B&R Revision Information

Automation Studio 3.0.90.33 UP15

29−Mar−2016

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The current revision information can be downloaded from the B&R Homepage download area (http://www.br−automation.com/en/downloads).

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Requests and problems by version

ID	valuation	solved since	known since	Description
400171093	Problem	V3.00.90.x UP15	V3.00.90.x UP10	Reduced Installation still asks for Portable or Standard installation
400134147	Problem	V3.00.90.x UP13	V3.00.90.28 SP0x	Not possible to use EDS file from Wittenstein Motion on the X20IF1041−1
400131924	Problem	V3.00.90.x UP13	V3.00.90.27 SP0x	X20IF10E3−1: IOPS byte for output data incorrectly displayed as as input byte in the I/O mapping
400099777	Problem	V3.00.90.x UP13	V3.00.90.22 SP0x	X20IF1061−1: Error message when changing PROFIBUS slave parameters
400101496	Problem	V3.00.90.x UP11	V3.00.90.25 SP0x	X20IF10D3−1 I/O configuration and I/O mapping destroyed when opening project
400120540	Problem	V3.00.90.x UP11	AS4.0.15 SP	Error configuring "ELMO Motion Control SimplIQ" CANopen slave
400088519	Problem	V3.00.90.x UP05	V3.00.81.32 SP0x	I/O modules are not displayed after GSDML file is imported
400070800	Problem	V3.00.90.x UP01	V3.00.81.26 SP0x	Problem in ASi DTM from Hilscher GmbH
400156805, 400168277	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	Error checking data types on SG3 target systems
400154497, 400156805, 400161543, 400161768, 400162429, 400162700	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	Error due to build option "−limit1"
400162260	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	Multiple AS instances started when installing a service pack together with hardware upgrades
400161782	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	VC3 error message "Alarm bit field variable not defined for alarm group 'xxx'" output although this is configured
400165078	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	VC4 StatusDatapoint not correctly saved and deleted
400163546	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	Automation Studio crash when importing an ACOPOS drive
400160035	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	8BVSV2SAFE1−1 not frozen when adding ACOPOSmulti power inverter with SafeMC if other frozen 8BVSV2SAFE1−1 devices in the same configuration
400169592	Problem	V3.00.90.33 SP0x	V3.00.90.32 SP0x	Converting projects from AS 2.7 to AS 3.x not completing
400141340	Problem	V3.00.90.33 SP0x	V3.00.90.30 SP0x	POWERLINK: Switch to Basic Ethernet of ICN at fail of MN
400122399	Problem	V3.00.90.33 SP0x	V3.00.90.27 SP0x	Error message when setting breakpoints in IEC actions
400117318	Problem	V3.00.90.33 SP0x	V3.00.90.27 SP0x	Operating system deleted when updating MemCard
400170221	Problem	V3.00.90.33 SP0x	AS4.2.03	Arrays shown as "Local" in tooltip in monitor mode
400154448	Problem	V3.00.90.33 SP0x	AS3.0.90 SP01	VNC viewer: Support for WQVGA (480 x 272) and WSVGA (1024 x 600) resolutions for the Power Panel T−Series.
400149860	Problem	V3.00.90.32 SP0x	V3.00.90.31 SP0x	Function block incorrectly displayed in Ladder Diagram editor
400150365	Problem	V3.00.90.32 SP0x	V3.00.90.30 SP0x	Confusing warning when comparing constant values
400145057	Problem	V3.00.90.32 SP0x	V3.00.90.30 SP0x	Possible to open AS 4.x projects with AS 3.x
400140914	Problem	V3.00.90.32 SP0x	V3.00.90.29 SP0x	Setting breakpoints in code segments used in multiple places
400135207	Problem	V3.00.90.32 SP0x	V3.00.90.29 SP0x	Not able to change tolerance of task classes after automatic rounding
400126188, 400126188	Problem	V3.00.90.32 SP0x	V3.00.90.28 SP0x	Error setting breakpoints in "Actions"
400128130	Problem	V3.00.90.32 SP0x	V3.00.90.27 SP0x	Program crash during incremental build
400117991	New function	V3.00.90.32 SP0x	V3.00.90.27 SP0x	Project path not checked for valid characters when opening the "CoffeeMachine" sample project
400143645, 400147936	Problem	V3.00.90.32 SP0x	V3.00.90.27 SP0x	ArConfig.rtc file not updated when changing node number of Windows terminal

400129674	Problem	V3.00.90.32 SP0x	AS4.0.17 SP	Changeover times for standard and daylight savings time incorrect for Melbourne/Australia
400144600	Problem	V3.00.90.32 SP0x	ARSG4_4.02.22_V04.02	Incorrect length calculation with circular references
400141163	Problem	V3.00.90.31 SP0x	V3.00.90.30 SP0x	Error detecting build dependencies
400142151	Problem	V3.00.90.31 SP0x	V3.00.90.30 SP0x	Deleting or renaming a POWERLINK iCN configuration resets the settings of the X2X interface on POWERLINK−X2X bus controllers in the master configuration.
400143184	Problem	V3.00.90.31 SP0x	V3.00.90.30 SP0x	Multiple function block calls for same instance not working in a network
400138129	Problem	V3.00.90.31 SP0x	V3.00.90.29 SP0x	Automation Studio crashing after copying and pasting a certain FBD network
400138191	Problem	V3.00.90.31 SP0x	V3.00.90.29 SP0x	Problem entering data in FBD editor
400141019	New function	V3.00.90.31 SP0x	V3.00.90.29 SP0x	Should be possible to use XML syntax highlighting for GMC CNC files
400137620	Problem	V3.00.90.31 SP0x	V3.00.90.29 SP0x	Hardware version not saved in hardware management source file when adding an ACOPOSmulti mit SafeMC device
400121358	Problem	V3.00.90.31 SP0x	V3.00.90.28 SP0x	Build not working correctly after moving a declaration file
400131168	Problem	V3.00.90.31 SP0x	V3.00.90.28 SP0x	error 8021 "The B&R Module already exists in the system" Module name " :: "
400042449	New function	V3.00.90.31 SP0x	V3.00.80.25	No warning output by Automation Studio when connecting via an incompatible PVI version
400116142, 400120141, 400125086	Problem	V3.00.90.30 SP0x	V3.00.90.29 SP0x	POWERLINK node number setting "Get from hardware" not working
400105727, 400105747	Problem	V3.00.90.30 SP0x	V3.00.90.28 SP0x	Error when selecting function block parameters in an ANSI C library
400129005	Problem	V3.00.90.30 SP0x	V3.00.90.28 SP0x	Crash when shutting down diagnostic tools
400067447	New function	V3.00.90.30 SP0x	V3.00.90.27 SP0x	Default setting *.mch when saving curve data
400117092	Problem	V3.00.90.30 SP0x	V3.00.90.26 SP0x	Function blocks cut off in certain configurations in the Ladder Diagram editor
400130252	New function	V3.00.90.30 SP0x	ARSG4_4.02.20_T04.02	Support for optimizing the latency time for imported POWERLINK devices
400128924	Problem	V3.00.90.29 SP0x	V3.00.90.28 SP0x	Motion upgrades not exported with "Save project as zip"
400123605, 400125063	Problem	V3.00.90.29 SP0x	V3.00.90.27 SP0x	Declaring arrays of derived data types
400068238	New function	V3.00.90.29 SP0x	V3.00.90.27 SP0x	NC Trace: "Don't ask me again" setting is overwritten by *.mch file
400126057	Problem	V3.00.90.29 SP0x	V3.00.90.27 SP0x	Network command trace: Crash when opening an "old" network command trace
400125153	Problem	V3.00.90.29 SP0x	V3.00.90.27 SP0x	Unable to connect remanent variables in the PV mapping
400106142	Problem	V3.00.90.29 SP0x	V3.00.90.24 SP0x	Installation error after changing the length of a dynamic I/O channel
400111643	Problem	V3.00.90.29 SP0x	V3.00.90.24 SP0x	Debugger reaching breakpoint in incorrect context
367420	New function	V3.00.90.29 SP0x	–	Support for the module 80VD100PD.C188−01
400121333	Problem	V3.00.90.29 SP0x	AS4.0.17 SP	Error message "Error 1140: Data type mismatch: Cannot convert UDINT to SINT"
400123456	Problem	V3.00.90.29 SP0x	AS4.0.16 SP	Error 1140 output if a DIV block follows an ADD block
400115746	Problem	V3.00.90.29 SP0x	AS4.0.14	"Values" settings reset to defaults when loading a .txt file
400126043	Problem	V3.00.90.29 SP0x	ARSG4_4.04.22_V04.04	Program crash when using verification functions CheckRange, CheckSignedSubrange or CheckUnsignedSubrange for VAR_IN_OUT parameters
400085316	Problem	V3.00.90.29 SP0x	AH3.00.90.0019	Wrong help page for network command trace
400119546	Problem	V3.00.90.28 SP0x	V3.00.90.27 SP0x	Project build aborted without error message
400118939, 400123611	Problem	V3.00.90.28 SP0x	V3.00.90.27 SP0x	IEC compiler freeze on some Ladder Diagram programs
400122559	Problem	V3.00.90.28 SP0x	V3.00.90.27 SP0x	Problem configuring 6 or more DTM interface modules
400112087	Problem	V3.00.90.28 SP0x	V3.00.90.27 SP0x	Changed order of interfaces in the NC configuration
400114265	Problem	V3.00.90.28 SP0x	V3.00.90.27 SP0x	Incorrect length of I/O data points for POWERLINK XDD import
400122484	Problem	V3.00.90.28 SP0x	V3.00.90.27 SP0x	"Save project as .zip" returning errors on manual selection
400114072	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Constant string lengths are not resolved in data types derived from STRING.
400116380	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	IP address for Modbus TCP slave not entered with SL−SL communication

400109342	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Modbus TCP not working on POWERLINK interface in DHCP mode
400114180	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Error in automatic indentation of IF/ELSE constructs in Automation Basic
400115259	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Cannot select some customized PP65 devices as POWERLINK V2 intelligent controllers
400115617	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Empty I/O mapping causing problems when saving the Modbus configuration
400120297	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Automation Studio crash on "Find in files" in Ladder Diagram with empty networks
400114245	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	NC configuration built incorrectly
400117290	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	BNC generation fails when compiling a safety project (or opening SD) that contains additional configurations with at least one referenced hardware configuration
400117514	Problem	V3.00.90.28 SP0x	V3.00.90.26 SP0x	Error calculating the domain gateway module ID if there are at least two SL−to−SL connections to the project SL and an I/O module is deleted/disabled
400111949	Problem	V3.00.90.28 SP0x	V3.00.90.25 SP0x	"Transfer only if not on target" setting ignored for referenced packages
400112924	Problem	V3.00.90.28 SP0x	V3.00.90.25 SP0x	I/O mappings lost when importing hardware modules
400106589, 400119564	Problem	V3.00.90.28 SP0x	V3.00.90.24 SP0x	Wrong Motorparameters in Automation Studio 3.00xx for Motors 8LSC75.xx0022x000−0, −1
400109072	New function	V3.00.90.28 SP0x	V3.00.90.24 SP0x	When using autocomplete and a filter is specified, the first entry does not appear in the first position.
400105309, 400106238, 400107384, 400108809, 400108915, 400111241, 400111389, 400112558, 400113250	New function	V3.00.90.28 SP0x	V3.00.90.23 SP0x	Data sources not being sorted automatically
400098816, 400119786	New function	V3.00.90.28 SP0x	V3.00.90.22 SP0x	Importing PROFIBUS device descriptions from Revision 5 on
400089445	Problem	V3.00.90.28 SP0x	V3.00.90.21 SP0x	German AS: In the button properties, the same parameter is referred to as both "Ebene" and "Level"
400085958	Problem	V3.00.90.28 SP0x	V3.00.90.20 SP0x	No error message when an output of an EN/ENO block is connected.
400111802	Problem	V3.00.90.28 SP0x	nicht relevant	CNC Trace not starting on certain trigger conditions
400110675	Problem	V3.00.90.28 SP0x	ARSG4_3.08.22_V03.08	Invalid task class priorities sometimes generated when building the system configuration
400104475	Problem	V3.00.90.28 SP0x	–	System exception when calling a function in an action
400118478	Problem	V3.00.90.27 SP0x	V3.00.90.27 SP0x	VC3 VA_Setup failure when using the VCScrSht library
400113395	Problem	V3.00.90.27 SP0x	V3.00.90.26 SP0x	Error in automatic indentation of IF/ELSE constructs in Automation Basic
400111141	Problem	V3.00.90.27 SP0x	V3.00.90.26 SP0x	Faulty code for IF statement in Automation Basic
400114073	Problem	V3.00.90.27 SP0x	V3.00.90.26 SP0x	Automation Studio crashes without an error message if an FBD function block is opened several times from a program in monitor mode.
400115622	Problem	V3.00.90.27 SP0x	V3.00.90.26 SP0x	The last line of a text−based SFC subroutine is not printed.
400114582	Problem	V3.00.90.27 SP0x	V3.00.90.26 SP0x	If configurations are referenced, BCN generation doesn't work with iCN connections.
400114092	Problem	V3.00.90.27 SP0x	V3.00.90.25 SP0x	External build using a UNC path causes errors
400111907, 400110988	Problem	V3.00.90.27 SP0x	V3.00.90.25 SP0x	"Build cross references" function doesn't work with DTM devices.
400111492	Problem	V3.00.90.27 SP0x	V3.00.90.25 SP0x	Coil cannot be set if an EN/ENO block is being used parallel to another condition.
400110320	Problem	V3.00.90.27 SP0x	V3.00.90.24 SP0x	Converting using *_TO_STRING not working correctly when assigning to reference variables
400105576, 400106679	Problem	V3.00.90.27 SP0x	V3.00.90.24 SP0x	Error when selecting function block parameters in an ANSI C library
400108524	Problem	V3.00.90.27 SP0x	V3.00.90.24 SP0x	See A&P 337880.
400054281, 400115438	New function	V3.00.90.27 SP0x	V3.00.81.19 SP01	Default case of a switch case construct is executed without a break
400110175	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	Converted project returns "Fatal error 9270"
400092880	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	Error 9237 if project build aborted when generating the I/O mapping
400107150	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	Error setting breakpoints in referenced source code files
400108342	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	For SGC systems, 0 or 1 must be specified instead of FALSE or TRUE when forcing a BOOL data type in the I/O mapping editor.
400107691	Problem		V3.00.90.24 SP0x	Cam profile editor: Cannot set the number of points when exporting

		V3.00.90.26 SP0x		
400108019, 400107599, 400112099	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	Incorrect version number of the VISAPI library displayed in the software configuration
400107127	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	Numeric control: "ProgressiveDirect" enumeration value for UpDownMode does not exist in the German AS version.
400107844	Problem	V3.00.90.26 SP0x	V3.00.90.24 SP0x	Automation Studio may crash as a result of a memory error when exporting large hardware structures.
400102421	Problem	V3.00.90.26 SP0x	V3.00.90.23 SP0x	Constants for limiting arrays
400103606, 400108864	Problem	V3.00.90.26 SP0x	V3.00.90.23 SP0x	VC3 − QVGA AlphaPad not working
400095773	New function	V3.00.90.26 SP0x	V3.00.90.23 SP0x	Incomplete configuration copy/import with hardware modules in a frozen state
400101659	Problem	V3.00.90.26 SP0x	V3.00.90.23 SP0x	Incorrect version displayed in the module parameter window for frozen hardware modules in some cases
400085139, 400108232	Problem	V3.00.90.26 SP0x	V3.00.90.20 SP0x	Error 1140 Data type mismatch: Cannot convert INT to USINT.
400088924, 400102837	Problem	V3.00.90.26 SP0x	V3.00.90.20 SP0x	Parameters necessary for OPC not set when opening a 3.0.81 project
400107740	Problem	V3.00.90.26 SP0x	AS4.0.14	Automation Studio crash when "." is entered in an SFC step
400102416, 400103257, 400102438	Problem	V3.00.90.25 SP0x	V3.00.90.x UP05	Data type filter in the variable selection dialog box for I/O mapping not working in the German version of Automation Studio
400105732	Problem	V3.00.90.25 SP0x	V3.00.90.24 SP0x	OPC configurations rebuilt any time a variable declaration is changed
400106496	Problem	V3.00.90.25 SP0x	V3.00.90.24 SP0x	Error message when opening the online settings editor in projects running on a virtual drive
400106916	Problem	V3.00.90.25 SP0x	V3.00.90.24 SP0x	Automation Runtime <3.00 can no longer be configured in AS 3.0.90.24 SP06 and higher
400103456	Problem	V3.00.90.25 SP0x	V3.00.90.24 SP0x	Long delay times for DTM devices when not able to reach host
400104953	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Boolean data points from imported 3rd−party POWERLINK devices not working
400099713	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	First plug−in module on the CP476 cannot be used if an interface module is inserted in the 7ME020.
400104654	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Error message when using an enumerated type defined in ANSI C
400102630	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Tasks loaded to the controller even though the option "Transfer objects only if relevant changes" is enabled
400102432	New function	V3.00.90.25 SP0x	V3.00.90.23 SP0x	No support for printing out DTMs
400087432	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Newly added variables are not suggested via auto−complete in the open ANSI C editor.
400101416, 400101754, 400102420, 400102735, 400103072	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Some channels not connected in the I/O mapping's monitoring mode
400102325	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Entire document not printed in a text−based SFC sub−editor if word wrap enabled
400104585	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Positioning not handled correctly when double−clicking on an error message in the SFC editor
400102328	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Lowercase keywords are offered if declaring variables in text editors when word wrap is disabled.
400105111	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Escape sequences in IEC strings result in incorrect string lengths
400094047	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Parameters for modules that have the "Freeze" flag set are still read from the current hardware description file.
400102706	Problem	V3.00.90.25 SP0x	V3.00.90.23 SP0x	Incorrect program context when opening a C source file in monitor mode
400099222	Problem	V3.00.90.25 SP0x	V3.00.90.22 SP0x	"Out of memory" in projects with large PVs
400095925	Problem	V3.00.90.25 SP0x	V3.00.90.22 SP0x	The menu options and buttons Edit / Undo and Edit / Redo are always enabled.
400106740	Problem	V3.00.90.24 SP0x	V3.00.90.24 SP0x	Not possible to use BOOL array as a permanent variable
400101813	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	Error message in Automation Studio when starting a function block during debugging
400101381, 400101619, 400104912	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	Incorrect program context when opening a C source file in monitor mode
400100166	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	Missing DPV1 section in CANopen slave configuration for enabling DPV1 communication
400100057, 400102326	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	Tooltip in monitor mode is only shown once for a variable.
400100058	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	Tooltip in monitor mode doesn't show any values for REAL and LREAL variables.

400101102, 400100382	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	Additionally supported hardware modules using incorrect firmware version
400099124	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	AR upgrade for an X20CPx48x−1 missing when exporting a project as a ZIP file
400091964	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	Crash during build.
400086699	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	With Chinese language settings, the "Active line" is not displayed.
400098447	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	Display error after closing and reopening certain Watch configurations
400097543	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	"Open device configuration" entry missing from Physical View shortcut menu
400099226	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	Ladder Diagram editor crashes when opening a ladder diagram that contains undeclared variables.
400092765	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	Function blocks with EN/ENO and no output are not executed in Ladder Diagram.
400099453	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	Automation Studio crashes when the cursor is positioned over a component of a structure variable.
400098869, 400098867, 400099399	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	In monitor mode, the tooltip shows 'local' for all variables.
400096259, 400098354	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	In the text editor, the tooltip for enumerators shows an incorrect value.
400095089	Problem	V3.00.90.24 SP0x	V3.00.90.22 SP0x	Configuration file for safety release not provided in AS SP
400102027	Problem	V3.00.90.24 SP0x	V3.00.90.18	Converting an AS 2.x (SG3) project to AS 3.0.90.18 changes values in acp10cfg − Error 10522.
400094222	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Project that is missing references can't be generated.
400093166	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Changing the version of NC data objects has no effect
400085395	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	OPC build doesn't work for large configurations
400087024	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	GDB freezes at frame info
400089656	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Breakpoint can't be set
400090651, 400094189	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Structure arrays with a length of one can sometimes not be used in the trace.
400093737	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Display error after closing and reopening certain Watch configurations
400092951	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	newline converted with CR + LF
400092280	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Display error after closing and reopening certain Watch configurations
400094132	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Element selection for FB variables doesn't work any more.
307640	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Automation Studio crashes when false binary literal entered in Automation Basic editor
400092536	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Inserting a function block results in incorrect display.
400095938	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	The task "ncsdcctrl" is inserted although it is not required
400093405	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Error in I/O mapping file after inserting a hardware module
400091517	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Automation Studio crashes when you right−click.
400095655	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Error 9218: PLC <Name> can't be loaded
400094082	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Search results shown twice
400095653	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Undo/Redo data can't be created. Folder or file path too long
400084454	Problem	V3.00.90.23 SP0x	V3.00.90.22 SP0x	Save Project As Zip doesn't work for referenced configuration
400091476	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Bit addressing with a Windows OPC configuration results in PVI Error 12037
400090638	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	With certain regional and language settings, such as US, there is a syntax error in the Watch.
400088255	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Monitor mode no longer works via modem connection
400086162	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Error searching for a string in the ANSI C editor.
400090449	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Some tooltips in the C editor incorrect.
400087432	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Newly added variables are not suggested via auto−complete in the open ANSI C editor.
400090175, 400092078,	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	No longer possible to copy/paste individual words using the mouse.

400093272, 400094590				
400090416, 400097092	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Tooltip shows the wrong array size in the text editors.
400091165, 400090013, 400089525, 400090600, 400092461, 400093238	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	No longer possible to copy/paste individual words using the mouse.
400091999, 400096044	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	An entered initial value is not applied in some cases
400088341	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Automation Studio crashes when you click on "Declare all variables"
400092033	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	If the I/O mapping file consists of multiple "mapping sections", then only the variables from the first section are added to the BNC file.
400092231	Problem	V3.00.90.23 SP0x	V3.00.90.21 SP0x	Automation Runtime upgrade for APC810 not saved when you "Save project as ZIP".
400087683	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	The module context can not be changed under certain circumstances.
400081602, 400090374	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	Debugger crashes when a breakpoint is set in an action.
400082345, 400087595	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	Display error after closing and reopening certain Watch configurations
400089533	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	To activate the Modbus master, you have to go into the interface settings for the Ethernet port and activate "Use as Modbus master" under "openSafety over TCP/IP", even though no safety communication is taking place.
400089884	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	AS crashes when an array index entered in ANSI C editor
400083301	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	InOut variables with the data type REAL cause problems in the Ladder Diagram editor.
400089893	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	Automation Studio crashes when the cursor is positioned over a component of a structure variable.
400084375	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	Line coverage in monitor mode stops working when a code section is collapsed.
400087164	New function	V3.00.90.23 SP0x	V3.00.90.20 SP0x	After "Save project as" the active configuration is lost
400090628	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	After importing text, the imported file can no longer be deleted
400086303, 400090308, 400092888, 400096732	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	Changes in a search string are not applied in the Find window. The previous search term remains in the text editor.
400089837	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	If multiple external editors are registered for a file, then "Open with..." doesn't work for all files.
400076534	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	The way the scope is changed produces incorrect results
400092727	Problem	V3.00.90.23 SP0x	V3.00.90.20 SP0x	If more than one Modbus slave CPU in the SDG SL configuration is connected to another configuration, then SL to SL communication doesn't work.
400083042	Problem	V3.00.90.23 SP0x	V3.00.90.19 SP0x	Problems when breakpoints set in libraries
400084136, 400085113, 400096562	Problem	V3.00.90.23 SP0x	V3.00.90.19 SP0x	Cyrillic input (CodePage) no longer possible in text editors.
400078983, 400079755	Problem	V3.00.90.23 SP0x	V3.00.90.18	NC Trace: Save/Load dialog box not shown
400078725	Problem	V3.00.90.23 SP0x	V3.00.90.18	Problem can't be reproduced
400089574	Problem	V3.00.90.23 SP0x	–	Wrong data type when rebuilding NC−INIT parameter modules
295585	New function	V3.00.90.23 SP0x	–	Support of 8BAC0125.000−1
400093935	Problem	V3.00.90.23 SP0x	ARSG4_3.09.4_D03.09	When ModbusSlaveCpu and ModbusTcp_any modules are used at the same time, only the number of slaves from the perspective of the ModbusSlaveCpu is considered.
400089766	Problem	V3.00.90.22 SP0x	V3.00.90.21 SP0x	Error 9270 when a decimal is used in an Include directory.
400087376	Problem	V3.00.90.22 SP0x	V3.00.90.21 SP0x	Not possible to move a configuration
400087235	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Project that is missing references can't be generated.
400086497	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Error "no rule to make target" when building a project
400088116	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	If BR modules are entered in Automation Studio with an invalid creation date (e.g. 01.01.2070), BR.AS.FinalizeBuild.exe crashes.
400087398	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	AS crashes when you double click "Add variable" in the Debugger Watch window.
400084892	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Trace configuration saved without asking for confirmation when NC Trace is closed.
400086529	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	ANSI C editor crashes when arrays are declared with a non IEC data type.

400088842	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Incorrect bracketing causes Automation Studio to crash when a SmartEdit function is used.
400086240, 400087318	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Autocomplete doesn't work for multidimensional structure elements
400089000	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Declaration files fan not be edited under certain circumstances
400085317	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	After "Save project as", the batch settings are lost
400089259	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	A Modbus slave CPU can't be inserted if it is in a configuration with a PP500.
400085459	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	"Resolve references" option doesn't work for files in the Configuration View
400088350	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Project can't be saved as a zip file if there are "missing" *.sw files
400086959, 400087046, 400089029, 400090898	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	Fatal error 9270 when building a project with OPC objects
400082887	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	After a hybrid library is imported it can't be compiled
400086400	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	Multi−axis trace limited to ten parameters
400079296	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	No PV values are shown when viewing a ladder diagram in monitor mode.
400084315	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	For 80SD* modules, parameter ID 109 is calculated incorrectly when the motor encoder isn't used
400052995	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	If an SFC transition or SFC action uses an IEC textual language, it is not checked out when edited.
400077256	Problem	V3.00.90.22 SP0x	V3.00.90.18	For files under version control, no message is output for a Replace or Replace All.
400075924	Problem	V3.00.90.22 SP0x	V3.00.90.18	In the text editor, the tooltip for enumerators doesn't show a value.
400077859	Problem	V3.00.90.22 SP0x	V3.00.90.18	Constant array limits in type definitions are not resolved correctly.
400086885	Problem	V3.00.90.22 SP0x	V3.00.90.18	The option to transfer only software objects that do not yet exist on the target is not applied to the Runtime Utility Center transfer list.
400077021, 400076626, 400079800, 400085083	New function	V3.00.90.22 SP0x	V3.00.90.18	Find In Files searches files multiple times
400083351	Problem	V3.00.90.22 SP0x	V3.00.81.32 SP0x	Automation Studio crashes in monitor mode when a SFC function block is opened.
400087487	Problem	V3.00.90.22 SP0x	ARSG4_4.01.3_C04.01	CPU load spikes when Automation Studio shows function block tooltips.
400089083	Problem	V3.00.90.22 SP0x	ARSG4_3.00.22_V03.00	Error 30030 for CANopen master with 4 slaves
400084126	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	Derivations of the type "ARRAY OF STRING" cause the build to crash
400075518, 400076490, 400076839	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	Icons in the toolbar are blurry and illegible
400086630, 400086556, 400086652	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	The Watch window isn't shown in the programming language editors.
400083771	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	Automation Studio crashes when "END_TYPE" is missing from the type declaration text editor.
400084202	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	Text can no longer be moved using the mouse in the text editor.
400085701	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	When converting from AS 3.00.81 to AS 3.00.90.20 the SDG channels of a SL to SL configuration are reversed, which results in AS and SafeDESIGNER each having a different "ChannelCRC".
400086340	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	Missing object data type crashes the XDD import
400085322	Problem	V3.00.90.21 SP0x	V3.00.90.20 SP0x	AS crashes when you freeze an ACOPOSmulti inverter with SafeMC
400082111	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	ArConfig.br isn't generated when building a configuration with an AC14x as the CPU if AC14x CANIO is disabled on the CAN interface.
400082991	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Incorrect I/O configuration when using a fieldbus CPU with an interface card
400081462	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Watch crashes when a variable with special characteristics is inserted
400081302	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	In ANSI C no index is displayed for array variables.
400081634	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Incorrect syntax coloring in the Automation Basic editor when there's a dollar sign in a character string.
400081914	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Automation Studio crashes when you open a FBD task
400084875	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	German Umlaut characters in I/O mapping description fields are lost during a hardware export.
400084800	Problem		V3.00.90.19 SP0x	

		V3.00.90.21 SP0x		Incorrect length calculation for structures in the OPC tag editor when nested structures are used.
400082717, 400083942, 400086933	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Array variables with an index > 0 can't be connected to VC3 controls
400083719	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Automation Studio crashes when you copy a step in the SFC Editor
400079527	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Starting and stopping tasks causes the entire right half of the software configuration to refresh when in monitor mode.
400082704	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	When a text is selected, then selecting "Go to Declaration of" from the shortcut menus goes to the selection and not the current position.
400079076, 400076197	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Automation Studio stops responding when you open the dialog box for initializing structures
400081440	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	If the Automation Studio Logical View contains more than one visualization application, then searching in files causes Automation Studio to crash.
400086015	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Typo in the info text in the output window. Only affects the German version.
400081014	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Inconsistencies in the hardware configuration can result in modules on the X2X bus being deleted when an X2X module is inserted.
400084460	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Display error in the key mapping for various PP65 devices
400077071	Problem	V3.00.90.21 SP0x	V3.00.90.18	When entering an array index, the LD editor doesn't offer any variables and constants after Ctrl+Space.
400080882	Problem	V3.00.90.21 SP0x	V3.00.90.18	A pointer array with a structure data type is not resolved in the select variable dialog box.
400076586	New function	V3.00.90.21 SP0x	V3.00.90.18	When inserting using CTRL+V (paste) the file is not checked out
400082784	Problem	V3.00.90.21 SP0x	V3.00.90.18	In the maintenance edition of Automation Studio you can create a new project from the start page, although that shouldn't be possible in this edition.
400079554	Problem	V3.00.90.21 SP0x	V3.00.81.31 SP0x	CANopen function "Don't Write All Objects On Download" disabled required objects
400066511	New function	V3.00.90.21 SP0x	V3.00.80.35 SP03	AS is sluggish when online connection has a high latency time.
400080716	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	In some cases, negative string lengths are not prohibited with an error message.
400078616	New function	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Incorrect error position when using typedefs when using IEC declarations in ANSI C
400075865, 400077909	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	AsTpu.br can't be compiled in the German version of Automation Studio.
400079304	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Trigger conditions don't work in some circumstances
400083045, 400083470	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Watch window doesn't restore the display correctly when reopened
400082095, 400082902, 400083295	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Automation Studio crashes when you click around in the Monitor Watch.
400081735	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Automation Studio crashes when an invalid value entry in the Monitor Watch is confirmed.
400081705	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Structured variables displayed incorrectly after monitor mode is turned off and back on
400080584	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Automation Studio crashes when the value of a PV is changed via double−click in the Monitor Watch.
400078702, 400081376	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	SmartEdit functions don't work when a structure contains a function block. In this case, the function block members aren't listed.
400081302	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	In ANSI C no index is displayed for array variables.
400080997	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Build Error 1179 when you use EDGE in a function block.
400079364	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Comments for derived data types written in the table editor are discarded after saving.
400081296	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Software configuration shows the incorrect version numbers for standard B&R libraries
400078154, 400081604	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Tooltip doesn't work in monitor mode for structure variables.
400078470	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Code snippets are not inserted completely in the text editor when using SmartEdit.
400077856	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	In the text editor, pressing the Enter key in multiple−line comments opens the variable declaration.
400082393	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	It is possible to disable the FTP server on the ARSim, even though this option has no meaning in this case.
400081720	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	When creating a CF for a PP100 terminal, the Automation Runtime Version from the main CPU is always used.
400042825	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Configuring the default online connection settings can cause the transfer process to terminate unexpectedly when using remote PVI.
400079565	Problem	V3.00.90.20 SP0x	V3.00.90.19 SP0x	Online connection can't be established when the project name contains a space.
400077472	Problem	V3.00.90.20 SP0x	V3.00.90.18	Configuration builder crashes when building ArConfig if the configuration of a DTM device is in another *.rtc file.
400078014	Problem	V3.00.90.20	V3.00.90.18	Problem selecting function block instance for array variables

		SP0x		
400077131	Problem	V3.00.90.20 SP0x	V3.00.90.18	Auto Watch is shown in monitor mode even though it was unchecked.
400080562	Problem	V3.00.90.20 SP0x	V3.00.90.18	Trigger conditions don't work in some circumstances
400078123	Problem	V3.00.90.20 SP0x	V3.00.90.18	The values of large structures or a large number of variables are not displayed in the watch window
400079564	Problem	V3.00.90.20 SP0x	V3.00.90.18	Remote port higher than 32767 not permitted
400077174	Problem	V3.00.90.20 SP0x	V3.00.90.18	A term searched for using Ctrl+Shift+F3 is subsequently not found using F3 or Shift+F3.
400077019	Problem	V3.00.90.20 SP0x	V3.00.90.18	CTRL+L doesn't delete a line.
400076086	Problem	V3.00.90.20 SP0x	V3.00.90.18	In the text editor, Ctrl + click doesn't select a word
400076784	Problem	V3.00.90.20 SP0x	V3.00.90.18	Error message in source editor when the function block declaration isn't saved.
400078402	Problem	V3.00.90.20 SP0x	V3.00.90.18	Faulty I/O addressing on SG3 systems
400081245	Problem	V3.00.90.20 SP0x	V3.00.90.18	In the LAD editor, a function block instance stops being executed when a parameter is changed.
400077071	Problem	V3.00.90.20 SP0x	V3.00.90.18	When entering an array index, the LD editor doesn't offer any variables and constants after Ctrl+Space.
400078271	Problem	V3.00.90.20 SP0x	V3.00.90.18	The function parameters of an SFC FB are not offered by SmartEdit in an ST step
400076938	Problem	V3.00.90.20 SP0x	V3.00.90.18	SmartEdit doesn't work for structure elements if the transfer parameter is a structure or FB.
400076577	Problem	V3.00.90.20 SP0x	V3.00.90.18	Incorrect variable declaration in the text editor for a function / function block.
400076636	New function	V3.00.90.20 SP0x	V3.00.90.18	When a character is deleted using the delete key, the file is not checked out
400076586	New function	V3.00.90.20 SP0x	V3.00.90.18	When inserting using CTRL+V (paste) the file is not checked out
400078628, 400078741	Problem	V3.00.90.20 SP0x	V3.00.90.18	Variables declared incorrectly as constants in the textual declaration editor.
400076841	Problem	V3.00.90.20 SP0x	V3.00.90.18	XDD file containing object without objFlags attribute may result in invalid import
400077805	New function	V3.00.90.20 SP0x	V3.00.90.18	Option to configure Hilscher GSD files on netX cards
400072301, 400072315, 400072408, 400072380, 400077761, 400077771, 400077777, 400077874	Problem	V3.00.90.20 SP0x	V3.00.90.18	AS crashes when the Tools / Upgrades dialog box is opened
400080482	Problem	V3.00.90.20 SP0x	V3.00.90.18	Entering DEL in the search field in the toolbar deletes the selected entry in the workspace.
400079336	Problem	V3.00.90.20 SP0x	V3.00.90.18	"Edit", "Zoom" and "Debug" toolbars flicker
400077168	Problem	V3.00.90.20 SP0x	V3.00.90.18	In an SFC program, "Find in files" doesn't take you to the right position.
268189	Problem	V3.00.90.20 SP0x	V3.00.90.15	The values of large structures or a large number of variables are not displayed in the watch window
400076554	Problem	V3.00.90.20 SP0x	V3.00.81.27 SP0x	Incorrect size calculation for process variables with empty user data type
273110	Problem	V3.00.90.20 SP0x	V3.00.81.18	SmartEdit provides incorrect or insufficient suggestions when using class templates.
277730	New function	V3.00.90.20 SP0x	nicht relevant	Support of 'Multiple Asynchronous Send'
400081370	Problem	V3.00.90.20 SP0x	ARSG4_3.07.8_H03.07	Error 9849 when building ArConfig
400078852	Problem	V3.00.90.19 SP0x	V3.00.90.18	"Error 9290: The command line arguments for the software object "XXXXXXXX" exceed the maximum permitted length of 32.768. "
400075329	Problem	V3.00.90.19 SP0x	V3.00.90.18	Compiler error 4512
400076466	Problem	V3.00.90.19 SP0x	V3.00.90.18	CompactFlash can't be created for APC 6xx series
400077144	Problem	V3.00.90.19 SP0x	V3.00.90.18	Incorrect error message 1068 when using the preprocessor instruction #pragma.
400076591	Problem	V3.00.90.19 SP0x	V3.00.90.18	Error when building a function block programmed in Continuous Function Chart or Function Block Diagram
400076865	Problem	V3.00.90.19 SP0x	V3.00.90.18	On a Win7 64−bit system, BR module files sometimes have a different size than they do on a Windows XP system
400076507, 400077909, 400075865	Problem	V3.00.90.19 SP0x	V3.00.90.18	Error 6599 when building the AsTpu library
400077013	Problem	V3.00.90.19 SP0x	V3.00.90.18	German AS: NC constant selected in the NC Test is not applied

400075758	Problem	V3.00.90.19 SP0x	V3.00.90.18	Partial structures inserted incorrectly in the watch window
400077029	Problem	V3.00.90.19 SP0x	V3.00.90.18	Incorrect context displayed when the editor is opened in monitor mode
400077027	Problem	V3.00.90.19 SP0x	V3.00.90.18	Crash when writing a USINT array with length 10 in the watch window
400076263, 400076429, 400076186	Problem	V3.00.90.19 SP0x	V3.00.90.18	Automation Studio freezes when you click in the editor's watch window
400076263, 400076429, 400076186, 400076887, 400077246, 400077694, 400077385, 400077801, 400077673, 400077131, 400078060, 400077919, 400078586	Problem	V3.00.90.19 SP0x	V3.00.90.18	Automation Studio freezes when you click in the monitor watch window.
400059839	Problem	V3.00.90.19 SP0x	V3.00.90.18	Parameter "/CKDA=1" not saved as extra setting
400076794	Problem	V3.00.90.19 SP0x	V3.00.90.18	Horizontal scrollbar in text editor has fixed width and can't be changed
400076667, 400076838	Problem	V3.00.90.19 SP0x	V3.00.90.18	SmartEdit error in ANSI C editor with referenced structure elements.
400076041, 400075847	New function	V3.00.90.19 SP0x	V3.00.90.18	Hide tab lines in the text editor.
400076347	Problem	V3.00.90.19 SP0x	V3.00.90.18	Smart Edit is slow in big projects.
400077383	Problem	V3.00.90.19 SP0x	V3.00.90.18	Error message when initializing certain variables in the table editor
400078129	Problem	V3.00.90.19 SP0x	V3.00.90.18	Function block split when a new column is inserted
400076660	Problem	V3.00.90.19 SP0x	V3.00.90.18	Automation Studio crashes when an EN/ENO connection is deleted.
400076935	Problem	V3.00.90.19 SP0x	V3.00.90.18	Displaying the signal flow of an array variable with a variable index doesn't work.
400077336, 400077084 , 400077970, 400080265	Problem	V3.00.90.19 SP0x	V3.00.90.18	CNC editor causes an AS error.
400076715	Problem	V3.00.90.19 SP0x	V3.00.90.18	Automation Studio crashes when an SFC FB instance is opened in monitor mode.
400077962	Problem	V3.00.90.19 SP0x	V3.00.90.18	Automation Studio crashes when you try to display a tool tip for a structure variable in monitor mode.
400076083, 400077351, 400080429	Problem	V3.00.90.19 SP0x	V3.00.90.18	The function "Go to implementation" doesn't work for actions.
400072798	Problem	V3.00.90.19 SP0x	V3.00.90.18	FB instances displayed incorrectly in editor watch.
400076723	Problem	V3.00.90.19 SP0x	V3.00.90.18	Keyword in parentheses not capitalized after end of line
400077526	Problem	V3.00.90.19 SP0x	V3.00.90.18	Ctrl+Space for a structure array inserts the variable with no index
400077469	Problem	V3.00.90.19 SP0x	V3.00.90.18	Automation Studio crashes when you start the "New function or function block" Wizard
400075518, 400076490, 400076839	Problem	V3.00.90.19 SP0x	V3.00.90.18	Icons in the toolbar are blurry and illegible
400077187	Problem	V3.00.90.19 SP0x	V3.00.90.18	"Save project as Zip" doesn't save VCShared folder when "Resolve references" option is enabled
400076486	Problem	V3.00.90.19 SP0x	V3.00.90.18	Save project as .zip doesn't work
400076693	Problem	V3.00.90.19 SP0x	V3.00.90.18	Lack of exception handling when setting registry entries after registering a component during installation of Automation Studio.
270460	Problem	V3.00.90.19 SP0x	V3.00.90.17	Takes a long time to expand/collapse structure elements in the editor watch using the mouse
400074467	Problem	V3.00.90.19 SP0x	V3.00.90.17	Hardware module name (Equipment ID) can't be configured for fieldbus devices (FDT/DTM)
400074810	Problem	V3.00.90.19 SP0x	V3.00.90.17	Declaration of Alias FB with "Declare all" not always correct.
400073991	Problem	V3.00.90.19 SP0x	V3.00.90.16	Libraries that contain actions are regenerated with every build.
400072880	Problem	V3.00.90.19 SP0x	V3.00.90.15	F1 Help sometimes doesn't work for safety logger modules
400074035	Problem	V3.00.90.19 SP0x	V3.00.81.27 SP0x	Libraries are recompiled when zipped projects are opened.
400072324	Problem	V3.00.90.19 SP0x	V3.00.81.27 SP0x	NodeSwitch channel of CAN interfaces with disabled CAN I/O

400073915	Problem	V3.00.90.19 SP0x	V3.00.81.27 SP0x	Incorrect code generation when mapping an expression to a bit
400071488	Problem	V3.00.90.19 SP0x	V3.00.81.27 SP0x	Profiler: Minimal Net Time und Minimal Gross Time
400071811	Problem	V3.00.90.19 SP0x	V3.00.81.27 SP0x	Incorrect handling of empty block connections in monitor mode
400075151	Problem	V3.00.90.19 SP0x	V3.00.80.37 SP05	Error 4511 while building a task
400072895	Problem	V3.00.90.17	V3.00.90.15	Festo Profinet device can not be inserted
400071495	Problem	V3.00.90.15	V3.00.81.27 SP0x	Build error "Required white space was missing" when using regional and language settings for China
400070573	Problem	V3.00.90.14	V3.00.90.12	CANopen Master DTM checks whether default values are defined in the EDS files for the COB−ID. If not, it tries to define default values that conform to the standards.
265455	Problem	V3.00.90.14	V3.00.90.12	POWERLINK: Default value for asynchronous timeout changed from 25 s to 50 s
400071333	Problem	V3.00.90.14	V3.00.90.11	Autocomplete error with local function blocks
400069448	Problem	V3.00.90.14	V3.00.81.27 SP0x	Memory overwritten when two local function blocks with the same name are used
400069458	Problem	V3.00.90.14	V3.00.81.27 SP0x	Incorrect code generated when a block instance with EN/ENO is used multiple times
400070129	Problem	V3.00.90.14	V3.00.81.26 SP0x	"Undefined reference" when generating C++ task
400072054	Problem	V3.00.90.14	V3.00.81.24 SP0x	CNC Trace: Some NC object names in the NC Trace data points are incorrect
234606	Problem	V3.00.90.14	V3.00.81.09 (FR000488)	New reserved names
400042894	New function	V3.00.90.14	V3.00.80.25	With CPUs used as a POWERLINK V2 CN, it is now possible to configure a fixed InSize and OutSize for the POWERLINK data.
400068093	Problem	V3.00.90.12	V3.00.81.26 SP0x	Build terminates unexpectedly
400067925	Problem	V3.00.90.12	V3.00.81.26 SP0x	For transitions that contain special characters (\ /: * <> |) it is then no longer possible to edit an action.The editor can't be opened.
400068185	Problem	V3.00.90.12	V3.00.81.26 SP0x	Go To Declaration is not offered for members of function blocks
400068898	Problem	V3.00.90.12	V3.00.81.26 SP0x	No compile error when using retain variables
400067673	Problem	V3.00.90.12	V3.00.81.26 SP0x	Contents of the dialog box "Tools / Options / Editor" not shown correctly in Korean Windows 7.
400069438	Problem	V3.00.90.12	V3.00.81.26 SP0x	Replace in "whole file"
400069234	Problem	V3.00.90.12	V3.00.81.26 SP0x	The Automation Runtime version can't be changed if safety hardware modules are frozen in the current configuration.
400062333	Problem	V3.00.90.12	V3.00.81.24 SP0x	Crash when inserting blocks with a parameter type labeled as "FUNCTION" or "FUNCTION_BLOCK".
400064521	Problem	V3.00.90.12	V3.00.81.24 SP0x	"Save Project As" doesn't work if the VC editor is open for one of the project's objects
400065517	Problem	V3.00.90.12	V3.00.81.23 SP0x	Saved logger records could not be opened if the backtrace contained special characters.
400054197	Problem	V3.00.90.12	V3.00.81.18	LineCoverage not working with high task class cycle times
400047764	Problem	V3.00.90.12	V3.00.80.31 SP01	Vertical scroll bar disappears after "append column"
400068446	Problem	V3.00.90.12	V3.00.80.31 SP01	Performance problem when using SVN
400006757	Problem	V3.00.90.12	ARSG4_2.94.22_V02.94	Problems displaying variable values in the PV Watch window after using the library function DatObjMove
261036	Problem	V3.00.90.11	V3.00.90.10	After the range limits of global array variables are changed, the new ranges aren't initialized
400066294	Problem	V3.00.90.11	V3.00.81.27 SP0x	Incorrect code generation when accessing dynamic VAR_Input variables in a block's actions.
400066847	Problem	V3.00.90.11	V3.00.81.26 SP0x	After axis mappings are converted from 2.x to 3.0, not all axis mappings are displayed.
400066009	New function	V3.00.90.11	V3.00.81.25 SP0x	After the upgrade dialog box is canceled no other configuration can be activated
400067530	Problem	V3.00.90.11	V3.00.81.24 SP0x	Endless loop when using advanced MOV blocks
400064208	Problem	V3.00.90.11	V3.00.81.24 SP0x	CheckDiv functions in the IEC Check library are called for MOD operators
400067024	Problem	V3.00.90.11	V3.00.81.24 SP0x	Initializing function block arrays causes build error 6024.
400063869	Problem	V3.00.90.11	V3.00.81.24 SP0x	"Window −> Close All" only closes NC Test window
400066151	Problem	V3.00.90.11	V3.00.81.24 SP0x	In the Variable Watch, the list of inserted variables is lost
400066230, 400068267	Problem	V3.00.90.11	V3.00.81.24 SP0x	Some values of enum variables don't show up in AS Watch.
400066226	Problem	V3.00.90.11	V3.00.81.24 SP0x	List Usage doesn't work for variables with the type ARRAY OF Structure
400066525	Problem	V3.00.90.11	V3.00.81.24 SP0x	Freezing 2003 backplane module causes build error.
400066205	Problem	V3.00.90.11	V3.00.81.24 SP0x	No build error when more local remanent memory is used than was configured.
400060397	Problem	V3.00.90.11	V3.00.81.24 SP0x	During a BUILD in AS the SafeDESIGNER must not be opened.
400065402	New function	V3.00.90.11	V3.00.81.24 SP0x	When a 2.x project is opened, the version info isn't set properly.
400067241, 400068754	Problem	V3.00.90.11	V3.00.80.34 SP02	With an existing online connection, fixed node numbers are detected incorrectly
400044280	Problem	V3.00.90.11	V3.00.80.25	Motor parameters are converted incorrectly
400060785	Problem	V3.00.90.11	–	Cross−communication on the SL's BOOL channels is not recognized as an error.
400065675	Problem	V3.00.90.10	V3.00.90.09	Using functions from <math.h> in a static C library causes build error with SG3/SGC
400064561	Problem	V3.00.90.10	V3.00.81.24 SP0x	The required size of the memory area zzInternalMemory sometimes calculated incorrectly.
400065147	Problem	V3.00.90.10	V3.00.81.24 SP0x	Warning 1289: Missing BOOL variable 'SFCInit' to initialize action
400065008	Problem	V3.00.90.10	V3.00.81.24 SP0x	For arrays with only one element, the software mismatch dialog box always detects a change.
400064590	Problem	V3.00.90.10	V3.00.81.24 SP0x	Invalid linefeed characters resulted in invalid import
400064495	Problem	V3.00.90.10	V3.00.81.24 SP0x	VAR_IN_OUT parameters added in the wrong order
400063292	Problem	V3.00.90.10	V3.00.81.24 SP0x	Input channels that are mapped multiple times are not saved in the order shown.
400064409	Problem	V3.00.90.10	V3.00.81.24 SP0x	Empty task inserted when an ACOPOSmicro is inserted on an SGC CPU
400064311	Problem	V3.00.90.10	V3.00.81.24 SP0x	Wrong Wizard opened for X20SM* and X67SM* modules with the function model "Ramp"
400065482	Problem	V3.00.90.10	V3.00.81.23 SP0x	Casting REAL or LREAL to whole number data type doesn't shorten to specified data width

400057519	Problem	V3.00.90.10	V3.00.81.23 SP0x	Variables can no longer be dragged into the Watch window.
400060315	Problem	V3.00.90.10	V3.00.81.23 SP0x	Linking identical OPC configurations
400062774	Problem	V3.00.90.10	V3.00.81.18	Didn't stop at breakpoints when CPU had insufficient RAM
400052334	Problem	V3.00.90.10	V3.00.81.18	Variables can no longer be dragged into the Watch window.
400053413	Problem	V3.00.90.10	V3.00.81.18	Error 1144 during build due to changed transfer parameters in the *.fun file
400052839	Problem	V3.00.90.10	V3.00.81.18	Dragging and dropping a selected line sometimes removes a line too many
224820	Projekt	V3.00.90.10	V3.00.81.06 (FR000553)	In the source files of static C/C++ libraries, breakpoint positions are not shown.
400049975	New function	V3.00.90.10	V3.00.80.31 SP01	Automation Studio doesn't show a message when two controllers use the same IP address
400044413	Problem	V3.00.90.10	V3.00.80.28 SP01	When inserting OPC tags into the mapping using the Select Variable dialog box, other tag files are inserted
400036316	Problem	V3.00.90.10	V3.00.80.25	The DiagGetStrInfo function from the AsIODiag library only shows "PLKany" for ACOPOSmulti
400032355	New function	V3.00.90.10	V3.00.80.22	Setting for the maximum number of profiler archive modules
210295	Problem	V3.00.90.10	V3.00.80.19	Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor
400027683	Problem	V3.00.90.10	V3.0.71.31 SP05	Debugger doesn't work via routed POWERLINK connection
400061171	New function	V3.00.90.10	nicht relevant	Syntax highlighting in the CNC program editor not fully available
400061893	Problem	V3.00.90.09	V3.00.90.05	OPC server − continuous RAM consumption
400060886	Problem	V3.00.90.09	V3.00.81.26 SP0x	VAR CONSTANT of function blocks overwritten by initialization of instance variable
400062823	Problem	V3.00.90.09	V3.00.81.24 SP0x	Error(s) occurred while generating cross−reference data
400060330	Problem	V3.00.90.09	V3.00.81.24 SP0x	Variable values only shown in monitor mode after scrolling.
400063244	Problem	V3.00.90.09	V3.00.81.24 SP0x	Open Cyclic/Init/Exit in the software configuration opens the wrong instance
400063410	Problem	V3.00.90.09	V3.00.81.24 SP0x	Double−clicking on error message sends cursor to wrong line
400063251	New function	V3.00.90.09	V3.00.81.24 SP0x	Declaration files added to a library after it has been created cannot be renamed.
400063350	Problem	V3.00.90.09	V3.00.81.24 SP0x	Incorrect dialog box shown during hardware export in Windows 7.
400063546, 400065518	Problem	V3.00.90.09	V3.00.81.23 SP0x	Password protected data objects or tasks cannot be compiled on computers running Win7 64−bit
400063594	Problem	V3.00.90.09	V3.00.81.23 SP0x	Import could not handle tabulator characters
400063018	Problem	V3.00.90.09	V3.00.81.22 SP01	MN cannot register data points on the iCN
400057426	Problem	V3.00.90.09	V3.00.81.22 SP01	Go to corresponding delimiter doesn't work if the instruction block contains ";" comments
400061752	Problem	V3.00.90.09	V3.00.81.22 SP01	ACOPOS parameter table: The motor wizard is started when trying to load data from a file
400059997	Problem	V3.00.90.09	V3.00.81.22 SP01	Not able to add a resolver motor to ACOPOSmulti
400058060	Problem	V3.00.90.09	V3.00.81.22 SP01	The I/O mapping from the AS project is not applied to the safety project.
400058790	Problem	V3.00.90.09	V3.00.81.22 SP01	Find text or replace text displayed in the output window for FindInFiles/ReplaceInFiles
400056878	Problem	V3.00.90.09	V3.00.81.18	Wrong title when tracing multiple axes
400050693	Problem	V3.00.90.09	V3.00.81.18	Online connection incorrectly established after local interruption
400054923	Problem	V3.00.90.09	V3.00.81.18	Replace Block sometimes causes display error
400042618	Problem	V3.00.90.09	V3.00.80.28 SP01	"Comment out" button stays grayed out
400040762	Problem	V3.00.90.09	V3.00.80.25	Forced values are not specifically identified.
400048396	Problem	V3.00.90.09	V3.00.80.25	Interface names can't be corrected in the NC configuration.
400042829, 400045254, 400045023	Problem	V3.00.90.09	V3.00.80.25	Undocked watch window remains out of view.
400056533	Problem	V3.00.90.09	V3.00.80.20	Parameters from function blocks and functions not offered in the Select Variable dialog box.
400062212	Problem	V3.00.90.09	−	Not able to select insert cards correctly from the wizard in 8AC14xxx projects
400060073	Problem	V3.00.90.09	nicht relevant	The contents of the variable declaration file for the SDC controller task deleted
400062521	Problem	V3.00.90.08	V3.00.81.24 SP0x	Error message when double−clicking on cross references from the SFC program
400062128	Problem	V3.00.90.08	V3.00.81.24 SP0x	SmartEdit does not work properly if the editor is opened by double−clicking on the cross reference list.
400060362	Problem	V3.00.90.08	V3.00.81.23 SP0x	Trace recording can't be opened in Windows7 64−bit
400058710	Problem	V3.00.90.08	V3.00.81.22 SP01	The I/O mapping does not support strings
400056018	Problem	V3.00.90.08	V3.00.81.19 SP01	Error message when an OPC tag isn't assigned to a variable
400054966	Problem	V3.00.90.08	V3.00.81.18	"Singularize" generates incorrect array indexes when used in IEC
400056310	Problem	V3.00.90.08	V3.00.81.18	Incorrect channel address calculation for imported Powerlink devices with static mapping and user defined datatypes
400057826	Problem	V3.00.90.08	V3.00.80.31 SP01	OPC tag editor: Incorrect length calculation for structures of a function block instance
400051430	Problem	V3.00.90.08	V3.00.80.31 SP01	Exception in the OPC tag editor when the Singularize function is called
400045196, 400045567	Problem	V3.00.90.08	V3.00.80.29 SP01	In the Watch window, sometimes only the numeric values of enumeration data types were shown.
400042819	Problem	V3.00.90.08	V3.00.80.25	Correction in Watch: Structure elements not inserted correctly with certain selections
400056817	New function	V3.00.90.08	V3.0.71.27 SP04	SafeDESIGNER cannot be opened after uploading hardware that contains safe modules.
400059441	Problem	V3.00.90.07	V3.00.81.25 SP0x	The entire project will not be retrieved during project update if one of the files is blocked.
252644	Problem	V3.00.90.07	V3.00.81.24 SP0x	Incorrect code generation for "stretched" MOV blocks
400055434	Problem	V3.00.90.07	V3.00.81.24 SP0x	For ACOPOSmicro, not all hardware module description files are updated during an upgrade.
400059910	Problem	V3.00.90.07	V3.00.81.23 SP0x	The "Modules" window in the logger was not hidden automatically
400060636	Problem	V3.00.90.07	V3.00.81.23 SP0x	Incorrect code is sometimes generated for complex networks.
400059518	Problem	V3.00.90.07	V3.00.81.23 SP0x	When importing/exporting hardware modules, the I/O mapping descriptions are lost.
400058791	New function	V3.00.90.07	V3.00.81.22 SP01	The measurement cursor is displayed by default.
400058178	Problem	V3.00.90.07	V3.00.81.22 SP01	Arrays with a start index <> 0 cause problems in the variable selection window for the variable trace.
400061731	Problem	V3.00.90.07	V3.00.81.22 SP01	Poor system response times depending on the quality of the connection to the file server or

				VCS server
400056776, 400057107, 400059697	New function	V3.00.90.07	V3.00.81.22 SP01	The IP address of the ARsim can't be set to 0.0.0.0
400061566	Problem	V3.00.90.07	V3.00.81.22 SP01	Interface settings are set to defaults after hardware import.
400058790	New function	V3.00.90.07	V3.00.81.22 SP01	Find text or replace text displayed in the output window for FindInFiles/ReplaceInFiles
400058413, 400059749	Problem	V3.00.90.07	V3.00.81.19 SP01	Network Command Trace shortcut menu displayed incorrectly
400057278	Problem	V3.00.90.07	V3.00.81.18	Slow system response when opening the connection dialog box between Safety CPUs
400051153	Problem	V3.00.90.07	V3.00.80.31 SP01	Error generating the header file for REAL constants < 1.0e−5
400048512	Problem	V3.00.90.07	V3.00.80.31 SP01	It is not possible to use C variables larger than 16 MB.
400046363	Problem	V3.00.90.07	V3.00.80.29 SP01	Declaration of arrays with sizeof incorrect
400046834, 400050679, 400055914, 400053351	Problem	V3.00.90.07	V3.00.80.28 SP01	Additional information isn't displayed in Windows 7 and Windows Vista
400034601, 400042798, 400048781, 400052626	Problem	V3.00.90.07	V3.00.80.25	ENUM data types in trace
400039342	Problem	V3.00.90.07	V3.00.80.25	The option "Store Nc Operating system on target" doesn't work for SG3 and SGC targets
153671	Problem	V3.00.90.07	V3.00.80.10	Forced variables not shown as forced after connection is interrupted
400025794	New function	V3.00.90.07	V3.0.71.30 SP05	When Automation Studio starts, it always tries to open the last opened project
250531	Problem	V3.00.90.06	V3.00.90.05	Error generating the header file for REAL constants >= 4e+15
400055637	Problem	V3.00.90.06	V3.00.90.05	Variable displayed with the wrong type.
400056381	Problem	V3.00.90.06	V3.00.90.04	Priority of CANopen master can be configured
400053732	Problem	V3.00.90.06	V3.00.90.04	Priority of Profibus master can be configured
400054118	Problem	V3.00.90.06	V3.00.90.03	With an existing online connection, fixed node numbers are detected incorrectly
400059705, 400060245	Problem	V3.00.90.06	V3.00.81.23 SP0x	Incorrect offsets sometimes generated for global variables
400060503	Problem	V3.00.90.06	V3.00.81.23 SP0x	Incorrect code generation for "stretched" MOV blocks
400056569	Problem	V3.00.90.06	V3.00.81.22 SP01	Bit 30 of a COB−ID was not properly handled by the CAN configuration editor
400056892	Problem	V3.00.90.06	V3.00.81.22 SP01	C++: Failed allocation of bur_heap_size memory gives no Warning/Error
400059327	Problem	V3.00.90.06	V3.00.81.22 SP01	For ARwin, the setting "Preserve permanent PV memory ..." is not preserved.
400058276	Problem	V3.00.90.06	V3.00.81.22 SP01	Special characters replaced by question marks during import
400051241	New function	V3.00.90.06	V3.00.81.18	No positive feedback for Check Offsets
400055024	Problem	V3.00.90.06	V3.00.80.31 SP01	Changing the node number of I/O modules results in incorrect mapping.
400058543	Problem	V3.00.90.05	V3.00.81.22 SP01	AS crashes when monitor mode is activated
400057419	Problem	V3.00.90.05	V3.00.81.22 SP01	If the configuration and the PLC have the same name, then modules can't be inserted.
400051553	Problem	V3.00.90.05	V3.00.81.19 SP01	Changing constants in ANSI C libraries results in the respective program not being generated
400057092	Problem	V3.00.90.05	V3.00.81.18	Crash when parameters are entered in extra device settings without separator
400055476	Problem	V3.00.90.05	V3.00.81.18	Object names that contain a comma are not displayed in the software configuration monitor
400056949	Problem	V3.00.90.05	V3.00.81.18	*.hpp files are not exported with "Export Source Library"
400054960	Problem	V3.00.90.05	V3.00.81.18	Project containing frozen fieldbus devices can't be built.
400056399	Problem	V3.00.90.05	V3.00.81.18	Slow system response when opening the connection dialog box between Safety CPUs
400054338	Problem	V3.00.90.05	V3.00.80.31 SP01	NC Test can't be opened
400047860	Problem	V3.00.90.05	V3.00.80.31 SP01	Cam profile editor remains locked after turning off monitor mode.
400042992, 400043877, 400048435	Problem	V3.00.90.05	V3.00.80.25	USB device can't be deleted
400022586, 400030657	Problem	V3.00.90.05	V3.0.71.27 UP04	Inserting an SI4100 changes arnc0cfg
244595	Problem	V3.00.90.04	V3.00.90.03	Static hybrid libraries can't be generated in projects that have a space in the path.
400054562	Problem	V3.00.90.04	V3.00.90.03	Malfunction of CheckBounds
244671	Problem	V3.00.90.04	V3.00.90.03	Build doesn't detect changed constant
244250	Problem	V3.00.90.04	V3.00.90.03	After performing "Clear Data", the logger data is deleted, but not refreshed
400055263	Problem	V3.00.90.04	V3.00.90.03	Sample files that are linked to on Help pages can't be saved.
400055860	Problem	V3.00.90.04	V3.00.81.22 SP01	Error "illegal option −− O" when generating static C/C++ library
400056134	New function	V3.00.90.04	V3.00.81.22 SP01	Errors should also be acknowledged with SFCQuitError when SFCPause = TRUE
400056231	Problem	V3.00.90.04	V3.00.81.20 SP01	Cyclic program won't open
400056008	Problem	V3.00.90.04	V3.00.81.18	Modem description string with single quote doesn't work
245404	Problem	V3.00.90.04	V3.00.81.18	Relaying contacts and coils to a MOVE output causes incorrect functionality.
400055093	Problem	V3.00.90.04	V3.00.80.33 SP02	Undeclared structure element is not detected as an error.
400055457	Problem	V3.00.90.04	V3.00.80.33 SP02	Changing the prototyping of the function block doesn't cause the task to be recompiled
243470	Problem	V3.00.90.04	V3.00.80.33 SP02	Malfunction in Select Variable window for making I/O assignments
243455	Problem	V3.00.90.04	V3.00.80.33 SP02	Array elements are shown multiple times
400040120	Problem	V3.00.90.03	V3.00.80.25	When adding existing objects, the object description is not added
400037337	Problem	V3.00.90.02	V3.0.71.34 SP06	Error "error 9234: Error creating make" if the active configuration contains invalid .br modules
400009868	Problem	V3.00.90.02	V3.0.71.16 SP01	Sorting order cleared when a new entry appears in the logger or when the logger is reopened.
400150212	Problem	–	V3.00.90.29 SP0x	Incorrect offset for permanent variables

400138687	Problem	–	V3.00.90.29 SP0x	Not able to configure PV memory in the system configuration
376290	Problem	–	V3.00.90.28 SP0x	Known error
379370	Problem	–	V3.00.90.28 SP0x	Froozen usbms module cannot be unfroozen
400123570	Problem	–	V3.00.90.27 SP0x	Recurring problem of insufficient UserRAM+REMMEM memory after changing AR version from Q4.02 to R4.02
400115770	Problem	–	V3.00.90.26 SP0x	Insert menu option not displayed in text editors
400110589	Problem	–	V3.00.90.25 SP0x	Incorrect version number of the VISAPI library displayed in the software configuration
400107599	Problem	–	V3.00.90.24 SP0x	Incorrect version number of the VISAPI library displayed in the software configuration
400112061	Problem	–	V3.00.90.24 SP0x	Support for UXGA resolution
400106581	Problem	–	V3.00.90.24 SP0x	Incorrect version displayed in the module parameter window for frozen hardware modules in some cases
400102707	Problem	–	V3.00.90.23 SP0x	If it is not possible to set breakpoints in programs, this may be caused by debugging explicitly being disabled in the task settings.
400101370	Problem	–	V3.00.90.23 SP0x	Debugger cannot be started if certain files in the project directory are write−protected.
400102438	Problem	–	V3.00.90.23 SP0x	Data type filter in the variable selection dialog box for I/O mapping not working in the German version of Automation Studio
400096914	Problem	–	V3.00.90.23 SP0x	Prespecified size of TmpRAM/OS area setting exceeds the checked maximum size
400103265	Problem	–	V3.00.90.23 SP0x	Unable to open SafeDesigner from AS
400094713	Problem	–	V3.00.90.22 SP0x	Changes made in the "Inverse" or "Simulate" column in the I/O mapping editor are lost if multiple mappings are selected at the same time.
400092113	Problem	–	V3.00.90.21 SP0x	Faulty GSDML files can result in duplicate channel names
400068304, 400073285, 400078138, 400109543	Problem	–	V3.00.81.26 SP0x	When an OPC item in the mapping is deleted or inserted, a comma is inserted after the index in the connection description of array elements.
400056193	Problem	–	V3.00.81.18	Projects with hardware modules that contain µ in their channel descriptions can not be build in the Chinese version of Windows.
400054385	Problem	–	V3.00.80.30 SP01	FW1.1.14.2 of the LS 182.6−1 tends to invalid Datapoints
225956	Problem	–	V3.00.80.28 (FR000531)	Changing a PV or structure type member from value type to reference is not detected reliably in CopyMode.
255560	Problem	–	V3.00.80.19	Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor
255565	Problem	–	V3.00.80.19	Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor
255575	Problem	–	V3.00.80.19	Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor
255570	Problem	–	V3.00.80.19	Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor
400032355	New function	V3.00.90.10	V3.00.90.09	Setting for the maximum number of profiler archive modules
400028142	New function	V3.00.90.10	V3.00.80.20	Checklist for handling errors
227270	New function	–	V3.00.80.25	Executable samples for the DRV_mn library
400061159, 400102463	Problem	V3.00.90.24 SP0x	V3.00.90.23 SP0x	In case of name changes of Pages, changes were not applied to target.
400088065, 400101887	Problem	V3.00.90.24 SP0x	V3.00.90.20 SP0x	Correction regarding "AlphaPad QVGA" touch pad in the "BR_Default_QVGA" template
400061159	Problem	V3.00.90.24 SP0x	V3.00.81.23 SP02	In case of name changes of Pages, changes were not applied to target.
400073633, 400082385	Problem	V3.00.90.24 SP0x	V3.00.80.09	Problem compiling constants in VC3
400079441, 400078977, 400094005	New function	V3.00.90.23 SP0x	V3.00.90.18	Icons hard to see
400086602, 400088464	Problem	V3.00.90.22 SP0x	V3.00.90.20 SP0x	Error when the movement order is changed for a control on a common layer.
400082169	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	AS crashes when a button with a bitmap is copied in the VC3 editor
400075880	Problem	V3.00.90.22 SP0x	V3.00.90.19 SP0x	Fixed a problem when changing of the station number.
400070358, 400073822	Problem	V3.00.90.22 SP0x	V3.00.81.27 SP0x	In certain projects, enabling cross−compile results in Error 7900.
400061375, 400078107, 400083309, 400087217	Problem	V3.00.90.22 SP0x	V3.00.81.23 SP02	When you copy text from the properties, the whole text is copied instead of just the current selection.
400083435	Problem	V3.00.90.21 SP0x	VC 3.95.3	Automation Studio crashes when you copy languages using Ctrl + C / Ctrl + V
400080527	Problem	V3.00.90.21 SP0x	V3.00.90.19 SP0x	Error converting Visual Components data points from Automation Studio 2.7 to Automation Studio 3.0.90
400075323	Problem	V3.00.90.21 SP0x	V3.00.81.27 SP0x	Retractor character for no reason after refreshing data source.
400081749, 400081606	Problem	V3.00.90.20 SP0x	VC 3.95.3	Problem with path formating from structures fixed.
279308	Problem	V3.00.90.20 SP0x	V3.00.90.17	Build time for text groups optimized.
400076137	Problem	V3.00.90.19 SP0x	VC 3.95.0	When importing resources, data points on a layer are not imported.
400067026, 400071283	Problem	V3.00.90.19 SP0x	V3.00.90.18	VC3 application can't be opened if the user name contains Cyrillic characters
400075792, 400076222, 400077748,	Problem	V3.00.90.19 SP0x	V3.00.90.18	Visualization objects can't be translated with GCC 2.95.3 if the project path contains a space.

400077891				
400062342, 400062713, 400062960, 400063419, 400074584	New function	V3.00.90.19 SP0x	V3.00.90.06	Merging data sources when importing resources
400074452	Problem	V3.00.90.19 SP0x	V3.00.81.27 SP0x	Structure array can't be expanded without refreshing the data source
400000595	Problem	V3.00.90.16	V3.00.90.14	Crash when VC objects are opened in a specific project
400043304	Problem	V3.00.90.16	V3.00.81.19	Incorrect display of arrays with many elements (80000 or more)
400067118	Problem	V3.00.90.13	VC 3.73.0	When VC Windows terminal is restarted, a running ARwin is not closed
400037920, 400041371, 400045431	Problem	V3.00.90.13	V3.00.90.11	Display error in the bitmap 'zuneAlphaPadQvga'
400046081	Problem	V3.00.90.13	V3.00.80.31 SP01	Layer copied from a page to the common layers keeps the property "hidden"
400068118	Problem	V3.00.90.12	V3.00.81.24 SP0x	Compiler output improved for Error 7164.
400065760	Problem	V3.00.90.12	V3.00.81.24 SP0x	Using multiple VC data sources causes a page fault.
400062173	Problem	V3.00.90.12	V3.00.81.24 SP03	Switching from 8−bit to 32−bit isn't applied to all graphics.
400053770	Problem	V3.00.90.12	V3.00.80.31 SP01	Element of a structure can't be displayed during runtime
400063338	Problem	V3.00.90.11	VC 3.73.0	Display of import log file doesn't work. The file is created in the wrong folder.
400053165	Problem	V3.00.90.11	VC 3.72.6	If an incorrect administrator password is entered, the VC Windows terminal won't boot automatically anymore.
400064647	Problem	V3.00.90.11	V3.00.81.24 SP0x	Changes to the name of the visualization are not saved in the project file.
400064021	Problem	V3.00.90.11	V3.00.81.24 SP0x	Incorrect error message when the wrong directory is specified in the VC Import Wizard.
400060674	Problem	V3.00.90.11	V3.00.81.23 SP02	With more than 10 key levels, switching displayed level in VC editor doesn't work correctly
400057211, 400060560, 400062831, 400070847	Problem	V3.00.90.11	V3.00.81.18	It was no longer possible to create an internal data source.
400034476	Problem	V3.00.90.11	V3.00.80.25	Grid settings in VC editor disappear if window too small
400060889	Problem	V3.00.90.11	V3.00.71.32 SP06	VC3 visualization application always transferred
400052964, 400060332	Problem	V3.00.90.10	VC 3.72.6	When opened, the visualization application is always marked as having been changed
400054507	New function	V3.00.90.10	VC 3.64.0	For the Toggle and Momentary DP key actions, the default setting for "pressed" status has been changed to 1.
400062424	Problem	V3.00.90.10	V3.00.90.05	Importing a 32−bit PNG inserts it as an 8−bit bitmap
400062105	Problem	V3.00.90.10	V3.00.81.26 SP0x	VC Editor crashes if a CPU name with more than 20 characters is used in a project.
400064754	Problem	V3.00.90.10	V3.00.81.24 SP0x	Variables are not deleted from the data source file when the last active reference is deleted.
400064577	Problem	V3.00.90.10	V3.00.81.24 SP0x	Limit for the expand function increased from 255 to 10000 elements.
400062865	Problem	V3.00.90.09	V3.00.81.24 SP03	The variable that is used exclusively for Fill Areas is decoupled from the property by VC
400060300	Problem	V3.00.90.09	V3.00.81.23 SP02	Layout of the listbox during rundime depends on the text size in Windows 7
400061451	Problem	V3.00.90.09	V3.00.81.23 SP02	Refactored variable not being saved
400059732	Problem	V3.00.90.09	V3.00.81.23 SP02	Refactored variable not being saved
400052336, 400061114	Problem	V3.00.90.09	V3.00.81.23 SP02	Array elements not being linked to the task during import
400057285	Problem	V3.00.90.09	V3.00.81.22 SP01	TextIndexOffset −1 not being saved
400059383, 400061465, 400063019, 400064576	Problem	V3.00.90.09	V3.00.81.22 SP01	Unit groups can no longer be connected to arrays
400058284	Problem	V3.00.90.09	V3.00.81.18	Absolute path in the *.mak file in VC3 visualization
400056974, 400059791	Problem	V3.00.90.09	V3.00.81.18	Members of FUB arrays not displayed correctly in the VC data source
244258	Problem	V3.00.90.08	VC 3.72.8	ReplaceColor doesn't work correctly for 32−bit bitmaps.
400054482	Problem	V3.00.90.08	VC 3.64.2	ReplaceColor doesn't work correctly for 32−bit bitmaps.
400055896	Problem	V3.00.90.08	V3.00.81.24 SP0x	The structure of a reference is displayed incorrectly in the cross reference in VC.
400061454	New function	V3.00.90.08	−	Output number of acknowledged alarms.
400055909	Problem	V3.00.90.07	VC 3.72.6	Data points linked to vKeys are sometimes disconnected if the project contains more than one visualization
400055285	Problem	V3.00.90.07	V3.00.81.18	Incorrect handling of data source in source control
400026964, 400049218	Problem	V3.00.90.07	V3.0.71.31 SP05	ShowConnections function doesn't work on text groups when pages are closed
400050882, 400055585, 400060760	Problem	V3.00.90.06	VC 3.72.6	Variable and units overlap in the editor.
400049724, 400052262	Problem	V3.00.90.06	VC 3.64.2	When a visualization page is copied, the tab order of the controls is lost
400055896	Problem	V3.00.90.06	V3.00.81.18	After a "Build all", visualization objects ignored in "Build Cross Reference"
400055155	Problem	V3.00.90.06	V3.00.81.18	Build error when config name contains "Temp"
400052054	Problem	V3.00.90.06	V3.00.81.18	Incorrect error message when multiple KeyMapping files are mapped
400055336	Problem	V3.00.90.06	V3.00.81.18	GDI resources are lost when switching between two trend windows
400051047	Problem	V3.00.90.06	V3.00.81.18	Problem replacing data points in VC
400050913	Problem	V3.00.90.06	V3.00.81.18	Additional nodes in structures in the data source view
400008201, 400006669,	New function	V3.00.90.06	V2.6.0.0012 SP02	The number of key levels has been increased to six

400009276, 400009917, 400013774, 400015386, 400015877, 400016146, 400018752, 400044279, 400053932, 400060613				
263545	Problem	–	VC 3.92.0	The font "Small Font" is not displayed correctly
400091640	Problem	–	V3.00.90.22 SP0x	Connected array items are disconnected when you "Import from another project" if data points are overwritten.
228710	Problem	–	V3.00.81.14	A build with GCC 2.95.3 doesn't work if the installation path contains parentheses ()
400056208	Problem	–	V3.00.81.14	Incorrect display of control element "Numeric" in the editor
400063641	Problem	V3.00.90.11	V3.00.90.09	ACOPOS parameter tables are not completely converted from AS 2.x to AS 3.x
400083307	Problem	V3.00.90.21 SP0x	–	Support for DATE_AND_TIME data type.
400068078	Problem	V3.00.90.12	V2.7.0.0020 SP13	Unable to enter parameters for the Profibus master modules
400056581	Problem	V3.00.90.07	V2.7.0.0020 SP13	Recursion when using a field variable in CheckBounds
400044791	Problem	V3.00.90.08	V3.00.80.31 SP01	Error 4813 when transferring project after "Rebuild All"
400068552	Problem	V3.00.90.12	V3.00.81.28 SP0x	Motion Samples: All errors have been acknowledged at once.
400049392	Problem	V3.00.90.12	V3.00.80.31 SP01	Addtional information 0x80004008 E_EXISTS is not described in error description 28700.
258187	Problem	V3.00.90.11	ARSG4_3.07.2_B03.07	Firmware Update for SafeMC did not complete.

Requests and problems by product/component

1A4300.02 Automation Studio 3.x

AS Internals − Object Model

ID#400066847 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.11

After axis mappings are converted from 2.x to 3.0, not all axis mappings are displayed.

After converting a project, if the axis mapping is opened "hardware oriented", then not all mappings are shown

Build

ID# 400123605, 400125063 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.29 SP0x

Declaring arrays of derived data types

When declaring arrays of derived data types, the size and offset of permanent variables of these types are not calculated correctly. This can lead to inconsistencies in the memory image on the target system.
Affected projects then unjustifiably show build warnings such as:
"Warning 9083: No size inserted for permanent variable "VARIABLENNAME" in offset table."

The error correction solves the problem without having to rebuild affected projects.

ID#400119546 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.28 SP0x

Project build aborted without error message

If the option −w<Number> or −w is set in the additional settings of a configuration, then the project build is aborted without an error message if a VC version is missing.

ID#400114092 : solved problem, known since V3.00.90.25 SP0x, solved since V3.00.90.27 SP0x

External build using a UNC path causes errors

If a project is built externally (BR.AS.Build.exe), a UNC path (\\<PC_Name>\\.....) cannot be used.

ID#400110175 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Converted project returns "Fatal error 9270"

If a project contains binary objects, they are entered incorrectly into the software configuration when a project is converted. This results in "Fatal error 9270" when the project is compiled.

ID#400091964 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

Crash during build.

If the file generated by the linker during a build is very large, then BR.AS.Backend.exe crashes.

ID#400094222 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Project that is missing references can't be generated.

If a project contains referenced packets or POUs that point nowhere, then the project can't be generated.
Workaround: Correct the references to destinations that actually exist.

ID#400089766 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.22 SP0x

Error 9270 when a decimal is used in an Include directory.

If the path of an #include statement in ANSI C source code contains a decimal point, then Error 9270 is generated during compilation.

ID# 400086959, 400087046, 400089029, 400090898 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

Fatal error 9270 when building a project with OPC objects

Projects containing OPC objects cause Error "9270 no rule to make target" when they are built.

ID#400087235 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Project that is missing references can't be generated.

If a project contains referenced packets or POUs that point nowhere, then the project can't be generated.
Workaround: Correct the references to destinations that actually exist.

ID#400086497 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Error "no rule to make target" when building a project

If a header file from the installation folder is used in a task, the error "no rule to make target" appears when you build a project. It is then no longer possible to build this task normally.
Rebuilding the project works.

ID#400082111 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

ArConfig.br isn't generated when building a configuration with an AC14x as the CPU if AC14x CANIO is disabled on the CAN interface.

If you have a configuration with an AC140 or AC141 as the CPU, and if the CAN has AC14x CANIO disabled, then ArConfig.br is not generated and there are no warnings or errors. As a result, subsequent scrolling doesn't work properly.

ID#400084126 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

Derivations of the type "ARRAY OF STRING" cause the build to crash

If a type declaration file contains data type derivations of the type ARRAY OF STRING, the build will crash during the initial analysis.
There is no known workaround for this error.

ID#400082887 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

After a hybrid library is imported it can't be compiled

When you import a hybrid library with a large number of source files into a project, you get an error when compiling the project.

ID#400080716 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

In some cases, negative string lengths are not prohibited with an error message.

If an IEC string variable declaration is made via ANSI C, this automatically generated declaration is permitted to have negative string lengths. It is also possible to enter negative string lengths textually.

If this variable is only used in C/C++ , then no error message is generated.

This error has been corrected, and an error message is now generated in these cases during a build.

ID#400076554 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.20 SP0x

Incorrect size calculation for process variables with empty user data type

If an empty user data type is created in a project and used with a remanent or permanent process variable, then errors occur when calculating the actual size of the remanent or permanent memory.
Among other things, this error affects the PV memory dialog box: an incorrect value of 0 is indicated as the required amount of permanent or remanent memory.

The error always occurs when an empty user data type is used.
Example of an empty user data type with no elements:
STRUCT test :
END_STRUCT

The error can be avoided by not using empty user data types. There is no good reason to use empty user data types, and they should be avoided in actual program code.

ID#400078852 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

"Error 9290: The command line arguments for the software object "XXXXXXXX" exceed the maximum permitted length of 32.768. "

If a program contains a file with many (over 100) actions, then the above error may occur depending on the path of the respective file.
After this error is corrected, a program containing files with more than 1 action will always be retranslated during the next build.

ID#400075329 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Compiler error 4512

If an SFC program contains a step implemented in Automation Basic, and if this step contains an all−caps STEP OF ACTION instruction, this will result in Error 4512 during a build.

ID#400074035 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.19 SP0x

Libraries are recompiled when zipped projects are opened.

When using "Save project as zip", if you select "Resolve references", then the libraries in this project will be recompiled and retransferred when the project is built.

ID#400073991 : solved problem, known since V3.00.90.16, solved since V3.00.90.19 SP0x

Libraries that contain actions are regenerated with every build.

Libraries that contain actions are regenerated with every build, even when no changes have been made.

ID#400069448 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.14

Memory overwritten when two local function blocks with the same name are used

Using two local function blocks with the same name and different structures results in memory being overwritten, because the wrong block description is used to calculate the memory required for an instance.

ID#400070129 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.14

"Undefined reference" when generating C++ task

If multiple interdependent static C++ libraries are used in a project, then when you generate the task you get an error regarding undefined references.
The problem can be solved by
a) arranging the libraries in the logical view from top to bottom so that the base libraries come before the derived libraries (directory level doesn't matter).
b) entering the dependencies to other static libraries in the properties of the respective library in the logical view.
(e.g. "Inherit" Library −> Dependency on −> "Base" library).

ID#400068093 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

Build terminates unexpectedly

With AS versions < 3.0.90, errors sometimes occur while saving symbol information during a build which can cause the next build to terminate unexpectedly.
In AS >= 3.00.90 this error has been identified and corrected. In these cases a rebuild is no longer necessary.

ID#400065675 : solved problem, known since V3.00.90.09, solved since V3.00.90.10

Using functions from <math.h> in a static C library causes build error with SG3/SGC

Using functions from <math.h> in a static C library causes build error with SG3/SGC

ID# 400063546, 400065518 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.09

Password protected data objects or tasks cannot be compiled on computers running Win7 64−bit

When compiling password protected objects, the message "Error 430: Unable to open file" is output

ID#400062823 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.09

Error(s) occurred while generating cross−reference data

The declarations from custom libraries are not found when generating the cross reference list.

ID#400060886 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.09

VAR CONSTANT of function blocks overwritten by initialization of instance variable

Constants that are declared for a function block could be overwritten by initialization of the instance variable.

ID#400051153 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.07

Error generating the header file for REAL constants < 1.0e−5

If a C/C++ library has a REAL constant with a value of 1.0e−5 or lower, then the constant is shown incorrectly in the header file.

ID#250531 : solved problem, known since V3.00.90.05, solved since V3.00.90.06

Error generating the header file for REAL constants >= 4e+15

If a C/C++ library has a REAL/LREAL constant with a value of 4e+15 or higher, then the constant is shown incorrectly in the header file.

ID#244595 : solved problem, known since V3.00.90.03, solved since V3.00.90.04

Static hybrid libraries can't be generated in projects that have a space in the path.

If static libraries are exported as hybrid libraries (sources of individual .c/.cpp files are excluded from the export), then using them in projects that have a space in their path results in an error during generation.
C:/Program Files/BrAutomation/AS30081/As/GnuInst/V4.1.2/bin/i386−elf−ar.exe : Error : <Path>/<File name>.o: No such file or directory

ID#400055093 : solved problem, known since V3.00.80.33 SP02, solved since V3.00.90.04

Undeclared structure element is not detected as an error.

If an undeclared structure element is addressed for a structure variable, (e.g. struVar.unknown = 1), the compiler doesn't detect this as an error and only outputs a warning.

ID#400051553 : solved problem, known since V3.00.81.19 SP01, solved since V3.00.90.05

Changing constants in ANSI C libraries results in the respective program not being generated

If the value of a constant in an ANSI C library is changed, the respective program won't be generated during the next build.

ID#234606 : solved problem, known since V3.00.81.09 (FR000488), solved since V3.00.90.14

New reserved names

With AS V3.0.90 and higher, the names BYTE, WORD, DWORD, DATE, TIME_OF_DAY, TOD, WSTRING are provided by the system as data types, and can therefore not be assigned by the user.

ID#400046363 : solved problem, known since V3.00.80.29 SP01, solved since V3.00.90.07

Declaration of arrays with sizeof incorrect

If a variable declaration is made in ANCI C and the sizeof operator is used, then the incorrect length is set for a PLC variable declared with this type.

```
typedef BOOL Option_fun[sizeof(option_store_typ)];

_GLOBAL option_store_typ OPT[S__MAX_OPTION_NUMBER] ;
_LOCAL Option_fun OptBitX;
```

Problem can be worked around by using literals or constants for the array length, e.g.

```
typedef BOOL Option_fun[16];
```

ID#400037337 : solved problem, known since V3.0.71.34 SP06, solved since V3.00.90.02

Error "error 9234: Error creating make" if the active configuration contains invalid .br modules

If the active configuration contains invalid .br modules (AsHwd.br, AsFw.br, ArConfig.br und IoMap,br), then an unclear error message "error 9234: Error creating make" is output.
The affected modules are therefore invalid because they are automatically transferred for each configuration,
In the future, error message "Error 9222: Software object <object name> is already defined through configuration file or data object <object path>\<object name>" will be output.

ID#400078616 : new function since V3.00.90.20 SP0x

Incorrect error position when using typedefs when using IEC declarations in ANSI C

If you use typedefs to declare IEC symbols in ANSI C, and if the base data type definition contains an error,
the position of the error is not output correctly.
In order to find the declaration error in the ANSI C, it is also possible to temporarily disable the option "Enable declaration of PLC variables (_GLOBAL, _LOCAL)" under <Project><Settings><ANSI C/C++ Compliance> and restart the build. If you do this, the C compiler outputs the error in the correct position.

ID#400150212 : known problem since V3.00.90.29 SP0x

Incorrect offset for permanent variables

A "Build all" for the project must be carried out to prevent the error from recurring.

ID#376290 : known problem since V3.00.90.28 SP0x

Known error

Address calculation under ModbusSlaveCpu/ModbusSlave is incorrect. The classes in AS 3.90 (BR.AS.RuntimeConfigurationEditor) are not suited for cascaded configurations that communicate via Modbus.
This error only occurs in AS 3.90. Starting with AS 4.0 addresses are calculated correctly.

Build − Backend

ID#400075151 : solved problem, known since V3.00.80.37 SP05, solved since V3.00.90.19 SP0x

Error 4511 while building a task

Error 4511 is output for no apparent reason while building a task. In this case the identifier specified in the error message must be renamed.

ID#400048512 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.07

It is not possible to use C variables larger than 16 MB.

If variables larger than 16 MB are declared in C programs, Error 4522 will be generated when the project is built.

Build − ConfigurationBuilder

ID#400128130 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.32 SP0x

Program crash during incremental build

The program may crash in certain situations during an incremental build. This error correction prevents this crash.

ID# 400111907, 400110988 : solved problem, known since V3.00.90.25 SP0x, solved since V3.00.90.27 SP0x

"Build cross references" function doesn't work with DTM devices.

The "Build cross references" function doesn't work when using DTM devices.

ID#400110675 : solved problem, known since ARSG4_3.08.22_V03.08, solved since V3.00.90.28 SP0x

Invalid task class priorities sometimes generated when building the system configuration

This behavior causes the target system to boot into diagnostics mode. Error 27352 is entered in the logbook.

ID#400104953 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Boolean data points from imported 3rd−party POWERLINK devices not working

If a POWERLINK device description file (XDD) is imported into Automation Studio where cyclic transfer is enabled for a non−Boolean channel, then this channel's values are not transferred if the channel's individual bits are split up into Boolean data points for the I/O mapping editor.

ID#400099713 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

First plug−in module on the CP476 cannot be used if an interface module is inserted in the 7ME020.

If a System 2003 I/O module is located in slot SS1 of a CP476 and a System 2005 interface module (3IF6*) is plugged into the 7ME020.9 module located in the SY1 slot at the same time, this situation may cause error 9136 (I/O error 2003) when the CPU is booted. Whether this error occurs or not depends on the order in which the System 2003 I/O module and the System 2005 interface module were added to the project. If the interface module is added first, this error does not occur.

ID#400093935 : solved problem, known since ARSG4_3.09.4_D03.09, solved since V3.00.90.23 SP0x

When ModbusSlaveCpu and ModbusTcp_any modules are used at the same time, only the number of slaves from the perspective of the ModbusSlaveCpu is considered.

If you create a project where, in addition to a ModbusSlaveCpu, there is also a ModbusTcp_any device connected to the Ethernet interface, a build will only generate the slaves and the number of Modbus blocks from the perspective of the ModbusSlaveCpu.

ID#400082991 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Incorrect I/O configuration when using a fieldbus CPU with an interface card

When using an SGC fieldbus CPU (e.g. XC0292) with an interface card, the generated I/O configuration is incorrect.
Under some circumstances, this can result in the I/O module on station 1 of the X2X BUS not working.

ID#400081370 : solved problem, known since ARSG4_3.07.8_H03.07, solved since V3.00.90.20 SP0x

Error 9849 when building ArConfig

If a POWERLINK station is connected using "Traced Node" mode to a POWERLINK interface set as a "Controlled Node" with operating mode "POWERLINK V1", then building ArConfig in Automation Runtime Version < A3.08, Error 9849 is generated. However, this error message would only be correct under operating mode "POWERLINK V2".

ID#400077472 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Configuration builder crashes when building ArConfig if the configuration of a DTM device is in another *.rtc file.

If the I/O configuration of a configuration's hardware modules is divided into multiple *.rtc files, and if one of the hardware modules is an FDT/DTM slave, then the configuration builder crashes or freezes when building ArConfig.

ID#400072324 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.19 SP0x

NodeSwitch channel of CAN interfaces with disabled CAN I/O

The current value of the NodeSwitch channel of CAN interfaces on SG4 target systems is not displayed in the variable monitor or in monitor mode of the I/O mapping if CAN I/O communication is disabled.

ID#400071495 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.15

Build error "Required white space was missing" when using regional and language settings for China

Using the regional and language settings for China may result in the build error "Required white space was missing." depending on the hardware used.

ID#400063018 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

MN cannot register data points on the iCN

A Managed Node cannot register its data points on the iCN due to a missing entry for safety channels on the iCN (although the entry is present on the MN).

ID#400060785 : solved problem, known since , solved since V3.00.90.11

Cross−communication on the SL's BOOL channels is not recognized as an error.

Cross−communication is not permitted on the SL's BOOL channels, but if it is configured, Automation Studio doesn't recognize this as an error.

ID#400056193 : known problem since V3.00.81.18

Projects with hardware modules that contain µ in their channel descriptions can not be build in the Chinese version of Windows.

The following error is generated when building projects that contain µ in the channel descriptions:
Required white space was missing.
Error: on line 79, position 219 in "(null)".

ID#400054385 : known problem since V3.00.80.30 SP01

FW1.1.14.2 of the LS 182.6−1 tends to invalid Datapoints

Build − FinalizeBuild

ID#400088116 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

If BR modules are entered in Automation Studio with an invalid creation date (e.g. 01.01.2070), BR.AS.FinalizeBuild.exe crashes.

Removing these modules from the project or correcting the creation date fixes the problem.

ID#400076466 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

CompactFlash can't be created for APC 6xx series

The Automation Runtime operating system is not included correctly when a CompactFlash is generated for APCs from the 6xx series. It is therefore not possible to create a CF image. There is no workaround available.

Build − IECCompiler

ID#400150365 : solved problem, known since V3.00.90.30 SP0x, solved since V3.00.90.32 SP0x

Confusing warning when comparing constant values

If a constant variable is compared to the number 0, then warning 1288 can be output during compilation. This warning is confusing rather than helpful.

ID#400121333 : solved problem, known since AS4.0.17 SP, solved since V3.00.90.29 SP0x

Error message "Error 1140: Data type mismatch: Cannot convert UDINT to SINT"

This error message is output in a Ladder Diagram function block if a SEL block is used after an ADD block and an VAR_IN_OUT parameter is used on the ADD input.

ID#400126043 : solved problem, known since ARSG4_4.04.22_V04.04, solved since V3.00.90.29 SP0x

Program crash when using verification functions CheckRange, CheckSignedSubrange or CheckUnsignedSubrange for VAR_IN_OUT parameters

If one of the verification functions CheckRange, CheckSignedSubrange or CheckUnsignedSubrange is called for a VAR_IN_OUT parameter, faulty machine code is generated that may cause the program to crash.

ID#400123456 : solved problem, known since AS4.0.16 SP, solved since V3.00.90.29 SP0x

Error 1140 output if a DIV block follows an ADD block

ID#400085958 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.28 SP0x

No error message when an output of an EN/ENO block is connected.

ID# 400118939, 400123611 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.28 SP0x

IEC compiler freeze on some Ladder Diagram programs

ID#400110320 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.27 SP0x

Converting using *_TO_STRING not working correctly when assigning to reference variables

When assigning the result of *_TO_STRING to a REFERENCE TO STRING variable, only three characters are copied to the STRING variable.

ID# 400085139, 400108232 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.26 SP0x

Error 1140 Data type mismatch: Cannot convert INT to USINT.

This error is output when a MUL block and an ADD block are connected.

ID#400104475 : solved problem, known since , solved since V3.00.90.28 SP0x

System exception when calling a function in an action

If a function is used in an action, then the function or function block only works the first time it is called in the action. This problem only occurs on SG3 and SGC target systems.

ID#400104654 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Error message when using an enumerated type defined in ANSI C

Using an enumerated data type defined in ANSI C in more than one ANSI C program mistakenly results in error message 1166 when compiling an IEC program.

ID#400077144 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Incorrect error message 1068 when using the preprocessor instruction #pragma.

When the correct preprocessor instruction #pragma is used in an IEC language or B&R Automation Basic, then Error 1068 is output incorrectly during the build.

ID#400076591 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Error when building a function block programmed in Continuous Function Chart or Function Block Diagram

When building a function block programmed in Continuous Function Chart or Function Block Diagram, Error 1236 is output for no apparent reason.

ID#400073915 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.19 SP0x

Incorrect code generation when mapping an expression to a bit

If an expression that contains an equation is mapped to a bit, the generated code is incorrect.
The faulty calculation only occurs when variables with a data width larger than 1 byte are used.

ID#400067530 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

Endless loop when using advanced MOV blocks

Using advanced MOV blocks can lead to endless loops during a build.

ID#400066294 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.11

Incorrect code generation when accessing dynamic VAR_Input variables in a block's actions.

If an action is run in a function block, and that action accesses a dynamic VAR_INPUT variable in the function block, then incorrect code is generated. When the variable is accessed, the dynamic variable is not dereferenced.

ID#400064561 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

The required size of the memory area zzInternalMemory sometimes calculated incorrectly.

Depending on the alignment, the size of zzInternalMemory is sometimes calculated incorrectly.

ID#400065482 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.10

Casting REAL or LREAL to whole number data type doesn't shorten to specified data width

When casting, the calculated result is increased or decreased to the specified data width.
dint_result = INT (40 * 1000); => −25536

When casting from REAL or LREAL to a whole number data type, the result is not shortened to the specified data width.
dint_result = INT (40.0 * 1000); => 40000

ID#400065147 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Warning 1289: Missing BOOL variable 'SFCInit' to initialize action

If an SFC action programmed in SFC is opened, it looks for one of the SFC system variables SFCInit or SFCReset. If they are not found, the SFC can't be initialized correctly and the warning is generated.
If the SFC action is not opened from an SFC program or an SFC function block, but instead from a ST program, then the SFC system variables are not found and a warning is generated.

ID#400064208 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

CheckDiv functions in the IEC Check library are called for MOD operators

The build option −D _MODULO_CHECK_OFF can be used to prevent calling the respective CheckDivXXX function from the IEC Check library when the MOD operator is used.
The command line option is documented on the Help page for the IEC Check library.

The result of an unmonitored MOD 0 operation is 0.

ID#400054562 : solved problem, known since V3.00.90.03, solved since V3.00.90.04

Malfunction of CheckBounds

If a function block receives a reference to an array and the lower or upper limit of the index range is a constant, then the value of the constant is incorrectly interpreted as 0. In order for the error to be corrected, the respective project must be recompiled.

Build − IOMapBuilder

ID#400092880 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Error 9237 if project build aborted when generating the I/O mapping

If a project build is aborted while the I/O mapping builder is running and the build process is then restarted immediately, then error 9237 will be reported and the project is completely rebuilt.

ID#400106142 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.29 SP0x

Installation error after changing the length of a dynamic I/O channel

If the length of a dynamic variable but not its name is changed in the POWERLINK configuration, installation error 8099 may occur when when transferring the I/O mappings (IoMap).
If the name of the dynamic I/O channel is also changed, this error does not occur.

Build − MCBuilder

ID#400093166 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Changing the version of NC data objects has no effect

When the version of an NC data object is changed, it isn't regenerated and is therefore also not transferred to the controller.

Build − OPC

ID#400105732 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.25 SP0x

OPC configurations rebuilt any time a variable declaration is changed

Changing any variable declaration until now caused the OPC configuration to be rebuilt during a build.

ID#400085395 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

OPC build doesn't work for large configurations

If OPC configurations were created that consisted of many opct files, then the OPC build wouldn't complete.

ID#400091476 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Bit addressing with a Windows OPC configuration results in PVI Error 12037

Due to an error in the OPC build, incorrect entries are generaged in the output file for the B&R Windows OPC server.
This can cause a connection error between the OPC server and client, and the PVI Error 12037 is reported on the server PC.

ID#400061893 : solved problem, known since V3.00.90.05, solved since V3.00.90.09

OPC server − continuous RAM consumption

Each time a value changes on an item, the OPC server consumes an additional 30MB of RAM

ID#400056018 : solved problem, known since V3.00.81.19 SP01, solved since V3.00.90.08

Error message when an OPC tag isn't assigned to a variable

If an OPC tag is not assigned a variable (either in the tag editor or in a mapping editor), a warning is generated during a build instead of an error message.

Build − Taskbuilder

ID# 400156805, 400168277 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

Error checking data types on SG3 target systems

Error checking data types on SG3 target systems

ID# 400154497, 400156805, 400161543, 400161768, 400162429, 400162700 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

Error due to build option "−limit1"

Error due to build option "−limit1"

ID#400144600 : solved problem, known since ARSG4_4.02.22_V04.02, solved since V3.00.90.32 SP0x

Incorrect length calculation with circular references

When calculating the length of data types, errors can occur if circular references are used.
This is the case, for example if a data type uses another data type, which is using a reference to the original data type.

ID#400141163 : solved problem, known since V3.00.90.30 SP0x, solved since V3.00.90.31 SP0x

Error detecting build dependencies

If a structure element uses an array of a structure that has been declared in another declaration file, then the build dependency is not detected.

ID#400121358 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.31 SP0x

Build not working correctly after moving a declaration file

If a program includes an action, then moving a declaration file used in the program and then performing a build may not result in the program being recompiled.

ID#400114072 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Constant string lengths are not resolved in data types derived from STRING.

If a data type derived from STRING has a length defined by a constant, then the length of the derived string is not resolved.
This causes instances of this data type to receive an incorrect length.
This can result in memory overlaps on the target system, which can lead to unpredictable effects.
Projects that use this constellation must be revised by performing a rebuild.

ID#400102421 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.26 SP0x

Constants for limiting arrays

Type elements are mistakenly used when resolving constants for array limits. This error correction changes this behavior so that structure data type elements are no longer included.

ID#400099222 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.25 SP0x

"Out of memory" in projects with large PVs

An "Out of memory" error message may occur for projects with large PVs when building the module. The build is then aborted.

This correction has allowed the internal memory required when specifying offsets to be drastically reduced.

ID#400076865 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

On a Win7 64−bit system, BR module files sometimes have a different size than they do on a Windows XP system

The BR module files of cyclic tasks within an Automation Studio project are larger on Win 7 64−bit systems than they are in the same project on a Windows XP system. The reason for this is that on a Win 7 64−bit system the INIT section of the BR module file isn't compressed. This error has no effect on the functionality of the application. There is no workaround available.

ID#400067024 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

Initializing function block arrays causes build error 6024.

Initializing functions block arrays causes Error 6024 when built.
Example:
ton_arr : ARRAY[0..1] OF TON := [(IN:=FALSE)];

ID#400055637 : solved problem, known since V3.00.90.05, solved since V3.00.90.06

Variable displayed with the wrong type.

Adding to a structure causes a variable to be shown with the wrong type.
Reason: Overflow of internal data structures.

In the future the error
<Taskname>:Error: 6473:Offset in information section for data types exceeds limit
will be generated.

ID# 400059705, 400060245 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.06

Incorrect offsets sometimes generated for global variables

In projects with the following characteristics
* Project contains ANSI−C tasks

* multiple tasks, at least one ANSI−C task, use the same global variables
* these variables have the type user data type (structure) or enumerator
* the data types are used in ANSI−C via variables using _GLOBAL
the incorrect variable offsets may be assigned for global variables.

To fix this issue in affected projects, perform a Clean and a Rebuild All.

ID#244671 : solved problem, known since V3.00.90.03, solved since V3.00.90.04

Build doesn't detect changed constant

If a globally declared constant
VAR CONSTANT
gconst1 :
USINT := 12;
END_VAR

is used in a local type declaration of a program
TYPE
task1Type1 :
STRUCT
ele1 : gType1;
ele2 : lib5Fub1;
ele3 :
ARRAY[0..gconst1] OF USINT;
END_STRUCT;
END_TYPE

then changing the constant doesn't causes the respective program to be rebuilt.

ID#400055457 : solved problem, known since V3.00.80.33 SP02, solved since V3.00.90.04

Changing the prototyping of the function block doesn't cause the task to be recompiled

Changing the prototyping of the function block doesn't cause the task to be recompiled if only the block's instance variable and not the block itself is called in the respective program. This can cause the application to malfunction or the CPU to crash.

Build − TpuBuilder

ID# 400075865, 400077909 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

AsTpu.br can't be compiled in the German version of Automation Studio.

ID# 400076507, 400077909, 400075865 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Error 6599 when building the AsTpu library

When building a configuration for an SG3 CPU with a TPU configuration, the internal error 6599 occurs, since a required configuration file is not installed.

Build − Transfer To Target

ID#400111949 : solved problem, known since V3.00.90.25 SP0x, solved since V3.00.90.28 SP0x

"Transfer only if not on target" setting ignored for referenced packages

ID#400102630 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Tasks loaded to the controller even though the option "Transfer objects only if relevant changes" is enabled

If a new global variable is declared, it is possible that tasks not using this variable will be loaded to the controller even though the option "Transfer objects only if relevant changes" is enabled.

ID#261036 : solved problem, known since V3.00.90.10, solved since V3.00.90.11

After the range limits of global array variables are changed, the new ranges aren't initialized

In "Copy" downloading mode, when the range limits of global array variables are changed (e.g. from [−2..2] to [0..4]) the array elements are not initialized.

ID#400065008 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

For arrays with only one element, the software mismatch dialog box always detects a change.

ID#225956 : known problem since V3.00.80.28 (FR000531)

Changing a PV or structure type member from value type to reference is not detected reliably in CopyMode.

If you change an existing PV from value type to reference or back, this change is not detected correctly by AS in CopyMode.
As a result, there is no (correct) user information regarding the pending initialization.

Build − VC3

ID#400118478 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.27 SP0x

VC3 VA_Setup failure when using the VCScrSht library

Diagnostics − Debugger

ID#400140914 : solved problem, known since V3.00.90.29 SP0x, solved since V3.00.90.32 SP0x

Setting breakpoints in code segments used in multiple places

This correction fixes an error that occurred when setting breakpoints in code segments used in different compilations.

ID# 400126188, 400126188 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.32 SP0x

Error setting breakpoints in "Actions"

If breakpoints are set in IEC actions, it is possible that they are incorrectly marked as inactive. This error has been corrected.

ID#400122399 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.33 SP0x

Error message when setting breakpoints in IEC actions

If a breakpoint is saved in an IEC action, the error message "Setting breakpoint failed with message: No line xxx in file..." is output sporadically.

This error has been corrected.

ID#400111643 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.29 SP0x

Debugger reaching breakpoint in incorrect context

If referenced source code files are used that contain breakpoints, it is possible that the debugger reaches the breakpoints in an incorrect program context.

ID#400107150 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Error setting breakpoints in referenced source code files

If source code files were being used as a reference, then setting debugger breakpoints in these files was no longer possible in certain circumstances.
This error has been corrected.

ID#400086699 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

With Chinese language settings, the "Active line" is not displayed.

If the Windows setting "Language for non−Unicode programs" is set to "Chinese" then the "Active line" is not marked in the text editor during debugging.

ID#400101813 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

Error message in Automation Studio when starting a function block during debugging

An error message may be output if an instance of the "CfgSetIPAddr" function block is executed while the debugger is active in Automation Studio.

ID#400087024 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

GDB freezes at frame info

The parser for GDB tasks gets stuck between single quotation marks in some character strings.

ID#400089656 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Breakpoint can't be set

If you try to set a breakpoint in an ANSI C source file, certain configurations (e.g. static libraries in the project) prevent you from doing so.

ID#400087683 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

The module context can not be changed under certain circumstances.

If a source code file is referenced in two programs in the Logical View and these programs are mapped to two different tasks in the software configuration, then the module context can't be switched between these tasks in monitor mode.
There is no possible workaround for this error.

ID#400087487 : solved problem, known since ARSG4_4.01.3_C04.01, solved since V3.00.90.22 SP0x

CPU load spikes when Automation Studio shows function block tooltips.

ID#400087398 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

AS crashes when you double click "Add variable" in the Debugger Watch window.

If you double click on the "Add variable" button in the Debugger Watch window, Automation Studio crashes.

ID# 400081602, 400090374 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

Debugger crashes when a breakpoint is set in an action.

If an action is used in a function block or a function, the Debugger crashes when a breakpoint is set within the action.

ID#400083042 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.23 SP0x

Problems when breakpoints set in libraries

Under certain circumstances setting breakpoints in libraries causes problems. A breakpoint can only be set in the context of a program.

ID#400078014 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Problem selecting function block instance for array variables

If a breakpoint is set in the program code for a function block, then in the breakpoint window under the "Condition" column you can select an instance of the function block to which the breakpoint refers. If the "Select" dialog box is used to do this, then arrays of function block instances don't allow individual elements to be selected. With this selection the dialog box can no longer be closed with OK, since the button is disabled.

This error has been corrected. As a workaround, the same result can be achieved by selecting the entire array variable in the dialog box, and then entering the desired index (in brackets) in the breakpoint window.

ID#400077131 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Auto Watch is shown in monitor mode even though it was unchecked.

ID#400062774 : solved problem, known since V3.00.81.18, solved since V3.00.90.10

Didn't stop at breakpoints when CPU had insufficient RAM

During debugging, the required information is copied from the UserROM to the UserRAM. Depending on the hardware and the project structure the CPU may have insufficient RAM. When this was the case the debugger didn't stop at breakpoints in some tasks.

Now an error message is generated indicating this problem if there is insufficient RAM. To solve this problem for programs that don't need to be debugged, you can uncheck the "Debugging" checkbox in the software configuration under Properties / Compiler.

ID#400027683 : solved problem, known since V3.0.71.31 SP05, solved since V3.00.90.10

Debugger doesn't work via routed POWERLINK connection

ID#400102707 : known problem since V3.00.90.23 SP0x

If it is not possible to set breakpoints in programs, this may be caused by debugging explicitly being disabled in the task settings.

If debugging is re−enabled, then it will also be possible to set breakpoints again.

ID#400101370 : known problem since V3.00.90.23 SP0x

Debugger cannot be started if certain files in the project directory are write−protected.

If the "default.brk" or "default.tch" file is write−protected in the Diagnose directory of the open Automation Studio project, then the debugger cannot be started.

A workaround is to remove the write protection for both files.

Diagnostics − Logger

ID#400072880 : solved problem, known since V3.00.90.15, solved since V3.00.90.19 SP0x

F1 Help sometimes doesn't work for safety logger modules

Entries with error numbers higher than 65535 are not displayed in the safety logbook.

ID#400065517 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.12

Saved logger records could not be opened if the backtrace contained special characters.

If a logger record was saved with a backtrace that contained special characters, the file could no longer be opened in the Automation Studio Logger.
The error message "The file [filename] could not be loaded." was generated.

After this correction it is now possible to open these files.

ID#400059910 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.07

The "Modules" window in the logger was not hidden automatically

When the focus is inside the "Modules" window, it is not automatically hidden when the mouse is moved away from it.
This error has been corrected.

ID#244250 : solved problem, known since V3.00.90.03, solved since V3.00.90.04

After performing "Clear Data", the logger data is deleted, but not refreshed

You have to close and reopen the logger in order to refresh the data.

ID#400009868 : solved problem, known since V3.0.71.16 SP01, solved since V3.00.90.02

Sorting order cleared when a new entry appears in the logger or when the logger is reopened.

When entries in the logger are sorted by time and a new logger entry is added, the chronological order is lost.
When entries in the logger are sorted by time and the logger is closed and reopened, the previous sorting order is lost.

Diagnostics − Motion − NC Test

ID#400077013 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

German AS: NC constant selected in the NC Test is not applied

If an NC constant is selected or entered as the new value of a structure component in the "Structure" area of the NC Test, the value is not applied. Instead, the value is reset to "0" or an NC constant that represents the value "0" is displayed.

ID#400063869 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

"Window −> Close All" only closes NC Test window

When multiple windows are open and one of them is an NC Test window with an active online connection, then "Window −> Close All" only closes the NC Test window.

ID#400054338 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.05

NC Test can't be opened

NC Test can't be opened for axes that have the same name as the project.

Diagnostics − Motion − NC Trace

ID#400115746 : solved problem, known since AS4.0.14, solved since V3.00.90.29 SP0x

"Values" settings reset to defaults when loading a .txt file

The "Values" settings in the Trace diagram settings are reset to the default values when loading a .txt file and then replacing the existing data. This means that shown values are no longer shown after the loading process and must be made visible again manually.

ID# 400078983, 400079755 : solved problem, known since V3.00.90.18, solved since V3.00.90.23 SP0x

NC Trace: Save/Load dialog box not shown

If the VC object name contains a ':' the dialog box for saving or loading curve data is not displayed.

ID#400084892 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Trace configuration saved without asking for confirmation when NC Trace is closed.

When NC Trace is closed, the trace configuration data is saved without asking for confirmation, although this may not be desired.

ID#400086400 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

Multi−axis trace limited to ten parameters

In the NC trace configuration is isn't possible to select more than ten parameters to be traced. It needs to be possible to select up to ten parameters for each NC object.

ID# 400075518, 400076490, 400076839 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

Icons in the toolbar are blurry and illegible

If the Windows control panel is used to enlarge the size of text and other items on the screen to 125% or higher, then the icons in the Automation Studio toolbar become blurry and illegible.

ID#400072054 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.14

CNC Trace: Some NC object names in the NC Trace data points are incorrect

When a CNC trace was loaded, some of the NC object names in the NC Trace data points were switched, and some of the names were cryptic.

ID#400056878 : solved problem, known since V3.00.81.18, solved since V3.00.90.09

Wrong title when tracing multiple axes

When multiple axes are traced, the title of the first axis is always displayed. This causes axis labels to have the same name, and only the first diagram is shown.
The problem only occurs with ARNC0.

ID# 400058413, 400059749 : solved problem, known since V3.00.81.19 SP01, solved since V3.00.90.07

Network Command Trace shortcut menu displayed incorrectly

When the shortcut menu is opened in the Network Command Trace table, the context menu of the header appears.

ID# 400046834, 400050679, 400055914, 400053351 : solved problem, known since V3.00.80.28 SP01, solved since V3.00.90.07

Additional information isn't displayed in Windows 7 and Windows Vista

When using Windows 7 or Windows Vista, the additional information is not displayed in the Network Command Trace.

ID#400067447 : new function since V3.00.90.30 SP0x

Default setting *.mch when saving curve data

The default setting for saving curve data has been changed back to *.csv.
In addition, the file format of the last load/save procedure (e.g. if *.txt was selected) remains set for subsequent load/save procedures.

ID#400058791 : new function since V3.00.90.07

The measurement cursor is displayed by default.

The measurement cursor is displayed as soon as the trace is opened

Diagnostics − Profiler

ID#400071488 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.19 SP0x

Profiler: Minimal Net Time und Minimal Gross Time

ID#400032355 : new function since V3.00.90.10

Setting for the maximum number of profiler archive modules

The maximum number of archive modules can now be set in the profiler configuration. Once the configured maximum number of archive modules for the controller has been reached on the controller, the oldest one is automatically deleted before creating a new one.

Diagnostics − Trace

ID# 400090651, 400094189 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Structure arrays with a length of one can sometimes not be used in the trace.

If an element of a structure is an array with a length of one, then this element can't be inserted in the trace using the Insert dialog box. When it is selected in the dialog box, an incorrect variable name is inserted in the list of trace variables.

Workaround: correct the name of the variable manually.

ID#400079304 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Trigger conditions don't work in some circumstances

If trigger conditions are set in the Trace, then under some circumstances the error message "Error: Condition variable 2&3&4" doesn't exist...." is generated.
As a workaround, close and reopen the trace window.

This error has been corrected.

ID#400080562 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Trigger conditions don't work in some circumstances

If trigger conditions are set in the Trace, then under some circumstances the error message "Error: Condition variable 2&3&4" doesn't exist...." is generated.
As a workaround, close and reopen the trace window.

This error has been corrected.

ID#400058178 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.07

Arrays with a start index <> 0 cause problems in the variable selection window for the variable trace.

Starting with this version of Automation Studio, arrays with a start index <> 0 can be selected as expected in the variable selection window.

ID#400068238 : new function since V3.00.90.29 SP0x

NC Trace: "Don't ask me again" setting is overwritten by *.mch file

When loading trace data, the message "Would you like to replace the existing data?" appears. This message can be disabled by selecting "Don't ask me again". The setting for the current trace session is overwritten by the *.mch file.

Diagnostics − Watch

ID#400098447 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

Display error after closing and reopening certain Watch configurations

When you close and reopen the Watch for certain variables, values are no longer shown for some variables. This error occurs for array variables with a length of 1 and a structured data type.

As a workaround, you have to delete the respective variables from the Watch and reinsert them.

The error also occurs in the editor watch when monitor mode is deactivated/reactivated.

ID# 400101381, 400101619, 400104912 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

Incorrect program context when opening a C source file in monitor mode

Program context may be incorrect when opening C programs in monitor mode. This behavior can be corrected after the fact. This error does not occur if the C program is already open when monitor mode is enabled.

ID#400093737 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Display error after closing and reopening certain Watch configurations

When you close and reopen the Watch for certain variables, values are no longer shown for some variables. This error occurs for array variables with a length of 1 and a structured data type.

As a workaround, you have to delete the respective variables from the Watch and reinsert them.

The error also occurs in the editor watch when monitor mode is deactivated/reactivated.

ID#400092951 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

newline converted with CR + LF

When converting between IEC and ASCII, newline is converted with CR + LF.

ID#400092280 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Display error after closing and reopening certain Watch configurations

When you close and reopen the Watch for certain variables, values are no longer shown for some variables. This error occurs for array variables with a length of 1 and a structured data type.

As a workaround, you have to delete the respective variables from the Watch and reinsert them.

The error also occurs in the editor watch when monitor mode is deactivated/reactivated.

ID#400090638 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

With certain regional and language settings, such as US, there is a syntax error in the Watch.

Date and time values are displayed with incorrect formatting in the Watch, which results in a syntax error when you try to enter a value.

ID# 400086630, 400086556, 400086652 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

The Watch window isn't shown in the programming language editors.

The Watch window isn't shown in the programming language editors.

ID# 400082345, 400087595 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

Display error after closing and reopening certain Watch configurations

When you close and reopen the Watch for certain variables, values are no longer shown for some variables. This error occurs for array variables with a length of 1 and a structured data type.

As a workaround, you have to delete the respective variables from the Watch and reinsert them.

The error also occurs in the editor watch when monitor mode is deactivated/reactivated.

ID# 400083045, 400083470 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Watch window doesn't restore the display correctly when reopened

If enumerators are inserted in the Watch window, after it is closed and reopened they are no longer shown.
The respective variables or structure must then be reinserted in the Watch window.

ID#400081462 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Watch crashes when a variable with special characteristics is inserted

If a variable is inserted in the Watch with the following characteristics:
1.) an array with 100 or more elements
2.) data type name with exactly 32 characters
then Automation Studio crashes.

As a workaround, rename the structure so that it has fewer than 32 characters.

ID# 400082095, 400082902, 400083295 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Automation Studio crashes when you click around in the Monitor Watch.

ID#400081735 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Automation Studio crashes when an invalid value entry in the Monitor Watch is confirmed.

ID#400081705 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Structured variables displayed incorrectly after monitor mode is turned off and back on

If complex arrays of structure variables are displayed in the editor watch window and monitor mode is turned off and back on, these variables are not refreshed correctly. Some elements of array variables are no longer displayed.
This error has been corrected.

ID#400080584 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Automation Studio crashes when the value of a PV is changed via double−click in the Monitor Watch.

ID#400078123 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

The values of large structures or a large number of variables are not displayed in the watch window

If the number of structure elements and variables in the watch window exceeds 9999, then only the values of the first 9999 elements are shown. The rest of the values are not displayed.
There is no workaround for this error.

ID#400075758 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Partial structures inserted incorrectly in the watch window

If the Automation Studio watch window already contains elements of a structure array and the Insert dialog box is used to insert more elements, the new ones are added in the wrong places in the tree diagram. This error only occurs when the elements of a structure array are inserted in multiple steps using the Insert dialog box, and not when all the elements are inserted in a single operation.

This error has been corrected.

ID#400077029 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Incorrect context displayed when the editor is opened in monitor mode

ID#400077027 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Crash when writing a USINT array with length 10 in the watch window

If you create an array with 10 USINT elements and then insert it in the watch window, you can switch to "String" to view the string that corresponds to the numeric values. If this field is overwritten with a new value and the entered string is 9 or 10 characters long, Automation Studio crashes.

This error has been corrected. Valid entries are accepted, but if the string is too long it is truncated to the maximum length.

ID# 400076263, 400076429, 400076186 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Automation Studio freezes when you click in the editor's watch window

If you click on a column header in the editor's watch window and then in the watch window below it, Automation Studio crashes.

ID# 400076263, 400076429, 400076186, 400076887, 400077246, 400077694, 400077385, 400077801, 400077673, 400077131, 400078060, 400077919, 400078586 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Automation Studio freezes when you click in the monitor watch window.

ID#270460 : solved problem, known since V3.00.90.17, solved since V3.00.90.19 SP0x

Takes a long time to expand/collapse structure elements in the editor watch using the mouse

ID#268189 : solved problem, known since V3.00.90.15, solved since V3.00.90.20 SP0x

The values of large structures or a large number of variables are not displayed in the watch window

If the number of structure elements and variables in the watch window exceeds 9999, then only the values of the first 9999 elements are shown. The rest of the values are not displayed.
There is no workaround for this error.

ID#400066151 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

In the Variable Watch, the list of inserted variables is lost

If the init subprogram and the cyclic section of a program were implemented in different files and both files were opened in monitor mode and variables were inserted in the Watch window, then under certain circumstances after monitor mode was turned off and back on the list of inserted variables was no longer shown in the Watch window. The variables then had to be inserted again manually.

After this correction, turning monitor mode off and back on does not affect the list of variables in the Watch window.

ID# 400066230, 400068267 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

Some values of enum variables don't show up in AS Watch.

In certain cases (enum types written a certain way as a member of a structure type) the value of the variable is shown incorrectly or not at all in the Watch.
This has been corrected.

ID#400057519 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.10

Variables can no longer be dragged into the Watch window.

If the "Watch" view of the text editor is disabled and the text editor is closed and reopened, it was no longer possible to insert variables in the Watch view. Dragging and dropping variables into the Watch window didn't insert them.
It was no longer possible to enable the "Watch" view.

After this correction, the "Watch" view can once again be opened from the main menu after it has been closed.

ID#400052334 : solved problem, known since V3.00.81.18, solved since V3.00.90.10

Variables can no longer be dragged into the Watch window.

If the "Watch" view of the text editor is disabled and the text editor is closed and reopened, it was no longer possible to insert variables in the Watch view. Dragging and dropping variables into the Watch window didn't insert them.
It was no longer possible to enable the "Watch" view.

After this correction, the "Watch" view can once again be opened from the main menu after it has been closed.

ID# 400045196, 400045567 : solved problem, known since V3.00.80.29 SP01, solved since V3.00.90.08

In the Watch window, sometimes only the numeric values of enumeration data types were shown.

Using an enumerated data type (Enum) that contains a large number of enumerators for a PV caused the PV to be displayed incorrectly in the Watch. "Large" values for PVs (project dependent) caused only the numerical value and not the name of the enumeration to be displayed in the Watch window. As a result, the value of this PV couldn't be set in the Watch window.

Error has been corrected.

ID#400042819 : solved problem, known since V3.00.80.25, solved since V3.00.90.08

Correction in Watch: Structure elements not inserted correctly with certain selections

In the Insert dialog of the Watch, if both a simple data type and individual elements of a structured data type were selected, these elements were sometimes not correctly inserted in the Watch. The items were inserted individually but at the highest level instead of being grouped under a common node for the structure.
The selected items are now displayed at the correct level.

ID#400006757 : solved problem, known since ARSG4_2.94.22_V02.94, solved since V3.00.90.12

Problems displaying variable values in the PV Watch window after using the library function DatObjMove

There were display problems in the Watch window when Automation Studio was connected to a target on which a task was running the library function "DatObjMove" cyclically with the PV Watch window open.
Variable values were no longer refreshed and it was sometimes not possible to insert any more PVs.

This error has been corrected.

IO Configuration − CANopen

ID#400134147 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.x UP13

Not possible to use EDS file from Wittenstein Motion on the X20IF1041−1

ID#400097543 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

"Open device configuration" entry missing from Physical View shortcut menu

If you try to close Automation Studio without saving changes and then select "Cancel",
the entry "Open device configuration" is no longer shown in the Physical View shortcut menu.

ID#400089083 : solved problem, known since ARSG4_3.00.22_V03.00, solved since V3.00.90.22 SP0x

Error 30030 for CANopen master with 4 slaves

ID#400079554 : solved problem, known since V3.00.81.31 SP0x, solved since V3.00.90.21 SP0x

CANopen function "Don't Write All Objects On Download" disabled required objects

The following objects were disabled by the CANopen function "Don't Write All Objects On Download", although they are still required by the CANopen driver.

1016: Heart beat consumer time
1017: Heart beat producer time
1018: Identity object

ID#400056381 : solved problem, known since V3.00.90.04, solved since V3.00.90.06

Priority of CANopen master can be configured

The user can configure the priority of the CANopen master in order to adjust the system load for a particular application.

ID#400056569 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.06

Bit 30 of a COB−ID was not properly handled by the CAN configuration editor

Regarding to DS301 specification bit 30 of a COB−ID shall be ignored. The CAN configuration editor treated this bit as a part of the COB−ID. This resultet in multiple occurences of a COB−ID.

IO Configuration − DTM

ID#400131168 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.31 SP0x

error 8021 "The B&R Module already exists in the system" Module name " :: "

Due to a crash of AS while inserting or deleting an interface module (X20IF10x1−1 bzw. X20IF10x3−1) the project might become erroronous. In this condition a file with the name
of the interface module exists in the configuration module without an according hardware module counterpart in the physical view. To solve this issue the project needs to be closed
and the file must be manually deleted from \Physical\ConfigName\PlcName\Plc.pkg.

ID#400131924 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.x UP13

X20IF10E3−1: IOPS byte for output data incorrectly displayed as as input byte in the I/O mapping

ID#400122559 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.28 SP0x

Problem configuring 6 or more DTM interface modules

An error in DTM cache logic sometimes led to a faulty assignment of the configuration module name.

ID#400099777 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.x UP13

X20IF1061−1: Error message when changing PROFIBUS slave parameters

Changing parameter number 37 for PROFIBUS slave "Zumbach ODAC family" is refused with an error message.

ID#400088519 : solved problem, known since V3.00.81.32 SP0x, solved since V3.00.90.x UP05

I/O modules are not displayed after GSDML file is imported

When you import the GSDML file for a SIEMENS SINAMICS G120 device the corresponding submodules are not displayed.

ID#400074467 : solved problem, known since V3.00.90.17, solved since V3.00.90.19 SP0x

Hardware module name (Equipment ID) can't be configured for fieldbus devices (FDT/DTM)

The hardware module name (Equipment ID) can't be configured for fieldbus devices (FDT/DTM). Automation Studio assigns a predefined name that is identical for all modules of the same type (e.g. "AS−Interface DTM Device"). As a result it is also not possible to differentiate between the devices in SDM, since the same name is displayed for each device.

ID#400070800 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.x UP01

Problem in ASi DTM from Hilscher GmbH

ID#400072895 : solved problem, known since V3.00.90.15, solved since V3.00.90.17

Festo Profinet device can not be inserted

ID#400070573 : solved problem, known since V3.00.90.12, solved since V3.00.90.14

CANopen Master DTM checks whether default values are defined in the EDS files for the COB−ID. If not, it tries to define default values that conform to the standards.

ID#400102432 : new function since V3.00.90.25 SP0x

No support for printing out DTMs

Printing DTMs was not possible until now.

ID#400092113 : known problem since V3.00.90.21 SP0x

Faulty GSDML files can result in duplicate channel names

Faulty GSDML files can result in duplicate channel names in the I/O mapping.

The problem can be fixed as follows:
1. Correct the respective data items in the GSDML file
2. Adjust the corresponding tag names in the process data table for the interface module
3. Map the I/O channels in the I/O configuration of the respective slave manually.

IO Configuration − DTM 3rd party

ID#400120540 : solved problem, known since AS4.0.15 SP, solved since V3.00.90.x UP11

Error configuring "ELMO Motion Control SimplIQ" CANopen slave

AS will output various error messages when configuring an included "ELMO Motion Control SimplIQ" CANopen slave.

ID#400078725 : solved problem, known since V3.00.90.18, solved since V3.00.90.23 SP0x

Problem can't be reproduced

IO Configuration − Modbus TCP

ID#400116380 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

IP address for Modbus TCP slave not entered with SL−SL communication

If SL−to−SL communication is configured via Modbus TCP, then the IP address for the Modbus line is not entered in the ArConfig file during the build process. This prevents SL−to−SL communication from working on the PLC.

ID#400109342 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Modbus TCP not working on POWERLINK interface in DHCP mode

If a POWERLINK interface is being used in Ethernet mode with DHCP set, "Error 9002: Not a valid IP address" is reported during the build process.

ID#400089533 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

To activate the Modbus master, you have to go into the interface settings for the Ethernet port and activate "Use as Modbus master" under "openSafety over TCP/IP", even though no safety communication is taking place.

IO Configuration − Profibus

ID#400100166 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

Missing DPV1 section in CANopen slave configuration for enabling DPV1 communication

The "DPV1 parameters" section is not shown in the device configuration for CANopen devices where Max_User_Prm_Data_Len is used instead of User_Prm_Data or Ext_User_Prm_Data_Const to build the configuration dynamically with ExtUserPrmData entries.

ID#400064590 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Invalid linefeed characters resulted in invalid import

Profibus device description files with invalid linefeed characters (0x0D, 0x0D, 0x0A sequence) resulted in invalid import. These linefeeds are now treated in a special manner.

ID#400058710 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.08

The I/O mapping does not support strings

String is not longer provided as data type for a Profibus channel because it is not supported by the I/O mapping.
For existing projects the concerned device has to be reimported to fix the issue.

ID#400053732 : solved problem, known since V3.00.90.04, solved since V3.00.90.06

Priority of Profibus master can be configured

The user can configure the priority of the Profibus master in order to adjust the system load for a particular application.

Languages − Ladder

ID#400088255 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Monitor mode no longer works via modem connection

Motion Components

ID#400085316 : solved problem, known since AH3.00.90.0019, solved since V3.00.90.29 SP0x

Wrong help page for network command trace

When you press F1 in the network command trace the wrong help page is opened and an unnecessary error message is output.

ID#400062212 : solved problem, known since unbekannt, solved since V3.00.90.09

Not able to select insert cards correctly from the wizard in 8AC14xxx projects

If an ACOPOS was added to the CAN interface of a 8AC14xxx CPU, then only the insert card of the third slot was able to be selected from the insert wizard. Slots one and two were only able to added in the hardware tree afterward.

Online Services

ID#400117318 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.33 SP0x

Operating system deleted when updating MemCard

ID#400054118 : solved problem, known since V3.00.90.03, solved since V3.00.90.06

With an existing online connection, fixed node numbers are detected incorrectly

For X2X configurations, fixed node numbers are entered, although the respective hardware modules don't have fixed node numbers configured.

ID#400050693 : solved problem, known since V3.00.81.18, solved since V3.00.90.09

Online connection incorrectly established after local interruption

If the PVI communication instance is terminated due to excessive load
(Communication Timeout COMT) and the connection is then re−established, then the CPU object will be connected with the communication parameter CD="CPU" instead of the correct parameter.

ID#400066511 : new function since V3.00.90.21 SP0x

AS is sluggish when online connection has a high latency time.

With the AS online connection (INA2000 connection), the speed of data transfer is strongly dependent on the latency time of the network used. At a latency time of 200 ms, large projects may take minutes to establish a connection.

ID#400042449 : new function since V3.00.90.31 SP0x

No warning output by Automation Studio when connecting via an incompatible PVI version

Online Settings Dialog

ID#400079564 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Remote port higher than 32767 not permitted

If you try to set a port higher than 32767 for a remote connection, this is denied with an error message.

ID#400059839 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Parameter "/CKDA=1" not saved as extra setting

The online settings editor doesn't save the entry "/CKDA=1" in the column "Extra CPU Settings". If you close the editor and then reopen it, the entered value is no longer displayed.

ID#400057092 : solved problem, known since V3.00.81.18, solved since V3.00.90.05

Crash when parameters are entered in extra device settings without separator

If the parameters are entered in the "Extra device settings" column without a space separating them (e.g. "/RS=0/RS=0"), then Automation Studio will crash when the online settings are saved.

ID#400056008 : solved problem, known since V3.00.81.18, solved since V3.00.90.04

Modem description string with single quote doesn't work

If a modem description string contains a single quotation mark, the string will not be forwarded properly.

Programming − ANSI C

ID# 400105576, 400106679 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.27 SP0x

Error when selecting function block parameters in an ANSI C library

ID# 400105727, 400105747 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.30 SP0x

Error when selecting function block parameters in an ANSI C library

ID#400087432 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Newly added variables are not suggested via auto−complete in the open ANSI C editor.

ID#400094132 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Element selection for FB variables doesn't work any more.

ID#400086162 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Error searching for a string in the ANSI C editor.

ID#400090449 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Some tooltips in the C editor incorrect.

ID#400087432 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Newly added variables are not suggested via auto−complete in the open ANSI C editor.

ID#400089884 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

AS crashes when an array index entered in ANSI C editor

Automation Studio crashes when the opening brackets of an array index is entered in the ANSI C editor.

ID#400086529 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

ANSI C editor crashes when arrays are declared with a non IEC data type.

ID# 400084136, 400085113, 400096562 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.23 SP0x

Cyrillic input (CodePage) no longer possible in text editors.

ID# 400078702, 400081376 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

SmartEdit functions don't work when a structure contains a function block. In this case, the function block members aren't listed.

ID#400077256 : solved problem, known since V3.00.90.18, solved since V3.00.90.22 SP0x

For files under version control, no message is output for a Replace or Replace All.

ID#400077174 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

A term searched for using Ctrl+Shift+F3 is subsequently not found using F3 or Shift+F3.

ID#400077019 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

CTRL+L doesn't delete a line.

Ctrl+L doesn't delete a line in the text editor.

ID#400076794 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Horizontal scrollbar in text editor has fixed width and can't be changed

ID# 400076667, 400076838 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

SmartEdit error in ANSI C editor with referenced structure elements.

Referenced structure elements are not offered by the SmartEdit function in the ANSI C editor.

ID#400076086 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

In the text editor, Ctrl + click doesn't select a word

ID#400054197 : solved problem, known since V3.00.81.18, solved since V3.00.90.12

LineCoverage not working with high task class cycle times

If line coverage is activated for a task with a high cycle time (>= 1000ms), then the error message "Error 6575: Unknown target error = 6575" is displayed.

ID# 400054281, 400115438 : new function since V3.00.90.27 SP0x

Default case of a switch case construct is executed without a break

When using GCC 4.1.1 and 4.1.2 this causes a compiler error.

ID# 400076041, 400075847 : new function since V3.00.90.19 SP0x

Hide tab lines in the text editor.

Programming − ANSI C++

ID#400081302 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

In ANSI C no index is displayed for array variables.

ID#400081302 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

In ANSI C no index is displayed for array variables.

ID#273110 : solved problem, known since V3.00.81.18, solved since V3.00.90.20 SP0x

SmartEdit provides incorrect or insufficient suggestions when using class templates.

ID# 400076347 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Smart Edit is slow in big projects.

ID#400056892 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.06

C++: Failed allocation of bur_heap_size memory gives no Warning/Error

ID#400055860 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.04

Error "illegal option −− O" when generating static C/C++ library

This error message may appear when generating C/C++ libraries if the command line for i386−elf−ar.exe is larger than 2048 bytes.
The error can be avoided by using shorter paths for projects (configuration name, name of the temp directory) shorter .cpp file names and a lower number of .cpp file names in each library.

ID#224820 : new function since V3.00.90.10

In the source files of static C/C++ libraries, breakpoint positions are not shown.

When debugging programs that with statically linked C/C++ libraries, no breakpoints are shown in the library source code.

Programming − Automation Basic

ID#400114180 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Error in automatic indentation of IF/ELSE constructs in Automation Basic

ID#400113395 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.27 SP0x

Error in automatic indentation of IF/ELSE constructs in Automation Basic

ID#400111141 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.27 SP0x

Faulty code for IF statement in Automation Basic

Faulty code may result on SG3 and SGC target system if an IF statement in Automation Basic includes a condition for explicit conversion to a data type.

ID#307640 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Automation Studio crashes when false binary literal entered in Automation Basic editor

When the false binary literal %2 is entered in the Automation Basic editor, Automation Studio crashes.

ID# 400090175, 400092078, 400093272, 400094590 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

No longer possible to copy/paste individual words using the mouse.

ID#400088842 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Incorrect bracketing causes Automation Studio to crash when a SmartEdit function is used.

ID# 400086240, 400087318 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Autocomplete doesn't work for multidimensional structure elements

The automatically inserted index doesn't conform to IEC

ID#400081634 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Incorrect syntax coloring in the Automation Basic editor when there's a dollar sign in a character string.

ID#400080997 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Build Error 1179 when you use EDGE in a function block.

ID#400071333 : solved problem, known since V3.00.90.11, solved since V3.00.90.14

Autocomplete error with local function blocks

Autocomplete doesn't work for structured elements of a local function block.

ID#400064495 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

VAR_IN_OUT parameters added in the wrong order

If a user function block containing a VAR_IN_OUT parameter is added using the "Insert Function block" option, then its parameters will be shown in the wrong order.

ID#400057426 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

Go to corresponding delimiter doesn't work if the instruction block contains ";" comments

For instruction blocks such as
if ((var1 = 1) and (Var2 = 2)) then ;test
var3 = 3
endif
"Go to matching delimiter" doesn't work.

Programming − Cross Reference

ID#400066226 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

List Usage doesn't work for variables with the type ARRAY OF Structure

ID#400062521 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.08

Error message when double−clicking on cross references from the SFC program

An error message is generated if the editor for a SFC source file is opened the first time by double−clicking on a cross reference.

Programming − Data Type Declaration Table Editor

ID#400079364 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Comments for derived data types written in the table editor are discarded after saving.

Correcting this error solves two problems:
1. When you write comments for derived data types in the table editor, these are lost when you save.
2. When you write comments for derived data types in the text editor, they are not displayed when opened in the table editor and are therefore also lost.

Correcting this problem solves both problems, and comments are no longer discarded.

ID#400077383 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Error message when initializing certain variables in the table editor

If a structure variable is declared in Automation Studio and one of the structure components is a function block, when the initialization window for this variable is opened in the table editor an error message is output.
When this error message is acknowledged, the initialization window doesn't show the whole structure of the variable, and it isn't possible to assign all the initial values.

This error has been corrected. The initialization window opens without errors and variables can be initialized.

ID#400061731 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.07

Poor system response times depending on the quality of the connection to the file server or VCS server

The table editor checks the file status each time a change is made (ReadOnly etc.).
This causes poor response times when editing, depending on the quality of the connection to the server.

Programming − Data Type Declaration Text Editor

ID#400083771 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

Automation Studio crashes when "END_TYPE" is missing from the type declaration text editor.

Programming − Declare Variable Dialog

ID# 400074810 : solved problem, known since V3.00.90.17, solved since V3.00.90.19 SP0x

Declaration of Alias FB with "Declare all" not always correct.

Using AutoDeclare on function block instances with the "Declare all" button sometimes enters the wrong block data type in the Variable Declaration dialog box.

Programming − FBD

ID#400138129 : solved problem, known since V3.00.90.29 SP0x, solved since V3.00.90.31 SP0x

Automation Studio crashing after copying and pasting a certain FBD network

ID#400138191 : solved problem, known since V3.00.90.29 SP0x, solved since V3.00.90.31 SP0x

Problem entering data in FBD editor

Umlauts cannot be entered in the FBD editor.
An error occurs when checking for valid input in the FBD editor if the cursor is not at the end of the input.

ID#400114073 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.27 SP0x

Automation Studio crashes without an error message if an FBD function block is opened several times from a program in monitor mode.

ID#400081914 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Automation Studio crashes when you open a FBD task

After a crash, incorrect data is written to the FBD file, which causes Automation Studio to crash when it is opened again.

ID#400071811 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.19 SP0x

Incorrect handling of empty block connections in monitor mode

If a value is entered for empty block connections in monitor mode, then this value is always written to the last element of the block instance variable.
Entering a value for empty block connections is therefore no longer permitted.

ID#400062333 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.12

Crash when inserting blocks with a parameter type labeled as "FUNCTION" or "FUNCTION_BLOCK".

A block that contains parameters with the type name "FUNCTION" or "FUNTION_BLOCK" can cause a crash when inserted.
From now on, using the type name "FUNCTION" or "FUNCTION_BLOCK" will cause an error message.

ID#400060330 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.09

Variable values only shown in monitor mode after scrolling.

ID#400047764 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.12

Vertical scroll bar disappears after "append column"

Programming − Function Table Editor

ID#400053413 : solved problem, known since V3.00.81.18, solved since V3.00.90.10

Error 1144 during build due to changed transfer parameters in the *.fun file

If the scope of a function block parameter is changed, then the sequence of the parameters will be changed under certain circumstances because the sequence is determined by the scope (VAR_INPUT, VAR_OUTPUT, VAR_INOUT, VAR).
In this case, the parameter sequence must also be adjusted when called up.

In order to illustrate this, the new sequence will now be displayed automatically and immediately after saving the declaration file.

Programming − Function Text Editor

ID#400076784 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Error message in source editor when the function block declaration isn't saved.

Programming − Interface Configuration Editor

ID#400115259 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Cannot select some customized PP65 devices as POWERLINK V2 intelligent controllers

When adding a POWERLINK V2 intelligent controller, it is necessary to specify the configuration in the project in which this iCN is configured as a controlled node. If a customized PP65 is being used as a CPU in the configuration selected, then the IF4 interface is not offered for selection for some PP65 systems, and the iCN cannot be added.

ID#277730 : new function since V3.00.90.20 SP0x

Support of 'Multiple Asynchronous Send'

Programming − IO Configuration Editor

ID#400142151 : solved problem, known since V3.00.90.30 SP0x, solved since V3.00.90.31 SP0x

Deleting or renaming a POWERLINK iCN configuration resets the settings of the X2X interface on POWERLINK−X2X bus controllers in the master configuration.

Situation: Project with two configurations:
iCN configuration with a POWERLINK interface configured as a controlled node.
Master configuration with one POWERLINK iCN (epl_icn) that references the POWERLINK interface in the iCN configuration.
The master configuration also contains a POWERLINK−X2X bus controller (e.g. X20BC0083) that has different values than the default values for the X2X interface.

If the iCN configuration is now deleted or renamed, then the parameters of the X2X interface on the POWERLINK−X2X bus controller are reset to their default values.

ID#400115617 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Empty I/O mapping causing problems when saving the Modbus configuration

Attempting to save a configuration containing Modbus TCP slaves may cause an error if there are no I/O channels in the configuration.

ID#400101496 : solved problem, known since V3.00.90.25 SP0x, solved since V3.00.90.x UP11

X20IF10D3−1 I/O configuration and I/O mapping destroyed when opening project

If the X20IF10D3−1 module is being used in a project, then reopening the project can destroy the module's I/O configuration and I/O mapping.

Programming − IO Mapping Table Editor

ID#400112924 : solved problem, known since V3.00.90.25 SP0x, solved since V3.00.90.28 SP0x

I/O mappings lost when importing hardware modules

ID#400108342 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

For SGC systems, 0 or 1 must be specified instead of FALSE or TRUE when forcing a BOOL data type in the I/O mapping editor.

ID# 400101416, 400101754, 400102420, 400102735, 400103072 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Some channels not connected in the I/O mapping's monitoring mode

ID# 400102416, 400103257, 400102438 : solved problem, known since V3.00.90.x UP05, solved since V3.00.90.25 SP0x

Data type filter in the variable selection dialog box for I/O mapping not working in the German version of Automation Studio

ID#400084875 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

German Umlaut characters in I/O mapping description fields are lost during a hardware export.

ID#400078402 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Faulty I/O addressing on SG3 systems

If I/O mapping has not yet been performed for an SG3 project, mapping the first variables to I/O channels may cause an error when compiling the project.
Error 6419 is returned. The cause is faulty addressing of the I/O channels. The character string for I/O addressing is missing the section for the I/O module slot.
If you correct the I/O addressing in the file IoMap.iom, the error no longer occurs. To correct the addressing, open IoMap.iom in text format.

ID#400063292 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Input channels that are mapped multiple times are not saved in the order shown.

A different order is shown after opening the editor again.

ID#400055024 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.06

Changing the node number of I/O modules results in incorrect mapping.

Moving I/O modules, e.g. an X20 CPU on the X2X bus can result in incorrect entries in the I/O mapping or in the physical view

ID#243470 : solved problem, known since V3.00.80.33 SP02, solved since V3.00.90.04

Malfunction in Select Variable window for making I/O assignments

The setting "Only not connected" is sometimes evaluated incorrectly.

ID#243455 : solved problem, known since V3.00.80.33 SP02, solved since V3.00.90.04

Array elements are shown multiple times

In the select variable window for making I/O assignments, array elements are sometimes listed twice.

ID#153671 : solved problem, known since V3.00.80.10, solved since V3.00.90.07

Forced variables not shown as forced after connection is interrupted

When the connection is lost on SG3 target systems, forced I/O variables are no longer identified as such.

ID#400102438 : known problem since V3.00.90.23 SP0x

Data type filter in the variable selection dialog box for I/O mapping not working in the German version of Automation Studio

ID#400094713 : known problem since V3.00.90.22 SP0x

Changes made in the "Inverse" or "Simulate" column in the I/O mapping editor are lost if multiple mappings are selected at the same time.

Programming − LD

ID#400149860 : solved problem, known since V3.00.90.31 SP0x, solved since V3.00.90.32 SP0x

Function block incorrectly displayed in Ladder Diagram editor

ID#400143184 : solved problem, known since V3.00.90.30 SP0x, solved since V3.00.90.31 SP0x

Multiple function block calls for same instance not working in a network

ID#400117092 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.30 SP0x

Function blocks cut off in certain configurations in the Ladder Diagram editor

ID#400120297 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Automation Studio crash on "Find in files" in Ladder Diagram with empty networks

ID#400111492 : solved problem, known since V3.00.90.25 SP0x, solved since V3.00.90.27 SP0x

Coil cannot be set if an EN/ENO block is being used parallel to another condition.

ID#400099226 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

Ladder Diagram editor crashes when opening a ladder diagram that contains undeclared variables.

ID#400092765 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

Function blocks with EN/ENO and no output are not executed in Ladder Diagram.

ID#400092536 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Inserting a function block results in incorrect display.

ID#400079296 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

No PV values are shown when viewing a ladder diagram in monitor mode.

ID#400083301 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

InOut variables with the data type REAL cause problems in the Ladder Diagram editor.

ID#400077071 : solved problem, known since V3.00.90.18, solved since V3.00.90.21 SP0x

When entering an array index, the LD editor doesn't offer any variables and constants after Ctrl+Space.

ID#400081245 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

In the LAD editor, a function block instance stops being executed when a parameter is changed.

If all the outputs are removed from a function block with EN/ENO connections, then it is no longer executed.

ID#400077071 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

When entering an array index, the LD editor doesn't offer any variables and constants after Ctrl+Space.

ID#400078129 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Function block split when a new column is inserted

If you insert a column inside, above or below a Compute/Compare block ("Ins" key), the Compute/Compare block is split

ID#400076660 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Automation Studio crashes when an EN/ENO connection is deleted.

If an EN/ENO connection at a certain position is deleted, Automation Studio crashes.

ID#400076935 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Displaying the signal flow of an array variable with a variable index doesn't work.

Displaying a signal flow using an array variable with an index that is also a variable doesn't work. The display of the signal flow is terminated at this point.

ID#400069458 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.14

Incorrect code generated when a block instance with EN/ENO is used multiple times

If one instance of a block with EN/ENO connections is used multiple times in a Ladder Diagram, the code generated is incorrect.

ID#252644 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.07

Incorrect code generation for "stretched" MOV blocks

If the input and output of a MOV block are not on the same line due to a preceding block, the generated code will be incorrect.

ID#400060636 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.07

Incorrect code is sometimes generated for complex networks.

Complex links can result in incorrect or incomplete code (some paths are ignored), and as a result, output contacts can't be set or reset.

ID#400060503 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.06

Incorrect code generation for "stretched" MOV blocks

If the input and output of a MOV block are not on the same line due to a preceding block, the generated code will be incorrect.

ID#400058543 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.05

AS crashes when monitor mode is activated

If an element or variable with the type ARRAY[0..n] OF TIME is linked to a function block input, AS crashes when monitor mode is started.

ID#245404 : solved problem, known since V3.00.81.18, solved since V3.00.90.04

Relaying contacts and coils to a MOVE output causes incorrect functionality.

If contacts or coils are relayed to a MOVE output, the editor indicates that this is invalid, but there is no error during compilation. However, the code generated during compilation contains errors if multiple contacts are relayed together.

ID#400054923 : solved problem, known since V3.00.81.18, solved since V3.00.90.09

Replace Block sometimes causes display error

ID#400040762 : solved problem, known since V3.00.80.25, solved since V3.00.90.09

Forced values are not specifically identified.

Programming − Motion − Acopos Parameter Table Editor

ID#400061752 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

ACOPOS parameter table: The motor wizard is started when trying to load data from a file

If the category "Motor" was selected in the ACOPOS parameter table dialog box for inserting new groups, then the option "Load Parameters from File" no longer had any effect and the motor wizard was started instead.

Programming − Motion − Cam Editor

ID#400107691 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Cam profile editor: Cannot set the number of points when exporting

Since Windows Vista, the setting for specifying how many points should be saved when using the "Create file with points" function is no longer displayed.

ID#400047860 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.05

Cam profile editor remains locked after turning off monitor mode.

Turning off monitor mode doesn't remove the lock on any open cam profile editors. The lock remains until the editors are closed and reopened.

Programming − Motion − CNC Program Editor

ID# 400077336, 400077084 , 400077970, 400080265 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

CNC editor causes an AS error.

Removing an opening bracket in the CNC editor causes an error in Automation Studio.

ID#400061171 : new function since V3.00.90.10

Syntax highlighting in the CNC program editor not fully available

Syntax highlighting was not available for some of the CNC commands such as G172. A tool tip for this CNC command was not being displayed either.

Programming − Motion − Init Parameter Table Editorxy

ID#400089574 : solved problem, known since unbekannt, solved since V3.00.90.23 SP0x

Wrong data type when rebuilding NC−INIT parameter modules

Structure components with the data type UDINT are converted to UINT. For example, 5999971 becomes 36195.

Programming − Motion − Motor Parameter Table Editor

ID# 400106589, 400119564 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.28 SP0x

Wrong Motorparameters in Automation Studio 3.00xx for Motors 8LSC75.xx0022x000−0, − 1

The motordatabase MotorLafert.mdb must be excchanged by a new file in ..\AS\Motion

ID#400059997 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

Not able to add a resolver motor to ACOPOSmulti

A resolver motor was not able to be added to the hardware tree in ACOPOSmulti, even through a resolver card was plugged into the ACOPOSmulti.

Programming − Motion − NC Manager Configuration Editor

ID#400112087 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.28 SP0x

Changed order of interfaces in the NC configuration

Changing the data in the AR configuration sometimes changes the order of interfaces in the NC configuration.

Programming − Motion − NC Mapping Table Editor

ID#400048396 : solved problem, known since V3.00.80.25, solved since V3.00.90.09

Interface names can't be corrected in the NC configuration.

Inserting an ACOPOS device module in the hardware tree automatically inserts the corresponding interface (e.g. "SL1.IF2") in the NC configuration. This interface was incorrectly changed to a different name (e.g. "SL2.IF2").
Closing and reopening the project results in the original interface name (e.g. "SL1.IF2") being recreated automatically in the internal structures, since ACOPOS modules are connected to it in the hardware.
The interface in the NC configuration (e.g. "SL2.IF2") can't be renamed to the original interface name (e.g. SL1.IF2), since this name is already used in the internal structures and is therefore no longer available.

Programming − Motion Components

ID#400129005 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.30 SP0x

Crash when shutting down diagnostic tools

Attempting to use a diagnostics tool (Test, Trace, Watch) to go online on a CPU for which no hardware upgrade is installed in AS crashes AS when closing the diagnostics tool.

ID#400126057 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.29 SP0x

Network command trace: Crash when opening an "old" network command trace

AS crashed when loading a network command trace from a file that still contained an "old" ACP10 version entry (e.g. V0.555).

ID#400111802 : solved problem, known since nicht relevant, solved since V3.00.90.28 SP0x

CNC Trace not starting on certain trigger conditions

CNC Trace doesn't start if the "Beginning of movement" or "End of movement" trigger condition is set.

ID#400114245 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

NC configuration built incorrectly

If an NC Manager version that is not installed in AS is entered in the NC configuration (e.g. acp10cfg.ncc), then a CAN interface is entered in the NC configuration when it is built although the configuration actually only included a POWERLINK interface.

ID#400095938 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

The task "ncsdcctrl" is inserted although it is not required

If you insert hardware that can be operated via SDC on an X2X interface, then the task "ncsdcctrl" is inserted, even if the hardware module is operated with a ramp function model.

ID#400093405 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Error in I/O mapping file after inserting a hardware module

If a hardware module (e.g. X20SM1436) is inserted on the X2X interface, and if it is automatically configured (in the Wizard) to be operated using the acp10sdc library, then the IoMap.iom was updated incorrectly and could no longer be opened in AS.

ID#400084315 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

For 80SD* modules, parameter ID 109 is calculated incorrectly when the motor encoder isn't used

When inserting an 80SD* module in the Wizard, if you set "Use motor encoder" to "no", the calculation is performed as though "yes" had been set.
This error only occurs in the German language version of Automation Studio.

ID#400064409 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Empty task inserted when an ACOPOSmicro is inserted on an SGC CPU

When an ACOPOSmicro(80SD*) is inserted on an SGC CPU (X20CP02*), an empty task with the name "ncsdcctrl" is created in the logical view.

ID#400064311 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Wrong Wizard opened for X20SM* and X67SM* modules with the function model "Ramp"

When inserting a stepper motor module (X20SM* or X67SM*), if the function model "Ramp" is selected in the wizard, then the wizard pages for SDC configuration are shown, which are not required for the Ramp function model

ID#400060362 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.08

Trace recording can't be opened in Windows7 64−bit

In Windows7 64−bit, a Net Trace recording can't be evaluated. The trace is saved as a *.bin file. An error message appears saying that the file can't be found.

ID#400060073 : solved problem, known since nicht relevant, solved since V3.00.90.09

The contents of the variable declaration file for the SDC controller task deleted

Adding an 8I64XXXXXXX.00X−1 ACOPOSinverter module caused the existing data in the variable declaration file for the SDC controller task (ncsdcctrl.var) to be deleted.

ID#400036316 : solved problem, known since V3.00.80.25, solved since V3.00.90.10

The DiagGetStrInfo function from the AsIODiag library only shows "PLKany" for ACOPOSmulti

The DiagGetStrInfo() function shows the 8AC112 and 8AC114 correctly for ACOPOS, but for ACOPOSmulti only "PLKAny" is returned.

ID# 400022586, 400030657 : solved problem, known since V3.0.71.27 UP04, solved since V3.00.90.05

Inserting an SI4100 changes arnc0cfg

If an X20SI4100 is inserted, the interface configuration of the ARNC0 is changed.

ID#400141019 : new function since V3.00.90.31 SP0x

Should be possible to use XML syntax highlighting for GMC CNC files

ID#367420 : new function since V3.00.90.29 SP0x

Support for the module 80VD100PD.C188−01

ID#295585 : new function since V3.00.90.23 SP0x

Support of 8BAC0125.000−1

Programming − OPC Alarm Editor

ID#255560 : known problem since V3.00.80.19

Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor

A FindInFiles search for OPC tag names returns the correct results, and double clicking on a result in the output window opens the editor, but then a random tag is selected.

Programming − OPC Custom Properties Editor

ID#255565 : known problem since V3.00.80.19

Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor

A FindInFiles search for OPC tag names returns the correct results, and double clicking on a result in the output window opens the editor, but then a random tag is selected.

Programming − OPC Mapping Editor

ID#400060315 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.10

Linking identical OPC configurations

If a network contains multiple CPUs with the same project, it was previously not possible to link them simultaneously using B&R Windows OPC Server 3.0. The reason was that the OPC name space requires that each element is unique, and the OPC configuration editors in Automation Studio allow an additional hierarchical level to be created for this differentiation. A new option for inserting an additional structure level has been added in the WinOPC mapping editor.

ID#400044413 : solved problem, known since V3.00.80.28 SP01, solved since V3.00.90.10

When inserting OPC tags into the mapping using the Select Variable dialog box, other tag files are inserted

If a tag file is inserted in the mapping using the Select Variable dialog box, the tag declarations below it are inserted too.

ID# 400068304, 400073285, 400078138, 400109543 : known problem since V3.00.81.26 SP0x

When an OPC item in the mapping is deleted or inserted, a comma is inserted after the index in the connection description of array elements.

If the mapping file contains OPC tags with array indexing in the variable name (e.g. "varname[2]", "struct[1].var1), each time the mapping file is saved, a comma is inserted after the array index or before the closing bracket.

ID#255575 : known problem since V3.00.80.19

Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor

A FindInFiles search for OPC tag names returns the correct results, and double clicking on a result in the output window opens the editor, but then a random tag is selected.

ID#255570 : known problem since V3.00.80.19

Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor

A FindInFiles search for OPC tag names returns the correct results, and double clicking on a result in the output window opens the editor, but then a random tag is selected.

Programming − OPC Tag Editor

ID# 400088924, 400102837 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.26 SP0x

Parameters necessary for OPC not set when opening a 3.0.81 project

If a 3.0.81 project was opened, then new parameters in the OPC tag declaration files (.opct) were not set until now. This could cause errors when creating OPC mapping files and/or during a project build.

ID#400084800 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Incorrect length calculation for structures in the OPC tag editor when nested structures are used.

If a tag is created manually in the OPC tag editor, and the Select dialog box is used to assign a member variable of a structure that is a structure itself, then in the OPC tag editor the structure length calculated for that tag was incorrect.,30

ID#400057826 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.08

OPC tag editor: Incorrect length calculation for structures of a function block instance

In the OPC tag editor, the length of a structure from a function block instance was calculated incorrectly.

ID#400054966 : solved problem, known since V3.00.81.18, solved since V3.00.90.08

"Singularize" generates incorrect array indexes when used in IEC

If an array with an index range unequal to zero is "singularized" in an IEC language, the elements are assigned an index that doesn't exist on the controller.

ID#400051430 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.08

Exception in the OPC tag editor when the Singularize function is called

Calling the Singularize function again in the OPC tag editor after adding a structure array member caused an exception.

ID#210295 : solved problem, known since V3.00.80.19, solved since V3.00.90.10

Double clicking on a FindInFiles result selects a random tag in the OPC Tag Editor

A FindInFiles search for OPC tag names returns the correct results, and double clicking on a result in the output window opens the editor, but then a random tag is selected.

Programming − Permanent Variable Table Editor

ID#400106740 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.24 SP0x

Not possible to use BOOL array as a permanent variable

Trying to specify a BOOL array as a permanent variable in the permanent variable table editor is refused with an error.

ID#400051241 : new function since V3.00.90.06

No positive feedback for Check Offsets

There is no feedback message if the results for "Check Offsets" in the editor for permanent variables are positive.

Programming − Select Variable Dialog

ID# 400082717, 400083942, 400086933 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Array variables with an index > 0 can't be connected to VC3 controls

In a VC3 application, it is not possible to connect an array variable with an index >0

ID#400080882 : solved problem, known since V3.00.90.18, solved since V3.00.90.21 SP0x

A pointer array with a structure data type is not resolved in the select variable dialog box.

For a pointer array with a structure data type, the select variable dialog box (e.g in the VC 3 editor) doesn't allow you to select the elements of the structure.

ID#400056533 : solved problem, known since V3.00.80.20, solved since V3.00.90.09

Parameters from function blocks and functions not offered in the Select Variable dialog box.

When editing how a block is implemented, the parameters of the block are not offered in the Select Variable dialog box.

Programming − SFC

ID#400115622 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.27 SP0x

The last line of a text−based SFC subroutine is not printed.

ID#400107740 : solved problem, known since AS4.0.14, solved since V3.00.90.26 SP0x

Automation Studio crash when "." is entered in an SFC step

ID#400102325 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Entire document not printed in a text−based SFC sub−editor if word wrap enabled

ID#400104585 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Positioning not handled correctly when double−clicking on an error message in the SFC editor

ID#400052995 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

If an SFC transition or SFC action uses an IEC textual language, it is not checked out when edited.

ID#400083351 : solved problem, known since V3.00.81.32 SP0x, solved since V3.00.90.22 SP0x

Automation Studio crashes in monitor mode when a SFC function block is opened.

ID#400083719 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Automation Studio crashes when you copy a step in the SFC Editor

ID#400078271 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

The function parameters of an SFC FB are not offered by SmartEdit in an ST step

ID#400076715 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Automation Studio crashes when an SFC FB instance is opened in monitor mode.

When the function "Go to implementation" is selected in monitor mode, Automation Studio crashes.

ID#400067925 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

For transitions that contain special characters (\ /: * <> |) it is then no longer possible to edit an action.The editor can't be opened.

ID#400056134 : new function since V3.00.90.04

Errors should also be acknowledged with SFCQuitError when SFCPause = TRUE

If the define −D _SFCPause_NoQuitError exists, the system variables SFCError, SFCErrorStep and SFCErrorPOU can be reset using the system variable SFCQuitError.

Programming − Software Configuration Editor

ID# 400108019, 400107599, 400112099 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Incorrect version number of the VISAPI library displayed in the software configuration

ID#400079527 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Starting and stopping tasks causes the entire right half of the software configuration to refresh when in monitor mode.

ID#400081296 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Software configuration shows the incorrect version numbers for standard B&R libraries

If a version number is assigned in a package in the logical view, it is also applied to manually mapped standard B&R libraries in the software configuration. The Automation Runtime version should actually be entered here.

ID#400063244 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.09

Open Cyclic/Init/Exit in the software configuration opens the wrong instance

The task context is not always defined for programs mapped multiple times when selecting Open Cyclic/Init/Exit.

ID#400055476 : solved problem, known since V3.00.81.18, solved since V3.00.90.05

Object names that contain a comma are not displayed in the software configuration monitor

ID#400110589 : known problem since V3.00.90.25 SP0x

Incorrect version number of the VISAPI library displayed in the software configuration

ID#400107599 : known problem since V3.00.90.24 SP0x

Incorrect version number of the VISAPI library displayed in the software configuration

Programming − ST

ID#400170221 : solved problem, known since AS4.2.03, solved since V3.00.90.33 SP0x

Arrays shown as "Local" in tooltip in monitor mode

ID#400102328 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Lowercase keywords are offered if declaring variables in text editors when word wrap is disabled.

ID# 400100057, 400102326 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

Tooltip in monitor mode is only shown once for a variable.

ID#400100058 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

Tooltip in monitor mode doesn't show any values for REAL and LREAL variables.

ID#400099453 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

Automation Studio crashes when the cursor is positioned over a component of a structure variable.

In the editor for text−based programming languages, if the mouse cursor is positioned over a component of a structure variable and if the name of the structure variable is only one character, then Automation Studio crashes.

ID# 400098869, 400098867, 400099399 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

In monitor mode, the tooltip shows 'local' for all variables.

ID#400091517 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Automation Studio crashes when you right−click.

ID# 400090416, 400097092 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Tooltip shows the wrong array size in the text editors.

ID# 400091165, 400090013, 400089525, 400090600, 400092461, 400093238 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

No longer possible to copy/paste individual words using the mouse.

ID#400089893 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

Automation Studio crashes when the cursor is positioned over a component of a structure variable.

In the editor for text−based programming languages, if the mouse cursor is positioned over a component of a structure variable and if the name of the structure variable is only one character, then Automation Studio crashes.

ID#400084375 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

Line coverage in monitor mode stops working when a code section is collapsed.

If line coverage is enabled in monitor mode and a section of code is collapsed, and if this results in more than 120 lines being visible in the editor, then line coverage stops working.

ID#400082704 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

When a text is selected, then selecting "Go to Declaration of" from the shortcut menus goes to the selection and not the current position.

ID#400084202 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

Text can no longer be moved using the mouse in the text editor.

ID# 400078154, 400081604 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Tooltip doesn't work in monitor mode for structure variables.

In monitor mode, moving the mouse over a variable should show a tooltip with its current value. Sometimes this doesn't work correctly for structure variables.

ID#400078470 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Code snippets are not inserted completely in the text editor when using SmartEdit.

ID#400077856 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

In the text editor, pressing the Enter key in multiple−line comments opens the variable declaration.

ID#400076938 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

SmartEdit doesn't work for structure elements if the transfer parameter is a structure or FB.

ID#400076577 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Incorrect variable declaration in the text editor for a function / function block.

In the text editor, the variable declaration is opened instead of the interface declaration.

ID#400077962 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Automation Studio crashes when you try to display a tool tip for a structure variable in monitor mode.

ID# 400076083, 400077351, 400080429 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

The function "Go to implementation" doesn't work for actions.

ID#400072798 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

FB instances displayed incorrectly in editor watch.

ID#400075924 : solved problem, known since V3.00.90.18, solved since V3.00.90.22 SP0x

In the text editor, the tooltip for enumerators doesn't show a value.

ID#400076723 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Keyword in parentheses not capitalized after end of line

ID#400077526 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Ctrl+Space for a structure array inserts the variable with no index

ID#400068185 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

Go To Declaration is not offered for members of function blocks

ID#400063410 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.09

Double−clicking on error message sends cursor to wrong line

If a source file contains line−ending data in UNIX format (\n), then the cursor will not be sent to the error position in the source file when double−clicking on an error message.

ID#400062128 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.08

SmartEdit does not work properly if the editor is opened by double−clicking on the cross reference list.

The SmartEdit functions are not available if an editor for a source file is opened the first time by double−clicking on a cross reference.

ID#400042618 : solved problem, known since V3.00.80.28 SP01, solved since V3.00.90.09

"Comment out" button stays grayed out

The "Comment out" button remains grayed out, even though there is no source code line being commented.

ID#400109072 : new function since V3.00.90.28 SP0x

When using autocomplete and a filter is specified, the first entry does not appear in the first position.

ID#400076586 : new function since V3.00.90.21 SP0x

When inserting using CTRL+V (paste) the file is not checked out

If the text from a checked−in file is inserted using Ctrl+V, it is not checked out and therefore not inserted.

ID#400076636 : new function since V3.00.90.20 SP0x

When a character is deleted using the delete key, the file is not checked out

If a character in a checked−in file is deleted using the delete key, the file is not checked out and therefore nothing is deleted.

ID#400076586 : new function since V3.00.90.20 SP0x

When inserting using CTRL+V (paste) the file is not checked out

If the text from a checked−in file is inserted using Ctrl+V, it is not checked out and therefore not inserted.

Programming − System Configuration

ID#400135207 : solved problem, known since V3.00.90.29 SP0x, solved since V3.00.90.32 SP0x

Not able to change tolerance of task classes after automatic rounding

ID#400082393 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

It is possible to disable the FTP server on the ARSim, even though this option has no meaning in this case.

On an ARSim target, it is possible to disable the FTP server in the system configuration. This setting has no meaning in this case, however, since there is no FTP server on the ARSim in the first place.

ID#400068898 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

No compile error when using retain variables

If there are retain variables declared in projects using PP100 or PP300 devices, no compile error occurs. For Powerpanels of this types no retain memory is available.

ID#400066525 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

Freezing 2003 backplane module causes build error.

If the 2003 backplane module is already frozen in a project, then in order to correct the build error you need to unfreeze it and freeze the module.

ID#400066205 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

No build error when more local remanent memory is used than was configured.

ID#400059327 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.06

For ARwin, the setting "Preserve permanent PV memory ..." is not preserved.

In the system configuration of an ARwin, the setting "Preserve permanent PV memory ..." is not preserved.

ID# 400056776, 400057107, 400059697 : new function since V3.00.90.07

The IP address of the ARsim can't be set to 0.0.0.0

If the ARsim's IP address is set to 127.0.0.1, then the ARsim can no longer be reached from another computer via the IP of the ARsim.

ID#400138687 : known problem since V3.00.90.29 SP0x

Not able to configure PV memory in the system configuration

This error occurs because the Automation Studio project is inconsistent. The inconsistency may have occurred due to an error converting from AS 2.7 to AS 3. The inconsistency may also have resulted from replacing the CPU in the project.
The inconsistency cannot be corrected by making a change in AS (and therefore not within the framework of a V3.0.90 SP).
There are two possibilities for the user to correct the inconsistency in the project himself:
1. Reset the system software properties under the "X20CP1483" tab with the "Default" button. The disadvantage here is that all settings are reset to their default values, and any settings that have been changed are lost.
2. Manipulate the sysconf.syc file.
Replace all occurrences of "CP1584" to "CP1483" in the sysconf.syc file located in the <ProjectPath>\Physical\Config1\PLC1 directory. The disadvantage here is that a file in the AS project must be edited externally, but this also makes sure that any changed settings are retained.

Programming − Variable Declaration Table Editor

ID#400108524 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.27 SP0x

See A&P 337880.

ID#400105111 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Escape sequences in IEC strings result in incorrect string lengths

The length of a string is determined incorrectly if using e.g. "$R" instead of "$r" as an escape sequence in an IEC string.

ID# 400091999, 400096044 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

An entered initial value is not applied in some cases

When you enter an initial value in the dialog box for initializing variables and types, this value is sometimes not shown if you close and reopen the dialog box.
This error occurs for an array of structures with more than 2 elements.

ID#400088341 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Automation Studio crashes when you click on "Declare all variables"

ID#400089000 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Declaration files fan not be edited under certain circumstances

If the name of a package containing IEC declaration files (extension .typ, .fun, or .var) is the same as the name of a binary library in the project, then the IEC declaration files can't be edited in the table editor.
To workaround this problem, either use a text editor to edit the file or change one of the names (package or binary library).

ID# 400079076, 400076197 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Automation Studio stops responding when you open the dialog box for initializing structures

In the table editor for variable and data type declarations, it takes a very long time to open the dialog box for initializing structures and arrays from the "Value" column for large, complex structures. This only happens when an initialization has already been configured. During this time it is not possible to interact with Automation Studio. If you wait for the dialog box to open, it does eventually open correctly and show all the existing initialization values.

This error has been corrected so that the dialog box opens immediately, and then you can expand the respective (sub)structures in order to view the existing initialization values.

ID#400077859 : solved problem, known since V3.00.90.18, solved since V3.00.90.22 SP0x

Constant array limits in type definitions are not resolved correctly.

If you define a derived data type as an array with a constant as the maximum index, then when you expand a variable with this type in the VC4 data source editor an unlimited number of elements are displayed.

Programming − Variable Declaration Text Editor

ID# 400078628, 400078741 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Variables declared incorrectly as constants in the textual declaration editor.

ID#400052839 : solved problem, known since V3.00.81.18, solved since V3.00.90.10

Dragging and dropping a selected line sometimes removes a line too many

Programming − Variable Mapping Table Editor

ID#400125153 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.29 SP0x

Unable to connect remanent variables in the PV mapping

Tools − Generate Bus Navigator Source

ID#400117290 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

BNC generation fails when compiling a safety project (or opening SD) that contains additional configurations with at least one referenced hardware configuration

If a referenced hardware configuration is used in a project, then the build is aborted with error message "../BusNavigator.bnc: Error 9827: Generation of bus navigator source file failed."
The reason for this is missing support in the BNC generator.
Workaround
Do not use referenced hardware configurations.

ID#400117514 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.28 SP0x

Error calculating the domain gateway module ID if there are at least two SL−to−SL connections to the project SL and an I/O module is deleted/disabled

If a safety project with at least two SL−to−SL connections to the project SL is built and then I/O modules are deleted, then an error calculating the domain gateway module ID results in an error where the second SL−to−SL connection receives the same domain gateway module ID as the safe module ID of an I/O module. This causes the I/O module to no longer be shown in SafeNAVIGATOR.

ID#400114582 : solved problem, known since V3.00.90.26 SP0x, solved since V3.00.90.27 SP0x

If configurations are referenced, BCN generation doesn't work with iCN connections.

If building a project that contains at least one SL controller an one iCN connection to another configuration that is referenced instead of being directly in the project directory, then the Hardware.hc file is not found during BNC generation.

ID#400094047 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Parameters for modules that have the "Freeze" flag set are still read from the current hardware description file.

If SafeDESIGNER is open for a project containing safe hardware modules that have been frozen to a particular version, then the "freeze" condition does not prevent the parameters from still being read from the current hardware description file.

ID#400092033 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

If the I/O mapping file consists of multiple "mapping sections", then only the variables from the first section are added to the BNC file.

This problem occurs when the I/O mapping file contains multiple VAR_CONFIG ... END_VAR sections. In AS this can happen when a block comment is added to the mapping definition.
Workaround:
The problem can be avoided by ensuring that there is only one VAR_CONFIG ... END_VAR section.

ID#400085701 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

When converting from AS 3.00.81 to AS 3.00.90.20 the SDG channels of a SL to SL configuration are reversed, which results in AS and SafeDESIGNER each having a different "ChannelCRC".

In AS 3.00.81 the SDG channels are generated in the order in which they were defined in AS. i.e. with increasing SDG number.
For example, if the SL with ID 100 is connected to Connection 1 and the SL with ID 3 is connected to Connection 3, then the order of the SDG channels in the project will be SLId 100 followed by SLId 3.
In the BNC file it would look like this:
<Channel ID="SL100_SafeBOOL" Type="BOOL" Direction="OUT" ...../>
<Channel ID="SL3_SafeBOOL" Type="BOOL" Direction="OUT" ...../>
If you then convert to AS 3.00.90.20, these channels are incorrectly sorted according to SLId and SMId.
The resulting order in the BNC:
<Channel ID="SL3_SafeBOOL" Type="BOOL" Direction="OUT" ...../>
<Channel ID="SL100_SafeBOOL" Type="BOOL" Direction="OUT" ...../>
The resulting "ChannelCRC" in SaveDESIGNER is different than the one in AS.
The "ChannelCRC" generation in AS correctly uses the SDG as the sorting criteria, so there is an error for the SL during the CRC comparison.

ID#400060397 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

During a BUILD in AS the SafeDESIGNER must not be opened.

If the SafeDESIGNER is opened while a BUILD is running, creation of the BNC may not be completed.
This should therefore be prevented in AS.

ID#400058060 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

The I/O mapping from the AS project is not applied to the safety project.

In the AS project, any channels with local or global PVs that are mapped to I/O modules are missing when the safety project is opened.

Effects on project development:
1) When the channels are dragged into the graphic workspace of the SafeDESIGNER, the names from the AS project are not suggested for the link.
2) In the SafeNAVIGATOR the PVs are missing from the "CPU Variable" column.

Tools − Generate Transfer List

ID#400086885 : solved problem, known since V3.00.90.18, solved since V3.00.90.22 SP0x

The option to transfer only software objects that do not yet exist on the target is not applied to the Runtime Utility Center transfer list.

ID#400081720 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

When creating a CF for a PP100 terminal, the Automation Runtime Version from the main CPU is always used.

Tools − Import Fieldbus Device

ID#400114265 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.28 SP0x

Incorrect length of I/O data points for POWERLINK XDD import

If an XDD file containing objects related to a structure declaration with a length of 3 bytes is imported, then 4 bytes are written/read for this object on the POWERLINK bus.

ID#400086340 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

Missing object data type crashes the XDD import

If no data type attribute was assigned to an object in the object directory, this crashed the import component.
The XDD could then no longer be imported.

ID#400076841 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

XDD file containing object without objFlags attribute may result in invalid import

For device specific objects without an objFlag attribute definition the internal value defaults to 0 by mistake. Further this default value meets the condition from the XDD specification that the default value from objects with PDO mapping "no" must not be imported in this case.

ID#400063594 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.09

Import could not handle tabulator characters

Tabulator characters at certain positiions caused a wrong interpretation of the values in the affected line and this in turn led to a corrupt runtime configuration.

ID#400056310 : solved problem, known since V3.00.81.18, solved since V3.00.90.08

Incorrect channel address calculation for imported Powerlink devices with static mapping and user defined datatypes

The mapping offset of user defined datatypes has not been applied for user defined datatypes. Although the offset within the user defined datatypes
was correct, the offset within the Powerlink frame was wrong.

ID#400130252 : new function since V3.00.90.30 SP0x

Support for optimizing the latency time for imported POWERLINK devices

The latency time can now also be optimized for POWERLINK devices imported using XDD files.

ID# 400098816, 400119786 : new function since V3.00.90.28 SP0x

Importing PROFIBUS device descriptions from Revision 5 on

Importing PROFIBUS device descriptions from Revision 5 on is not supported by Automation Studio.
Attempting to import is aborted with numerous error messages, but the user is not informed about the circumstances.

ID#400077805 : new function since V3.00.90.20 SP0x

Option to configure Hilscher GSD files on netX cards

Tools − Trace

ID# 400034601, 400042798, 400048781, 400052626 : solved problem, known since V3.00.80.25, solved since V3.00.90.07

ENUM data types in trace

Starting with the current version of Automation Studio, the AS trace function will also support variables with the ENUM data type.

Tools − Upgrade

ID#400162260 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

Multiple AS instances started when installing a service pack together with hardware upgrades

ID# 400072301, 400072315, 400072408, 400072380, 400077761, 400077771, 400077777, 400077874 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

AS crashes when the Tools / Upgrades dialog box is opened

The reason for this is a faulty XML file on the B&R homepage that is downloaded when the dialog box is opened. This file is checked hourly and regenerated if necessary. The error then no longer occurs. However, if you happen to open the dialog box during this time, Automation Studio crashes.

Workaround:
Since Automation Studio doesn't automatically re−download this file every time the dialog box is opened, the error appears to occur for longer than an hour. However, the file has probably been repaired in the meantime. You must therefore delete the downloaded file manually so that it is re−downloaded the next time the dialog box is opened. The file can be found in the user's Temp folder, e.g. 'C:\Documents and Settings\<username>\Local Settings\Temp'. You need to delete both files (AddOns.xml and AddOns.zip).

VisualComponents Editor – VC3

ID#400161782 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

VC3 error message "Alarm bit field variable not defined for alarm group 'xxx'" output although this is configured

VisualComponents Editor – VC4

ID#400165078 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

VC4 StatusDatapoint not correctly saved and deleted

Follow−up error A&P 282895 − Converting projects.

Workaround:
− Open the HMI application where the data points are deleted.
− Change the description of the data source so that it's saved.
− Save the project −> Dependencies will be entered correctly.

ID# 400103606, 400108864 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.26 SP0x

VC3 − QVGA AlphaPad not working

ID# 400105309, 400106238, 400107384, 400108809, 400108915, 400111241, 400111389, 400112558, 400113250 : new function since V3.00.90.28 SP0x

Data sources not being sorted automatically

ID#400112061 : known problem since V3.00.90.24 SP0x

Support for UXGA resolution

Workspace − Common

ID#400145057 : solved problem, known since V3.00.90.30 SP0x, solved since V3.00.90.32 SP0x

Possible to open AS 4.x projects with AS 3.x

Automation Studio 3.x allows the opening of projects made in versions later than AS 3.x. If this is done, the program crashes.

ID#400129674 : solved problem, known since AS4.0.17 SP, solved since V3.00.90.32 SP0x

Changeover times for standard and daylight savings time incorrect for Melbourne/Australia

ID#400106496 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.25 SP0x

Error message when opening the online settings editor in projects running on a virtual drive

Mapping a project to a drive (e.g. A:) causes an error when opening the online settings editor.

ID#400095925 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.25 SP0x

The menu options and buttons Edit / Undo and Edit / Redo are always enabled.

ID#400102706 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.25 SP0x

Incorrect program context when opening a C source file in monitor mode

When opening C programs in monitor mode, the program context may be set incorrectly. This program context can be corrected afterward. This error does not occur if a C program is opened before turning on monitor mode.

ID# 400096259, 400098354 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

In the text editor, the tooltip for enumerators shows an incorrect value.

ID#400081440 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

If the Automation Studio Logical View contains more than one visualization application, then searching in files causes Automation Studio to crash.

AS only crashes when the VC editor is open.

ID#400042825 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Configuring the default online connection settings can cause the transfer process to terminate unexpectedly when using remote PVI.

When connecting to the target system via remote PVI, depending on the contents of the Automation Studio project, the transfer of the application to the target system is terminated without an error message. The cause for this are the default parameters selected when configuring the online connection. The value in the "Client timeout" column for the remote connection in the online settings editor is set to a

default of 10. This value is too small under some circumstances. If you enter a larger value (e.g. 50) or 0, the error no longer occurs.

ID#400079565 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.20 SP0x

Online connection can't be established when the project name contains a space.

When an Automation Studio project with one or more spaces in the project name is opened, an online connection can't be established.
There is no workaround for this error.

ID#400080482 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

Entering DEL in the search field in the toolbar deletes the selected entry in the workspace.

If the focus is on the field for entering a search term in the toolbar, then entering DEL affects the selected entry in the currently active workspace window.
As a result, the entry selected in the workspace window is deleted.

ID#400079336 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

"Edit", "Zoom" and "Debug" toolbars flicker

If the "Show text labels" option is set for the "Edit", "Zoom" and "Debug" toolbars, then these toobars begin to flicker.
This problem can only be avoided by undocking the toobars from the Automation Studio window.

ID#400077469 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Automation Studio crashes when you start the "New function or function block" Wizard

If a program or library contains a source file with the same name as the program/library itself, Automation Studio crashes.

ID# 400075518, 400076490, 400076839 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Icons in the toolbar are blurry and illegible

If the Windows control panel is used to enlarge the size of text and other items on the screen to 125% or higher, then the icons in the Automation Studio toolbar become blurry and illegible.

ID#400067673 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

Contents of the dialog box "Tools / Options / Editor" not shown correctly in Korean Windows 7.

ID# 400042829, 400045254, 400045023 : solved problem, known since V3.00.80.25, solved since V3.00.90.09

Undocked watch window remains out of view.

ID#400039342 : solved problem, known since V3.00.80.25, solved since V3.00.90.07

The option "Store Nc Operating system on target" doesn't work for SG3 and SGC targets

ID#400117991 : new function since V3.00.90.32 SP0x

Project path not checked for valid characters when opening the "CoffeeMachine" sample project

ID#400087164 : new function since V3.00.90.23 SP0x

After "Save project as" the active configuration is lost

If you save a project using "Save project as", then afterward the first configuration is always active.

ID#400049975 : new function since V3.00.90.10

Automation Studio doesn't show a message when two controllers use the same IP address

If the same fixed IP address is assigned to two controller CPUs, then only one of them is randomly selected for the online connection; there is no message to inform the user of this situation.

ID#400025794 : new function since V3.00.90.07

When Automation Studio starts, it always tries to open the last opened project

This behavior can now be configured under Tools / Options / General.

ID#400123570 : known problem since V3.00.90.27 SP0x

Recurring problem of insufficient UserRAM+REMMEM memory after changing AR version from Q4.02 to R4.02

ID#400115770 : known problem since V3.00.90.26 SP0x

Insert menu option not displayed in text editors

ID#400096914 : known problem since V3.00.90.23 SP0x

Prespecified size of TmpRAM/OS area setting exceeds the checked maximum size

For the X20CP201, X20CP2091 and X20XCC201, the prespecified size of the TmpRAM/OS area setting (306 kB) exceeds the checked maximum size (256 kB). This causes an error message when changing the system software properties on the "Memory" page.
This problem occurs with Automation Runtime A2.33 and higher.
Workaround: Reduce the size to 256 kB.

Workspace − Configuration View

ID#400106916 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.25 SP0x

Automation Runtime <3.00 can no longer be configured in AS 3.0.90.24 SP06 and higher

If an Automation Runtime version < 3.00 is configured in a project, then the dialog box for switching runtime versions cannot be closed.

ID# 400101102, 400100382 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

Additionally supported hardware modules using incorrect firmware version

If safety modules are listed in the list of additionally supported hardware modules, then an incorrect firmware version is used for them when the project is compiled.

ID#400095655 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Error 9218: PLC <Name> can't be loaded

If a configuration's Runtime configuration contains module with no description, then this configuration can't be built.

ID#400087376 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.22 SP0x

Not possible to move a configuration

When you try to move a configuration, an unhandled exception occurs

ID#400085317 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

After "Save project as", the batch settings are lost

If you save a project using "Save project as", then any existing batch build options are no longer set.

ID#265455 : solved problem, known since V3.00.90.12, solved since V3.00.90.14

POWERLINK: Default value for asynchronous timeout changed from 25 s to 50 s

Default value for asynchronous timeout increased from 25 s to 50 s.
As a result, even relatively slow POWERLINK stations with a response time higher than 25 s are detected with the default setting.

ID#400066009 : new function since V3.00.90.11

After the upgrade dialog box is canceled no other configuration can be activated

If you're activating a configuration and the upgrade dialog box is opened to perform a required upgrade, if the upgrade is canceled then no other configuration can be activated.

Workspace − Export/Import

ID#400128924 : solved problem, known since V3.00.90.28 SP0x, solved since V3.00.90.29 SP0x

Motion upgrades not exported with "Save project as zip"

If certain motion versions are used in a project, their upgrades will not be included in the export when selecting "Save project as zip".

ID#400090628 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

After importing text, the imported file can no longer be deleted

If you import an AS 2.x text export file into an AS 3.x project, then after the import you can't delete the file as long as AS is open.

ID#400061566 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.07

Interface settings are set to defaults after hardware import.

If the hardware (incl. CPU) is exported, then the default values will entered instead of the interface settings for the POWERLINK interface when importing.
This affects the following hardware modules: 4PP065.0351−P74, 4PP065.0571−P74, 4PP065.0571−K01.

ID#400059518 : solved problem, known since V3.00.81.23 SP0x, solved since V3.00.90.07

When importing/exporting hardware modules, the I/O mapping descriptions are lost.

When importing, the I/O mappings are missing.

ID#400058276 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.06

Special characters replaced by question marks during import

If a data object that contains special characters is exported from an AS V2.x project using File −> Export… and then imported into an AS V3.0.81.x project using File − >Import….
all special characters in the data object are replaced by question marks.

ID#400056949 : solved problem, known since V3.00.81.18, solved since V3.00.90.05

*.hpp files are not exported with "Export Source Library"

*.hpp files can't be selected for exporting.

ID#400040120 : solved problem, known since V3.00.80.25, solved since V3.00.90.03

When adding existing objects, the object description is not added

If objects (programs, data objects, packets) from other projects are added to an existing project using Add Object / Existing wizards, then their description is not added.

ID#400095773 : new function since V3.00.90.26 SP0x

Incomplete configuration copy/import with hardware modules in a frozen state

If a configuration containing frozen hardware modules is exported, then necessary associated data is not included when the configuration is re−imported.
This is also the case when copying/pasting this type of configuration.

Workspace − Find/Replace

ID#400094082 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Search results shown twice

If you use referenced files in a project, and their paths contain different capitalization, then the search results from each of these files are shown.

ID# 400086303, 400090308, 400092888, 400096732 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

Changes in a search string are not applied in the Find window. The previous search term remains in the text editor.

ID#400077168 : solved problem, known since V3.00.90.18, solved since V3.00.90.20 SP0x

In an SFC program, "Find in files" doesn't take you to the right position.

ID#400069438 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

Replace in "whole file"

In the Replace dialog box, even if "Whole file" is selected, any terms located before the cursor are not replaced.
WrapAround can't be enabled.

ID# 400077021, 400076626, 400079800, 400085083 : new function since V3.00.90.22 SP0x

Find In Files searches files multiple times

If a project contains references to files within the same project, these files are searched multiple times when you use the "Find in Files" function.

ID#400058790 : new function since V3.00.90.07

Find text or replace text displayed in the output window for FindInFiles/ReplaceInFiles

With FindInFiles/ReplaceInFiles, the text being searched for or replaced is not shown in the output window.

Workspace − Help Explorer

ID#400055263 : solved problem, known since V3.00.90.03, solved since V3.00.90.04

Sample files that are linked to on Help pages can't be saved.

There is no "Save as..." dialog box for the sample files that are linked to on the Help pages.

Workspace − Localization

ID#400107127 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Numeric control: "ProgressiveDirect" enumeration value for UpDownMode does not exist in the German AS version.

ID#400089445 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.28 SP0x

German AS: In the button properties, the same parameter is referred to as both "Ebene" and "Level"

ID#400086015 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Typo in the info text in the output window. Only affects the German version.

ID#400058790 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

Find text or replace text displayed in the output window for FindInFiles/ReplaceInFiles

With FindInFiles/ReplaceInFiles, the text being searched for or replaced is not shown in the output window.

Workspace − Logical View

ID#400095653 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Undo/Redo data can't be created. Folder or file path too long

When you move an object whose resulting path (including its child objects) would be too long, an error message is generated. The action is not completed and some data is missing.

ID#400089837 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

If multiple external editors are registered for a file, then "Open with..." doesn't work for all files.

If a computer has more than one external program registered for a certain file extension, then this program can't always be opened from within Automation Studio.

ID#400076534 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

The way the scope is changed produces incorrect results

When you change the scope of a declaration file it is switched to the other setting without checking the current status.
In other words, if you set the scope of a global declaration file to "Global", its scope is changed to "Restricted".

ID#400056231 : solved problem, known since V3.00.81.20 SP01, solved since V3.00.90.04

Cyclic program won't open

The command "Open cyclic program" doesn't work if the name of the file is written differently in the file system than it is in the AS project.
"vcFastBitProcessing.c" != "vcfastbitprocessing.c

ID#400063251 : new function since V3.00.90.09

Declaration files added to a library after it has been created cannot be renamed.

If additional declaration files with the extension .typ or .var are added to a library, then they cannot be renamed.

Workspace − Physical View

ID#400163546 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

Automation Studio crash when importing an ACOPOS drive

ID#400160035 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

8BVSV2SAFE1−1 not frozen when adding ACOPOSmulti power inverter with SafeMC if other frozen 8BVSV2SAFE1−1 devices in the same configuration

If SafeMC modules (8BVSV2SAFE1−1) that are already frozen to a certain version already exist in a project's active configuration, then any additional ACOPOSmulti power inverters with SafeMC (8BVIxxxxxxDS.xxx−x) that are added do not also freeze the 8BVSV2SAFE1−1 modules as would be expected. Warning 30973 is then reported when transferring the project. After installing this service pack, the ACOPOSmulti power inverters with SafeMC whose SafeMC modules were not correctly frozen must be deleted from the project's active configuration and then added again.

ID#400137620 : solved problem, known since V3.00.90.29 SP0x, solved since V3.00.90.31 SP0x

Hardware version not saved in hardware management source file when adding an ACOPOSmulti mit SafeMC device

If a new hardware module is added to Automation Studio, then the version of the hardware module is stored in the hardware management source file (hardware.hc). If a hardware module is frozen, then the hardware data from this frozen version is used in the future.
In the case of ACOPOSmulti with SafeMC, this version is not stored in the hardware management source file, however. This results in error messages (error 6850 or 6854) when performing a build of AsHwd and AsFw after freezing the ACOPOSmulti with SafeMC and then installing a newer hardware upgrade.

ID# 400143645, 400147936 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.32 SP0x

ArConfig.rtc file not updated when changing node number of Windows terminal

This change to the node number causes the settings on the Windows terminal to be lost.

ID#400107844 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.26 SP0x

Automation Studio may crash as a result of a memory error when exporting large hardware structures.

There is not yet a correction for this error.

ID#400103456 : solved problem, known since V3.00.90.24 SP0x, solved since V3.00.90.25 SP0x

Long delay times for DTM devices when not able to reach host

If a host name is specified in the online settings that cannot be reached or resolved, then certain actions seem to take a very long time in combination with DTM devices.

ID#400101659 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.26 SP0x

Incorrect version displayed in the module parameter window for frozen hardware modules in some cases

If a hardware module in a project is frozen at a higher version than is installed, then the installed version is shown instead of the frozen version in the module parameter window.

ID#400092727 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.23 SP0x

If more than one Modbus slave CPU in the SDG SL configuration is connected to another configuration, then SL to SL communication doesn't work.

If more than one Modbus slave CPU in the SDG SL configuration is connected to another configuration, then the IP address of the last Modbus slave CPU is used for all SDG connections. As a result, SL to SL communication is no longer possible.

ID#400089259 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

A Modbus slave CPU can't be inserted if it is in a configuration with a PP500.

If you try to insert a Modbus slave CPu on the Ethernet interface, then the third page in the wizard asks you to enter the name of the configuration in which the selected CPU is the main CPU.
At this point, if you select a configuration with a PP500, then the bottom combobox doesn't show an Ethernet interface, even if it is configured correctly for Modbus.
This mechanism works fine for CPUs other than the PP500.

ID#400085322 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.21 SP0x

AS crashes when you freeze an ACOPOSmulti inverter with SafeMC

When an ACOPOSmulti inverter with SafeMC is inserted in a project, then the Physical View doesn't show the versions of the ACOPOSmulti or SafeMC module. If you then freeze the ACOPOSmulti, Automation Studio crashes. Automation Studio also crashes if the active configuration already contains a frozen ACOPOSmulti inverter with SafeMC and another ACOPOSmulti inverter with SafeMC is inserted.

ID#400081014 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Inconsistencies in the hardware configuration can result in modules on the X2X bus being deleted when an X2X module is inserted.

This problem only occurs in one particular Automation Studio project.

On the X2X there are X67 modules that are preceded by a gap in the station numbers.
This is not permitted, since X67 modules are numbered sequentially on the X2X bus.
There are two ways to work around this problem and restore the consistency of the hardware structure:
1) Insert a dummy X20 module in front of the two X67 modules (at the position of the X67 module with station number 60). This shifts the station numbers, and the dummy can then be removed.
2) Delete and reinsert the X67 module with station number 60. This also shifts the station numbers.

ID#400069234 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.12

The Automation Runtime version can't be changed if safety hardware modules are frozen in the current configuration.

Trying to change the version of Automation Runtime in a configuration that contains safety hardware modules frozen at Version 1.2, when the installed version of the same safety hardware modules is >= 1.4, results in an error message.

ID# 400067241, 400068754 : solved problem, known since V3.00.80.34 SP02, solved since V3.00.90.11

With an existing online connection, fixed node numbers are detected incorrectly

For X2X configurations, fixed node numbers are entered, although the respective hardware modules don't have fixed node numbers configured.

ID#400063350 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.09

Incorrect dialog box shown during hardware export in Windows 7.

ID#400055434 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.07

For ACOPOSmicro, not all hardware module description files are updated during an upgrade.

After upgrading the ACOPOSmicro, an error message is generated when the respective project is opened, indicating a missing hardware module "80VDxxxxx.xx22−xx".

ID#400057419 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.05

If the configuration and the PLC have the same name, then modules can't be inserted.

If the configuration and the CPU it contains have the same name, then an IF module can't be inserted on the X20BC1083.

ID#400057278 : solved problem, known since V3.00.81.18, solved since V3.00.90.07

Slow system response when opening the connection dialog box between Safety CPUs

It takes too long to open the dialog box for selecting connected SL modules.

ID#400054960 : solved problem, known since V3.00.81.18, solved since V3.00.90.05

Project containing frozen fieldbus devices can't be built.

If "freeze all" is performed on a project containing fieldbus devices, a subsequent build will result in error messages.

ID#400056399 : solved problem, known since V3.00.81.18, solved since V3.00.90.05

Slow system response when opening the connection dialog box between Safety CPUs

It takes too long to open the dialog box for selecting connected SL modules.

ID# 400042992, 400043877, 400048435 : solved problem, known since V3.00.80.25, solved since V3.00.90.05

USB device can't be deleted

On an APC, only a usbhubAP900 can be inserted at USB 1 or USB 4.
However, it is then no longer possible to delete this hub.

ID#400042894 : new function since V3.00.90.14

With CPUs used as a POWERLINK V2 CN, it is now possible to configure a fixed InSize and OutSize for the POWERLINK data.

ID#400056817 : new function since V3.00.90.08

SafeDESIGNER cannot be opened after uploading hardware that contains safe modules.

If the SafeDESIGNER is activated via the SafeLOGIC, then it will not be loaded after uploading hardware configurations with safe modules.

ID#379370 : known problem since V3.00.90.28 SP0x

Froozen usbms module cannot be unfroozen

ID#400106581 : known problem since V3.00.90.24 SP0x

Incorrect version displayed in the module parameter window for frozen hardware modules in some cases

If a hardware module in a project is frozen at a higher version than is installed, then the installed version is shown instead of the frozen version in the module parameter window.

ID#400103265 : known problem since V3.00.90.23 SP0x

Unable to open SafeDesigner from AS

If a project contains defective or incomplete data in its safety modules or associated safety projects, then it is not possible to open SafeDesigner directly from AS.

Workspace − Project Converter

ID#400169592 : solved problem, known since V3.00.90.32 SP0x, solved since V3.00.90.33 SP0x

Converting projects from AS 2.7 to AS 3.x not completing

When converting a project with encrypted ANSI C source files, the conversion is aborted and no longer responds.

ID#400102027 : solved problem, known since V3.00.90.18, solved since V3.00.90.24 SP0x

Converting an AS 2.x (SG3) project to AS 3.0.90.18 changes values in acp10cfg − Error 10522.

If an AS 2.x SG3 project is converted to an AS AS 3.0.90.x project, then some values in the Acp10 configuration are not applied correctly.

ID#400044280 : solved problem, known since V3.00.80.25, solved since V3.00.90.11

Motor parameters are converted incorrectly

When opening a 2.x project, the motor parameters for synchronous motors are entered incorrectly.

ID#400065402 : new function since V3.00.90.11

When a 2.x project is opened, the version info isn't set properly.

When a 2.x project is opened, the version info in the properties of the object in the software configuration is not set to "use default".

Workspace − Save Project As Zip

ID#400122484 : solved problem, known since V3.00.90.27 SP0x, solved since V3.00.90.28 SP0x

"Save project as .zip" returning errors on manual selection

If a project is exported as a .zip file in manual mode, then an error occurs when deselecting references.

ID#400099124 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

AR upgrade for an X20CPx48x−1 missing when exporting a project as a ZIP file

When you export a project as a ZIP file, an AR upgrade for an X20CPx48x−1 CPU is not exported along with the project.

ID#400084454 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.23 SP0x

Save Project As Zip doesn't work for referenced configuration

If a project contains a configuration as a reference and its source can't be found, then this project can't be saved using "Save Project As Zip".

ID#400092231 : solved problem, known since V3.00.90.21 SP0x, solved since V3.00.90.23 SP0x

Automation Runtime upgrade for APC810 not saved when you "Save project as ZIP".

ID#400085459 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

"Resolve references" option doesn't work for files in the Configuration View

References in the Configuration View are not included in the export when the "Resolve references" option is selected.

ID#400088350 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Project can't be saved as a zip file if there are "missing" *.sw files

If a project contains a *.sw file whose source doesn't exist, then the project can't be saved as a zip file.

ID#400077187 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

"Save project as Zip" doesn't save VCShared folder when "Resolve references" option is enabled

If you save a project using "Save project as zip" or "Save project as zip without upgrades" and enable the "Manual" and "Resolve references" options, then VC objects are not all saved in the zip file.
The VC shared folder is missing.

ID#400076486 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Save project as .zip doesn't work

If one of a project's configurations contains a VC Terminal module "4PP420.1043.K52t", then the project can't be saved as a .zip file.

ID#400064521 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.12

"Save Project As" doesn't work if the VC editor is open for one of the project's objects

Workspace − Setup

ID#400171093 : solved problem, known since V3.00.90.x UP10, solved since V3.00.90.x UP15

Reduced Installation still asks for Portable or Standard installation

ID#400154448 : solved problem, known since AS3.0.90 SP01, solved since V3.00.90.33 SP0x

VNC viewer: Support for WQVGA (480 x 272) and WSVGA (1024 x 600) resolutions for the Power Panel T−Series.

ID#400141340 : solved problem, known since V3.00.90.30 SP0x, solved since V3.00.90.33 SP0x

POWERLINK: Switch to Basic Ethernet of ICN at fail of MN

For POWERLNK ICN a switch to basic ethernet mode was build it, so that after a fail of the POWERLINK MN the ICN station could communicate by standard ethernet. In the POWERLINK Standard this state change is not described yet. Now this feature hat to be enabled explicitly therefore the standard behavior of ICN conforms to the POWERLINK specification.

ID# 400116142, 400120141, 400125086 : solved problem, known since V3.00.90.29 SP0x, solved since V3.00.90.30 SP0x

POWERLINK node number setting "Get from hardware" not working

The POWERLINK node number setting "Get from hardware" causes unexpected behavior. The node number received is always 0, and various warnings are output to the logger.

ID#400095089 : solved problem, known since V3.00.90.22 SP0x, solved since V3.00.90.24 SP0x

Configuration file for safety release not provided in AS SP

ID#400084460 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Display error in the key mapping for various PP65 devices

For the following devices, there is an error displaying the VC key mapping in Automation Studio:
− 4PP065.0351−P74
− 4PP065.0571−P74
− 4PP065.0571−P74F
− 4PP065.0571−X74F

ID#400076693 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Lack of exception handling when setting registry entries after registering a component during installation of Automation Studio.

In order to support parallel installation of multiple versions of Automation Studio, some keys created by Automation Studio must be modified during installation.
The exception was triggered by access to a key without the necessary read authorization.
Attempts to access keys without the necessary authorization are now ignored.

Workspace − Source Control

ID#400068446 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.12

Performance problem when using SVN

Using SVN can reduce performance of the AS editors, because they check the source control status with every operation.

ID#400059441 : solved problem, known since V3.00.81.25 SP0x, solved since V3.00.90.07

The entire project will not be retrieved during project update if one of the files is blocked.

Workspace − Startpage

ID#400082784 : solved problem, known since V3.00.90.18, solved since V3.00.90.21 SP0x

In the maintenance edition of Automation Studio you can create a new project from the start page, although that shouldn't be possible in this edition.

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AS − Diagnostics

ID#400028142 : new function since V3.00.90.10

Checklist for handling errors

The Automation Studio Help system doesn't have a chapter about I/O and network diagnostics

Diagnostics − Profiler

ID#400032355 : new function since V3.00.90.10

Setting for the maximum number of profiler archive modules

The maximum number of archive modules can now be set in the profiler configuration. Once the configured maximum number of archive modules for the controller has been reached on the controller, the oldest one is automatically deleted before creating a new one.

Libraries − Samples

ID#227270 :

Executable samples for the DRV_mn library

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Libraries

ID#400061454 : new function since V3.00.90.08

Output number of acknowledged alarms.

A new VISAPI function VA_GetAlarmCount(...) can be used to read out the number of alarms that have been acknowledged.

SG3 Compiler

ID# 400070358, 400073822 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.22 SP0x

In certain projects, enabling cross−compile results in Error 7900.

ID#400060889 : solved problem, known since V3.00.71.32 SP06, solved since V3.00.90.11

VC3 visualization application always transferred

SG3 Editor

ID#400082169 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

AS crashes when a button with a bitmap is copied in the VC3 editor

ID# 400067026, 400071283 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

VC3 application can't be opened if the user name contains Cyrillic characters

ID# 400073633, 400082385 : solved problem, known since V3.00.80.09, solved since V3.00.90.24 SP0x

Problem compiling constants in VC3

Array member variables that are defined with a constant and used in VC3 can't be compiled.

SG4 − Common

ID# 400088065, 400101887 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.24 SP0x

Correction regarding "AlphaPad QVGA" touch pad in the "BR_Default_QVGA" template

ID# 400008201, 400006669, 400009276, 400009917, 400013774, 400015386, 400015877, 400016146, 400018752, 400044279, 400053932, 400060613 : new function since V3.00.90.06

The number of key levels has been increased to six

The possible number of KeyLevels was increased to six in order to ensure consistent hardware/software key configurations.

SG4 Compiler

ID#400061159 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.24 SP0x

In case of name changes of Pages, changes were not applied to target.

Bug located and fixed.

ID# 400061159, 400102463 : solved problem, known since V3.00.90.23 SP0x, solved since V3.00.90.24 SP0x

In case of name changes of Pages, changes were not applied to target.

Bug located and fixed.

ID#279308 : solved problem, known since V3.00.90.17, solved since V3.00.90.20 SP0x

Build time for text groups optimized.

ID# 400075792, 400076222, 400077748, 400077891 : solved problem, known since V3.00.90.18, solved since V3.00.90.19 SP0x

Visualization objects can't be translated with GCC 2.95.3 if the project path contains a space.

ID#400068118 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.12

Compiler output improved for Error 7164.

ID#400055896 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.08

The structure of a reference is displayed incorrectly in the cross reference in VC.

ID#400060300 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.09

Layout of the listbox during rundime depends on the text size in Windows 7

If the text size in Windows 7 is changedd (Control Panel −> Display −> Make it easier to read what's on your screen), this affects the layout of the listbox control.

ID#400058284 : solved problem, known since V3.00.81.18, solved since V3.00.90.09

Absolute path in the *.mak file in VC3 visualization

ID#400055896 : solved problem, known since V3.00.81.18, solved since V3.00.90.06

After a "Build all", visualization objects ignored in "Build Cross Reference"

ID#244258 : solved problem, known since VC 3.72.8, solved since V3.00.90.08

ReplaceColor doesn't work correctly for 32−bit bitmaps.

ID#400055155 : solved problem, known since V3.00.81.18, solved since V3.00.90.06

Build error when config name contains "Temp"

ID#400052054 : solved problem, known since V3.00.81.18, solved since V3.00.90.06

Incorrect error message when multiple KeyMapping files are mapped

ID#228710 : known problem since V3.00.81.14

A build with GCC 2.95.3 doesn't work if the installation path contains parentheses ()

If the installation path for Automation Studio contains parentheses, the build won't work if GCC Version is set to 2.95.3.

The problem occurs especially on Windows 7 64−bit installations, because the default installation path there is "c:\program files (x86)".

SG4 Editor − Common

ID#400083435 : solved problem, known since VC 3.95.3, solved since V3.00.90.21 SP0x

Automation Studio crashes when you copy languages using Ctrl + C / Ctrl + V

ID#400080527 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.21 SP0x

Error converting Visual Components data points from Automation Studio 2.7 to Automation Studio 3.0.90

ID# 400081749, 400081606 : solved problem, known since VC 3.95.3, solved since V3.00.90.20 SP0x

Problem with path formating from structures fixed.

ID#400075880 : solved problem, known since V3.00.90.19 SP0x, solved since V3.00.90.22 SP0x

Fixed a problem when changing of the station number.

ID#400076137 : solved problem, known since VC 3.95.0, solved since V3.00.90.19 SP0x

When importing resources, data points on a layer are not imported.

ID#400064647 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

Changes to the name of the visualization are not saved in the project file.

ID#400064754 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Variables are not deleted from the data source file when the last active reference is deleted.

ID# 400052964, 400060332 : solved problem, known since VC 3.72.6, solved since V3.00.90.10

When opened, the visualization application is always marked as having been changed

ID#400062105 : solved problem, known since V3.00.81.26 SP0x, solved since V3.00.90.10

VC Editor crashes if a CPU name with more than 20 characters is used in a project.

ID#400061451 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.09

Refactored variable not being saved

If a variable is refactored (e.g. because it has been renamed in the task) and the visualization application saved and then re−opened, then the data point will be set to <None>.

ID# 400061375, 400078107, 400083309, 400087217 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.22 SP0x

When you copy text from the properties, the whole text is copied instead of just the current selection.

ID#400060674 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.11

With more than 10 key levels, switching displayed level in VC editor doesn't work correctly

ID#400059732 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.09

Refactored variable not being saved

If a variable is refactored (e.g. because it has been renamed in the task) and the visualization application saved and then re−opened, then the data point will be set to <None>.

ID#400055285 : solved problem, known since V3.00.81.18, solved since V3.00.90.07

Incorrect handling of data source in source control

As a result, changes can't be saved and are lost.

ID#400057285 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

TextIndexOffset −1 not being saved

If the value 1 is set as the TextIndexOffset for a text, then this value will not be saved. Other values work correctly.

ID#400055336 : solved problem, known since V3.00.81.18, solved since V3.00.90.06

GDI resources are lost when switching between two trend windows

Each time you switch between two trend windows approximately 100 GDI resources get lost. This, in turn, can lead to the error "Incorrect argument found".

ID#400054482 : solved problem, known since VC 3.64.2, solved since V3.00.90.08

ReplaceColor doesn't work correctly for 32−bit bitmaps.

ID#400053770 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.12

Element of a structure can't be displayed during runtime

After a functioning project is converted, an element of a structure is no longer displayed.

ID# 400049724, 400052262 : solved problem, known since VC 3.64.2, solved since V3.00.90.06

When a visualization page is copied, the tab order of the controls is lost

If multiple controls are copied from one page to another, the tab settings are not retained.

ID#400046081 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.13

Layer copied from a page to the common layers keeps the property "hidden"

ID#400034476 : solved problem, known since V3.00.80.25, solved since V3.00.90.11

Grid settings in VC editor disappear if window too small

ID# 400026964, 400049218 : solved problem, known since V3.0.71.31 SP05, solved since V3.00.90.07

ShowConnections function doesn't work on text groups when pages are closed

ID# 400079441, 400078977, 400094005 : new function since V3.00.90.23 SP0x

Icons hard to see

Exclamation marks in data source are difficult to see

ID# 400062342, 400062713, 400062960, 400063419, 400074584 : new function since V3.00.90.19 SP0x

Merging data sources when importing resources

ID#400054507 : new function since V3.00.90.10

For the Toggle and Momentary DP key actions, the default setting for "pressed" status has been changed to 1.

SG4 Editor − Controls

ID#400000595 : solved problem, known since V3.00.90.14, solved since V3.00.90.16

Crash when VC objects are opened in a specific project

ID# 400037920, 400041371, 400045431 : solved problem, known since V3.00.90.11, solved since V3.00.90.13

Display error in the bitmap 'zuneAlphaPadQvga'

ID#400056208 : known problem since V3.00.81.14

Incorrect display of control element "Numeric" in the editor

If the alignment for a "Numeric" control element is set to Center/Center and the Border to "none", then there is no value displayed in the editor.

SG4 Editor − Help

ID#400043304 : solved problem, known since V3.00.81.19, solved since V3.00.90.16

Incorrect display of arrays with many elements (80000 or more)

SG4 Editor − PageDesigner

ID# 400086602, 400088464 : solved problem, known since V3.00.90.20 SP0x, solved since V3.00.90.22 SP0x

Error when the movement order is changed for a control on a common layer.

ID#400062424 : solved problem, known since V3.00.90.05, solved since V3.00.90.10

Importing a 32−bit PNG inserts it as an 8−bit bitmap

ID# 400050882, 400055585, 400060760 : solved problem, known since VC 3.72.6, solved since V3.00.90.06

Variable and units overlap in the editor.

SG4 Editor − Resources

ID#400075323 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.21 SP0x

Retractor character for no reason after refreshing data source.

ID#400074452 : solved problem, known since V3.00.81.27 SP0x, solved since V3.00.90.19 SP0x

Structure array can't be expanded without refreshing the data source

ID#400065760 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.12

Using multiple VC data sources causes a page fault.

ID#400064577 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.10

Limit for the expand function increased from 255 to 10000 elements.

ID#400064021 : solved problem, known since V3.00.81.24 SP0x, solved since V3.00.90.11

Incorrect error message when the wrong directory is specified in the VC Import Wizard.

ID#400063338 : solved problem, known since VC 3.73.0, solved since V3.00.90.11

Display of import log file doesn't work. The file is created in the wrong folder.

ID#400062865 : solved problem, known since V3.00.81.24 SP03, solved since V3.00.90.09

The variable that is used exclusively for Fill Areas is decoupled from the property by VC

ID#400062173 : solved problem, known since V3.00.81.24 SP03, solved since V3.00.90.12

Switching from 8−bit to 32−bit isn't applied to all graphics.

ID# 400052336, 400061114 : solved problem, known since V3.00.81.23 SP02, solved since V3.00.90.09

Array elements not being linked to the task during import

If controls with array elements are imported as data points via the VC Import Wizard, then the link to the task is lost even though these links appear to still be there.

ID# 400059383, 400061465, 400063019, 400064576 : solved problem, known since V3.00.81.22 SP01, solved since V3.00.90.09

Unit groups can no longer be connected to arrays

ID# 400057211, 400060560, 400062831, 400070847 : solved problem, known since V3.00.81.18, solved since V3.00.90.11

It was no longer possible to create an internal data source.

ID# 400056974, 400059791 : solved problem, known since V3.00.81.18, solved since V3.00.90.09

Members of FUB arrays not displayed correctly in the VC data source

ID#400055909 : solved problem, known since VC 3.72.6, solved since V3.00.90.07

Data points linked to vKeys are sometimes disconnected if the project contains more than one visualization

ID#400051047 : solved problem, known since V3.00.81.18, solved since V3.00.90.06

Problem replacing data points in VC

ID#400050913 : solved problem, known since V3.00.81.18, solved since V3.00.90.06

Additional nodes in structures in the data source view

An extra node is shown for structures in the data source view, which allows additional elements to be shown for arrays with more than 10 entries.

ID#400091640 : known problem since V3.00.90.22 SP0x

Connected array items are disconnected when you "Import from another project" if data points are overwritten.

SG4 Runtime – TerminalMode

ID#400067118 : solved problem, known since VC 3.73.0, solved since V3.00.90.13

When VC Windows terminal is restarted, a running ARwin is not closed

ID#400053165 : solved problem, known since VC 3.72.6, solved since V3.00.90.11

If an incorrect administrator password is entered, the VC Windows terminal won't boot automatically anymore.

SG4 Runtime − VNC

ID#263545 : known problem since VC 3.92.0

The font "Small Font" is not displayed correctly

Because of errors in the font "Small Font", Visual Components Runtime doesn't display it correctly.

1A4000.02 Motion Components

Motion Components

ID#400063641 : solved problem, known since V3.00.90.09, solved since V3.00.90.11

ACOPOS parameter tables are not completely converted from AS 2.x to AS 3.x

If an ACOPOS parameter table contains characters such as "Ä","Ö" or "Ü", then the is only converted to AS 3.x up until these characters. The remaining characters are not converted from AS 2.x to AS 3.x.

NC Software − ACP10 Wichtige Information

ID#462060 : Important Information

ACP10 versions V2.51.3up to V2.99.9

ACP10 versions V2.51.3 upt to V2.99.9 contain extensions and bug fixes based on ACP10 V2.51.2.

Extensions and bug fixes that are listet for ACP10 V2.51.3 up to V2.99.9, do not apply to ACP10 versions starting with V3.10.0.

ID#443215 : Important Information

ACP10 software from V3.100 on can be used only for SG4 target systems with POWERLINK network

The following platforms are no longer supported:
− SGC target systems
− SG3 target systems
− SG4 target systems with CAN network

ID#400103307 : Important Information

ACOPOSmulti with SafeMC: Error 7048 or 7066 after ACOPOS startup

In rare cases, encoder initialization takes too long when using ACOPOSmulti with SafeMC. This causes the following errors, which cannot be acknowledged:
− 7048: Error during the reading of encoder memory
− 7066: Encoder: Encoder not ready

This problem is especially prevalent in applications with many SafeMC axes and a large SafeLOGIC cycle time. In some cases, it is possible to get around this problem by reducing the SafeLOGIC cycle time.

The probability of this problem occurring has been reduced by increasing the timeout value for encoder initialization in the ACP10 software:
− Before ACP10 V2.380: Timeout 30 sec.
− ACP10 V2.380 − V2.40x: Timeout 60 sec.
− Beginning with ACP10 V2.410: Timeout 90 sec.

ID#264882 : Important Information

ACOPOSmulti 8BVx0xx0HxSx.000−1: Increased thermal load on components in the power supply for IGBT driver circuits (only in V2.250, V2.260, V2.261, V2.262, V2.263, V2.270, V2.271 and V2.280)

In ACOPOSmulti modules 8BVI0220HxSx.000−1, 8BVI0330HxSx.000−1, 8BVI0440HxSx.000−1, 8BVI0880HxSx.000−1, 8BVI0220HWS0.001−1, 8BVI0440HCS0.001−1, 8BVI0880HCS0.001−1, 8BVP0220Hx00.000−1, 8BVP0440Hx00.000−1, 8BVP0880Hx00.000−1 using the versions listed above increases the thermal load on components in the power supply for IGBT driver circuits. This can cause an error message or even a defect in the module hardware. The modules also display a significant increase in 24V power consumption.

The defect of an ACOPOSmulti module caused by the problem described above can lead to the following errors:
− 6045: Power stage: X5 connection: No power flow
− 6052: Power stage: High−side: Overcurrent
− 6053: Power stage: Low−side: Overcurrent
When using inverter modules, this can cause the motor to spin out. When using power supply modules, this can cause the fuses connected upstream to be triggered.

Note:
If there is no defect of an ACOPOSmulti module, then it is only necessary to upgrade to an ACP10 software version in which the problem has been corrected. No other measures are necessary.

ID#262092 : Important Information

SG4 target system, POWERLINK: Task class as output cycle trigger is possible with ACP10 software from V2.280 on

In Automation Studio V3.0.90 with AR versions from V3.08 on, in the POWERLINK configuration a task class can be selected as output cycle trigger (by default the output cycle trigger is carried out by the system tick). This selection is supported in ACP10 software starting with V2.280. In versions before V2.280, selecting a task class as output cycle trigger will cause the ACOPOS startup to be aborted with the following error:
− 32223: Error calling plGetNodeInfo(), Status of plGetNodeInfo(): 20935

ID#256222 : Important Information

SG4 target system, POWERLINK: SDM Motion is supported from ACP10 Software V2.270 on

With Automation Studio V3.0.90 and AR versions from V3.08 on, Motion functions are available in the SDM (System Diagnostics Manager). These functions are supported from ACP10 Software V2.270 on.

ID#235337 : Important Information

SG4 target system, POWERLINK: PDO errors with certain AR versions

The following error can occur if ACP10 software for POWERLINK is used for ACOPOS with 8AC114.60−2 with AR version F3.01:
− 32244: No PDO defined in the cyclic frame for this channel: NC object is disabled
If this error occurs with AR version F3.01, then another AR version must be used.

The following errors can occur if V2.090 or later of ACP10 software for Powerlink is used with AR versions H2.95 − K2.95 for SG4:
Error calling ncaccess() or ncalloc():
− 10712: This NC object is not enabled (channel number too high or no PDO data defined)
Error in NC structure of the NC objects:
− 32244: No PDO defined in the cyclic frame for this channel: NC object is disabled
If the errors listed above occur, then an AR version earlier than H2.95 or later than K2.95 must be used.

ID#233467 : Important Information

SG4 target system: ACP10 software versions for different AR versions

For AR versions A3.08 or higher only the ACP10 versions V2.220 or higher can be used.

ACP10 software versions V2.210 or higher can be used only with AR versions V2.82 or higher.
If an ACP10 software version V2.210 or higher is used with AR versions before V2.82, then "ACP10MAN: SG4 AR < V2.82" will be entered in the AR logger and the initialization of ACP10 software will be aborted.
For AR versions before V2.82 only the ACP10 software versions before V2.210 can be used.

ID#173492 : Important Information

SGC target system: ACP10 software versions for different AR versions

ACP10 software versions V2.190 or higher must be used for AR versions V2.30 and higher (otherwise global PVs cannot be used as NC object).
If an ACP10 software version V2.190 or higher is used with AR versions before V2.30, then "ACP10MAN: SGC AR < V2.30" will be entered in

the AR logger and the initialization of ACP10 software will be aborted.

ACP10 software versions V2.050 or higher must be used for AR versions E2.00 and higher.
If an ACP10 software version V2.050 or higher is used with AR versions before E2.00, then "ACP10MAN: SGC AR < E2.00" will be entered in the AR logger and the initialization of ACP10 software will be aborted.

ACP10 software versions V2.000 − V2.033 must be used for AR versions before A2.00.
If an ACP10 software version V2.034 or higher is used for AR versions before A2.00, then "ACP10MAN: SGC AR < A2.00" will be entered in the AR logger.

IMPORTANT:
ACP10 software versions V2.034 − V2.043 with AR versions A2.00 − D2.00 must not longer be used for SGC target systems.

NC Software − ACP10 V2.422

ID#361575 : new function since V2.422

ACOPOSmicro 80Vxxxxxx.xxxx−x: Configurable voltage monitor

The lower limit value of the voltage monitoring can be set with parameter MOTOR_BRAKE_VOLT_REL.
The upper limit value of the voltage monitoring can be set with parameter MOTOR_BRAKE_VOLT_MAX.

ID#361580 : solved problem, solved since V2.422

ACOPOSmotor 8DIxxx.xxxxxxxxx−x: Holding brake: Replacing the configurable current control (only in V2.340 − V2.421) with a configurable voltage control

To achieve this, the following current parameters are being replaced by voltage parameters:
− MOTOR_BRAKE_CURR_REL replaced by MOTOR_BRAKE_VOLT_REL
− MOTOR_BRAKE_CURR_HOLD replaced by MOTOR_BRAKE_VOLT_HOLD
− MOTOR_BRAKE_CURR_MAX replaced by MOTOR_BRAKE_VOLT_MAX

NC Software − ACP10 V2.421

ID# 400122499, 400123066 : solved problem, solved since V2.421

ACOPOSmulti, trigger inputs, LATCH function block: Faulty evaluation of minimum signal width

The following configuration could cause a signal to be wrongly evaluated as valid despite not reaching the minimum signal width:
LATCH_MODE 4, LATCH_EV_TYPE 4, LATCH_EV_PARID STAT_TRIGGER1 or STAT_TRIGGER2.

ID#359075 : solved problem, solved since V2.421

Trace with wrong NC object after loading the trace configuration from MTC data object

If the name of an NC object was fully contained at the beginning of the longer name of another NC object (e.g. "Axis1" at the beginning of "Axis11"), then it could happen that after loading a multi−axes trace configuration of a data object with MTC format (NC action "ncMTC,ncLOAD") erroneously the NC object with the shorter name (e.g. "Axis1") was used as trigger object or trace object, although the NC object with the longer name (name (e.g. "Axis11") was defined in the trace configuration.

ID#400113276 : new function since V2.421

Induction motors: Catching a spinning motor

When switching on the controller, moving axes were erroneously decelerated before cyclic status bit 8 "Controller on" was set.

ID#360550 : solved problem, solved since V2.421

"One−sided short circuit stop" was not activated with inverted pulse width modulation (only in V2.250 − V2.420)

If pulse width modulation was inverted, then the "one−sided short circuit stop" was NOT activated although the ENABLE_CONFIG parameter was set to a value greater than 0 and the signal level of one ENABLE input was switched to LOW.

Beginning with V2.370, PWM inversion is the default setting for the second axis of ACOPOSmulti dual−axis modules (8BVIxxxxxxDx.xxx−x).

On ACOPOSmulti modules with SafeMC (8BVIxxxxxxxS.xxx−x), the "one−sided short circuit stop" is the default setting (ENABLE_CONFIG=1).

This caused, for example, the second axis of an ACOPOSmulti SafeMC dual−axis module (8BVIxxxxxxDS.xxx−x) to NOT be decelerated with a short circuit stop if STO1 was active.

ID#352080 : solved problem, solved since V2.421

The cyclic status bit "Drive ready" was erroneously set after disabling simulation mode

After disabling simulation mode (CMD_SIMULATION = ncSWITCH_OFF), it was possible that the cyclic status bit "Drive ready" (Bit19 in STATUS_CYCLIC_BITS) was erroneously set and the green READY LED erroneously lit although the bus was not loaded and the main relay of the pre−charging input circuit was not closed.

NC Software − ACP10 V2.420

ID#400134058 : solved problem, solved since V2.420

SG4 target system, POWERLINK: Error 32398 for ACOPOSmulti or ACOPOSmicro (only in V2.320 − V2.41x)

In ACP10 versions V2.320 − V2.41x, the ACOPOS hardware type is read with RD_BLOCK_SEGM in order to read the BRMOD_BSL data immediately after RD_BLOCK_OFFSET=29 was written.

If an operating system older than V2.070 or no operating system at all existed on the ACOPOS device, then this could mistakenly cause the following error since sometimes an incorrect ACOPOS hardware type was read:
− 32398: acp10sys does not contain an operating system for this ACOPOS hardware type

RD_BLOCK_BYTES is now read before RD_BLOCK_SEGM, which avoids this problem.

Note:
If this problem occurs, it can be circumvented with using the following steps for ACP10 versions V2.320 − V2.41x:
1) Transfer the ACP10 software V2.070 − V2.31x to the target system
2) Transfer the ACP10 software V2.320 − V2.41x to the target system

ID#353115 : solved problem, solved since V2.420

Target system SG4, POWERLINK: Detection of missing coupling data for coupling of axes on different networks (only in V2.310 − V2.41x)

If in the ACP10 configuration "Extended coupling data for ACP10_MC_BROADCAST=Yes" is selected for a POWERLINK or a SDC interface, then for coupling of axes on different networks the 8 bytes position data are extended by a time stamp with 4 bytes, causing the loss of coupling data can be detected.

If the coupling master was a POWERLINK axis, then the loss of coupling data was not detected by the coupling slave, if the slave was connected to another network and "CYCLIC_DP_DATA_TYPE=65" was configured for the receive data point.

ID#400114371 : solved problem, solved since V2.420

Virtual axis: Change direction error with CMD_MODULO_MOVE_VAX1

If an automat movement is interrupted with CMD_MODULO_MOVE_VAX1, this may have caused a faulty change in direction.
The following function blocks in the ACP10_MC library use this command when called for a periodic axis:
− MC_MoveAbsolute
− MC_BR_MoveAbsoluteTriggStop
− MC_BR_JogLimitPosition
− MC_BR_JogTargetPosition
− MC_BR_EventMoveAbsolute

ID#400084689 : solved problem, solved since V2.420

Start of movement: Error 5005 "Start of movement not possible: Position controller inactive"

Error 5005 appeared after the following sequence, even though the cyclic status showed "Controller on":
Turn on controller, interrupt the start−up procedure with Quickstop command, then turn on the controller again.

ID#354330 : solved problem, solved since V2.420

8B0Pxxxxxxxx.xx1−x: Errors 41041 and 9040 on power failure

If an external braking resistor has not been configured, then the following errors are mistakenly reported when a power failure occurs:
− 41041: Bleeder temperature model: Overtemperature
− 9040: Bleeder temperature model: Overtemperature

ID#352620 : solved problem, solved since V2.420

8BAC0130.000−1: 0 always returned when reading inputs and readable outputs (only in V2.400 − V2.411)

The value 0 was always returned by PARID_DIO_IN (bits 4−7) or PARID_DIO_IN5/6/7/8, regardless of the physical signal state of the inputs and readable outputs.

NC Software − ACP10 V2.411

ID#351745 : solved problem, solved since V2.411

8BVx0880xxxx.xx0−x, 8BVx0880xxxx.xx1−x: Error 7222

At high current slew rate, the following error was mistakenly reported:
− 7222: Power stage: Summation current connection X5: Overcurrent (Ground fault)

ID#351285 : solved problem, solved since V2.411

8B0P0110xxxx.xx0−x: Error 41080, 9080 (only in V2.400 − V2.410)

If the external 24 V supply was connected via the X1 connector, then it was possible for the following errors to be reported when power was restored:
− 9080: Charging resistor: Overtemperature
− 41080: Charging resistor: Overtemperature

The error correction increases the delay between power restoration and start of the DC bus pre−charging. The delay time can be reduced by increasing the value of the UDC_PRECHARGE_THRESHOLD parameter.

ID#351280 : solved problem, solved since V2.411

8B0P0440xxxx.xx0−x, 8B0P0220xxxx.xx0−x: Long delay time between power restoration and DC bus pre−charging

When power was restored, DC bus pre−charging was only started if the DC bus voltage UDC_ACT fell below the threshold value UDC_PRECHARGE_THRESHOLD = 20V. This resulted in a long delay time between when power was restored and when the cyclic status bit 19 "Drive ready" was set. The delay time can now be reduced by increasing the value of the UDC_PRECHARGE_THRESHOLD parameter.

NC Software − ACP10 V2.410

ID#348125 : solved problem, solved since V2.410

SDC and SIM axes: Error 32204 or 32205 due to breakpoint during debugging

If a breakpoint was reached when transferring acyclic parameters (e.g. for data blocks), this could have caused one of the following errors:
− 32204: Timeout reading parameters over acyclic channel (is the drive in the network?)
− 32205: Timeout writing parameters over acyclic channel (is the drive in the network?)

Timeout monitoring for SDC and SIM axes has now been modified so that these errors are no longer incorrectly reported during debugging.

ID#346895 : solved problem, solved since V2.410

Encoder interfaces AC121.60−x,−x and 8BAC0121.000 8CVIxxxH1xxxx.xx−1 with HIPERFACE encoder: Serial absolute position monitoring (only in V2.392 − V2.40x)

HIPERFACE position evaluation monitors the serial absolute position cyclically. The monitor checks transmission errors, protocol errors and encoder errors (HIPERFACE error bit).

Protocol error and encoder errors were in the affected versions not tested, so some encoder errors were not detected.

ID#400108677 : solved problem, solved since V2.410

Encoder interfaces AC121.60−x,−x and 8BAC0121.000 8CVIxxxH1xxxx.xx−1 with HIPERFACE encoder: Error 7038 at control of the HIPERFACE parameter channel (only in V2.350 − V2.40x)

If an encoder error (protocol error, error for command arguments or internal encoder error) occurred during the control of the HIPERFACE parameter channel, the error 7038 was reported. This error could not be acknowledged.

ID#400028892 : solved problem, solved since V2.410

UF mode: Not possible to configure axis parameters for external encoder

If the available encoder slot was used for an external encoder (e.g. master encoder) in UF mode, then it was not possible to configure units separately for the UF axis and the encoder.
Beginning with V2.410, the virtual encoder (ENCOD0) is used in UF mode. This allows a real encoder in the encoder slot to be configured with the following ParIDs:

ENCOD_COUNT_DIR
SCALE_LOAD_UNITS
SCALE_LOAD_MOTOR_REV
SCALE_ENCOD_MOTOR_REV
SCALE_ENCOD_INCR

ID#344032 : new function since V2.410

SG4 target system, POWERLINK: Parallel Cam Profile download to several ACOPOS modules possible

New substructure "Cam Profile Download" in the NC configuration with the following parameters:
− Parallel transfer of Cam profile data=No/Yes
− Reference task class for parallel transfer

If "Parallel transfer of Cam profile data=Yes" is selected, then the cam profile data is transferred to several ACOPOS modules in parallel if the data is passed as a data buffer (via "data_adr" and "data_len").

If "Parallel transfer of Cam profile data=No" is selected or if the data is passed by entering a data object name in "data_modul", then the cam profile data is transferred to several ACOPOS modules sequentially ACOPOS for ACOPOS (as was always performed with versions before V2.41).

When transferring cam profile data in parallel via the POWERLINK network, the idle task "Acp10CamTrfTsk" is installed with a priority of 1 less than is set for the task class defined as the "Reference task class for parallel transfer".

ID#341687 : new function since V2.410

Simulation mode: The simulation is now possible with different load models

The substructure "simulation.parameter" with the following components has been added to the data structure for the simulation mode:
mode: Mode
add_load_par_id: Parameter−ID for additive load
mass1: Parameters for 1−mass load model
mass2: Parameters for 2−mass load model

With "mode" the load model can be selected:
ncSIM_1MASS_AUTO: 1−mass load model with automatically determined parameters
ncSIM_1MASS: 1−mass load model with parameters of "mass1"
ncSIM_2MASS: 2−mass load model with parameters of "mass1" and "mass2"

For the parametrization the following new NC actions are available:
ncSIMULATION,ncINIT: Initialize simulation mode
ncSIMULATION,ncINIT+ncSWITCH_ON: Initialize simulation mode and switch it on
ncSIMULATION,ncREAD: Read parameters of simulation mode

Application example:
If "mode = ncSIM_1MASS_AUTO" is set on the ACOPOS (this is the default mode), then the parameters of "mass1" and "mass2" are calculated automatically, when certain motor parameters are modified. The values of these parameters could be read with the NC action "ncSIMULATION,ncREAD" for example, and be used as basis values to parameterize the load models.

ID#341682 : new function since V2.410

ACOPOS Hardware Information: New component "mission_time_end" for drives

In "drive.mission_time_end" the end date of the mission time (the expiration date) of a drive is displayed in the following form:
0: Date not stored
YYYYMMDD: Eight−digit number for the date (e.g."20330502" for "May 2, 2033")

ID#341677 : new function since V2.410

Setup for controller: New values for "mode"

ncSPEED+ncT_FILTER_2{+ncISQ_F1_NOTCH}
With "+ncT_FILTER" the frequency response of the speed filter is used as a weighting value. When using a LinMot encoder, for example, this may cause the calculated kv value to be too low. With "+ncT_FILTER_2" this weighting is not used.

ncSPEED+ncUSE_FILTER_PAR+ncUSE_TN
With this mode the determination of the controller parameters is accomplished with the preset values of the following controller parameters:
− speed.t_n
− speed.t_filter
− speed.isq_filter1
− speed.isq_filter2
− speed.isq_filter3

ID#400116884 : solved problem, solved since V2.410

POWERLINK, cyclic communication failure

A heavy load on the POWERLINK cycle caused cyclic communication to the ACOPOS or SafeMC module to fail. Communication could only be reestablished with an ACOPOS software reset or by turning the power off and back on. The error occurred under one of the following circumstances:
− ACOPOS with SafeMC
− Poll−response chaining and active ACOPOS coupling

ID#345337 : solved problem, solved since V2.410

UF mode: Using an encoder for position control

Until now, position control "short circuit" (PCTRL_S_ACT = PCTRL_S_SET) was used in UF mode. In addition, encoder errors were ignored and not reported.
Setting PCTRL_S_ACT_PARID = ENCOD_S_ACT allowed the encoder position to be used for the position control (short circuit lifted). This did not re−enable the evaluation of encoder errors, however.
If an encoder was in an error state, then this condition was not reported and the motion was not aborted.

Beginning with V2.410, the virtual encoder (ENCOD0) is used in UF mode. In addition, encoder errors are also reported.
If a real encoder is now used for position control (PCTRL_S_ACT_PARID = ENCOD_S_ACT), then the expected behavior results with respect to encoder errors.

ID#338805 : solved problem, solved since V2.410

Simulation mode: Motor parameter set change: Error 1016

The following error was reported in rare cases when switching on the simulation mode:
− 1016: Maximum cycle time exceeded − CPU load too high

When switching on the simulation mode, the system automatically switched to a predefined simulation motor parameter set.
Beginning with V2.410, motor simulation uses the configured motor parameter set.

ID# 400020486, 400030706, 400038180, 400048375, 400052638 : solved problem, solved since V2.410

UF mode: No error message and no homing status when using an encoder card and encoder in an error state (e.g. encoder cable not connected)

Encoder errors were previously not reported in UF mode. If the encoder was in an error state (e.g. encoder card inserted but encoder cable disconnected), then the homing status was deleted and no error message was reported.
Beginning with V2.410, the virtual encoder (ENCOD0) is used in UF mode. This removes any influence on UF mode by the encoder slot.

NC Software − ACP10 V2.401

ID#341645 : solved problem, solved since V2.401

Motor temperature sensor: The monitoring was deactivated (only in V2.390 − V2.400)

When the motor temperature model has been switched off (TEMP_MOTOR_MODEL_MODE = 0), the monitoring of the motor temperature sensor was mistakenly deactivated.

NC Software − ACP10 V2.400

ID#337822 : solved problem, solved since V2.400

AC114, ACOPOSmulti and ACOPOSmicro: Drive synchronization after failure of a POWERLINK synchronization frame

If a single POWERLINK synchronization frame fails with a cycle time of 3.6 ms or higher, the following error might be entered prematurely:
− 6002: Sync Controller: Error tolerance of system time difference exceeded

ID#333637 : new function since V2.400

Setup for induction and synchronous motors: New optional parameters

The below listed new parameters are offered in following substructures:
setup.motor_induction.parameter.optional
setup.motor_synchron.parameter.optional

phase: Motor phase (1,2,3)
invcl_a1: Inverter characteristic: Gain factor
invcl_a2: Inverter characteristic: Exponent [1/A]

ID#333565 : new function since V2.400

Setup for controller: New parameter "kv_percent"

The Autotuning function first determines the basic values for the kv parameters of speed and position controller. The percentage defined by "kv_percent" (50..150%) is then multiplied to these values in order to calculate the final controller parameters.

"kv_percent=0" corresponds to 100%.

A value less than 100% increases the robustness of the controller with regard to parameter variations on the machine.

ID#333475 : new function since V2.400

NC Configuration: New parameter "Enter SafeNC Logger errors into axis structure=Yes/No"

If "Yes" is selected for this parameter (default setting), the SafeMC entries of the Safety Logbook are transferred as ACP10 error into the NC structure of the corresponding axis. With "No" this function can be switched off.

NC Software − ACP10 V2.392

ID#339780 : solved problem, solved since V2.392

ACOPOSmicro inter circuit relay switches unnecessarily (only in V2.391)

When inter circuit voltage is OK and Enable returns, the relay drops out for a short time.

ID#400112524 : solved problem, solved since V2.392

SG4 target system, POWERLINK: ACOPOSmulti and ACOPOSmicro: ACOPOS startup was aborted with error 32011 after warning 64008 (only in V2.320 − V2.391)

When using ACP10 software V2.320 − V2.391, for ACOPOSmulti und ACOPOSmicro modules "POWERLINK_PLSTATE=0x0005" (cyclic POWERLINK communication active) must be reached already at the beginning of the basis initialization. If this POWERLINK_PLSTATE was not reached in time, warning 64008 was displayed, but then it was tried to transfer parameters with cyclic POWERLINK frames. In the most cases, this caused the timeout error 32011 after CMD_WR_BLOCK_ABORT and the startup function was then aborted for the affected ACOPOS module.

Starting with ACP10 software V2.392, initial parameters are transferred via acyclic POWERLINK frames for all ACOPOSmulti and ACOPOSmicro modules, for which "POWERLINK_PLSTATE=0x0005" cannot be reached at the beginning of the basis initialization. Thus the ACOPOS startup and the operating system upgrade can be performed successfully in most cases.

Note:
This problem could for example occur, if a new parameter was activated in the POWERLINK configuration (e.g. "Chained station"), which is not known to the operation system version on the ACOPOS module. With ACP10 software V2.320 − V2.391, an ACOPOS operating system upgrade can be performed in this case, after the unknown parameter has been disabled.

ID#338240 : solved problem, solved since V2.392

8BVIxxxxxxxx.xxx.x, 8CVIxxxxxxxx.xxx.x, 8DIxxx.xxxxxxxxx−x: Error 7211 and 7218

If the inverter module was connected through a passive power supply module to the power supply 3x480VAC and the parameter UDC_DETECTION was set, then it could happen in rare cases that the following errors were reported.
− 7211: DC bus: Voltage dip (Info: Low voltage limit = 1000)
− 7218: DC bus: Nominal voltage detection: Voltage too low (Info: Minimum required DC bus voltage = 667.125)

Workaround: The errors can be avoided if the parameter UDC_NOMINAL is set immediately before the parameter UDC_DETECTION to the same value as UDC_DETECTION.

ID#400112487 : solved problem, solved since V2.392

Encoder interfaces AC121.60−x, 8BAC0121.000−x und 8CVIxxxH1xxxx.xx−1 with Baumer Hübner encoder: Initialization error (only in V2.350 − V2.391)

When using a Baumer Hübner encoder in combination with a HIPERFACE interface card the following errors were wrongly reported:
7022: Encoder: Initialization is active
7015: Encoder: Timeout error during parameter transfer
7038: Encoder: Position value not synchronous with absolute value

NC Software − ACP10 V2.391

ID#336105 : solved problem, solved since V2.391

ACOPOSmicro POWERLINK communication (only in V2.370 − V2.390)

In rare cases there were problems with the POWERLINK connection. The ability to communicate with the devices is limited.

ID#400111197 : solved problem, solved since V2.391

ELC with ENCOD0_MODE=20: Incorrect position calculation after a transition back to open loop current vector control with a high lag error (only in V2.380 − V2.390)

During transition from closed loop vector control to open loop vector control, an offset could wrongly be added to the position caused by a lag error greater than one electrical revolution. This then caused a remanent lag error in open loop vector control.

NC Software − ACP10 V2.390

ID#400106466 : new function since V2.390

Increased voltage limit for 2 − phase mode

For 2 − phase motors (MOTOR_NUM_PHASES = 2) the voltage limit is increased to the maximal possible value of UDC_ACT/sqrt(2). This allows an increased motor speed.

ID#400108373 : solved problem, solved since V2.390

8BAC013x.00x−1, encoder emulation with reference pulse: Sporadic reference pulse loss (only in V2.210 − V2.38x)

When using encoder emulation with reference pulse enabled, reference pulses could wrongly be lost sporadically, especially with higher output frequencies.

ID#331890 : solved problem, solved since V2.390

8BVPxxxxxxxx.xxx.x with 8BAC0120.001−x: Error 5034, 7022 and 7038 when homing (only in V2.360 − V2.38x)

When using EnDat 2.2 plug−in card in connection with a power supply module a plugged encoder is not detected and the following errors are reported:
5034: Homing procedure not possible: Encoder error
7022: Encoder: Initialization is active
7038: Encoder: Position value not synchronous with absolute value

NC Software − ACP10 V2.381

ID#330965 : solved problem, solved since V2.381

Motor temperature model: Warning 41070 or error 9070 (nur in V2.370 − V2.380)

In rare cases the following warning and error was wrongly registered:
− 41070: Motor temperature model: Overtemperature
− 9070: Motor temperature model: Overload − Movement stopped

ID#330630 : solved problem, solved since V2.381

ELC with ENCOD0_MODE=20/21 and open loop current vector control with ENCOD0_MODE=1: Incorrect position calculation after position overflow

At movements beyond the range of the position in units, an incorrect calculation of the actual position could occur.

ID#400107046 : solved problem, solved since V2.381

Encoder error when using ENCOD1/2/3_S_ACT or PCTRL_S_ACT (only in V2.370 − V2.380)

If it was not possible to determine the actual position, then using ENCOD1/2/3_S_ACT or PCTRL_S_ACT cyclically resulted in an encoder error.

Examples:
If ARNC0 axes are used on a POWERLINK network and the an ACOPOS device is initialized with CYCLIC_MON_PARID = 111 (111: PCTRL_S_ACT), then the actual position is requested for the monitoring data. If an encoder is not connected (e.g. when using an ACOPOSmulti power supply module), then the ACOPOS module will report error 7036.
If an SSI encoder is used with AC123 and "ENCOD_TYPE=ncSSI" is not yet initialized, then errors 7039 and 7040 are reported if using PCTRL_S_ACT.

ID#329160 : solved problem, solved since V2.381

Encoder interfaces 8AC121.60−x, 8BAC0121.000−x and 8CVIxxxH1xxxx.xx−x: Error 7017 with HIPERFACE encoder SKS/SKM36 (only in V2.240 − V2.380)

For HIPERFACE encoders with type SKS/SKM36 the timeout periods were extended in firmware version V8 13.03.08 . This caused the following error which could not be acknowledged:
− 7017: Encoder: Error while reading encoder parameter

ID#400093236 : new function since V2.381

ACOPOSmulti: 8BxPxxxxxxxx.xxx−x: Simulation mode

8BVPxxxxxxxx.xxx−x: Turning off simulation mode (CMD_SIMULATION = ncSWITCH_OFF) mistakenly turned off all 24 V consumers on the auxiliary supply modules (e.g. controller).
8B0Pxxxxxxxx.xxx−x: Turning on simulation mode (CMD_SIMULATION = ncSWITCH_ON) mistakenly turned off all 24 V consumers on the auxiliary supply modules (e.g. controller).

Simulation mode is not supported by power supply modules. The following error is reported in V2.390 and higher for power supply modules when writing to the CMD_SIMULATION parameter:
− 1027: Function not available for this hardware

ID#400113017 : solved problem, solved since V2.381

EnDat motors: Error 6036 when switching the controller on (only in V2.370 − V2.380)

For EnDat motors in rare cases the following error was wrongly registered when switching the controller on:
− 6036: Motor parameters missing or invalid

NC Software − ACP10 V2.380

ID#327650 : solved problem, solved since V2.380

Encoder interface ACOPOSmulti 8BAC0120.000−x and ACOPOSremote 8CVIxxxE1xxxx.xx−1 with EnDat2.1 encoder: SinCos monitoring (only in V2.300 − V2.370)

The SinCos signals are checked by the amplitude monitoring. The amplitude results from the vectorial addition of the encoders Sin and Cos signal.

With affected versions some encoder errors were not detected, because it was not monitored, whether the upper amplitude limits were exceeded.

ID#400105299 : solved problem, solved since V2.380

ELC with ENCOD0_MODE=20/21: Increase in current, lag error or temperature

Caused by a drift in commutation, an increase in current, lag error or temperature could occur during continuous operation in one direction.

ID#400101942 : solved problem, solved since V2.380

The transfer of an initial ACOPOS parameter table was aborted without error message

Initial ACOPOS parameter tables are tables that are defined for an NC object in an NC mapping table. The parameters contained in these ACOPOS parameter tables are transferred to the ACOPOS during the ACOPOS startup.

In extremely rare cases, the transfer of an initial ACOPOS parameter table was aborted without an error message. This subsequently could cause errors, since some of the parameters were not initialized.

ID#400103487 : solved problem, solved since V2.380

Motor encoder temperature mointoring: The error 9090 was wrongly registered (only in V2.340 − V2.37x)

If the parameter MOTOR_ENCOD_TEMP_LIM was set to a value other than 0, then it was possible that the following error was wrongly registered:
− 9090: Motor encoder temperature sensor: Temperature value not valid

ID#319360 : new function since V2.380

Automatic ACOPOS simulation when using ARsim

If Automation Runtime ARsim is being used, then ACOPOS axes can only be operated if the ACOPOS simulation is switched on. When using ARsim from now on, therefore, ACOPOS simulation will be switched on automatically in "Standard" mode for all axes, whose ACOPOS simulation is not already switched on via configuration or NC mapping table.

This new function makes it possible e.g. to switch the target platform between a real CPU and CPU simulation based on ARsim without having to explicitly switch ACOPOS simulation on or off via configuration or NC mapping table, which would otherwise require a project build after each switch.

ID#400146725 : solved problem, solved since V2.380

8BVPxxxxxxxx.xxx−x: Somtimes the error 7200 was wrongly registered when switching the controller.

The mains filters fans are powered via the holding brake output when the controller is switched on. Switching on the line filter fan sometimes incorrectly causes the following error.
− 7200: DC bus: Overvoltage

ID#400097770 : solved problem, solved since V2.380

ACOPOS 8Vxxxx.xx−x: External bleeder: The warning 38008 was wrongly registered

When switching on the controller sometimes the following warning was wrongly registered:
− 38008: Bleeder: No current flow

ID#400096579 : solved problem, solved since V2.380

The auto configuration of the speed error stop limit AXLIM_DV_STOP did not work during controller active

If the parameter AXLIM_DV_STOP_MODE was changed during active controller, the speed error stop limit AXLIM_DV_STOP was not automatically configured. Thus it could happen that the following error was wrongly registered:
− 6062: CTRL Speed controller: Speed error stop limit exceeded

NC Software − ACP10 V2.370

ID#400101920 : solved problem, solved since V2.370

8BVPxxxxxxxx.xxx−x and 8B0Pxxxxxxxx.xxx−x: The external temperature model and external temperature measurement should have been enabled and were not (only in V2.340 − V2.362)

The external temperature model TEMP_MOTOR_MODEL_MODE is used with power supply modules (8BVPxxxxxxxx.xxx−x and 8B0Pxxxxxxxx.xxx−x) for secondary thermal monitoring of mains components (line choke, line filter and power mains).
The external temperature measurement TEMP_MOTOR is used with the 8BVPxxxxxxxx.xxx−x module for thermal monitoring of choke and filter temperatures.

If the line choke or line filter is operated outside the specified ambient temperature, then these components can become damaged.

Remedy
The following configuration can be used to enable the external temperature model and external temperature measurement for the affected versions (V2.340 − V2.362):
− TEMP_MOTOR_MODEL_MODE = 2 (External temperature model)
− MOTOR_TEMPSENS_TYPE = 0xFFFF (External temperature measurement)

ID#306042 : solved problem, solved since V2.370

SG4 target system, POWERLINK, ACOPOS coupling: Error 1013 after reducing cyclic TX data in the POWERLINK configuration

After call of the NC action "ncNETWORK+ncSERVICE, ncACP_PAR_RECEIVE" the receipt of coupling data on the coupling slave is configured using the Parameter "CONFIG_MA1/2/3/4/5_CYCLIC_POS". If the cyclic POWERLINK frame of the sender was configured in a way, so that the offset of the used coupling object was unchanged to the standard frame, then for "MA_PARID_CYCLIC_POS" the corresponding standard ParID "MA1/2/3_CYCLIC_SEND" (484/485/494) was used.

This caused the error 1013 (Station is not available for network communication), if the cyclic TX data were reduced in a way, that the length of the cyclic POWERLINK frame from the drive did not correspond to a standard configuration (Double axis, Single Axis). This was for example the case if only the number of coupling objects was reduced or for ACOPOSmulti only data of axis 2.

From now on, in such a case for "MA_PARID_CYCLIC_POS" the parameter "CYCLIC_DP_DATA_OFFSET" is used.

ID#400063844 : solved problem, solved since V2.370

ACOPOS, 8BAC123.60−1, incremental encoder: The home position was applied at the falling edge.

Previously, the home position was only applied at the falling edge of input signal "R". With ENCOD_INC_MODE = 512 it is now possible to have the home position be applied at the rising edge of the input signal "R".
If ENCOD_INC_MODE is set to 0 or not set at all, then the home position is applied at the falling edge.

ID#308242 : new function since V2.370

New NC actions for transferring ACOPOS parameter tables

A new interface is now available for uploading/downloading data blocks. This new interface can also be used to upload/download ACOPOS parameter tables using the NC actions listed below. The input/output parameters for this interface are contained in the "datblock" substructure of the data structures for real and virtual axes. This makes it also possible to upload/download ACOPOS parameter tables in the NC Test.

ncaction(ax_obj,ncACP_PAR+ncDATBLOCK,ncUPLOAD)
The specified ACOPOS parameter table is processed by the NC manager. ACOPOS reads each parameter in the ACOPOS parameter table individually and writes its value to the ACOPOS parameter table. Once all parameters have been read, the data module for the ACOPOS parameter table is regenerated with the updated parameter values.

ncaction(ax_obj,ncACP_PAR+ncDATBLOCK,ncDOWNLOAD)
The specified ACOPOS parameter table is processed by the NC manager, and the parameters it contains are transferred to ACOPOS individually.

Parameters:
datobj_name: Name of the ACOPOS parameter table

ID#308237 : new function since V2.370

New NC actions for transferring any data blocks

A new interface is now available for uploading/downloading all types of data blocks (ParIDs with the type "DATA" or "BRMOD") using the NC actions listed below. The input/output parameters for this interface are contained in the "datblock" substructure of the data structures for real and virtual axes. This makes it also possible to upload/download data blocks in the NC Test.

ncaction(ax_obj,ncDATBLOCK,ncUPLOAD)
The binary data for the defined data block is read from ACOPOS and saved into the specified data object.

ncaction(ax_obj,ncDATBLOCK,ncDOWNLOAD)
The binary data for the defined data block is read from the specified data object and transferred to ACOPOS.

Parameters:
datobj_name: Name of the data object
datblock_par_id: Parameter ID of the data block
idx1_par_id: Parameter ID of the data block Index1 (set to 0 if not used)
idx1: Data block Index1
idx2_par_id: Parameter ID of data block Index2 (set to 0 if not used)
idx2: Data block Index2

NC Software − ACP10 V2.362

ID#315522 : solved problem, solved since V2.362

ACOPOSmulti 8B0Pxxxxxxxx.xxx−x: After POWER−ON, the Warnings 33008 and 33009 were falsely reported (only in V2.361)

NC Software − ACP10 V2.361

ID#311637 : solved problem, solved since V2.361

ACOPOSmulti: Module and firmware−related data consistencies in hardware registers

In extremely rare cases, an unfavorable combination of firmware version and ACOPOSmulti modules could cause inconsistencies in hardware registers. Depending on the application, this can sporadically result in error messages such as:
− 6018: Hardware: 15V power supply fail
− 9002: Heat sink temperature sensor: Not connected or damaged
− 7219: DC bus: Charging: Voltage too low
− 7211: DC bus: Voltage dip

ID#310202 : solved problem, solved since V2.361

ACOPOSmulti, ACOPOSmicro, advanced coupling with multiplexed slave axis starting with V2.320

Due to an error in how timestamps are handled, data is not applied in every cycle. When using advanced coupling of multiplexed axes to data in the poll response frame of the POWERLINK master, the multiplexed POWERLINK slave data should be applied when the SoC timestamp is greater than or equal to the coupling timestamp in the poll response frame from the POWERLINK master.

ID#400179599 : solved problem, solved since V2.361

8V1180.xxx−x: ACOPOS_POWER_RATED corrected to 9000W

The rated power ACOPOS POWER RATED was incorrectly set to 8000W instead 9000W.

NC Software − ACP10 V2.360

ID#400095742 : solved problem, solved since V2.360

Cam Profile Automat, MC_BR_AutControl: The cyclic status bit 12 "Stop due to active drive event" was mistakenly set

When changing to the stop state 255, with the configuration SGEN_SW_END_IGNORE 2 or 3, stop bit 12 was mistakenly set. This caused a PLCopen axis to change to the ERRORSTOP state.

ID#400087587 : solved problem, solved since V2.360

Setting PCTRL_S_ACT_PARID to a non−encoder position always changed the controller status to OFF when the movement was stopped.

When no encoder was used on the actual value input for position control (PCTRL_S_ACT_PARID), then stopping a movement triggered a speed−controlled stop ramp. As a result the controller was always turned off, regardless of how the stop configuration was set.

ID#300147 : new function since V2.360

Setup for induction motors: New optional parameter "phase_cross_sect"

setup.motor_induction.parameter.optional.phase_cross_sect: Cross section of a phase

ID#300137 : new function since V2.360

Automatic determination of motor parameters for synchronous motors

NC structure component "setup.motor_synchron"
NC actions "ncSETUP+ncMOTOR_SYNCHRON,ncSTART" und "ncSETUP+ncMOTOR_SYNCHRON,ncSAVE"

ID# 400053915, 400054026, 400059832 : new function since V2.360

New homing variants: Homing on block, fixed direction

New homing modes:
ncBLOCK_TORQUE: Homing on block with torque limit as condition for "block reached"
ncBLOCK_DS: Homing on block with lag error limit as condition for "block reached"

New homing parameters:
fix_dir: Fixed direction ON/OFF
torque_lim: Torque limit for homing on block
ds_block: Lag error for block detection
ds_stop: Lag error for stop of a movement

ID# 400100591, 400101749 : solved problem, solved since V2.360

ACOPOSmulti: 8BVPxxxxxxxx.xxx−x, 8B0Pxxxxxxxx.xxx−x:

After a software reset (e.g. controller warm/cold restart), all consumers on the control supply units (e.g. controller) were switched off.

ID#400091796 : solved problem, solved since V2.360

ACOPOSmulti with SafeMC, asynchronous communication lost

When there was a high load on the CPU, asynchronous communication to the ACOPOS SafeMC modules was interrupted. Restarting the ACOPOS modules restored communication. Loss of asynchronous communication caused the axis to stop.

NC Software − ACP10 V2.351

ID#400091709 : solved problem, solved since V2.351

ACOPOSmulti, axis2: Encoder error when using EnDat encoders

Under the following conditions an encoder error on axis2 could occur:
For axis2 an EnDat encoder was used.
For axis1 no encoder or another than EnDat was used.
In an initial ACOPOS Parameter table the encoder position of axis2 was used.

ID#299847 : solved problem, solved since V2.351

ACOPOS reset was not carried out during multi axes trace

If the NC action "ncNETWORK,ncINIT+ncRESET" was called for an ACOPOS during a multi axes trace with this ACOPOS was active, then the ACOPOS reset was not carried out, until the multi axes trace was completed.
From now on, in this case the trace is aborted internally with "CMD_TRACE=ncSTOP" for all ACOPOS which are contained in the multi axes trace configuration, so that immediately afterwards the ACOPOS reset is carried out.

NC Software − ACP10 V2.350

ID#400084806 : solved problem, solved since V2.350

Parameter list with movement command: Transfer aborted by movement stop on other NC object

If "parameter.mode = ncPAR_LIST_MOVE" is set for a parameter list, then the parameter list will be handled like a movement command after calling the NC action "ncPAR_LIST+ncSERVICE,ncINIT". Among other things, this means that the transfer of such a parameter list for an NC object should be aborted if the NC action "ncMOVE,ncSTOP" is called for the same NC object.

If the protocol for accelerated parameter transfer was enabled (for example when using ACP10_MC), then the transfer of such a parameter list for an NC object was also aborted incorrectly if the NC action "ncMOVE,ncSTOP" was called for another NC object that uses the same communication channel. For example, transmission for a real axis was aborted when "ncMOVE,ncSTOP" was called for the virtual axis of the same channel and vice versa.

After this problem occurred, the transfer of subsequent parameter lists for the affected NC object was also blocked (status "ncACTIVE" when calling the NC action) until the NC action "ncMOVE, ncSTOP" was called for this NC object itself.

ID#298200 : new function since V2.350

Suppression of periodical disturbances

A new functionality for suppression of periodical disturbances in the speed controller is available.

ID#400091796 : solved problem, solved since V2.350

ACOPOS, POWERLINK with poll response chaining, coupling to broadcast channel (MN response), coupling across networks

ACOPOS modules with poll response chaining enabled were not able to couple with data on the broadcast channel (MN response). No data was received when coupling across networks and error 5110 was reported.

NC Software − ACP10 V2.341

ID#294302 : solved problem, solved since V2.341

Startup error for SDC and SIM axes with "ACOPOS reset after NCSYS download=No" (only in V2.340)

If "ACOPOS reset after NCSYS download=No" is selected in the NC configuration, for SDC and SIM axes reading of parameter STAT_BURN_SYSMOD caused response error 1 (invalid parameter ID) and the startup was aborted for these axes.

Now parameter STAT_BURN_SYSMOD is no longer read for SDC or SIM axes in this case.

ID#400090276 : solved problem, solved since V2.341

8B0Pxxxxxxxx.xxx−x: If the mains voltage was disrupted, the 24V supply was cut off, which caused the inverter or external 24V consumer (e.g.: controller) to be turned off prematurely.

If power was briefly disrupted and immediately restored or strong fluctuations occurred in the supply voltage then the CR_OK output (or 24V supply) was cut off if the DC bus voltage UDC_ACT first fell below the limit value POWERFAIL_DETECT_RATIO*UDC_NOMINAL (pre−defined value of POWERFAIL_DETECT_RATIO = 0.779) and the rectifier value of the mains voltage MAX(MAINS_U1, MAINS_U2, MAINS_U3) − MIN(MAINS_U1, MAINS_U2, MAINS_U3) immediately exceeded the limit value 0.9*UDC_NOMINAL. This caused the inverters to be turned off immediately after the disruption to the mains voltage.

Starting with version V2.341, if the mains voltage is disrupted, the CR_OK output will only be turned off after the DC bus voltage UDC_ACT drops below the limit value 20VDC.

NC Software − ACP10 V2.340

ID#292477 : solved problem, solved since V2.340

SG4 target system, save trace data into file: Pagefault when using CIFS

If a file device was used which was linked via CIFS (Common Internet File System), then saving trace data into a data object with type "ncDATOBJ_FILE" in rare cases could lead to a pagefault.

ID#292455 : solved problem, solved since V2.340

Motor Holding Brake: Automatic functional test of the holding brake torque when switching on the drive controller

Error 6048 was not reported when using the automatic functional test of the holding brake torque when switching on the drive controller (BRAKE_MODE Bit7 = 1) together with a deactivated movement monitoring (BRAKE_MODE Bit3 = 1).

ID#288252 : solved problem, solved since V2.340

Invalid motor parameter: Error 33002

When using induction motors, the error "33002: floating point exception" was reported, if one of the following parameters was set to zero:
− MOTOR_ROTOR_RESISTANCE
− MOTOR_ROTOR_INDUCTANCE
− MOTOR_MUTUAL_INDUCTANCE

Now setting these parameters to zero is no longer possible when using induction motors , this would be refused with the following error:
− 52: Value of parameter lower than minimum value

ID# 400064357, 400082610, 400086607 : solved problem, solved since V2.340

Motor Holding Brake: Error 6048 or 6063 despite deactivated monitoring

The deactivation of an active movement monitoring or external voltage monitoring (BRAKE_MODE Bit3 and Bit6) was not executed until the next holding brake operation.

ID#292142 : new function since V2.340

NC Configuration: New parameter "ACOPOS reset after NCSYS download=Yes/No"

If "Yes" is selected for this parameter (default setting), an ACOPOS reset is carried out automatically after the download of an operating system.

If "No" is selected, a manual ACOPOS restart (POWER−OFF/−ON) must be carried out after the download of an operating system. In this case, after the download of an operating system the ACOPOS startup is aborted with the following error, if the manual ACOPOS restart was not yet carried out:
− 32399: Manual ACOPOS restart (POWER−OFF/−ON) after NCSYS download necessary

ID#288247 : solved problem, solved since V2.340

8B0Pxxxxxxxx.xx1−x: The charging resistors could be damaged in the following modules.

8B0P0220HC00.001−1 up to and including Rev.: J0
8B0P0220HW00.001−1 up to and including Rev.: J0
8B0P0440HC00.001−1 up to and including Rev.: H0
8B0P0440HW00.001−1 up to and including Rev.: H0

NC Software − ACP10 V2.331

ID#292252 : solved problem, solved since V2.331

8AC125.6x−x: BISS encoder: The multi−turn position is evaluated incorrectly (only in V2.330)

ID#400088237 : solved problem, solved since V2.331

8BAC0120.001−x, 8BAC0120.005−1, 8AC126.60−x und 80VD100PD.C0xx−01: EnDat 2.1 encoder does not work with EnDat 2.2 plug−in module (only in V2.330)

NC Software − ACP10 V2.330

ID#284937 : solved problem, solved since V2.330

8Vxxxx.xx−x: Motor temperature measurement: Error 9012 was displayed although no motor temperature sensor was configured.

ID#284205 : solved problem, solved since V2.330

8B0AC123.000−1, SSI Encoder: Parity check

SSI parity check can be activated by writing the values described below to the parameter ENCOD_SSI_PARITY_CHK.

With "ncEVEN" the parity bit is evaluated for odd parity.
With "ncODD" the parity bit is evaluated for even parity.

From V2.330 on additionally the following NC constants can be used:
ncSSI_PARITY_CHK_EVEN: Check for even parity
ncSSI_PARITY_CHK_ODD: Check for odd parity

ID#284200 : solved problem, solved since V2.330

8AC123.60−1, SSI Encoder: Parity check

The following problems occur after writing the values described below to the parameter ENCOD_SSI_PARITY_CHK.
With "ncEVEN" the parity is not checked.
With "ncODD" error 7044 is reported.

From V2.330 on the following NC constants can be used for activation of the parity check:
ncSSI_PARITY_CHK_EVEN: Check for even parity
ncSSI_PARITY_CHK_ODD: Check for odd parity

ID#400083808 : solved problem, solved since V2.330

Cyclic status bits: Incorrect status "Drive Ready"

Under the following conditions, the cyclic status bit 19 "Drive Ready" remained mistakenly set to ncFALSE:
Configuration of the movement stop after drive error to STOP_ERR_DECEL_RAMP=ncCTRL_OFF and an error which resets the status "Drive Ready".

ID#283370 : solved problem, solved since V2.330

Virtual Encoder: Mode 10: ENCOD0_STATUS_PARID wasn't initialized with PARID_CONST_I4_ONE mistakenly.

ID#283345 : solved problem, solved since V2.330

8B0Pxxxxxxxx.xxx−x + 3x480VAC power supply: UDC_NOMINAL value returned by nominal voltage detection is too high.

If the power is supplied by a passive supply module (8B0P*) and the rectified value of the mains voltage is higher than 675VDC (corresponds to 3x477VAC), then the nominal DC bus voltage detected for the inverter modules (8BVI*, 8CVI*) is too high (UDC_NOMINAL = 750VDC).
This results in one of the follwing errors or warnings:
− 7211: DC bus: Voltage dip
− 7212: DC bus: Large voltage dip
− 9075: ACOPOS continuous power: Overload − Movement stopped
− 41075: ACOPOS continuous power: Overload

ID#400065583 : new function since V2.330

8AC123.60−1,8BAC0123.000.1: Support of alarm bit and warning bit for SSI encoders

ID#400068500 : solved problem, solved since V2.330

ACOPOSmulti 8Bxxxxxxxxxx.xxx−x: In simulation mode, the status of the digital input "Enable" was not updated

NC Software − ACP10 V2.322

ID#284732 : solved problem, solved since V2.322

ACOPOSmulti, ACOPOSmicro: Error 32011 after CMD_WR_BLOCK_ABORT (only in V2.320 − V2.321)

At the beginning of the basis initialization (after "NETWORK_PHASE=10") the following error occurred in rare cases after the Write Request for the parameter CMD_WR_BLOCK_ABORT, if ACOPOSmulti or ACOPOSmicro modules were used:
− 32011: Drive not responding to Write Request (is the drive in the network ?)

Note:
The higher the configured POWERLINK cycle time, the higher the probability that this problem occurs.

NC Software − ACP10 V2.321

ID#283040 : solved problem, solved since V2.321

ACOPOSmicro 80VD100Px.xxxx−xx: Error 6054 was mistakenly reported (only in V2.320)

The following error was sometimes mistakenly reported with ACOPOSmicro (80VD100PD.xxxx−xx) when 13 A was exceeded instead of the current limit of 21 A:
− 6054: Power stage: Overcurrent

As a result of this error correction, the following prototype modules will already report error 6054 when the reduced current limit value 13 A is reached:
− 80VD100PD.0022−01 (up to Rev. A6)

ID#282920 : solved problem, solved since V2.321

ACOPOSmulti65 8CVIxxxSxxxxx.xx−x: The encoder positon was determined incorrectly (only in V2.300 − V2.320)

ID#400082225 : solved problem, solved since V2.321

SG4 target system, CAN: Pagefault when calling CAN_sendCOB

In very rare cases a pagefault could occur in Acp10man when CAN_sendCOB was called.

This problem can be avoided if the writing of data records into the network trace is deactivated. To do this, set the parameter "Number of data records per ACOPOS for Network Command Trace" in the ACP10 configuration to zero, or call the NC action "ncNET_TRACE,ncSWITCH_OFF" for the NC object with the type"ncNET_GLOBAL".

ID#400081560 : solved problem, solved since V2.321

Error 32215 when using ARsim with version A3.09/A4.01 or higher (only in V2.310 − V2.320)

When using ARsim with version A3.09 (respectively A4.01) or higher for " %ID.SYSTIME" the plCECreate error 20923 occurs. Because of this error the basis initialization was aborted with error 32215 (status of plCECreate = 20923) and additionally an error with ASCII data "%ID.SYSTIME" was entered in the Logger.

Now the basis initialization in this case is no longer aborted, but only an information with ASCII data "plCECreate(%ID.SYSTIME) =20923" is entered in the Logger.

ID#400081325 : solved problem, solved since V2.321

SG4 target system, function ncda_cr(): Data were not stored in UserROM when using AR version A3.08 or higher

If data were written with the function ncda_wr() into an NC data module, which was present in the UserROM, then the data was not stored in the UserROM, if an AR version A3.08 or higher was used. After a restart of the target system in this case the NC data module contained again the previous data.

ID#400081425 : solved problem, solved since V2.321

ACP10SIM, simulation mode Standard: The status of the enable input was not set to ncCLOSED

NC Software − ACP10 V2.320

ID#400080735 : solved problem, solved since V2.320

8AC123.60−1,8BAC0123.000.1: Error 6048 when configuring an SSI encoder (only in V2.190 − V2.31x)

Under the following conditions, the error 6048 was incorrectly reported:
− The encoder was used for motor control
− The motor was equipped with a brake

ID#278180 : solved problem, solved since V2.320

ACOPOSmulti, trigger inputs and digital inputs 8BAC0130.000−1, incorrect edge times.

The time value for the rising and falling trigger edges of the parameter TRIG1/2_RISE_EDGE_TIME, TRIG1/2_FALL_EDGE_TIME, DIO_IN7/8_RISE_EDGE_TIME and DIO_IN7/8_FALL_EDGE_TIME was too small by 100us. Further effects of the "premature" times: Speed−dependent error when using TRIGGER1, TRIGGER2 and DIO_IN7/8 in connection with Cam Profile Automat, LATCH function and basis movement with the mode "Stop after trigger".

ID#400075906 : solved problem, solved since V2.320

NC action "ncCONTROLLER,ncINIT": From now on, the value of "controller.speed.t_filter" is always transferred to the ACOPOS

Until now, after calling the NC action "ncCONTROLLER,ncINIT", the value of "controller.speed.t_filter" was only then transferred to the ACOPOS with parameter ID "SCTRL_TI_FIL", if the value of "controller.speed.t_filter" was changed.

If a new value for "controller.speed.t_filter" was determined by the autotuning procedure and afterwards "controller.speed.t_filter" was overwritten with the previous value by the application or in the NC test, then the value of "controller.speed.t_filter" was falsely not transferred to the ACOPOS after the NC action "ncCONTROLLER,ncINIT" was called. Due to this error, "controller.speed.t_filter" in the NC structure and the parameter "SCTRL_TI_FIL" on the ACOPOS had different values afterwards.

From now on, the value of "controller.speed.t_filter" is always transferred to the ACOPOS with parameter ID "SCTRL_TI_FIL" after the NC action "ncCONTROLLER,ncINIT" is called.

ID#282025 : solved problem, solved since V2.320

ACOPOSmicro 80VD100Px.xxxx−xx: Overcurrent monitoring was not activated, although it should have been

Overcurrent monitoring will now be activated for ACOPOSmicro 80VD100Px.xxxx−xx. This will cause the following error to be displayed if the current limit value of 21 A is exceeded:
− 6054: Power stage: Overcurrent

ID#400080878 : solved problem, solved since V2.320

8B0Pxxxxxxxx.xxx−x: Warnung 33002 during startup. (only in V2.290 − V2.31x)

In rare cases, the charging resistance temperature model was incorrectly initialized during startup. Thus, the following warning was registered.
− 33002: Floating−Point exception

ID#400077983 : solved problem, solved since V2.320

ACOPOSmulti, POWERLINK Response Chaining: Transfer error

Transfer errors could occur during communication with ACOPOSmulti devices if many stations were addressed in the POWERLINK cycle (approximately 40 POWERLINK stations or more). This caused various error messages or faulty behavior on the drive.

NC Software − ACP10 V2.310

ID#400079477 : solved problem, solved since V2.310

8BAC0123.00x−x, Incremental encoder: Warning 39018 after activation of reference pulse monitoring

If the reference pulse monitoring was activated after a SW reset, before the first reference impulse was captured, then the following warning could falsely be indicated:
− 39018: Reference pulse monitoring: Faulty position, resolution, or reference pulse

ID#275762 : new function since V2.310

SG4 target system, POWERLINK: NCSYS download via broadcast

The new parameter in the NC configuration "Enable NCSYS download via Broadcast=Yes/No" makes it possible to enable/disable the download of an ACOPOS operating system via broadcast.

If "Yes" is selected for this parameter, the download of an operating system (BRMOD_NCSYS) to all connected ACOPOSmulti and ACOPOSmicro modules will then be carried out via broadcast (and thus be considerably faster) during the basic network initialization (startup function for all ACOPOS modules), if the following minimum versions are present on all modules of the same type:
− BRMOD_NCSYS V2.310 or higher
− BRMOD_BSL V2.310 or higher (if BRMOD_NCSYS is not present)

NCSYS download via broadcast is not supported for ACOPOS with AC112 and ACOPOS with AC114. The download of an operating system to modules of this type is always carried via Unicast.

ID#272527 : new function since V2.310

Target system SG4, POWERLINK: Restrictions for extended coupling data have been lifted

Until now, extended coupling data for ACP10_MC_BROADCAST could only be used under the following restrictions:
− Cyclic #1 must be defined as an NC manager task class
− For this task class, output data must be written in synchronization with the network

From now on, these restrictions are no longer valid when using AR versions A3.09 or higher (respectively A4.01 or higher).

NC Software − ACP10 V2.301

ID#272265 : solved problem, solved since V2.301

8B0Pxxxxxxxx.xxx−x: The temperature of the charging resistances was wrongly initialized to the value 0°C. (only in V2.290 − V2.300)

If the maximum chargeable DC bus capacitance was exceeded, then the following warning or error was sometimes reported too late:
41080: Charging resistor: Overtemperature
9080: Charging resistor: Overtemperature

ID# 400075482, 400075619 : solved problem, solved since V2.301

8BVxxxxxxxxx.xxx−x: DC bus voltage measurement: Error 7200 was mistakenly reported (only in V2.250 − 2.300)

The following error was sometimes mistakenly reported:
− 7200: DC bus: Overvoltage

ID#400075630 : solved problem, solved since V2.301

ACOPOSmulti with 8BAC0133.000−1: System crash after software−reset (only in V2.210 − V2.300)

A system crash occurred on some ACOPOSmulti modules after a SW reset if the plug−in module 8BAC0133.00−1 was used.

ID#272260 : new function since V2.301

ACOPOSmulti with SafeMC, 8BVIxxxxxxxS.xxx−x: The Simulation mode is supported

From now on it is also possible for ACOPOSmulti modules with SafeMC to switch the simulation mode on.

NC Software − ACP10 V2.300

ID#400075231 : solved problem, solved since V2.300

8BAC0122.000−x, 8AC122.60−x, 80VD100Px.C02x−01, Resolver: When switching off the simulation mode, the actual position of the motor encoder was sometimes initialized incorretly.

ID#270240 : solved problem, solved since V2.300

Virtual Encoder: After switching off the controller, the homing status was kept in mode 1.

It can't be determined, wether the axis moves or not when the controller is off. Because of this, the virtual encoder looses the homing status when the controller is switched off.
Keeping the homing status can be configured with ENCOD0_MODE Bit 9 = 1, if it can be assured that the axis can't move (eg. if there is a holding brake).

ID#269755 : solved problem, solved since V2.300

8BVIxxxxxxxx.xx1−x: X2 plug, contact 5: OnBoard ADC input 2 (AIO_IN2) was faulty (only in V2.250 − V2.29x)

ID#400071799 : solved problem, solved since V2.300

8AC123.60−1, SSI encoder: Acceleration monitoring could not be disabled with ENCODx_LINE_CHK_IGNORE

The parameter ENCODx_LINE_CHK_IGNORE is used for disabling acceleration monitoring for SSI encoders by setting Bit4=1. This did not work when using the encoder interface 8AC123.60−1.

ID#270467 : new function since V2.300

Target system SG4, POWERLINK: Extended coupling data for ACP10_MC_BROADCAST

The new parameter in the NC configuration "Extended coupling data for ACP10_MC_BROADCAST=No/Yes" for POWERLINK and SDC interfaces allows users to select, whether extended coupling data are to be used for the following functionalities:
− Coupling of axes on different networks
− Coupling a POWERLINK axis to position data that is cyclically produced by a PLCopen MC FB

If "Yes" is selected for this parameter, then the 8 bytes position data are extended by a time stamp with 4 bytes for the functionalities mentioned above, which creates the following new possibilities:
− Coupling to a master with larger cycle time than the network cycle time of the slave axis
− Detection of missing coupling data for coupling of axes on different networks

IMPORTANT:
The functionalities mentioned above can only be used with Automation Studio V3.0.80 or higher and Automation Runtime für SG4 V3.00 or

higher.

If "Yes" is selected for this parameter, then 12 bytes are needed on the broadcast channel for each master position (otherwise 8 bytes). In this case the size of ACP10_MC_BROADCAST for the associated network interface must be increased by a factor of 1.5.

Extended coupling data can only be used under the following restrictions:
− Cyclic #1 must be defined as NC manager task class
− For this task class, output data must be written in synchronization with the network

ID#400063059 : new function since V2.300

New NC structure component "trace.datobj.parameter.format" for the NC object with type "ncMULTI_AX_TRACE"

If for saving of the trace data into a data object the type "ncDATOBJ_FILE" is used, then another data object format than the binary format can be defined with this component.

The following NC constants can be used for "format":
− ncDATOBJ_FORMAT_BIN: Binary format (default setting)
− ncDATOBJ_FORMAT_CSV: CSV format (only for type "ncDATOBJ_FILE")
− ncDATOBJ_FORMAT_TXT: Text format (only for type "ncDATOBJ_FILE")

NC Software − ACP10 V2.292

ID#271045 : solved problem, solved since V2.292

ACOPOSmulti with SafeMC: Selecting STO1 did not lead to an induction stop, although this was configured with ENABLE_CONFIG (only in V2.290 − V2.291)

NC Software − ACP10 V2.291

ID#268137 : solved problem, solved since V2.291

POWERLINK, the NC action "ncNETWORK,ncINIT+ncSTOP" did not function during network phase 9 (only in V2.200 − V2.290)

If the NC action "ncNETWORK,ncINIT+ncSTOP" was called, during "network phase = 9" was set, then the startup function of the appropriate ACOPOS was not aborted immediately. If the ACOPOS was not connected to the network, this could last still the entire timeout time (45 sec.).

ID#267967 : solved problem, solved since V2.291

Error 32166 when calling "ncNETWORK,ncINIT{+ncRESET}" after "ncNETWORK,ncINIT+ncSTOP"

If for an ACOPOS module the startup function was aborted during the basic network initialization by calling the NC action "ncNETWORK,ncINIT+ncSTOP", then it was no longer possible for this ACOPOS module, to carry out the startup function by calling the NC action "ncNETWORK,ncINIT {+ncRESET} ". Each call of this NC action for this ACOPOS module caused then the following error:
− 32166: Network initialization during active network initialization not allowed

NC Software − ACP10 V2.290

ID# 400071246, 400071560 : solved problem, solved since V2.290

Setup for controller: Error 6029 during disabled control monitoring

In the following combinations of the parameter "orientation" and "mode" the parameter BRAKE_MODE was incorrectly set to the value 9 (automatic control on, movement monitoring off):
− "orientation = ncHORIZONTAL", "mode =ncFF..."
− "orientation = ncVERTICAL", alle modes

As a result, the setup process was falsely aborted with the following error, if control monitoring was disabled:
− 6029: Holding brake: Control signal on and output status off

ID#400072365 : solved problem, solved since V2.290

Kinetic buffering or DC bus voltage control when power failure occurs: Error 7200 (only in V2.270 − V2.28x)

If the parameter UVLIM_MODE was set to 0x202 and a power failure occurred, then kinetic buffering was not activated as it should have been. Therefore, the following errors was sometimes reported:
− 7225: DC bus: Overvoltage
− 7200: DC bus: Overvoltage

ID#265020 : solved problem, solved since V2.290

Heat sink temperature sensor: Activating failure monitoring

On ACOPOSmulti modules with more than one heat sink temperature sensor (e.g.: 8B0Pxxxxxxxx.xxx−x, 8B0P0880xxxx.xxx−x, 8B0P1650xxxx.xxx−x), the values provided by each of the connected temperature sensors are checked for validity. If an error occurs, the following error number will be reported:
9002: Heat sink temperature sensor: Not connected or damaged

ID#265015 : solved problem, solved since V2.290

8B0Pxxxxxxxx.xxx−x: Activating thermal monitoring of charging resistors

The temperature of the charging resistors on the following modules will be monitored.
8B0P0220Hx00.00x−1 from Rev.:I0,
8B0P0220HW00.001−E from Rev.:F0 and
8B0P0440Hx00.00x−1 from Rev.:G0

The following warning or error can occur if the maximum chargeable DC bus capacitance is exceeded:
41080: Charging resistor: Overtemperature
9080: Charging resistor: Overtemperature

ID#400070459 : solved problem, solved since V2.290

8B0Pxxxxxxxx.xxx−x: Error number 6061 was mistakenly reported.

In the event of a power failure, the braking resistor's chopper output was sometimes switched off mistakenly and the error number 6061 was mistakenly reported.

NC Software − ACP10 V2.282

ID# 400069466, 400071137, 400071148 : solved problem, solved since V2.282

Induction motor: Error 4007 when turning on the controller (only in V2.270 − V2.281)

An increased lag error can occur briefly on induction motors when turning on the controller if, after the motor parameters have been set, the value of the parameter UDC_NOMINAL or UDC_BLEEDER_ON has changed or UDC_NOMINAL has been newly detected (e.g.: after a power failure or after boosting the DC bus voltage). This can result in the following error:
− 4007: Lag error stop limit exceeded

NC Software − ACP10 V2.281

ID#264765 : solved problem, solved since V2.281

ACOPOSmulti 8BVx0xx0HxSx.000−1: Increased thermal load on components in the power supply for IGBT driver circuits (only in V2.250, V2.260, V2.261, V2.262, V2.263, V2.270, V2.271 and V2.280)

In ACOPOSmulti modules 8BVI0220HxSx.000−1, 8BVI0330HxSx.000−1, 8BVI0440HxSx.000−1, 8BVI0880HxSx.000−1, 8BVI0220HWS0.001−1, 8BVI0440HCS0.001−1, 8BVI0880HCS0.001−1, 8BVP0220Hx00.000−1, 8BVP0440Hx00.000−1, 8BVP0880Hx00.000−1 using the versions listed above increases the thermal load on components in the power supply for IGBT driver circuits. This can cause an error message or even a defect in the module hardware. The modules also display a significant increase in 24V power consumption.

The defect of an ACOPOSmulti module caused by the problem described above can lead to the following errors:
− 6045: Power stage: X5 connection: No power flow
− 6052: Power stage: High−side: Overcurrent
− 6053: Power stage: Low−side: Overcurrent
When using inverter modules, this can cause the motor to spin out. When using power supply modules, this can cause the fuses connected upstream to be triggered.

Note:
If there is no defect of an ACOPOSmulti module, then it is only necessary to upgrade to an ACP10 software version in which the problem has been corrected. No other measures are necessary.

ID#264640 : solved problem, solved since V2.281

8BVIxxxxxxSx.xxx−x: IGBT temperature sensor inputs were not monitored (only in V2.250 − V2.263, V2.270, V2.271 and V2.280)

Only one temperature sensor was monitored on ACOPOSmulti inverter modules with three temperature sensors (e.g.: 8BVIxx0660Sx.xxx−x, 8BVIxx0880Sx.xxx−x, 8BVIxx1650Sx.xxx−x).
This can damage the IGBT if strong currents occur during standstill.

ID#400070266 : solved problem, solved since V2.281

CAN network error 6002 when using cyclic user data or master/slave network coupling

With CAN networks the use of cyclic user data or master/slave network coupling could lead to errors in the drive synchronization.
The following error was displayed:
− 6002: Sync controller: Error tolerance of system time difference exceeded

NC Software − ACP10 V2.280

ID#262707 : solved problem, solved since V2.280

Warnings 39003 and 39006 when using Heidenhain EBI encoders

When using Heidenhain EBI encoders, in operation sometimes the following warnings were indicated:
− 39003: EnDat encoder: Alarm bit is set
− 39006: EnDat encoder: Alarm bit − Position value contains an error

It is rarely possible even now that this warnings were indicated after ACOPOS startup . In this case the encoder error has to be cleared by setting "ENCOD_CMD = 1".

ID#400066732 : solved problem, solved since V2.280

ACOPOSmulti with SafeMC: The errors 33002, 6058 and 6059 were falsely indicated

Using large values for the load scale (SCALE_LOAD_UNITS, SCALE_LOAD_MOTOR_REV) could cause incorrect set position values to be transferred the to SafeMC module. This error activated the STO safety function if safety related monitoring of the position lag error was switched on. This then caused the following errors to be indicated:
− 33002: Floating−Point exception
− 6058: Enable1: Voltage sag
− 6059: Enable2: Voltage sag

ID#258967 : solved problem, solved since V2.280

ACOPOS 8V1xxxx.xx−2: Start−up error, if multiple 8AC122.60−3 cards are plugged

Starting with version V2.240, the following occurred when using two or more AC122.60−3 cards in an ACOPOS:
− 6032: Interface: FPGA configuration error

With versions before V2.271 in this case not the error 6032 was indicated, but the ACOPOS startup was aborted with one of the following errors, because after start of the operating system with "CMD_BOOT_STATE = 24" no response on read request for "BOOT_STATE" could be received:

POWERLINK:
− 32204: Timeout while reading par. via acyclic channel (is the drive in the network ?)

CAN:
− 32010: Drive not responding to Read Request (is the drive in the network ?)

ID#400063297 : new function since V2.280

SG4 target system, POWERLINK, Coupling of axes on different networks: Unequal cycle times are now possible

Until now, coupling of axes on different networks was only possible if the following cycle times were equal:
− Cycle time of the NC Manager task class
− POWERLINK cycle time (if master or slave are operated via POWERLINK network)

From now on, coupling of axes on different networks is also possible with unequal cycle times if the following conditions are fulfilled:
− The cycle time of the slave network interface is equal to the cycle time of the NC Manager task class
− The cycle time of the slave network interface is greater or equal to the cycle time of the master network interface
− The ratio of the cycle times of slave and master network interface is integral

If one of the conditions specified above is not fulfilled, the following error is indicated:
− 32282: Network coupling: Incompatible cycle times (network interfaces, NC task class)

NC Software − ACP10 V2.272

ID#264872 : solved problem, solved since V2.272

ACOPOSmulti 8BVx0xx0HxSx.000−1: Increased thermal load on components in the power supply for IGBT driver circuits (only in V2.250, V2.260, V2.261, V2.262, V2.263, V2.270, V2.271 and V2.280)

In ACOPOSmulti modules 8BVI0220HxSx.000−1, 8BVI0330HxSx.000−1, 8BVI0440HxSx.000−1, 8BVI0880HxSx.000−1, 8BVI0220HWS0.001−1, 8BVI0440HCS0.001−1, 8BVI0880HCS0.001−1, 8BVP0220Hx00.000−1, 8BVP0440Hx00.000−1, 8BVP0880Hx00.000−1 using the versions listed above increases the thermal load on components in the power supply for IGBT driver circuits. This can cause an error message or even a defect in the module hardware. The modules also display a significant increase in 24V power consumption.

The defect of an ACOPOSmulti module caused by the problem described above can lead to the following errors:
− 6045: Power stage: X5 connection: No power flow
− 6052: Power stage: High−side: Overcurrent
− 6053: Power stage: Low−side: Overcurrent
When using inverter modules, this can cause the motor to spin out. When using power supply modules, this can cause the fuses connected upstream to be triggered.

Note:
If there is no defect of an ACOPOSmulti module, then it is only necessary to upgrade to an ACP10 software version in which the problem has been corrected. No other measures are necessary.

ID#264842 : solved problem, solved since V2.272

8BVIxxxxxxSx.xxx−x: IGBT temperature sensor inputs were not monitored (only in V2.250 − V2.263, V2.270, V2.271 and V2.280)

Only one temperature sensor was monitored on ACOPOSmulti inverter modules with three temperature sensors (e.g.: 8BVIxx0660Sx.xxx−x, 8BVIxx0880Sx.xxx−x, 8BVIxx1650Sx.xxx−x).
This can damage the IGBT if strong currents occur during standstill.

NC Software − ACP10 V2.271

ID#259480 : solved problem, solved since V2.271

ACOPOSmulti: Temperature sensor inputs supplied invalid values (only in V2.250 − V2.263, V2.270)

8BVPxxxxxxxx.xxx−x:
The temperature sensor inputs on encoder plug−in module 2 and on the X1 plug supplied invalid values.

8BVIxxxxxxSx.xxx−x:
The temperature sensor input on encoder plug−in module 2 supplied invalid values.

ID#400065447 : solved problem, solved since V2.271

POWERLINK, ACOPOS 8V1xxxx.xx−2, ACOPOS startup: Error 32204 after start of operating system (only in V2.230 − V2.270)

During the ACOPOS startup function, communication to ACOPOS modules 8V1xxxx.xx−2 must be re−established after the operating system has been started with "CMD_BOOT_STATE = 24". If the ACOPOS contains plug−in modules, which cause a longer boot procedure (e.g. 8AC122.60−3), then the ACOPOS startup was sometimes falsely aborted in this phase with the following error:
− 32204: Timeout while reading par. via acyclic channel (is the drive in the network ?)

NC Software − ACP10 V2.270

ID#248555 : solved problem, solved since V2.270

8B0Pxxxxxxxx.xxx−x: Braking resistor temperature model: The calculated temperature TEMP_BLEEDER was too low

If braking resistors (e.g.: 8B0Wxxxxxxxx.xxx−x) were operated on 8B0Pxxxxxxxx.xxx−x modules, then the braking resistor temperature model indicated a TEMP_BLEEDER temperature that was up to 2x too low. This made it possible to put a load on the braking resistors that was beyond the specification.

If the braking resistor used was not dimensioned correctly, then one of the following messages could be displayed due to error correction:
− 41041: Bleeder temperature model: Over−temperature
− 9040: Bleeder temperature model: Over−temperature − Movement stop

If the braking resistors with the product ID 8B0Wxxxxxxxx.xxx−x are used and the warning or error mentioned above occurs, then the messages can be avoided in V2.270 and higher by using pre−initialized parameter groups. This can be done by adding the parameter groups "8B0Wxxxxxxxx.xxx−x" to an ACOPOS parameter table in Automation Studio in V2.270 and higher.

IMPORTANT:
Using these parameter groups in a version older than V2.270 can result in loads being placed on the braking resistors that are beyond the specification.

ID#256172 : new function since V2.270

SG4 target system, POWERLINK: Determination of ACOPOS hardware information

For determination of ACOPOS hardware information the new NC action "ncSERVICE,ncACOPOS_INFO" is offered for NC objects with type "ncAXIS" and "ncV_AXIS".
Before calling this NC action the address of a variable with data type "ACP10HWINFO_typ" must be entered in "network.service.data_adr".
After call of this NC action the ACOPOS hardware information is copied into this variable.
The following information is offered for ACOPOS module, plug−in cards and motors:
− Model number
− Serial number
− Revision

ID#253492 : new function since V2.270

Deceleration ramp after occurrence of a drive error: New mode "ncCTRL_OFF"

With "move.stop.drive_error.decel_ramp = ncCTRL_OFF" after occurrence of a drive error the power section will be switched off immediately (the drive has no electrical torque).

ID# 400048696, 400063943 : new function since V2.270

New NC actions for the Basic Network Initialization

For the NC object with type "ncNET_GLOBAL" the new NC actions mentioned below are offered to trigger the for Basic Network Initialization (function for collective startup of all ACOPOS modules which are configured).

ncNETWORK, ncINIT: Collective network initialization without reset
The ACOPOS startup is carried out only for those ACOPOS modules, for which the cyclic network communication is not active.

ncNETWORK, ncINIT+ncRESET: Collective network initialization with reset
The ACOPOS startup is carried out for all ACOPOS modules. For those ACOPOS modules, for which the cyclic network communication is active, a reset is applied.

ID#400075819 : solved problem, solved since V2.270

8BVPxxxxxxxx.xxx−x: Encoder interface parameters from the axis structure of Axis1 (= converter) incorrectly assigned to the encoder in slot 1

The parameters VCTRL_ENCOD_COUNT_DIR, VCTRL_SCALE_LOAD_UNITS and VCTRL_SCALE_LOAD_MOTREV are used for the motor encoder.
The VCTRL_ENCOD_COUNT_DIR, VCTRL_SCALE_LOAD_UNITS and VCTRL_SCALE_LOAD_MOTREV parameters were incorrectly used to configured encoder 1 (ENCOD_COUNT_DIR, SCALE_LOAD_UNITS and SCALE_LOAD_MOTREV).

From V2.270 the virtual encoder (ENCOD0) is used as the motor encoder.
From V2.270 the encoder in slot 1 can not be configured with the parameters VCTRL_ENCOD_COUNT_DIR, VCTRL_SCALE_LOAD_UNITS and VCTRL_SCALE_LOAD_MOTREV.
From V2.270 the encoder in slot 1 must be configured with the parameters ENCOD_COUNT_DIR, SCALE_LOAD_UNITS and SCALE_LOAD_MOTREV.

ID#258772 : solved problem, solved since V2.270

Field weakening characteristic curve for permanent magnet synchronous motors can be incorrectly configured

The field weakening characteristic curve for permanently excited synchronous motors will be incorrectly initialized
if the DC bus voltage is changed after the motor parameters have been set.

ID#254925 : solved problem, solved since V2.270

8B0Pxxxxxxxx.xxx−x: Error number 7217 was mistakenly reported. (only in V2.230 − V2.26x)

The following error could be mistakenly reported if a braking resistor with a resistance value greater than 150 ohms was connected to a passive power supply module.
− 7227: Bleeder: Overcurrent

ID#400062284 : solved problem, solved since V2.270

80Vxxxxxx.xxxx−xx: Error number 7217 was mistakenly reported.

The following error was mistakenly reported if the parameter PHASE_MON_IGNORE was set to the value 1 and the DC bus voltage UDC_FILTER was higher than 80V:
− 7217: DC bus: Nominal voltage detection: Voltage too high

NC Software − ACP10 V2.264

ID#264877 : solved problem, solved since V2.264

ACOPOSmulti 8BVx0xx0HxSx.000−1: Increased thermal load on components in the power supply for IGBT driver circuits (only in V2.250, V2.260, V2.261, V2.262, V2.263, V2.270, V2.271 and V2.280)

In ACOPOSmulti modules 8BVI0220HxSx.000−1, 8BVI0330HxSx.000−1, 8BVI0440HxSx.000−1, 8BVI0880HxSx.000−1, 8BVI0220HWS0.001−1, 8BVI0440HCS0.001−1, 8BVI0880HCS0.001−1, 8BVP0220Hx00.000−1, 8BVP0440Hx00.000−1, 8BVP0880Hx00.000−1 using the versions listed above increases the thermal load on components in the power supply for IGBT driver circuits. This can cause an error message or even a defect in the module hardware. The modules also display a significant increase in 24V power consumption.

The defect of an ACOPOSmulti module caused by the problem described above can lead to the following errors:
− 6045: Power stage: X5 connection: No power flow
− 6052: Power stage: High−side: Overcurrent
− 6053: Power stage: Low−side: Overcurrent
When using inverter modules, this can cause the motor to spin out. When using power supply modules, this can cause the fuses connected upstream to be triggered.

Note:
If there is no defect of an ACOPOSmulti module, then it is only necessary to upgrade to an ACP10 software version in which the problem has been corrected. No other measures are necessary.

ID#264847 : solved problem, solved since V2.264

8BVIxxxxxxSx.xxx−x: IGBT temperature sensor inputs were not monitored (only in V2.250 − V2.263, V2.270, V2.271 and V2.280)

Only one temperature sensor was monitored on ACOPOSmulti inverter modules with three temperature sensors (e.g.: 8BVIxx0660Sx.xxx−x, 8BVIxx0880Sx.xxx−x, 8BVIxx1650Sx.xxx−x).
This can damage the IGBT if strong currents occur during standstill.

ID#264837 : solved problem, solved since V2.264

ACOPOSmulti: Temperature sensor inputs supplied invalid values (only in V2.250 − V2.263, V2.270)

8BVPxxxxxxxx.xxx−x:
The temperature sensor inputs on encoder plug−in module 2 and on the X1 plug supplied invalid values.

8BVIxxxxxxSx.xxx−x:
The temperature sensor input on encoder plug−in module 2 supplied invalid values.

NC Software − ACP10 V2.263

ID#255007 : solved problem, solved since V2.263

8AC125.60−1: Error 7100 during startup (only in V2.260 − 2.262)

From V2.260 on, during the ACOPOS startup it is tried to access the encoder data memory by writing "EPROM_ID+slot = 1" (slot: Slot of the plug−in card). When using the ACOPOS plug−in card 8AC125.60−1 writing of "EPROM_ID+slot = 1" falsely caused the following error:
− 7100: Parameter function not supported. (Module ?)

NC Software − ACP10 V2.262

ID#253677 : solved problem, solved since V2.262

8B0Pxxxxxxxx.xxx−x: ERR LED or RDY LED blinking and auxiliary supply modules were not switched on (only in V2.230 − V2.261)

After connecting the power mains, 8B0Pxxxxxxxx.xxx−x modules sometimes failed to enter the "Ready" state. This was indicated by the red ERR−LED or the green RDY−LED blinking and the auxiliary supply modules not being switched on. As a result, all of the modules connected to the auxiliary supply modules also remained off (PLC CPU, inverter modules, etc.).

If the PLC CPU was not supplied with the auxiliary supply module but with an external 24V voltage, then the 8B0Pxxxxxxxx.xxx−x module reported the following error:
− 7210: DC bus: Charging: Voltage unstable

This problem occurred primarily under high, unbalanced and distorted mains voltage (e.g.: 3x480VAC 60Hz).

NC Software − ACP10 V2.261

ID#400062286 : solved problem, solved since V2.261

ACOPOSmicro Servo 80VD100xx.C0xx−01: Error 7222 was reported to early

Due to an error in the DC bus current monitoring, the following error was reported already at 15A instead of 30A:
− 7222: Power stage: Connection X5: Ground fault

ID#252920 : solved problem, solved since V2.261

8Vxxxx.xx−x: No movement stop procedure if power failure occurs (only in V2.250 − V2.260)

A movement stop procedure was sometimes not executed if the power failed on ACOPOS modules (8Vxxxx.xx−x) and the DC bus voltage dropped rapidly or phase failure monitoring was disabled (PHASE_MON_IGNORE = 1).

NC Software − ACP10 V2.260

ID#400060980 : solved problem, solved since V2.260

Warning 39001 when using Hiperface encoders (only in V2.231 − V2.250)

When using Hiperface encoders, the encoder position was sometimes initialized incorretly by 1/4 of the signal period. This position error was recognized and corrected after moving one signal period. Additionally the following warning was displayed:
− 39001: Encoder: Position correction active

The problem could arise only if the absolute positions of the Hiperface encoders were changed not conform to the analog signals.

ID#250405 : solved problem, solved since V2.260

8AC130: In mode "ncINC" reference pulse detection was deactivated wrongly by setting "ENCOD_OUT_PARID = 0".

ID#400058883 : solved problem, solved since V2.260

No error message, although drive in error state, when switching controller on

In certain error states, when switching on the controller, the cyclic status bit16 (error record not read) was not set. As a result sometimes no error message was registered.

ID#400055646 : solved problem, solved since V2.260

SDC axes, Cam Profile download: The error info was sometimes not displayed

For SDC SDC axes a Cam Profile download is processed in the cyclic NC manager task, if the Cam Profile data are handed over via " data_adr" and " data_len". If during such a Cam Profile download in the cyclic NC manager task a response error occured, then the error info was not copied into "message.record.info" of the corresponding NC object.

In the Network Command Trace the error info was displayed correctly.

ID#249602 : new function since V2.260

Setup for controller: New parameter "orientation"

From now on, the setup procedure also supports axes which are subject to any external torque (hanging load, etc.), if "orientation = ncVERTICAL" is set.

ID#400045220 : new function since V2.260

Motor Holding Brake Control: Automatic functional test of the holding brake torque when switching on the drive controller is supported

NC Software − ACP10 V2.250

ID#400056880 : solved problem, solved since V2.250

AC114 POWERLINK, network coupling to POWERLINK participant

When linking to another POWERLINK station, which is not an ACOPOS device, sometimes only every second value will be applied.

ID#245942 : new function since V2.250

ACOPOSmulti with SafeMC: Safety Release V1.4 is supported.

ID#400053666 : new function since V2.250

Setup for controller: New value for "mode"

In mode "ncSPEED+ncUSE_FILTER_PAR" the determination of the controller parameters is accomplished with the preset filter parameters (ISQ filter, speed filter).

ID#245270 : solved problem, solved since V2.250

The Motor sometimes accelerated during a movement stop.

If the position controller was not enabled, for reasons such as
− the position controller was disabled using the parameter PCTRL_ENABLE_PARID or
− only the speed controller was enabled with CONTROLLER_MODE = 4
and an additive speed was enabled during the movement stop with the parameter SCTRL_ADD_SET_PARID, then the motor would be accelerated to twice its speed during the movement stop.

ID# 400038187, 400055918 : solved problem, solved since V2.250

Ref pulse check with the 8BAC0123

NC Software − ACP10 V2.242

ID#247800 : solved problem, solved since V2.242

8BAC0124.000−1, 8AC120.60−1, sine−cosine encoder: Incorrect absolut positon within a signal period (only in V2.240 and V2.241)

When using a sine−cosine encoder without reference pulse as absolute encoder, it may come to an incorrect position within one signal period.

NC Software − ACP10 V2.241

ID#245512 : solved problem, solved since V2.241

POWERLINK communication problems during startup

In rare cases, some ACOPOS devices may not be added to the POWERLINK communication cycle during startup.

ID#400054555 : solved problem, solved since V2.241

ACOPOSmulti with SMC (Safe Motion Control) and frame reduction to single axis, coupling with cyclically coupled objects is not possible

A cyclic coupling is rejected with error 1013.

ID#400056175 : solved problem, solved since V2.241

8BxPxxxxxxxx.xxx−x: Thermal overload possible (only in V2.240)

The following temperature and load monitoring functions were mistakenly disabled:
− Continuous current load LOAD_CONT_CURR
− Peak current load LOAD_PEAK_CURR
− Motor temperature model and temperature model for mains components TEMP_MOTOR_MODELL
Modules could be damaged if rated current was applied to ACOPOSmulti power supply modules.

NC Software − ACP10 V2.240

ID#400053626 : solved problem, solved since V2.240

ISQ−Ripple identification: The data were calculated wrong for "ENCOD_COUNT_DIR = ncINVERSE".

ID#400053501 : solved problem, solved since V2.240

Powerlink Network Coupling, ACOPOSmulti, Error 33002: Floating−Point exception

Receiving a cyclic network position with very small fractional part (<1.175e−38) the error 33002 occured.

ID#400050040 : solved problem, solved since V2.240

Multiturn absolute encoder, homing with ncHOME_OFFSET, wrong unit position

With certain settings of the load scaling (load.units/load.rev_motor) and a large number of encoder revolutions, the unit position was calculated incorrectly during initialization and after a homing procedure with ncHOME_OFFSET

ID#242947 : new function since V2.240

Handling of MTC data (Motion Trace Configuration)

For handling of trace configurations with MTC format the following actions are offered for the NC object with type "ncMULTI_AX_TRACE":
− "ncMTC, ncLOAD"
− "ncMTC, ncSAVE"

ID#400039751 : new function since V2.240

8BAC0120.000−1, 8BAC0121.000−1, 8BAC0124.000−1: The ADC calibration values are supported

ID#400052353 : new function since V2.240

8AC0121.60−1, 8BAC0121.000.1: Hiperface encoder with extended type label are supported.

ID#400041065 : new function since V2.240

8AC125.60−1, BiSS Encoder:

Support for register read/write access. Support for alarm and warning bits

ID#400047158 : new function since V2.240

8AC125.60−1, BiSS Encoder: Support for register read/write access

ID#243530 : solved problem, solved since V2.240

Motor temperature model: Warning 41070 or error 9070 was mistakenly reported

If the value of the parameter MOTOR_CURR_RATED was greater than the value of the parameter MOTOR_CURR_STALL, then the following warning or error was mistakenly registered under minimal load:
− 41070: Motor temperature model: Overtemperature
− 9070: Motor temperature model: Overload − Movement stopped

ID#243525 : solved problem, solved since V2.240

8Bxxxxxxxxxx.xxx−x, 8Cxxxxxxxxxx.xxx−x, 80Vxxxxxx.xxxx−x: Change in the DC bus nominal voltage detection UDC_NOMINAL

From now on, the nominal DC bus voltage UDC_NOMINAL will not be detected until after the main relay has been closed.
This causes a slightly larger nominal DC bus voltage UDC_NOMINAL to be detected (approx. 5%).
As a result, if a power failure occurs, the main relay will open up at a larger DC bus voltage UDC_ACT (approx. 5%), which means that the auxiliary supply module and all inverter modules will be shut off sooner.

ID#243520 : solved problem, solved since V2.240

8Vxxxx.xx−x: External braking resistor: Connection RB+ and RB−: Open circuit test: Warning 38008 was not reported

If the braking resistor circuit failed, it could happen that the following warning wrongly was not reported:
− 38008: Bleeder: No current flow
The filtered DC bus voltage UDC_FILTER will now be used for testing instead of the DC bus voltage UDC_ACT.

ID#243185 : solved problem, solved since V2.240

NO automatic activation of the short−circuit stop when switching off only one ENABLE input (STO1)

If
the parameter ENABLE_CONFIG was set 1 or a SAFETY module was used (ENABLE_CONFIG automatically set to 1) and
the parameter F_SWITCH or ICTRL_MODE was set after setting the parameter ENABLE_CONFIG,
then
a short−circuit stop would NOT be started when switching off only one ENABLE input.

ID#400050570 : solved problem, solved since V2.240

8BVIxxxxxxxx.xxx−x: Error 4005 was mistakenly reported. (only in V2.180 − V2.23x)

The following error was mistakenly reported if the parameter MAINS_SWITCH_PARID was set to CONST_I4_ZERO on an inverter module:
− 4005: Controller cannot be switched on: Drive in error state

ID#241040 : solved problem, solved since V2.240

Setup for controller: Improvements for mode "ncFF..."

If the setup function in "ncFF..." mode was aborted, then the movement was stopped with the current deceleration if the stop configuration ncA_LIMIT (+ncT_JOLT) was set. In some cases, this could take a long time. The stop movement is shortened by using the maximum for the current deceleration and the respective acceleration limit values.

Previously, the acceleration would be increased in "ncFF" mode after every forward and backward movement until the maximum determined current was reached. To shorten the identification procedure, this is now done after every movement. Furthermore, the acceleration for which the specified current has not yet been reached will be used for identification.

Under certain circumstances, the wrong result parameters were determined in "ncFF…" mode. This was caused by an incorrectly calculated sample time (multiple of 200us). The sample time will now be calculated as a multiple of 400us.

ID#240100 : solved problem, solved since V2.240

8AC120.60−1,8BAC124.000−1,8BAC120.000−1 : Position step during initialization of encoder (only in V2.170 − V2.23x

Due to this problem one of the following errors could be registered:
− 6048: Motor holding brake movement monitor: Position error too large
− 7033: Encoder: Incremental position step too large

NC Software − ACP10 V2.232

ID#400051518 : new function since V2.232

8AC120.60−1, 8BAC120.000−1: EnDat01 encoder: Monitoring of the multiturn position

ID#241907 : solved problem, solved since V2.232

Active SW limts, movement with cyclic position set values: Stop bit was incorrectly set (only in V2.230 − V2.231)

In certain cases with cyclic position set values, the status bit12 (Stop after drive event active) was set without reaching the SW limits. Thus in these cases the wrong movement status was indicated:
− move.mode = ncSTOP
− move.detail = ncEVENT

ID#400053134 : solved problem, solved since V2.232

8B0Pxxxxxxxx.xxx−x: The error 7212 and 7211 were incorrectly reported (only in V2.220 − V2.231)

The following error was sometimes incorrectly reported when switching on the mains:
− 7212: DC bus: High voltage drop

The following error was incorrectly reported only then, if the DC bus voltage fell below the threshold voltage 20VDC:
− 7211: DC bus: Voltage drop
Now this error is again reportet correctly already then, if UDC_ACT falls below POWERFAIL_DETECT_RATIO*UDC_NOMINAL.

NC Software − ACP10 V2.231

ID#400052413 : solved problem, solved since V2.231

ACOPOSmulti with SafeMC: The errors 33002, 6058 and 6059 were falsely indicated

With longer movements (e.g. for a periodic axis) a wrong position set value was transferred to the SafeMC module. This error activated the STO safety function, if the safety related monitoring of the position lag error was switched on. This led then to the fact that the following errors were indicated:
− 33002: Floating−Point exception
− 6058: Enable1: Voltage sag
− 6059: Enable2: Voltage sag

ID#400051934 : solved problem, solved since V2.231

8AC121.60−1, 8BAC0121.000−1: Incorrectly determined encoder position

The encoder position was sometimes calculated incorrectly. It could happen a constant position error (half signal period).

NC Software − ACP10 V2.230

ID#257767 : new function since V2.230

New NC actions for NC object with type "ncMULTI_AX_TRACE"

− "ncTRACE, ncSTART+ncSAVE"
− "ncTRACE, ncSAVE"

ID#400051977 : new function since V2.230

8AC122.60−3, 8BAC0122.000−1: Resolver transformation ratio ENCOD_TRANS_RATIO

The allowed range for the resolver transformation ratio ENCOD_TRANS_RATIO was extended from [0.3..0.5] to [0.2..0.5].

Caution:
The position accuracy is reduced with decreasing resolver transformation ratio.

ID#239970 : new function since V2.230

8B0Pxxxxxxxx.xxx−x: Thermal monitoring of the rectifier and the chopper has been activated .

Using a passive power supply module with the following model number can cause the following errors or warning to occur:

8B0P0220Hx00.00x−1 from Rev.: H0
8B0P0220HW00.000−E from Rev.: E0
8B0P0440Hx00.00x−1 from Rev.: F0

9030: Junction temperature model: Overtemperature − Movement stopped
9031: Junction temperature model: Overtemperature − Limiter active
41031: Junction temperature model: Overtemperature

If an over−temperature error (e.g.: 9030 and 9031) occurs, then the chopper output and the CR_OK output will be switched off, the main relay opened and the RDY−, RUN− and ERR LEDs will blink synchronously in 3 second cycles. The error can only be corrected by turning the mains power off and back on.

ID#239965 : new function since V2.230

8B0Pxxxxxxxx.xxx−x: External bleeder: Connection RB+ and RB−: Modification wire break test

Wire break test from V2.230:
While the controller is starting up, a test checks to see if the chopper current UDC_CHOP_CURR exceeds the limit value 0.8 * UDC_ACT / R_BLEEDER_EXT when the braking resistor chopper is activated briefly (20ms). If the chopper current does not exceed the limit the following warning will be registered: 38008: Bleeder: No current flow

Additional Cause/Remedy for 8B0Pxxxxxxxx.xxx−x:
Braking resistor error configuration: The parameter for the resistance value of the braking resistor R_BLEEDER_EXT was set too low.
Chopper current measurement defective: Replace the ACOPOS−modul
DC bus voltage measurement defective: The real DC bus voltage value is lower than the measured DC bus voltage value UDC_ACT: Replace the ACOPOS−modul
The warning can be deactivated by setting Bit6 (0x40) in MOTOR_TEST_MODE.

Wire break test befor V2.230:
While the controller is starting up, a test checks to see if the DC bus voltage drops by at least 2% when the braking resistor chopper is activated briefly (50ms).
If the DC bus voltage drop less than 2% during the test procedure the following warning will be registered: 38008: Bleeder: No current flow

ID#239955 : new function since V2.230

8B0Pxxxxxxxx.xxx−x: External bleeder: Connection RB+ and RB−: Overcurrent monitoring was activated.

If the measured chopper current value UDC_CHOP_CURR exceeds the limit 1.2 * UDC_ACT / R_BLEEDER_EXT , then the following error will be registered:
7227: Bleeder: Overcurrent

Cause/Remedy:
Braking resistor error configuration: The parameter for the resistance value of the braking resistor R_BLEEDER_EXT was set too high.
Braking resistor defective or connections RB+ and RB−: Short−circuit
Braking resistor defective or connection RB−: Ground fault RB−
Braking resistor defective: The real resistance value of the braking resistor has decreased.
DC bus voltage measurement defective: The real DC bus voltage value is higher than the measured DC bus voltage value UDC_ACT.
Chopper current measurement defective: The measured chopper current value UDC_CHOP_CURR is too high.

The overcurrent check can be disabled by setting Bit8 (0x100) in the parameter MOTOR_TEST_MODE.
Caution: Ignoring the braking resistor overcurrent can result in damage to the ACOPOS module or the braking resistor.

ID#400052075 : solved problem, solved since V2.230

Target system ARwin (AR010), POWERLINK, processor blocked for the Windows operating system during ACOPOS startup (only in V2.200 − V2.22x)

During the ACOPOS startup function, after reset commands (CMD_SW_RESET, CMD_BOOT_STATE) the communication to all configured ACOPOS modules is re−established. During this procedure, in V2.200 − V2.22x the processor for the Windows operating system was blocked from the low−priority NC−IDLE task on the PLC. This could last upt to 45 seconds.
From V2.230 on, the processor for the Windows operating system is no longer blocked by the NC−IDLE task during communication establishment.

ID#400051954 : solved problem, solved since V2.230

U/f Control: CONTROLLER_MODE = ncUF: Speed−jump and current−jump (only in V2.210 − V2.22x)

In control mode U / f control (CONTROLLER_MODE = ncUF) could mistakenly occur a speed−jump and current−jump.

ID#239290 : solved problem, solved since V2.230

Setup: Motor phasing: The setup process sometimes failed to complete.

If one of the following error numbers was reported during the setup process, then the setup sometimes failed to complete.
4005: Controller cannot be switched on: Drive in error state
6036: Motor parameters missing or invalid

ID#400050244 : solved problem, solved since V2.230

Parameter identification induction motor:

The internal voltage calculation was sometimes insufficient for identification due to very low stator resistances.

ID#400050297 : solved problem, solved since V2.230

CURVE−FB Mode 3 with predefined 0xFFFF curve: Wrong limitation

With negative input values, the outputs CURVE_VALUE_REL_I4 and CURVE_VALUE_REL_R4 were limited wrongly at 0, instead of at the negative curve interval.

NC Software − ACP10 V2.220

ID#236162 : new function since V2.220

Setup ISQ−Ripple for automatically determing the parameters for the ISQ−Ripple compensation

New NC structure component "setup.isq_ripple".
New NC actions "ncSETUP+ncISQ_RIPPLE,ncSTART" und "ncSETUP+ncISQ_RIPPLE,ncSAVE".

ID#400053009 : solved problem, solved since V2.220

8BAC120.000−1 : EnDat 2.2: Floating−Point−exeption while initializing a LC415 liear encoder

Due to this problem one of the following error numbers could be registered: 33002

ID#400058774 : known problem since V3.00.90.01

SG4 target system with AR A3.08 or higher: Error 9650 when using ACP10 before V2.220

After optimizations some system functions are no longer contained in AR versions A3.08 or higher, which are needed by ACP10 versions before V2.220. If a ACP10 version before V2.220 is used with AR versions A3.08 or higher, then the following error is indicated during the project transfer or registered in the Logger during the PLC startup:
− 9650: Library function not available (System GOT)

For AR versions A3.08 or higher only the ACP10 versions V2.220 or higher can be used.

ID#400048567 : solved problem, solved since V2.220

Cam profile automat: Speed jump with trigger event

Under the following conditions, a speed jump could occur: Change of state into compensation gears, trigger event with attribute ncAT_ONCE, activating the trigger with CMD_DIG_IN_FORCE

ID#400034848 : solved problem, solved since V2.220

8B0Pxxxxxxxx.xxx−x: The error 7200 or 7225 was wrongly registered.

Passive power supply unit (8B0P): After opening of the main relay, the chopper output for brake resistor was wrongly disabled. Thus it could happen that one of the following error was registered:
− 7200: DC bus: Overvoltage
− 7225: DC bus: Overvoltage

NC Software − ACP10 V2.211

ID#236275 : solved problem, solved since V2.211

8BVPxxxxxxxx.xxx−x: The phase fail monitoring was falsely disabled (only in V2.210)

ID#400049068 : solved problem, solved since V2.211

ACOPOS 8Vxxxx.xx−x und ACOPOSmulti 8B0Pxxxxxxxx.xxx−x: External bleeder: The warning 38008 was wrongly registered. (only in V2.210 and V2.21x)

When switching on the controller the following warning was wrongly registered:
− 38008: Bleeder: No current flow

ID#235820 : solved problem, solved since V2.211

ACOPOSmulti with SafeMC: The errors 6058 and 6059 were falsely indicated

With longer movements (e.g. for a periodic axis) a wrong position set value was transferred to the SafeMC module. This error activated the STO safety function, if the safety related monitoring of the position lag error was switched on. This led then to the fact that the following errors were indicated:
− 6058: Enable1: Voltage sag
− 6059: Enable2: Voltage sag

ID#400046005 : solved problem, solved since V2.211

Setup for controller: Error message because of too high speed limit values in relation to motor rated speed

If AXLIM_V_POS/AXLIM_V_NEG exceeds MOTOR_SPEED_RATED (converted into [Units/s]) the following error was wrongly reported:
− 70: Value of a necessary parameter too high

NC Software − ACP10 V2.210

ID#400045077 : new function since V2.210

Encoder Emulation: With ENCOD_OUT_OFFSET, it is possible to offset the reference to a revolution.

Encoder Emulation: With ENCOD_OUT_OFFSET, it is possible to offset the reference to a revolution.

ID#233472 : new function since V2.210

SG4 target system: ACP10 software versions V2.210 or higher can be used only with AR versions V2.82 or higher

If an ACP10 software version V2.210 or higher is used with AR versions before V2.82, then "ACP10MAN: SG4 AR < V2.82" will be entered in the AR logger and the initialization of ACP10 software will be aborted.

For AR versions before V2.82 only the ACP10 software versions before V2.210 can be used.

ID#400020142 : new function since V2.210

ERRESP_UDC_POWERFAIL

The parameter ERRESP_UDC_POWERFAIL was not able to be read and reset to the default value 1.

ID#400047934 : solved problem, solved since V2.210

Using SDC axes with task class cycle time lower than 1ms caused error 32200/32201 with info 20919

If SDC axes were used with a task class cycle time lower than 1ms, then one of the following errors with info 20919 was falsely indicated:
− 32200: Error calling plAcycWrite() (read parameter)
− 32201: Error calling plAcycWrite() (write parameter)

ID#234155 : solved problem, solved since V2.210

Encoder interface BAC124/AC120: Error 7033 when setting the encoder unit system (only in V2.190 − V2.201)

When setting the unit system of an encoder, the error 7033 "Encoder: Incremental position step too large" was sometimes reported incorrectly.

ID#234090 : solved problem, solved since V2.210

8BVx1650xxxx.xxx−x: The error 6054 was mistakenly not reported.

If the absolute value of the phase currents VCTRL_Ix has exceeded the limit 1.62 * ACOPOS_CURR_MAX, then the error 6054: "Power stage: Overcurrent" was mistakenly not reported.

ID#400046980 : solved problem, solved since V2.210

SG4, POWERLINK V1: ACOPOS reset led in rare cases to network failure for other POWERLINK stations (only in V2.160 − 2.201)

Transfer of the reset commands CMD_SW_RESET or CMD_BOOT_STATE to all connected ACOPOS modules during the basis initialization (function for startup of all ACOPOS modules connected to the network), in rare cases could lead to network failures (loss of cyclic communication) for other POWERLINK stations.

ID#400046961 : solved problem, solved since V2.210

ACOPOSmulti with SMC (Safe Motion Control), coupling with cyclically coupled objects is not possible

A cyclic coupling is rejected with error 1013.

ID#400046421 : solved problem, solved since V2.210

8BVP and 8B0P: Error 7221 and 7211 (only in V2.180 − V2.20x)

The error 7221 or 7211 was sometimes registered if simulation was enabled on channel 2 of a power supply module (8BVP or 8B0P).

ID#400046731 : solved problem, solved since V2.210

Wrong target position using movement with period CMD_MODULO_MOVE (MC_MoveAbsolute)

Under the following conditions CMD_MODULO_MOVE reached a wrong target position:
Call of CMD_HOMING (MC_Home) before MODULO_PERIOD (MC_BR_InitModPos) and a homing position greater than 1073741824 or negative.

ID#400045522 : solved problem, solved since V2.210

ACOPOSmulti, Multi Axes Trace with multipexed stations, misalignement of recorded trace data

When using multiplexed stations, different system times were applied from the individual stations. This could cause an offset in the trace data recorded during Multi Axes Trace functions.

ID#400041098 : solved problem, solved since V2.210

8BAC0123.00x−1: Reference Pulse which where not synchronized to A=B=high, weren't detected.

With ENCOD_INC_MODE Bit 9 =1 a edge sensitive Detection of the Reference can be activated. At a Reference Pulse width higher than 90° there direction−dependend Reference positions can occur.

NC Software − ACP10 V2.201

ID#400045336 : solved problem, solved since V2.201

Position jump with basis movement and mode "stop after trigger"

Under the following conditions a position jump could occur at the end of an absolute movement with trigger stop: The trigger occoured just before the target position, a short remaining distance and a high value of jolt time.

ID#231827 : solved problem, solved since V2.201

8BAC120.001: EnDat 2.2: Encoder Error 6057 while reading diagnostic values (only in V2.170 − V2.200)

A data transfer error occures while sending EnDat2.2 additional information if diagnostic values are supported by the encoder and no dignostic values are activated . Due to this problem the following error number could be registered:
− 6057: Position loop controller: Load encoder error

ID#400045205 : solved problem, solved since V2.201

Motor holding brake control with movement monitor: Error 6048 when setting the encoder unit system (only in V2.190 − V2.200)

When setting the unit system of the motor encoder, the error 6048 "Motor holding brake movement monitor: Position error too large" was sometimes reported incorrectly. This error occurred only in the use of motors with holding brake.

ID#400042675 : solved problem, solved since V2.201

Induction motor: Uncontrolled movement if MOTOR_CURR_ROT_DIR = ncINVERSE

An uncontrolled movement occurred when turning on the controller if the rotational direction of the encoder on an induction motor was not the same as the rotational direction of the current and if the rotational direction of the current was inverted with the configuration MOTOR_CURR_ROT_DIR = ncINVERSE.

ID#134315 : solved problem, solved since V2.201

The parameter MOTOR_BRAKE_CURR_RATED was falsely set to the value 1 during the boot procedure of the ACOPOS operating system.

NC Software − ACP10 V2.200

ID#227145 : new function since V2.200

Multi Axes Trace: Trigger data point without test data point

Now the configuration of a trigger data point for an axis is possible, even if for this axis of test data point is defined.

So far in this case the following error was indicated:
− 2004: Trace start not allowed: No trace test data defined

ID#230192 : solved problem, solved since V2.200

8BAC120.001: EnDat 2.2: Increased dead time while determining position (only in V2.170 − V2.19x)

In V2.170 − V2.19x ,150µs too much dead time were falsely used for determining the position. Due to this problem one of the following error numbers could be registered: 6054, 9030, 9300, 41031.

ID#400043093 : solved problem, solved since V2.200

Multi Axes Trace: Misalignment of the recorded trace data

Now the trace is started synchronously on all configured axes. Thus a misalignment for the trace recording of the different axes is avoided.

So far a misalignment for the recorded trace data could arise, if the network cycle time and the sampling time were greater than 400µs.

NC Software − ACP10 V2.191

ID#230417 : solved problem, solved since V2.191

Movement start after movement stop (only in V2.130 − V2.190)

If NC actions were called in a higher task class than defined in the NC configuration as "Task class for NC manager task", then the problem described below could arise.

If the NC action for movement stop was called in the same task class cycle after the NC action for the movement start, then first the movement stop parameters were transferred to the drive and afterwards all movement start parameters.

This was not correct, because the NC control for the movement stop was called after the NC action for the movement start. Now in this case the movement start parameters are not transferred to the drive after processing of the movement stop.

NC Software − ACP10 V2.190

ID#226562 : new function since V2.190

Setup phasing for automatically determing the commutation offset

New NC structure component "setup.motor_phasing".
New NC actions "ncSETUP+ncMOTOR_PHASING,ncSTART" und "ncSETUP+ncMOTOR_PHASING,ncSAVE".

ID#226505 : new function since V2.190

Motor holding brake: Movement monitoring with engaged holding brake

Initial activation of movement monitoring no longer occurs after the first time the holding brake is engaged, but rather after the holding brake is configured, when the encoder is ready. The error 6048 is registered if a movement takes place in this state.

ID#226400 : new function since V2.190

Motor holding brake: if an external voltage over 24V is applied during closed condition, error 6063 is reported from now on.

The voltage monitoring at closed holding brake can be deactivated by setting BRAKE_MODE Bit6 = 1.

ID#400039030 : new function since V2.190

8B0P: Passiv power supply: The error 7215 will be reported if at least one phase of the power line fails.

ID#400037391 : new function since V2.190

Positon jump detection for BAC120, AC120, BAC123 and BAC124

ID#400042277 : solved problem, solved since V2.190

Encoder Interfaces 8AC120.60−1, incremental encoder: The absolut positon is set to 0 after writing PARID_SCALE_ENCOD_INCR (V2.160 − V2.180)

ID#227167 : solved problem, solved since V2.190

Conversion from REAL into text now with 8 significant digits

Until now, REAL numbers were converted into a text with 6 significant digits. If REAL parameters were read from the ACOPOS into a data text and afterwards were transferred again from the data text to the ACOPOS, so far therefore the value could change.

The following NC actions were affected by this problem:
− ncSERVICE, ncREAD+ncDATA_TEXT
− ncSERVICE+ncACP_PAR, ncUPLOAD
− ncSETUP+ncMOTOR_INDUCTION, ncSAVE

ID#400041362 : solved problem, solved since V2.190

SGC target system: With AR versions V2.30 or higher global PVs could not be used as NC object

With ACP10 software versions V2.190 or higher it is possible, to use global PVs as NC object with AR versions V2.30 or higher.

For this AR system libraries had to be linked, which are not compatible with AR versions before V2.30. Therefore ACP10 software versions V2.190 or higher cannot be used with AR versions before V2.30.

If an ACP10 software version V2.190 or higher is used with AR versions before V2.30, then "ACP10MAN: SGC AR < V2.30" will be entered in the AR logger and the initialization of ACP10 software will be aborted.

ID#400040037 : solved problem, solved since V2.190

An active movement stop could be interrupted by CMD_MOVE_STOP_A2.

NC Software − ACP10 V2.180

ID#222865 : solved problem, solved since V2.180

Encoder − Emulation 8BAC0130.00x−1: The outputs of the Encoder − Emulation weren't deactivated after a network error

The outputs of the Encoder − Emulation are deactivated after a network error. This can be parameterized with PARID_ENCOD_ERROR_MODE = 1, so that the outputs stay active.

ID#400036166 : solved problem, solved since V2.180

ACOPOS, POWERLINK with AC114: Reduced send time for cyclic data from the drive

The cyclic send data from the ACOPOS was mistakenly sent with a delay of one POWERLINK cycle.
The data is now available one cycle earlier, which corresponds to the delay on the AC112.

NC Software − ACP10 V2.172

ID#400036879 : solved problem, solved since V2.172

8B0P: Error 9002

The error 9002 was mistakenly reported if the heat sink temperature on the following modules was below 14°C.
− 8B0P0440Hx00.00x−1 Rev.: C0 and
− 8B0P0220Hx00.00x−1 Rev.: E0

ID#400037963 : solved problem, solved since V2.172

NC object "ncMULTI_AX_TRACE": The data object ident was not returned after saving the trace data

After completion of the NC action "ncTRACE,ncUPLOAD+ncSAVE" with data oject type "ncDATOBJ_BRMOD" the determined data object ident was not stored into the component "status.ident".

ID#400037378 : solved problem, solved since V2.172

Homing: Error 5017 was mistakenly reported.

When performing the homing procedure right after switching on the controller, the following error was sometimes reported even though the controller status was already set to ON. "Homing procedure mode not possible: Position controller inactive." The error only occurred with the homing methods ncSWITCH_GATE, ncABS_SWITCH and ncEND_SWITCH.

ID#400036766 : solved problem, solved since V2.172

EnDat2.2 BAC0120.001−x: ENCOD_DIAG_ID could not be set during controller active.

NC Software − ACP10 V2.171

ID#221257 : solved problem, solved since V2.171

After a network failure after a multi axes trace the communication sometimes could not be re−established (only in V2.170)

If a cyclic network communication failure occurred after a multi axes trace for an ACOPOS which was contained in the multi axes trace configuration, then the cyclic network communication to this ACOPOS sometimes could not be re−established.

ID#400036203 : solved problem, solved since V2.171

ACOPOS 8V and ACOPOSmulti 8B0P: External bleeder: The warning 38008 was wrongly registered (only in V2.170)

When switching on the controller sometimes the following warning was wrongly registered: "38008: Bleeder: No current flow"

ID#220377 : solved problem, solved since V2.171

Setup for controller: The Controller mode was not stored into the NC structure

After completion of the NC action "ncSETUP+ncCONTROLLER,ncSTART" the determined controller mode was not stored into the component "controller.mode".

ID#400034794 : solved problem, solved since V2.171

Cam profile automat: Incorrect parameters in one state after online change and direct start.

In certain cases, the new parameters were rejected after a consistent online change was made to parameters with AUT_ONL_PAR_LOCK and a subsequent direct start in one state.

NC Software − ACP10 V2.170

ID#218427 : new function since V2.170

Current controller: Change to automatic configuration of current controller (ICTRL_KV and ICTRL_TN)

The current controller gain is increased. The changed automatic configuration can cause the current controller to become unstable under the following conditions:
− If the configured electrical time constant MOTOR_STATOR_INDUCTANCE/MOTOR_STATOR_RESISTANCE is greater than the real

electrical time constant.
− If the motor inductance MOTOR_STATOR_INDUCTANCE is considerably reduced at high currents (saturation).
An indication of high saturation is if MOTOR_TORQ_MAX*MOTOR_CURR_STALL/(MOTOR_TORQ_STALL*MOTOR_CURR_MAX) < 0.8.

An unstable current controller could cause over−current or over−temperature in the components being supplied with current.
In this case, one of the following error or warning numbers would be registered: 9300, 6054, 41031, 41051, 41061, 41070, 41011, 9010, 9030, 9050, 9060, 9070

If the parameter ICTRL_AUTO_CONF is set to the value 1, then automatic configuration of the current controller is reset to the original values (the same as in previous versions).

ID#218242 : new function since V2.170

ACOPOS 8V and ACOPOSmulti 8B0P: External bleeder: Connection RB+ and RB−: Wire break test

While the controller is starting up, a test checks to see if the DC bus voltage drops when the braking resistor chopper is activated briefly. If the DC bus voltage drop during the test procedure was too low, then the following warning is registered: "38008: Bleeder: No current flow"
The warning can be deactivated by setting Bit6 in MOTOR_TEST_MODE.

ID#400032009 : new function since V2.170

8BVP and 8B0P: CR_OK status stored on parameter STAT_LOAD_RELAY

Bit 2 is set in the parameter STAT_LOAD_RELAY when the power supply module's CR_OK output signal is switched on.

ID#216662 : new function since V2.170

POWERLINK (and SDC), new NC actions for ACOPOS coupling

For the network types POWERLINK and SDC the following NC actions are offered for ACOPOS coupling:
− ncNETWORK+ncSERVICE, ncACP_PAR_SEND: Send ACOPOS Parameter data on the network
− ncNETWORK+ncSERVICE, ncACP_PAR_RECEIVE: Receive ACOPOS Parameter data from the network

ID#400033737 : solved problem, solved since V2.170

Encoder interface 8AC123.60−1: Error when using an SSI encoder (only in V2.150 − V2.161)

The error 7051 "Acceleration too high (disturbance)" was falsely registered if there was an overflow of an SSI encoder's absolute position.

ID#218447 : solved problem, solved since V2.170

After a network failure during a multi axes trace the communication could not be re−established

If a cyclic network communication failure occurred during a multi axes trace for an ACOPOS which was contained in the multi axes trace configuration, then the cyclic network communication to this ACOPOS could not be re−established.

ID#218442 : solved problem, solved since V2.170

ACOPOSmulti: High CPU−load TimerInterrupt

The following error could be mistakenly reported: "6061: CTRL Speed controller: Limit speed exceeded"

ID#218272 : solved problem, solved since V2.170

The startup function for all ACOPOS modules was sometimes aborted with error 32020

If a parameter read or write error occurred for one ACOPOS during the basic network initialization (startup function for all ACOPOS modules), after the parameter BOOT_STATE was read from the ACOPOS and before the function for operating system download was started, then the startup function was falsely aborted for all ACOPOS modules with the following errors:
− 32196: Error downloading operating system to ACOPOS
− 32020: System module data could not be read from the drive during NC manager INIT

Now the startup function is only aborted for that ACOPOS, for which the error occurred.

ID#218220 : solved problem, solved since V2.170

8BAC0132.000−1: input values not limited to valid values

The wanted limit couldn't be read from PARID_INx at voltages over +10V or under −10V.

ID#400028497 : solved problem, solved since V2.170

ACOPOS with AC114, POWERLINK V2: The network coupling to the axis 2 of an ACOPOSmulti was rejected with error 1013.

ID#400033241 : solved problem, solved since V2.170

Warning 39002: "Resolver: Speed limit for 14 bit resolution exceeded" after writing parameter ID ENCOD_POLEPAIRS

In version V2.160 or higher, the warning 39002: "Resolver: Speed limit for 14−bit resolution exceeded" could be triggered after writing the parameter ID ENCOD_POLEPAIRS.

ID#400032082 : solved problem, solved since V2.170

ACOPOS with 8AC114.60−2 POWERLINK coupling

Incorrect values were copied if the connection was made using CYCLIC_DP_DATA_OFFSET on a POWERLINK frame with an uneven amount of Payload data.

ID#400029963 : solved problem, solved since V2.170

ACOPOSmulti POWERLINK coupling

An POWERLINK error could have the result that a package was received to late. This remaining offset could cause jumps in the set values, particularly when linking networking data.

NC Software − ACP10SDC Wichtige Information

ID#217737 : Important Information

ACP10SDC is only supported with Automation Studio starting with V3.0.80.

NC Software − ACP10SDC V2.320

ID#278600 : solved problem, solved since V2.320

ACP10SDC digital inputs and encoder positions: Increased dead time.

The status of the digital inputs and the positions of the encoder were only available for certain functions one task class cycle later. Effects: Increased dead time in response to reference switches, hardware limit switches, trigger inputs and when there were links to actual positions of encoder1 or encoder2.

NC Software − ACP10SDC V2.310

ID# 400039638, 400068208 : solved problem, solved since V2.310

ACP10SDC simulation mode: Lag error for purely simulated axes.

Excessive set speeds caused jumps to occur in the actual speed of purely simulated SDC axes and movement was consequently stopped due to violation of the lag error limit.
The simulation is now reduced to a minimum "short circuit simulation", with the following effects:
− Lag error stays at zero.
− Movement stop caused by lag error no longer possible.
− Incremental position ENCOD_POS_ACT stays at zero.
− PCTRL_S_SET corresponds with SGEN_S_SET. This means that prediction time and total time have no effect (POS_CTRL_T_PREDICT, POS_CTRL_T_TOTAL).
− Reduced CPU load.

NC Software − ACP10SDC V2.220

ID#400048362 : solved problem, solved since V2.220

ACP10SDC Cam profile automat: Missing trigger event with force function

A digital trigger input, which was set with the force function (CMD_DIG_IN_FORCE), did not work as an event for the cam profile automat

NC Software − ACP10SDC V2.200

ID# 400043620, 400043760, 400044195, 400044403, 400047529 : solved problem, solved since V2.200

ACP10SDC with stepper motor modules: Error 31247 (Drive Interface: DrvOK not set from HW Module) was reported to early.

ID# 400019163, 400040068 : solved problem, solved since V2.200

ACP10SDC Status Enable:

The drive interface of an ACP10SDC axis was expanded by the data point 'iStatusEnable'. The state of the data point is used only to update the status of the cyclic bit enable. There is no further functionality behind the state of the data point.

NC Software − ACP10SDC V2.171

ID#220362 : solved problem, solved since V2.171

ACP10SDC Function block PID: Depending on the task class cycle time a wrong transfer function was calculated.

ID#220357 : solved problem, solved since V2.171

ACP10SDC Function block DELAY: Depending on the task class cycle time a wrong delay time was calculated.

ID#400034717 : solved problem, solved since V2.171

ACP10SDC Extrapolation filter for actual position of encoder1 and encoder2 did not work.

A configured ENCODx_S_FILTER_TE caused a position jump on ENCODx_S_ACT_FILTER.

ID# 400035087, 400036603 : solved problem, solved since V2.171

ACP10SDC with ARNC0 and stepper motor: Operation only with standstill current caused by incorrect current selection.

NC Software − ACP10SDC V2.170

ID#400034357 : solved problem, solved since V2.170

ACP10SDC with ARsim (AR000): Error 32006 or 32007

If in a ARsim (AR000) project the function ncaction() was called in that task class, which was defined as "Task class for NC Manager Task" in the NC configuration, then one of the following errors could occur in rare cases:
− 32206: Cyclic channel: Read Request in spite of Wait for Response
− 32207: Cyclic channel: Write Request in spite of Wait for Response

With older versions of the ACP10 software this problem can be avoided by configuring the application task with the ncaction() call into another task class as "Task class for NC Manager Task".

NC Software − ACP10_MC V2.421

ID#400122154 : solved problem, solved since V2.421

MC_BR_JogLimitPosition, MC_BR_JogTargetPosition: Movement not always ended on "Enable"=FALSE (only in V2.400 − V2.420)

If the "Enable" input was set to FALSE shortly after changing the motion parameters or setting the "JogToTarget" input, it was possible that the movement was not stopped and instead continued moving until the end.

The following function blocks were affected by this problem:
− MC_BR_JogLimitPosition
− MC_BR_JogTargetPosition

ID#400121655 : solved problem, solved since V2.421

MC_Power: Simultaneous MC_Stop call, controller not switched off (only in V2.340 − V2.420)

The axis controller could not be switched off under the following conditions:
− MC_Power.Enable = FALSE and MC_Stop.Execute = TRUE are set in the same task class cycle
− MC_Power is called before MC_Stop

ID#400121044 : solved problem, solved since V2.421

MC_BR_DownloadCamProfileObj, MC_BR_DownloadCamProfileData: Service mode after function block call with invalid axis reference

If the FB MC_BR_DownloadCamProfileObj and MC_BR_DownloadCamProfileData function blocks were called with an axis reference containing invalid internal data, then the controller was restarted in service mode. Now, they report error 29489: "Invalid internal data in axis structure".

ID#400121787 : solved problem, solved since V2.421

MC_BR_TorqueControl: "CommandAborted" not set in every case

If MC_BR_TorqueControl was aborted by MC_Stop while transferring parameters (between "StartSignal" and "Active" or "InitData" and "DataInitialized"), the function block did not set the "CommandAborted" output and the function block could no longer be operated. It was only possible to correct this situation by restarting the controller.

ID#400120980 : solved problem, solved since V2.421

MC_Home with mcHOME_RESTORE_POS: Incorrect restoration of position (only in V2.380 − V2.420)

The position was not correctly restored when using MC_Home with mcHOME_RESTORE_POS mode under the following conditions:

− A resolver is being used as a motor encoder.
− Resolution is set to 2^12 (4096) or 2^14 (16384) increments.

ID#400120047 : solved problem, solved since V2.421

MC_Halt: Movement not always ended (only in V2.390 − V2.420)

If MC_Halt was enabled directly after starting a movement, it was possible that the function block correctly set the "Done" output, but the movement was not ended.

NC Software − ACP10_MC V2.420

ID#356245 : solved problem, solved since V2.420

MC_Home with mcHOME_RESTORE_POS: Position sometimes restored incorrectly on SG3 and SGC (only in V2.380 − V2.41x)

Restoring the position of a real axis using MC_Home together with the mcHOME_RESTORE_POS mode could lead to a wrong result on SG3 and SGC.

ID#400120841 : solved problem, solved since V2.420

MC_BR_GearIn: ACOPOS error 5102 at master movement in negative direction

A master movement in negative direction could lead to the ACOPOS error "5102: Too many changes of cam profile per cycle (master period too short)".

ID#351820 : solved problem, solved since V2.420

MC_Home with mcHOME_RESTORE_POS: Position sometimes restored incorrectly

Under the following conditions, the position may not be restored correctly when using MC_Home together with the mcHOME_RESTORE_POS mode:

− No axis period is defined.
− The product of multiplying the configured units per revolution with the number of multi−turn revolutions (distinguishable revolutions) of the encoder is greater than the maximum value of the DINT data type (2147483647).
− The encoder overflow falls within the permitted movement range of the axis (software limits).

ID#400114926 : solved problem, solved since V2.420

MC_BR_MoveCyclicXxxx: Other function blocks affected by recognition of changed parameters

Due to an error in changed parameter recognition, the function blocks listed below may have affected other function blocks that also used parameter change recognition if the latter were enabled before MC_BR_MoveCyclicXxxx and after MC_BR_MoveCyclicXxxx.

Example of a sequence of function bocks that would trigger this error:
1. MC_MoveAbsolute
2. MC_BR_MoveCyclicPosition (motion parameters greater than limit values)
3. MC_BR_MoveCyclicPosition (motion parameters unchanged)
4. MC_MoveAbsolute (motion parameters identical to 1.)

The sequence above would report axis error 5027: "Basis motion parameters (with override) exceed acceleration limits".

The following FBs were affected by this problem:
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity
− MC_BR_MoveCyclicPositionExt
− MC_BR_MoveCyclicVelocityExt

ID#400116752 : solved problem, solved since V2.420

Input values were applied wrongly

The following input values could be applied differing by 1 unit, if they were negative (e.g. −54 instead of −55):
− MC_CamIn: SlaveScaling
− MC_BR_TouchProbe: PeriodChange

ID#349210 : solved problem, solved since V2.420

MC_Home: Periodic axis position sometimes calculated incorrectly

The periodic axis position was incorrect after calibration with MC_Home under the following conditions:
− An axis period must be defined.
− MC_BR_InitEndlessPosition must have been called.
− A negative value must be specified at the "Position" input of the MC_Home function block if the axis is calibrated with a "HomingMode" other than mcHOME_RESTORE_POS.

Example:
− Axis period = 3600
− MC_BR_InitEndlessPosition was called.
− MC_Home.HomingMode = mcHOME_DIRECT
− MC_Home.Position = −100

MC_ReadActualPosition.Position was equal to 1596 in this case instead of (correctly) 3500.

ID#345310 : solved problem, solved since V2.420

Error message and abort of actual value coupling after encoder error

In order for drives to be able to use an actual position from another drive as the master position (e.g. for axis coupling), it must be transferred over the network cyclically via a transmission channel. If an error occurs on an encoder whose position is being transferred via a transmission channel, then this situation will be indicated by an error message from the transmitting drive. In order for the coupling to continue working after the error had been corrected, a restart of the controller used to be necessary.

From now on, each function block of a receiving axis reports error 29315: "Cyclic position transfer aborted due to axis error" if it is responsible for the use of the actual position of a different axis and an encoder error occurs. At the same time, the coupling the function block is using is detached and can be restarted by re−enabling the function block.

The following coupling function blocks were affected by this problem:
− MC_BR_AutControl
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_BR_CamTransition
− MC_BR_CrossCutterControl
− MC_BR_GearIn
− MC_CamIn
− MC_GearIn
− MC_GearInPos

This functionality is also no longer being used for the following function blocks:
− MC_DigitalCamSwitch
− MC_BR_DigitalCamSwitch

ID#400095654 : solved problem, solved since V2.420

MC_Home with mcHOME_RESTORE_POS: Position sometimes restored incorrectly

The MC_Home function block together with the mcHOME_RESTORE_POS mode restored the position incorrectly if a previous attempt to restore the position was aborted due to an axis error or the controller was turned off.

ID#400117870 : new function since V2.420

New function block: MC_BR_ConfigPowerStageCheck

When the controller is turned on, the ACOPOS modules perform several checks of the connected motor or braking resistor by default. This function block allows these checks to be individually enabled or disabled.

NC Software − ACP10_MC V2.411

ID#400119551 : solved problem, solved since V2.411

MC_BR_ReadCyclicPosition: Restart after encoder error was not possible at SDC axis

If an encoder error occurs when reading the actual position of an encoder of a SDC axis using MC_BR_ReadCyclicPosition, then the position output of the function block remains set to the last valid value. Resetting the "Enable" input did not correct the problem.
Now when this occurs, error "29315: Cyclic position transfer aborted due to axis error" is reported. Once the source of the problem was corrected and the "Enable" input was reset, the current position values are again output on the position output.

NC Software − ACP10_MC V2.410

ID#400117060 : solved problem, solved since V2.410

MC_Home with mcHOME_RESTORE_POS: Position could be restored incorrectly

If for periodic axes the product resulting from multiplying the configured units per revolution with the number of multi−turn revolutions (distinguishable revolutions) of the encoder is larger than 4294967294, then the position was not restored correctly when using MC_Home with mode mcHOME_RESTORE_POS.

Example:
− encoder_if.parameter.scaling.load.units = 3600000
− encoder_if.parameter.scaling.load.rev_motor = 3
− Number of multi−turn revolutions of the encoder = 4096

(3600000 / 3) * 4096 > 4294967294

ID#346195 : solved problem, solved since V2.410

MC_BR_BrakeControl: Incorrect axis state after brake test error

If an error occurred during a brake test that results in the Errorstop axis state, MC_BR_BrakeControl would incorrectly change the axis state from Errorstop to Standstill.

ID#345345 : solved problem, solved since V2.410

MC_BR_CamTransition: Axis error 5102 may have occurred

The MC_BR_CamTransition function block returned axis error 5102: "Too many cam profile changes per cycle (master period too short)" after the following sequence:
− MC_BR_CamTransition is enabled with the option "+mcLEAD_IN" on the "TransitionMode" input
− The function block is canceled by another function block or disabled by "Enable = FALSE"
− Another multi−axis function block is enabled (e.g. MC_GearIn) and subsequently ended or canceled
− MC_BR_CamTransition is enabled again with the option "+mcLEAD_IN" on the "TransitionMode" input

ID#400112321 : solved problem, solved since V2.410

MC_MoveVelocity: Error 29217 despite correct input values

Under the following circumstances, the MC_MoveVelocity function block incorrectly reports error 29217: "Invalid input parameter":
− The value at the "Velocity" input is less than the configured limit value in the direction being moved
− The values for the velocity in the basis movement parameters of the axis structure and on the drive are greater than the limit values configured on the drive

ID#400114232 : solved problem, solved since V2.410

MC_BR_CalcCamFromSections: Error in motion rule mc5TH_ORDER_POLYNOMIAL and motion task "constant speed to reverse" or "reverse to constant speed"

Under the following circumstances, the MC_BR_CalcCamFromSections function block unjustifiably reports error 29289: "Invalid boundary parameters":
− Section[x].Type = mc5TH_ORDER_POLYNOMIAL
− The values of the first and second derivatives of the boundary points of this section cause motion task "constant speed to reverse" or "reverse to constant speed".

ID#400111437 : solved problem, solved since V2.410

MC_BR_JogTargetPosition: In some circumstances, movement towards a "TargetPosition" occurred one period too late.

If at least one of the input parameters "Velocity", "Acceleration" or "Deceleration" was changed while an axis was already in the deceleration phase when moving to the target position, then movement to the target position occurred in the following period instead. This was also the case if the motion was possible in the current period with the modified input values.

ID#400110411 : solved problem, solved since V2.410

MC_Stop: Change in behavior when braking ramp too small

If MC_Stop was called during an active movement with deceleration so small that stopping cannot take place withing the software limits, then axis error "5032 or 5033: Acceleration too low − braking distance exceeds positive or negative SW limit" was reported and the motion continued. The axis state was set to "Stopping" until the end of the motion.
From now on in this situation, a braking ramp is calculated with which stopping can take place without exceeding the software limits and used to stop the axis. In addition, axis warning "36003 or 36004: Braking distance exceeds positive or negative SW limit − Deceleration parameter increased" is reported.

ID# 400110452, 400113376 : solved problem, solved since V2.410

MC_BR_ReadCyclicPosition: Restart after encoder error was not possible.

If an encoder error occurs when reading the actual position of an encoder using MC_BR_ReadCyclicPosition, then the position output of the function block remains set to the last valid value. Resetting the "Enable" input did not correct the problem.
Now when this occurs, error "29315: Cyclic position transfer aborted due to axis error" is reported. Once the source of the problem was corrected and the "Enable" input was reset, the current position values are again output on the position output.

ID#345925 : new function since V2.410

New function block: MC_BR_ResetAutPar

This function block makes it possible to reset the parameters of the Cam Profile Automat to their default values. It is possible to reset either all parameters and automat states at once or individually.

ID#345420 : new function since V2.410

MC_BR_NetTrace: New commands

mcSAVE_RING_STARTIDX:
The data records contained in the network command trace are saved by the fact, that the start index of the ring buffer ("index after overflow") is set with the current index value if the following conditions are valid:
− It was still no overflow in the network command trace ring buffer
− The "index after overflow" was not yet saved by calling this command

mcRESET_RING_STARTIDX:
The start index of the ring buffer ("index after overflow") is reset and can afterwards again be saved by calling the command "mcSAVE_RING_STARTIDX".

ID#345085 : new function since V2.410

MC_BR_SetupController: New values for "Configuration.SetupControllerPar.Mode"

mcSPEED+mcT_FILTER_2(+mcISQ_F1_NOTCH)
With "+mcT_FILTER" the frequency response of the speed filter is used as a weighting value. When using a LinMot encoder, for example, this may cause the calculated kv value to be too low. With "+mcT_FILTER_2" this weighting is not used.

mcSPEED+mcUSE_FILTER_PAR+mcUSE_TN
With this mode the determination of the controller parameters is accomplished with the preset values of the following controller parameters:
− speed.t_n
− speed.t_filter
− speed.isq_filter1
− speed.isq_filter2
− speed.isq_filter3

ID#342560 : new function since V2.410

MC_BR_Simulation: New commands

The following commands are now available for MC_BR_Simulation:

mcSIMULATION_ON:
Switch simulation mode on

mcSIMULATION_INIT:
Initialize parameters of the simulation mode by transferring the parameters from the axis structure to the drive

mcSIMULATION_INIT+mcSIMULATION_ON:
Initialize parameters of the simulation mode and switch the simulation mode on

mcSIMULATION_READ:
Read parameters of the simulation mode from the drive and write them into the axis structure

ID#342365 : new function since V2.410

Cam profiles can be transferred to index 15−20

Cam profiles can now be transferred to an index between 15 and 20 (previously 1−14) for use with the MC_BR_LimitLoadCam function block or a CURVE−SPT function block. These cam profiles are permitted to have a Y initial value other than "0" and cannot be used for position couplings (e.g. MC_CamIn, MC_BR_CamDwell, Cam Profile Automat, etc.).

Function blocks that can transfer cam profiles to index 15−20:
− MC_BR_DownloadCamProfileObj
− MC_BR_DownloadCamProfileData

ID#341665 : new function since V2.410

MC_BR_GetHardwareInfo: New "MissionTimeEndDate" element for drive's hardware information, data types changed

The "MissionTimeEndDate" element is now available at the "HardwareInfo.Drive" function block output. It displays the end date of the mission time as a value of data type UDINT in the following form:
0: Date not saved
YYYYMMDD: Eight−digit number for the date (e.g. "20330502" for "May 2, 2033")

In addition, the data types of the "Drive", "Card" and "Motor" elements of the function block output "HardwareInfo" of MC_HW_INFO_COMPONENT_REF have been changed to MC_HW_INFO_DRIVE_REF, MC_HW_INFO_CARD_REF and MC_HW_INFO_MOTOR_REF.

ID#341200 : new function since V2.410

MC_BR_CalcCamFromSections, MC_BR_CalcCamFromPoints: Can now calculate cam profiles with a starting point not equal to "0.0"

The FB listed above can now be used to calculate cam profiles whose first y−coordinate is a value other than "0.0".
It is still not possible to specify a cam profile index greater than 14 for a cam profile automat.
These cam profiles can be transferred to the drive with the following function blocks using an "Index" greater than 14 and then used for the ACOPOS "CURVE" function block:
− MC_BR_DownloadCamProfileObj
− MC_BR_DownloadCamProfileData

ID#339455 : new function since V2.410

MC_TorqueControl, MC_BR_TorqueControl, MC_BR_VelocityControl: Possible to use with ACP10SIM axes.

The MC_TorqueControl, MC_BR_TorqueControl and MC_BR_VelocityControl function blocks can now also be used with ACP10SIM axes. This allows torque and speed control to be effected with the MTLoadSim Library.

ID#339435 : new function since V2.410

New function block: MC_BR_LimitLoadCam

This function block can be used to limit motor shaft torque
The limitation is defined for the range of movement of the axis using a cam profile. The "Mode" input can be used to select whether only the torque generated by the controller action or the total torque (feed forward + controller action) should be limited.
The Y initial values of the cam profiles being used are permitted to be values other than 0 and – in this case – must be transferred to index 15−20 using MC_BR_DonwloadCamProfileObj or MC_BR_DownloadCamProfileData.

ID#338545 : new function since V2.410

MC_BR_BrakeControl: Expansions for the safe brake test

This function block now provides support for the safe brake test:
− New structure element "TestMode" in MC_BRAKE_TEST_REF: This element can be used to to determine the method how the brake test is carried out (0 = standard, 1 = safe brake test). This element must be set to "1", if the element which is described below, is also set.
− New structure element "EnableSBTRequestBySMC" in MC_BRAKE_MODE_REF: This element can be used to enable the automatic safe brake test, which can then be requested and monitored by the SafeMC function block SF_SafeMC_SBT_BR. Without this kind of enabling, the SafeMC function block cannot start the automatic safe brake test.

ID#400107610 : new function since V2.410

Now possible to read ParIDs while a setup function block is active

The drive was previously unable to read ParIDs while a setup function block was active; this is now possible. It is still not possible to write ParIDs.

Function blocks that can read ParIDs while a setup FB is active:
− MC_BR_ReadParID
− MC_BR_ReadParIDText

NC Software − ACP10_MC V2.400

ID#400113271 : solved problem, solved since V2.400

Cyclic read data via CAN interface not working (only in V2.380 − V2.39x)

No cyclic read data could be configured for axes on a CAN interface.
Function blocks that require cyclic read data to operate returned error "29242: Cyclic read data full" when activated.

ID#336075 : solved problem, solved since V2.400

MC_BR_AutCommand: "CommandAborted" was not set in some circumstances.

If the MC_BR_AutCommand was aborted by another motion function block, re−enabling the function block may have set the "CommandAborted" output incorrectly.
Instead, the "Active" and "Busy" outputs remained set.

ID#400111302 : solved problem, solved since V2.400

MC_BR_AutCommand: "CommandAborted" was sometimes set incorrectly

If the MC_BR_AutCommand was aborted by another motion function block and the "Enable" input is set to FALSE at the same time, re−enabling the function block incorrectly sets the "CommandAborted" output.
The function block now executes as intended.

ID#328775 : solved problem, solved since V2.400

MC_MoveAdditive: Movement possible to an incorrect position

Under the following circumstances, it was possible that the axis incorrectly changed the direction of movement:
− A periodic axis was being used.
− MC_MoveAbsolute was active and the target position was in the previous or next period.
− MC_MoveAdditive was started.

Example:
− Period = 1000
− Current axis position = 800, MC_MoveAbsolute.Direction = mcPOSITIVE_DIR, MC_MoveAbsolute.Position = 200.
− During the absolute movement, MC_MoveAdditive is called with "Distance" = 400.
− The axis moved to position 600 in the current period, i.e. it reversed the direction of movement.

Now this movement ends at position 600 in the next period.

ID#400100820 : solved problem, solved since V2.400

Axis state immediately changed from Errorstop to Standstill

The axis state was changed immediately from Errorstop to Standstill after canceling a movement under the following circumstances:
− Due to a drive error, an active movement was stopped, but the drive controller remained turned on.
− An NC Test window was open for the axis.

In this case (an open NC Test window), the axis state only changes from Errorstop to Standstill if one of the following conditions is met:
− MC_Reset is enabled in a program for this axis.
− A command was executed in the NC Test window that results in a different axis state.

ID#400091307 : solved problem, solved since V2.400

MC_ReadActualPosition possibly output imprecise positions (only in V2.290 − V2.39x)

If the PLCopen factor was set to a large value, MC_ReadActualPosition sometimes output imprecise positions.
Example:
PLCopen factor=1000
monitor.s = 9
MC_ReadActualPosition = 0.009000001

ID#337805 : new function since V2.400

New function block: MC_BR_LimitLoad

This function block can be used to limit motor shaft torque.
Inputs are included for specifying the torque limit values [Nm] for all four torque quadrants to which the limits apply. The torque limits can be specified via ParIDs as well. The "Mode" input allows for choosing whether only the torque corrective action provided by the controller or the overall torque (feed forward + corrective action) should be limitted.

ID#333720 : new function since V2.400

MC_BR_SetupInductionMotor, MC_BR_SetupSynchronMotor: New optional parameters

The following optional parameters can be specified when using the MC_BR_SetupInductionMotor and MC_BR_SetupController function blocks:
− "Phase"... Motor phase (1,2,3)
− "InvCharacteristicGain"... Gain factor of the inverter curve
− "InvCharacteristicExponent"... Exponent of the inverter curve [1/A]

ID#333215 : new function since V2.400

MC_BR_SetupController: New parameter "PropAmplificationPercent"

The Autotuning function first determines the basic values for the kv parameters of speed and position controller. The percentage defined by "PropAmplificationPercent" (50..150%) is then multiplied to these values in order to calculate the final controller parameters.

"PropAmplificationPercent=0" corresponds to 100%.

A value less than 100% increases the robustness of the controller with regard to parameter variations on the machine.

ID#332630 : new function since V2.400

Determining the maximum possible torque of an axis

The maximum possible torque of an axis [Nm] can be determined by reading the new 1015 PLCopen parameter.

ID#332160 : new function since V2.400

New function block: MC_LimitLoad

This function block can be used to limit motor shaft torque
Inputs are included for specifying the torque limit value [Nm] as well as the direction of movement to which the limit applies.

NC Software − ACP10_MC V2.391

ID#335605 : solved problem, solved since V2.391

MC_BR_MoveCyclicPositionExt: Axis error 1002 after ending a movement (only in V2.390)

Axis error "1002: Parameter outside the valid range" occurred under the following conditions:
− The MC_SetOverride FB was not enabled for the axis
− The MC_BR_MoveCyclicPositionExt function block was enabled with "AdvancedParameters.CoordinatedMovement = TRUE"
− The movement started by MC_BR_MoveCyclicPositionExt was aborted or ended.

This problem could occur for example, when processing of a CNC program was finished.

NC Software − ACP10_MC V2.390

ID#400106264 : solved problem, solved since V2.390

MC_Reset: Axis state could mistakenly be changed to Stopping

The axis state was changed by MC_Reset from Disabled to Stopping under the following circumstances:
− An active movement was ended by switching off the controller ("MC_Power.Enable = FALSE").
− While ending the movement, an axis error occurred and the axis state changed to Errorstop.
− MC_Reset was called, and the axis state was changed from Errorstop to Disabled.
− MC_Reset was enabled one more time, or a second instance of the function block was enabled.

ID#330695 : new function since V2.390

MC_BR_BrakeControl: New parameter "TestDuration"

The new "Configuration.BrakeTest.TestDuration" structure element can be used to specify how long the "TestTorque" should be applied to the holding brake during the holding brake test.

ID#329465 : new function since V2.390

MC_BR_MoveCyclicPositionExt: New advanced parameter "CoordinatedMovement"

The MC_BR_MoveCyclicPositionExt function block now has a new advanced parameter called "CoordinatedMovement". If this parameter is set to 1 (TRUE), then the axis state is changed to Synchronized Motion instead of Continuous Motion when the function block is active. This parameter is used by the ARNC0 to switch the axis to the state required by the PLCopen standard during coordinated axis movements.

ID#328570 : new function since V2.390

ACP10SDC and ACP10SIM axes: Increased size and number of cyclic read and write parameters

Until now, ACP10SDC and ACP10SIM axes had the following data sizes for cyclic read and write parameters (same as POWERLINK axes):
Cyclic write data: 6 ParIDs, max. 18 bytes
Cyclic read data: 6 ParIDs, max. 18 bytes, max. 8 telegrams

From now on, the ACP10SDC and ACP10SIM axes have the following cyclic data sizes:
Cyclic write data: 10 ParIDs, max. 28 bytes
Cyclid read data: 12 ParIDs, max. 38 bytes, max. 8 telegrams

The MC_RECORD_REF data structure used with the "RecordInfo" output of the MC_BR_CyclicReadDataInfo function block has been extended accordingly.

When reconfiguring applications that have been developed or tested with ACP10SIM axes to POWERLINK, it is important to note that there is less cyclic read and write data available. This could have the following effects:
− Update rates for cyclic data worsen since more data telegrams are being used.
− The following errors may be reported:
− 29264: Cyclic write data full
− 29242: Cyclic read data full

ID#327455 : new function since V2.390

MC_Halt: FB call now also possible in Standstill

Starting MC_Halt while an axis was in Standstill used to cause error "29207: This movement type is currently not allowed".
"Done" is now reported immediately. Neither parameters nor commands are transferred.

ID#303570 : new function since V2.390

MC_BR_HomeAcpEncoder: Referencing external encoders now possible with all drive systems

Until now, this function block could only be used for external encoders that were read and processed using interface cards in slot 3 or 4 of an ACOPOS device.
It is now possible to use the function block for external encoders that are read and processed by other drive systems, ACP10SDC or ACP10SIM axes.
The following is a list of configuration options for the "HomingParameters.Slot" function block input that are now valid for the various ACOPOS series and axis types:
− ACOPOS: 2, 3, 4
− ACOPOSmulti, ACOPOSmicro, ACOPOSmotor, ACOPOSremote: 1
− ACP10SIM axes: 1, 2, 3, 4
− ACP10SDC axes: 2

NC Software − ACP10_MC V2.381

ID#400110257 : solved problem, solved since V2.381

MC_Home: Usage could lead to a restart of the target in service mode (only in V2.380)

The use of MC_Home with the mode mcHOME_RESTORE_POS for an axis with active motor simulation led to a restart of the target in service mode.

ID#400104302 : solved problem, solved since V2.381

MC_BR_MoveCyclicXxxx: Axis state mistakenly changed from Errorstop to Standstill

In the following circumstances, the function blocks listed below mistakenly changed the axis state from Errorstop to Standstill:
− The "Enable" input was reset in the same cycle that an event on the drive changed the axis state to Errorstop.
− The axis state switched to Errostop while a movement was being stopped after the "Enable" input was reset.

The following function blocks were affected by this problem:
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity
− MC_BR_MoveCyclicPositionExt
− MC_BR_MoveCyclicVelocityExt

ID#400085108 : solved problem, solved since V2.381

Gear function blocks could mistakenly cause axis error 5102

Gear function blocks could cause the following axis errors:
−5102: To many curve changes per cycle (master period too short)

Conditions that led to this error:
− The slave axis was an SDC axis or ACP10SIM axis.
− The cycle time of the NC Manager task class was greater than 2 ms.
− Small values were used for the gear factors.

The following function blocks were affected by this problem:
− MC_GearIn
− MC_BR_GearIn
− MC_GearInPos

ID#400103858 : new function since V2.381

MC_TorqueControl, MC_BR_TorqueControl: Error corrections

The following errors have been corrected for both function blocks:
− If the value at the "Torque" input is changed with a rising edge at the "InitData" or "Execute" input respectively, the "InTorque" output is now set to "0" for several cycles before the status is taken again from the cyclic data.
− The functionality of the function blocks could only be re−enabled after a failure of the ACOPOS device's 24 V power supply with a workaround (changing values).

The following errors were additionally corrected for MC_BR_TorqueControl:
− If the speed limits at the "XxxMaxVelocity" inputs were set to the same value, error "29217: Invalid input parameter" is now output.
− The decimal places of the "Torque" input for the calculated speed limits were not taken into consideration when using "+mcV_LIMIT_CALC" mode until now.
− If the mode is changed to "+mcV_LIMIT_CALC" during operation, the correct error "29275: At least one input value was changed while "Enable = TRUE" ".

NC Software − ACP10_MC V2.380

ID#326370 : solved problem, solved since V2.380

MC_ReadAxisError, MC_BR_ReadAxisError: Error 29294

If an error text for an error number has been determined using one of the FBs listed above, then the following error could be registered if the errors of the respective axis have been acknowledged while determining the error text.
− 29294: Not able to determine error text. See error text string for details
− Error text string: Message number 0 not found

This problem could occur if MC_Reset was activated by a positive edge on the "Execute" input while error text was being actively determined for the respective axis.

ID#400100406 : solved problem, solved since V2.380

Function block not executed if axis not initialized

Some function blocks do not work if the "Execute" input was both set and reset before the specified axis is finished initializing.
In this case, the "Busy" output with the falling edge of the "Execute" input is immediately reset again and no further action is set by the function block.

The following function blocks are affected by this problem:
− MC_BR_BrakeControl
− MC_BR_CheckAutCompensation
− MC_BR_GetHardwareInfo
− MC_BR_GetParIDTransferInfo
− MC_BR_InitModPos
− MC_BR_InitReceiveNetworkData
− MC_BR_InitReceiveParID
− MC_BR_InitSendParID
− MC_BR_SetupController
− MC_BR_SetupInductionMotor
− MC_BR_SetupIsqRipple
− MC_BR_SetupMotorPhasing
− MC_BR_SetupSynchronMotor
− MC_Home
− MC_TorqueControl
− MC_WriteBoolParameter

ID#318810 : solved problem, solved since V2.380

MC_BR_AutCommand, MC_BR_CrossCutterControl: Value of a phase or offset shift is not reset in some circumstances

If performing the following sequence, then a phase or offset shift was not reset on the drive like it should have been:
− One of the coupling function blocks listed above and a phase or offset shift function block (e.g. MC_Phasing, MC_BR_Phasing, MC_BR_Offset, MC_BR_OffsetZone, MC_BR_OffsetVelocity) are active.
− The phase or offset shift function block is disabled while the coupling function block is still active.
− The coupling function block is disabled.
− The coupling function block is re−enabled.
− The phase or offset shift function block being used before is re−enabled.

ID#400101442 : solved problem, solved since V2.380

MC_Home with mcHOME_RESTORE_POS: Position could be restored incorrectly

If the product resulting from multiplying the configured units per revolution with the number of multi−turn revolutions (distinguishable revolutions) of the encoder is larger than the maximum value of the DINT data type (2147483647), then the position was not restored correctly when using MC_Home with mode mcHOME_RESTORE_POS.

Example:
− encoder_if.parameter.scaling.load.units = 360000
− encoder_if.parameter.scaling.load.rev_motor = 5
− Number of multi−turn revolutions of the encoder = 65536

(360000 / 5) * 65536 > 2147483647

ID#400099649 : solved problem, solved since V2.380

MC_BR_JogVelocity, MC_BR_JogTargetPosition: Movement could have been aborted by trigger event

If a movement was started with MC_BR_JogVelocity or MC_BR_JogTargetPosition after a movement was carried out with one of the function blocks listed below, it was possible that the jog movement was ended by a trigger event and that this wasn't reported by MC_BR_JogXxx.

The following function blocks led to this behavior if they were active beforehand:
− MC_BR_MoveAbsoluteTriggStop
− MC_BR_MoveAdditiveTriggStop
− MC_BR_MoveVelocityTriggStop

ID#400097611 : solved problem, solved since V2.380

MC_BR_DigitalCamSwitch: Error "29208" occurred sometimes by mistake

If an axis reference was not specified at the "Output.Axis" input, error "29208: The axis object was changed since last FB call" is reported even though "0" is a valid value for this input.

ID# 400094900, 400091274 : solved problem, solved since V2.380

Error 29217 reported by mistake

The following function blocks may have incorrectly reported error "29217: Invalid input parameter" if they were enabled after an instance of MC_BR_MoveCyclicVelocity(Ext) or MC_BR_MoveCyclicPosition(Ext) was active whose values for the motion parameters were larger than the limit values of the axis:
− MC_GearOut
− MC_CamOut
− MC_MoveVelocity
− MC_BR_MoveVelocityTriggStop

ID#298705 : solved problem, solved since V2.380

Incorrect transmission channel used by MC_BR_InitReceiveParID in some circumstances

If the ParID sent from the master is specified for MC_BR_InitReceiveParID but the transmission channel remains set to 0 (function block determines the transmission channel), the function block always used transmission channel 1 of the master.

ID#298335 : solved problem, solved since V2.380

MC_BR_VelocityControl: Potential problem after abort by MC_Power

If the following conditions weren't met, the controller of an axis wasn't turned off:
− MC_BR_VelocityControl and MC_Power were called in a task class other than that of the NC Manager.
− MC_Power was called before MC_BR_VelocityControl.

ID#400085150 : solved problem, solved since V2.380

MC_AUTDATA_STATE_TYP: "MasterFactor" component now of data type DINT

The data type of the "MasterFactor" component in data structure MC_AUTDATA_STATE_TYP has been changed from UDINT to DINT. This prevents the inadvertent specification of a value that is too large (greater than 2^31−1).

ID#318510 : new function since V2.380

MC_BR_Phasing, MC_BR_Offset, MC_BR_OffsetZone: New "ShiftMode" mcRELATIVE_NO_RESET

If the new "ShiftMode" is active, then the offset is always interpreted as a relative value. In addition, the value of the offset on the drive is not reset to "0" if the slave axis leaves the state "Synchronized motion" when a phasing or offset function block is active.

ID#318290 : new function since V2.380

MC_BR_DigitalCamSwitch: New input element "Switches.MasterStartPosition"

The new input element "Switches.MasterStartPosition" can be used to specify the start position of the cam period relative to the zero point of the axis position.

ID#316940 : new function since V2.380

Reduction of cyclic POWERLINK frames now supported for all data points

Cyclic POWERLINK frames used to not be reduced for the data points listed below.

Cyclic data to the drive
If cyclic data to the drive is disabled or reduced to a length under four bytes, then the initialization of the affected axes is now aborted. These axes can then no longer be operated with PLCopen MC function blocks.

Cyclic data from the drive
If cyclic data from the drive is disabled, then the following error is reported by all function blocks that require this data to operate:
− 29242: Cyclic read data full

Monitoring data
If complete monitoring data is not present in the cyclic POWERLINK frame from the drive, then the initialization of the affected axes is now aborted. These axes can then no longer be operated with PLCopen MC function blocks.

ID#315545 : new function since V2.380

Cam profile automat: Start position as a DINT value

The master start position for the cam profile automat used to only be specified in REAL format, which led to problems with the precision of values greater than 2^23. Now it is also possible to specify it as a DINT value.
The "StartPositionDINT" component has been added to the MC_AUTDATA_TYP data type. In order for it to be enabled, the value 128 must be added to "MasterStartPosMode".

The following function blocks can use this new feature:
− MC_BR_AutControl
− MC_BR_InitAutData (operated with MC_BR_AutCommand)

ID#314340 : new function since V2.380

New function block: MC_BR_RegMarkCapture002

This function block can be used together with MC_BR_CrossCutterControl for registration mark control in crosscutter applications.
The following are some of the available features:
− Correction calculation with "Valid" as a trigger for e.g. MC_BR_CrossCutterControl
− Delay of correction calculation with internal FIFO
− Optional limiting of correction
− Mean value generation of measured product lengths
− Calculation of the cutting length
− Calculation of the current distance between two registration marks
− Calculation of the number of FIFO elements

ID#400099218 : new function since V2.380

New function block: MC_BR_CheckEndlessPosition

This function block indicates whether the data address of an "endless position" data structure for an axis has already been initialized, i.e. MC_BR_InitEndlessPosition has been called, and whether valid data exists in this structure to restore the axis position (using MC_Home and "HomingMode=mcHOME_RESTORE_POS").

NC Software − ACP10_MC V2.370

ID#400099300 : solved problem, solved since V2.370

MC_BR_MoveCyclicPositionExt: Wrong behaviour of the axis when the "AdditiveParID" was used

If a "AdditiveParID" was configured at the MC_BR_MoveCyclicPositionExt FB, it could happen, that the axis did not follow the specified set position value (= "CyclicPositon" + value of the "AdditiveParID").

ID#316160 : new function since V2.370

MC_BR_CrossCutterControl: Additional start mode

If the new additive mode mcCORRECT_CURRENT_CYCLE is added to the basic mode of "AdvancedParameters.StartMode", then a change to the master−side product length ("ProductLengthCorrection") is applied in the current product cycle.

NC Software − ACP10_MC V2.361

ID#400099217 : solved problem, solved since V2.361

MC_Home: Incorrect axis position after encoder parameters are changed

The homing mode mcHOME_RESTORE_POS used the encoder parameters that were initialized for the axis during the automatic global initialization performed by the ACP10_MC library.
Any changes made to these parameters by the application were ignored, and mcHOME_RESTORE_POS subsequently resulted in an incorrect axis position.
Now the encoder parameters are read every time MC_Home is called. This allows the application to modify the encoder parameters any time

prior to when MC_Home is called.
This applies to the encoder parameters for the axis structure that are initialized by MC_BR_InitAxisPar or MC_BR_InitAxisSubjectPar, as well as to encoder parameters that are initialized using ParIDs (ENCOD2, ENCOD3).

ID#400096426 : solved problem, solved since V2.361

MC_GearIn: Input values are sometimes not applied

After the following sequence, the values of the "RatioNumerator" and/or the "RatioDenominator" input were sometimes not applied.
− MC_GearIn is already active
− Another rising edge on the "Execute" input changes the gear ratio

Subsequently changing the gear ratio sometimes triggered the faulty behavior.

ID#306705 : solved problem, solved since V2.361

Multi−axis function blocks: Unwanted movement when exiting a compensation in the negative direction

With some multi−axis FBs, unwanted movements occurred when the master axis was moving in the negative direction after the coupling was started and this caused a state with compensation gears to be exited in the negative direction.
From now on, the slave axis will be stopped when this occurs. Once the master axis has moved in the positive direction enough to make up for the distance it moved in the negative direction, the slave again follows the coupling.

The following FBs were affected by this problem:
− MC_GearInPos
− MC_BR_CamDwell
− MC_BR_AutoCamDwell

NC Software − ACP10_MC V2.360

ID#303305 : solved problem, solved since V2.360

MC_BR_CrossCutterControl: Changes and error corrections

The following changes and error corrections have been implemented for the FB MC_BR_CrossCutterControl:

The "CutMasterPosition" output value will now be output as soon synchronous movement switches to compensation movement.
Compensation was one unit too short if a negative "ProductLengthCorrection" was specified.
The "InCompensation" output was not set if the axis changed from cyclic cutting movement to standby.
The first value of "CutMasterPosition" was sometimes not calculated after a positive edge on the "EnableCut.
If, instead of "CutRangeMaster", only "CutterRadius" and "NumberOfKnives" was specified or if "CutOverspeed" was used, then incorrect values were calculated for the "CutMasterPosition" output.

ID#400093462 : solved problem, solved since V2.360

Multi−axis FBs: Error 29200 could be mapped to an incorrect NC object

With the multi axis function blocks listed below, specifying an invalid master axis and no "MasterParID" resulted in the following error being entered in the axis structure of the NC object ncNET_GLOBAL instead of in the axis structure of the slave:
− 29200: The axis object is invalid

This prevented the error text from being read by MC_ReadAxisError or MC_BR_ReadAxisError via the axis object of the slave axis.
In the network command trace the error was also entered for the NC object ncNET_GLOBAL.

The following FBs were affected by this problem:
− MC_CamIn
− MC_GearIn
− MC_GearInPos
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition
− MC_DigitalCamSwitch
− MC_BR_DigitalCamSwitch
− MC_BR_GetCamMasterPosition
− MC_BR_GetCamSlavePosition
− MC_BR_RegMarkCapture001

ID#301705 : new function since V2.360

MC_BR_SetupInductionMotor: New optional parameter "PhaseCrossSection"

Using this parameter the cross section of a motor phase can be specified now.

ID#299130 : new function since V2.360

New FB MC_BR_SetupSynchronMotor

MC_BR_SetupSynchronMotor: Starts and stops the setup (motor parameter identification) for an synchron motor and saves the data determined during setup.

ID#298880 : new function since V2.360

MC_Home: New homing modes for homing to a block

The following homing modes are now available:
− mcHOME_BLOCK_DS: Homing to mechanical limit with lag error value as detection criteria
− mcHOME_BLOCK_TORQUE: Homing to mechanical limit with torque value as detection criteria

The new parameters for these homing methods, "ds_block" and "torque_lim", are defined in the NC INIT Parameter module or via the axis structure.

NC Software − ACP10_MC V2.351

ID#298535 : solved problem, solved since V2.351

An unintentional direction change occurred while approaching the target position

Setting "JogToTarget" shortly before the target position changed the direction of movement and the target position was approached within the current period.
Now when this happens, the specified deceleration is taken into consideration and the target position is approached in the next period.

NC Software − ACP10_MC V2.350

ID#400084806 : solved problem, solved since V2.350

Transfer of a movement command was aborted by movement stop on other NC object

If one of the following FBs caused a movement stop, the transfer of a movement command currently in progress for the second NC object on the same communication channel could also be aborted incorrectly:
− MC_Stop
− MC_Power
− MC_BR_VelocityControl
− MC_GearInPos

If for example MC_Stop was called for the virtual axis, parameter transfer for the following FBs could also be aborted for the real axis on the same communication channel.
− FBs for basis movements
− FBs for coupling
− FBs for torque control
− FBs for speed control
− FBs for cyclic set values

After this problem occurred, the transfer of subsequent parameter lists for the affected NC object was also blocked (status "ncACTIVE" when calling the NC action) until a movement stop FB was called for this NC object itself.

ID#400092240 : solved problem, solved since V2.350

MC_BR_CalcCamFromPoints: Cam profile data could be calculated incorrectly

If the following conditions were met it could happen that some of the calculated polynomial coefficients were wrong:
− At least 57 slave positions were passed to the FB
− "Configuration.NumberOfPolynomials" was set to zero or >= 56
− The FB was consecutively activated several times

ID#400088413 : solved problem, known since ACP10 V2.32.2, solved since V2.350

MC_MoveVelocity and MC_BR_MoveVelocityTriggStop now only transfer the velocity in the specified movement direction

Until now both FBs transferred the defined velocity to the drive always for both directions. When the limits were set differently the error "29217: Invalid input parameter" could be reported and the movement was not started even if the defined velocity was permissible for the selected direction.
"MC_MoveVelocity" and "MC_BR_MoveVelocityTriggStop" now transfer the defined velocity to the drive only for the selected direction.

ID#296875 : new function since V2.350

New FB: MC_BR_GearIn

Just like MC_GearIn, this FB can be used to establish a specified gear ratio between a slave axis and a master axis.
MC_BR_GearIn also provides the following functions:

− Select whether to perform coupling, gear ratio change and/or stop without compensation.
− Set the jolt time for compensation
− More accurate grading of the gear ratio
− The gear ratio can even be changed when a compensation movement to achieve a previous gear ratio is already underway.

ID#296855 : new function since V2.350

New FB: MC_BR_OffsetZone

With this FB an offset shift can be conducted during an active coupling by means of adding a position to the slave axis. The shift is carried out inside a defined position window within the period. Optionally a ParId can be used as source of the position.

ID#400081333 : new function since V2.350

New FB: MC_BR_OffsetVelocity

With this FB a offset shift can be conducted during an active coupling by means of adding a velocity to the slave axis. Optionally a ParID can be used as source of the velocity or trigger ParIDs can be defined for activating and dectivating the shift operation.

ID#296795 : new function since V2.350

MC_BR_TorqueControl: The "StartParID" input is now evaluated

When this input is configured, the torque controlled movement can be started by an event on the drive.

ID#400091474 : new function since V2.350

Automatic changes to the software limits now entered in the logger

The PLCopen MC library ACP10_MC has always changed the software limits for an axis in the corresponding NC data structure to the values listed below when zero is defined as the axis period (or when no axis period is defined explicitly) and when the following conditions are met:
− limit.parameter.pos_sw_end > 8388607
− limit.parameter.neg_sw_end < −8388608

From now on, automatic changes to the software limits will be entered in the logger, along with the details in the ASCII data:
− <Name of the NC object>
− PLCopen MC axis period is zero
− POS_SW_END adjusted to 8388607
− NEG_SW_END adjusted to −8388608

ID#400080255 : new function since V2.350

MC_BR_TouchProbe: New mode "+mcUSE_AXIS_PERIOD"

Using the additive mode "+mcUSE_AXIS_PERIOD" ignores the "Period" input and uses the axis period instead. Also, when the FB is activated ("Enable = TRUE"), the calculation for the "RecordedPeriodicValue" output uses the offset of the axis period instead of the reference point "0". This ensures that – even if the INTEGER ParID overflows while the FB is inactive – the value on the "RecordedPeriodicValue" output matches the axis position from MC_ReadActualPosition whenever the FB is reactivated.

The new mode can be used for the following ParIDs:
− ACP10PAR_PCTRL_S_SET (real axis)
− ACP10PAR_PCTRL_S_ACT (real axis)
− ACP10PAR_SGEN_S_SET (real axis)
− ACP10PAR_S_SET_VAX1 (virtual axis)

NC Software − ACP10_MC V2.340

ID#400086363 : solved problem, solved since V2.340

8B0Pxxxxxxxx.xxx−x: If the controller was switched off, then the output values of MC_BR_PowerMeter were not valid.

ID#290450 : solved problem, solved since V2.340

MC_BR_RegMarkCapture001: Wrong "PositionError" after a position overflow of the master axis

The value of "PositionError" was calculated incorrectly, if a periodic master axis was used and the FB was activated again after a DINT position overflow of the master.

ID#286910 : solved problem, solved since V2.340

MC_BR_DigitalCamSwitch: The specified "MasterParID" was not used in some circumstances

In each of the following situations, the set position of the axis specified for the "Switches.Master" input was used instead of the "Switches.MasterParID":
− The same axis reference was used for "Switches.Master" as was used for "OutputOptions.Axis".
− The axis reference of the real axis of a channel was used as "Switches.Master", and the axis reference of the virtual axis of the same channel was used as "OutputOptions.Axis".
− The axis reference of the virtual axis of a channel was used as "Switches.Master", and the axis reference of the real axis of the same channel was used as "OutputOptions.Axis".
− No axis reference was specified for "OutputOptions.Axis".

ID#400085933 : solved problem, solved since V2.340

MC_Power: Error 29209 at controller switch−off

If switching off the controller took longer then two seconds, e.g. due to a move stop with low deceleration, the FB reported the following error:
− 29209: The drive is in error state

The axis remained in the state Stopping, thus when setting the input "Enable" again, the FB reported the following error:
− 29238: The FB cannot be used in the current state

From now on no error is reported in this case, but waited until the deceleration ramp is finished.

ID#400083066 : solved problem, solved since V2.340

MC_Power: Error 29209 at controller switch−on with phasing

If switching on the controller took longer then seven seconds, e.g. due to phasing in dither mode, the FB reported the following error:
− 29209: The drive is in error state

From now on this error is only reported, if switching on the controller takes longer than 20 seconds.

ID#280895 : solved problem, solved since V2.340

MC_BR_InitModPos did not completely reparametrize an axis into a periodic axis

If an axis, which had no period defined, was reparametrized into a periodic axis by the FB MC_BR_InitModPos, the axis had to be homed before a movement could be started, although that is not required for periodic axes. In this case movement FBs reported the following error:
− 29205: The axis is not homed

ID#400080610 : solved problem, solved since V2.340

CAN interface: Value calculated automatically for SYNC_MASTERPERIOD can be too small

The ACP10_MC library automatically calculates a value for the ParID SYNC_MASTERPERIOD for all drives on a CAN interface during the initialization phase. The value of this ParID defines the master cycle time for drive synchronization (axis coupling, cyclic data to/from drives) When a large number of positions for coupled axes or a large amount of cyclic data is sent to and from the drives, the automatically calculated value may be too small.
This can cause speed jumps on slave axes, for example.
Now there is an option to specify the value for this ParID explicitly for each CAN interface in the NC configuration, whereby this value is initialized on the drives. If this option isn't used and the value in the NC configuration is left at the default setting ("SYNC_MASTERPERIOD Default"), the ACP10_MC library will calculate and transfer the value for this parameter in the initialization phase as before.

ID#400078608 : new function since V2.340

MC_Home: "Position" greater than axis period produced error 29225

If for periodic axes the value on the input "Position" of MC_Home was greater than the axis period, always the following error was reported:
− 29225: The target position is outside the axis period

From now on no error is reported, if a "HomingMode" is selected which doesn't use the "Position" input value or uses it as offset respecitvely.

The modification was made for the following "HomingModes":
− mcHOME_ABSOLUTE (and mcHOME_ABSOLUTE_CORR)
− mcHOME_DCM (and mcHOME_DCM_CORR)
− mcHOME_RESTORE_POS
− mcHOME_DEFAULT
− mcHOME_AXIS_REF

ID#400076162 : new function since V2.340

MC_ERRORRECORD_REF: New element "Type"

The data type MC_ERRORRECORD_REF now has an additional element "Type", which represents the type of the currently displayed error.

The following error types can be distinguished:
− mcAXIS_ERROR (axis error)
− mcAXIS_WARNING (axis warning)
− mcFB_ERROR (PLCopen FB error)

The following function blocks have an output of this data type, so they are affected by this change:
− MC_BR_ReadAxisError
− MC_BR_NetTrace
− MC_BR_ParTrace
− MC_BR_ParTraceConfig
− MC_BR_SaveCamProfileObj

NC Software − ACP10_MC V2.331

ID#288455 : solved problem, solved since V2.331

MC_GearIn: In some circumstances, a speed jump occurred on the slave axis (only in V2.160 − V2.330)

If the following conditions were met when starting the gear coupling with the FB MC_GearIn, there was a speed jump on the slave axis:
− The slave axis was moving in the negative direction.
− The master axis was not moving.

NC Software − ACP10_MC V2.330

ID#281960 : solved problem, solved since V2.330

MC_BR_JogLimitPositon, MC_BR_JogTargetPositon: Axis state was not set correctly

MC_BR_JogLimitPosition: The axis state was not changed from Discrete Motion to Standstill after one of the limit positions was reached.
MC_BR_JogTargetPosition: The axis state was not changed from Discrete Motion to Standstill after the "TargetPosition" was reached.

ID#400081910 : solved problem, solved since V2.330

Transferring Cam Profiles, ACOPOS Parameter tables and Parameter Sequences delayed processing of other FBs

When one of the following FBs was called, data transfer to a drive from any other FB, which was subsequently called, was delayed until processing of the previously called FB was completed:
− MC_CamTableSelect
− MC_BR_DownloadCamProfileObj
− MC_BR_DownloadCamProfileData
− MC_BR_InitParTabObj
− MC_BR_DownloadParSequ

Now, data is transferred to the drives in parallel for the FBs listed above and all other FBs, so that processing of these other FBs is no longer delayed.

ID#400068639 : solved problem, solved since V2.330

Under certain circumstances an active movement could not be stopped

With the FBs listed below an active movement could not be stopped, if the following conditions were met:
− The value of the FB input "Deceleration" (if existing) is greater than the limit value of the deceleration, which is currently specified on the drive.

− The value of at least one limit value of the deceleration within the axis structure is greater than the value, which is currently specified on the drive.

The following FBs were affected by this problem:
− MC_Stop
− MC_Halt
− MC_BR_VelocityControl
− MC_BR_AutCommand
− MC_BR_AutControl
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_BR_CamTransition
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity
− MC_BR_CrossCutterControl
− MC_BR_JogVelocity
− MC_BR_JogLimitPosition
− MC_BR_JogTargetPosition

ID#284045 : new function since V2.330

New FBs: MC_BR_MoveCyclicPositionExt, MC_BR_MoveCyclicVelocityExt

With these FBs cyclic set values can be transferred from the PLC to a drive. Additionally the value of a ParID can be added to the set value and the jolt limitation (limit.parameter.t_jolt) can be deactivated on the drive during the movement.

ID#400056504 : new function since V2.330

New FBs: MC_BR_CalcPointsFromCam, MC_BR_CalcSectionsFromCam

MC_BR_CalcPointsFromCam: Calculation of node vectors from a polynomial cam profile.
MC _BR_CalcSectionsFromCam: Calculation of a list of points from a polynomial cam profile with corresponding motion rules.

NC Software − ACP10_MC V2.322

ID#284880 : solved problem, solved since V2.322

MC_BR_InitAxisPar and MC_BR_InitAxisSubjectPar multiplied basis movement parameters by the PLCopen axis factor

The function blocks MC_BR_InitAxisPar and MC_BR_InitAxisSubjectPar ("Subject" = ncBASIS_MOVE) multiplied the basis movement parameters by the PLCopen axis factor instead of dividing by it. This resulted in wrong values of the PLCopen parameters 1001−1006. These parameters serve only for display purposes, the functionality of other FBs was not affected.

ID#400082663 : solved problem, solved since V2.322

CAN−Bus: Problem in case of a network coupling (only in V2.280 − V2.321)

After a coupling was started, the master axis could not be used anymore. FBs called for the master axis reported "Busy" all the time.

ID#281925 : solved problem, solved since V2.322

MC_Home: mcHOME_RESTORE_POS did not work under certain circumstances (only in V2.290 − V2.321)

If MC_Home was used with "HomingMode" mcHOME_RESTORE_POS the position could be restored wrongly under the following circumstances:
− An NC test was opened for the axis
− The controller was off

NC Software − ACP10_MC V2.321

ID#281160 : solved problem, solved since V2.321

The Jog−FBs could start a new movement only after the previously active was completely finished

Now a movement can be started at any time by the following FBs, if the inputs "JogPositive" or "JogNegative" are set.
− MC_BR_JogVelocity
− MC_BR_JogLimitPosition
− MC_BR_JogTargetPosition

NC Software − ACP10_MC V2.320

ID#278680 : solved problem, solved since V2.320

MC_Power reports error 29238 when activated again

At deactivation of MC_Power the FB output "Status" could have been set to FALSE, even though the axis state was still Standstill. Therefore at an immediate reactivation of MC_Power the error "29238: The FB cannot be used in the current state" could have occured.

ID#400080160 : solved problem, solved since V2.320

TorqueControl FBs could not be aborted by MC_Halt

If the function block MC_TorqueControl or MC_BR_TorqueControl should have been aborted by MC_Halt, MC_Halt reported the error "29217: Invalid input parameter" and the TorqueControl FB stayed active. Now these function blocks can be aborted also by MC_Halt.

ID#278675 : new function since V2.320

New FB: MC_BR_GetParIDTransferInfo

This FB provides information about the ParID cross communication of an axis.

NC Software − ACP10_MC V2.310

ID#276050 : solved problem, solved since V2.310

MC_Power: The axis state could be set to Standstill, even though the controller was off

When resetting the input "Enable" the axis state could be set to Standstill for a short period and afterwards back to Disabled, even though the controller was always off.

ID#400077220 : solved problem, solved since V2.310

MC_BR_VelocityControl: Error 29302 was reported unjustifiedly

If the input "Enable" of MC_BR_VelocityControl was reset before the function block had set the output "Active", every following setting of the input "Enable" led to the Error 29302: "One instance of the function block is already active" although no instance of the function block were was active.

ID#275280 : new function since V2.310

New FB: MC_BR_CrossCutterControl

This FB can be used for cross cutter applications. Amongst other things the following features are available:
− Pause the movement
− Carry out a registration mark correction
− Specify an over−synchronous velocity for the cutting process
− Use a cam profile for a push−out movement

ID#275270 : new function since V2.310

Ending MC_BR_RegMarkCapture001 does not transfer parameters any more

If the input "Enable" of MC_BR_RegMarkCapture001 was set to FALSE during a network failure, the FB persitantly tried to transfer parameters. This resulted in a lot of entries in the network command trace.
The necessary parameters are downloaded now at the next activation of the FB.

ID#400074090 : new function since V2.310

New functionality: If MC_BR_VelocityControl is activated, the actual values are output now by MC_ReadActualXxx FBs

Once the MC_BR_VelocityControl is activated, the actual values are output (until now set values) by MC_ReadActualPosition and MC_ReadActualVelocity. If the FB MC_BR_VelocityControl is aborted, the FBs provide the set values again.

ID#275010 : new function since V2.310

New FBs: MC_BR_JogVelocity, MC_BR_JogLimitPosition, MC_BR_JogTargetPosition

MC_BR_JogVelocity: An axis can be operated in jog mode.
MC_BR_JogLimitPosition: An axis can be operated in jog mode within defined position limits.
MC_BR_JogTargetPosition: A periodic axis can be operated in jog mode, additionally it can be stopped at a defined target position within the period.

ID#275005 : new function since V2.310

New FB: MC_BR_SaveCamProfileObj

This function block saves cam profile data, which is available on the PLC in a variable of the type MC_CAMPROFILE_TYP, into a data module.

ID#400074195 : new function since V2.310

ParID transfer between drives can be changed now

If send and receive channel are set explicitly at FBs for initializing the ParID transfer between drives, the parameters of the channels can be changed later on. This add−on applies to POWERLINK and SDC, but not to CAN.

The following FBs were extended:
− MC_BR_InitSendParID
− MC_BR_InitReceiveParID
− MC_BR_InitMasterParIDTransfer

ID#400074194 : new function since V2.310

New FB: MC_BR_InitReceiveNetworkData

With this FB 4−byte data from a POWERLINK station can be read into a drive, which is located on the same network .

NC Software − ACP10_MC V2.302

ID#276690 : solved problem, solved since V2.302

MC_Home: Usage could lead to a restart of the target in service mode (only in V2.301)

The use of MC_Home for a periodic axis in encoderless mode led to a restart of the target in service mode.

ID#400079283 : solved problem, solved since V2.302

MC_InitFunction: Error 1 by reading SCALE_ENCOD2_REV (only in V2.301)

If two encoder control was activated, then the MC_InitFunction for ACOPOSmulti or ACOPOSmicro falsely attempted to read ENCOD2 ParIDs of axis1. This caused the error 1: "Invalid parameter ID" when reading SCALE_ENCOD2_REV.

Now for ACOPOSmulti or ACOPOSmicro the parameters necessary for two encoder control are read correctly from axis2.

NC Software − ACP10_MC V2.301

ID#400077053 : solved problem, solved since V2.301

MC_BR_AutControl: Parameter transfer could be aborted by MC_Stop

If MC_Stop was called during a parameter transfer of MC_BR_AutControl (e.g. signals set or reset), it was possible that the parameter transfer was aborted and the error 29268: "FB aborted by another one" was reported. Now only such parameter transfers are aborted which contain a start or restart command.

ID#400076625 : solved problem, solved since V2.301

MC_Home: The mode mcHOME_RESTORE_POS did not work for two encoder control

If the "HomingMode" = mcHOME_RESTORE_POS was used for axes, for which two encoder control was activated, the axis position was not correctly restored.

ID#400075640 : solved problem, solved since V2.301

MC_Home: The mode mcHOME_RESTORE_POS did not work for simulated axes

If the "HomingMode" = mcHOME_RESTORE_POS was used for axes, for which the ACOPOS simulation mode "Standard" or "Complete" was defined in the NC mapping table, the axis position was not correctly restored.
Now the FB MC_Home with "HomingMode" = mcHOME_RESTORE_POS works for axes with activated ACOPOS simulation in the same way as for axes with activated motor simulation.

ID#400074667 : solved problem, solved since V2.301

MC_BR_ReadDriveStatus: "Valid" was set before all status information was valid (only in V2.241 − V2.300)

In the connected structure of the data type MC_DRIVESTATUS_TYP "Valid" was immediately set, if the successful end of the network initialization is signalized by "NetworkInit" = TRUE. At that time some of the other status information was not valid.

Initial ACOPOS parameter tables are tables that are defined for an NC object in an NC mapping table. The parameters contained in these ACOPOS parameter tables are transferred to the ACOPOS during the ACOPOS startup.
If "CMD_SIMULATION" = ncSWITCH_ON was present in an initial ACOPOS parameter table, then "Simulation" = TRUE was set three NC Manager task class cycles after "Valid" = TRUE.

The status of "HomeSwitch", "PosHwSwitch", "NegHwSwitch", "Trigger1" and "Trigger2" is depending on the active levels which are defined for these inputs. That's why wrong values could be displayed as long as the transfer of the active levels to the ACOPOS was not finished.

Now "Valid" = TRUE is set after the transfer of the parameters of the NC INIT parameter module is successfully finished. At that time it is guaranteed that all status information is valid.

NC Software − ACP10_MC V2.300

ID#269065 : solved problem, solved since V2.300

MC_BR_AutCommand: Invalid axis state after "Start" or "Restart"

If the inputs "Start" or "Restart" were set while a NC Test for the slave axis was open, an invalid axis state was the result.

ID#400072674 : solved problem, solved since V2.300

A coupled movement couldn't be influenced by MC_BR_Phasing or MC_BR_Offset

If the parameters of the cam profile automat were updated by MC_BR_InitAutData, MC_BR_InitAutPar or MC_BR_AutControl while a phase or offset shift was active, MC_BR_Phasing or MC_BR_Offset lost their influence on the movement. Only at a rising edge on the input "InitData" the next shift was considered.

ID#268165 : solved problem, solved since V2.300

MC_BR_HomeAcpEncoder: The output "Done" could be set to early

After a repeated call of MC_BR_HomeAcpEncoder it could happen that the output "Done" was immediately set, though the homing was still active.

ID#267815 : solved problem, solved since V2.300

MC_BR_ReadDriveStatus: "HomingOk" was set twice under certain conditions

If MC_Home was used with mode mcHOME_RESTORE_POS, MC_BR_ReadDriveStatus could set the flag "HomingOk" briefly to "TRUE" and to "FALSE" again under certain conditions, while the homing was carried out. At the end of the homing procedure "HomingOk" was set to "TRUE" again.

ID#400072149 : solved problem, solved since V2.300

MC_BR_RegMarkCapture001, MC_BR_TouchProbe: Outputs were possibly not set after a network failure or drive reset

The FBs didn't set any output after the network connection was lost or a drive reset was performed and if they were enabled before all axes left the state Errorstop.

ID#270140 : new function since V2.300

MC_BR_ParTrace: New component "Format" in data type MC_DATOBJ_REF for selection of a format for the trace data to be saved

If for saving of the trace data into a data object the type mcFILE is used, then another data object format than the binary format can be defined with this component.

The following constants can be used for "Format":
− mcFILE_BIN: Binary format (default setting)
− mcFILE_CSV: CSV format
− mcFILE_TXT: Text format

ID#400073669 : new function since V2.300

MC_BR_TouchProbe: New mode "+mcUPDATE_PERIOD"

With the additive mode "+mcUPDATE_PERIOD" the acceptance of a new value of the input "Period" is allowed, while the FB is active.

ID#400071883 : new function since V2.300

Starting movements without homing

Writing to the new PLCopen parameter 1014 makes it possible to deactivate the software limit monitoring. Movements can be startet then without homing the axis prior to that.
For periodic axis the monitoring of the software limits is deactivated automatically and the PLCopen parameter 1014 is set. Therefore it is possible now to start movements for periodic axes without homing.

NC Software − ACP10_MC V2.291

ID#400072813 : solved problem, solved since V2.291

MC_BR_DownloadCamProfileData: In rare cases a pagefault could occur (only in V2.290)

In rare cases the download of a cam profile with MC_BR_DownloadCamProfileData could lead to a pagefault.

NC Software − ACP10_MC V2.290

ID#400068920 : solved problem, solved since V2.290

MC_BR_AutControl always used the limit value for "Deceleration" (only in V2.270 − V2.28x)

MC_BR_AutControl ignored at "Enable" = FALSE or "Stop" = TRUE the value of the input "Deceleration" and used always the limit value from the axis structure or from the NC INIT parameter module respectively.

ID#266340 : solved problem, solved since V2.290

MC_BR_Offset and MC_BR_Phasing could use wrong ParID

If a master axis and a "MasterParID" were specified at the coupling FB and master and slave axis resided on different drives (resp. ACOPOSmulti channels), MC_BR_Offset and MC_BR_Phasing did not use the ParID of the master axis in the "ApplicationMode" mcMASTER_POSITION_BASED or mcMASTER_DISTANCE_BASED but the same ParID of the slave axis as master of the shift profile.

ID#265615 : solved problem, solved since V2.290

Coupling−FBs reported errors that limits were exceeded at the compensation calculation

If for a virtual slave axis the basis movement or for a real slave axis the limit parameters were reinitialized between two calls of a coupling FB an error could occur during the compensation gear calculation, or in case of MC_GearIn the compensation movement took a longer master distance then at the first call.

The following FBs were affected by this problem:
− MC_GearIn
− MC_GearInPos
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition

ID#265175 : solved problem, solved since V2.290

Cam profile FBs did not transfer "MasterParIDMaxVelocity"

The following FBs did not transfer "MasterParIDMaxVelocity" when the paramters were initialised anew using "InitData".

The following FBs were affected by this problem:
− MC_BR_CamDwell
− MC_BR_AutoCamDwell

ID#400070987 : solved problem, solved since V2.290

MC_BR_CamTransition: When the FB was activated again, the LeadIn was possibly not executed

If the inputs "Enable" and "LeadIn" were reset in the same cycle and afterwards set again simultaneously, the FB didn't start the LeadIn movement.

ID#265160 : solved problem, solved since V2.290

Cam profile FBs multiplied master parameters by the PLCopen axis factor of the slave axis

When a "MasterParID" but no "Master" was specified for the following FBs all input parameters with a master unit relation were multiplied by the PLCopen axis factor of the slave axis.

The following FBs were affected by this problem:
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition

ID#400070986 : solved problem, solved since V2.290

MC_BR_CamTransition: The lead in behavior wasn't correct, if the FB was started while the master was in stand still

If MC_BR_CamTransition was used with "CamMode" mcTIME_BASED and the master axis was started after the FB was activated, depending on the acceleration of the master axis the following misfeatures could appear:

− Low acceleration of the master axis: The "CamTime" of the first three cam runs was not equal to the value which was specified on the input "CamTime".
− High acceleration of the master axis: Starting with the third cam run the starting position of the cam within the master period was permanently shifted.

ID#265125 : solved problem, solved since V2.290

MC_BR_TorqueControl: Evaluation of encoder counting direction

The FB now evaluates the encoder counting direction , and if necessary inverts "Torque" as well as "PosMaxVelocity" and "NegMaxVelocity". Therefore the same moving direction is kept as with other basic moving FBs, if the counting direction of the encoder within the axis structure ACP10AXIS_typ is set to ncINVERSE.

ID#400070569 : solved problem, solved since V2.290

MC_BR_VelocityControl: Evaluation of encoder counting direction

The FB now evaluates the encoder counting direction, and if necessary inverts "CyclicVelocity", "CyclicVelocityCorrection" as well as "CyclicTorque" with mode "+mcFF". Therefore the same moving direction is kept as with other basic moving FBs, if the counting direction of the encoder within the axis structure ACP10AXIS_typ is set to ncINVERSE.

ID#264960 : solved problem, solved since V2.290

MC_BR_CamTransition: Cams downloaded with MC_BR_DownloadCamProfileXXX, couldn't be used with MC_BR_CamTransition

Cam profiles downloaded to the drive with MC_BR_DownloadCamProfileObj or MC_BR_DownloadCamProfileData, could not be used with MC_BR_CamTransition. This FB reported the error "29250 CamTableID is invalid".

ID#264345 : solved problem, solved since V2.290

MC_Power changed axis state from Errorstop to Stopping

If the axis state changed to Errorstop due to an event on the drive, MC_Power was disabled and the deceleration ramp took longer then two seconds, then the axis state was set from Errorstop to Stopping.

ID#264270 : solved problem, solved since V2.290

MC_BR_RegMarkCapture001: Searching for registration marks did not start anymore

If the FB was aborted while searching for a registration mark by resetting the input "Enable" an automatic search ("ProductParameters.MissedTriggerCount") or the manual mode ("+mcMANUAL_SEARCH") was not working after reactivation, if the registration mark should be searched for. The output "SearchActive" was always set.

ID#263490 : solved problem, solved since V2.290

MC_BR_RegMarkCapture001: The automatic search for registration marks was initiated too late

The FB initiated the search for a lost registration mark one missing registration mark (output "MissedTriggers") too late. However the output "SearchActive" was set already when "MissedTriggers" reached the value of "ProductParameters.MissedTriggerCount".

ID#400066512 : solved problem, solved since V2.290

Virtual axis is not automatically homed to the position "0" any more

After the initialization of the virtual axis (e.g. after a drive reset, network failure, ...) it is not automatically homed to the position "0" anymore.

ID#265185 : new function since V2.290

Coupling FBs now use the parameter "MasterParIDMaxVelocity" also when no "MasterParID" is specified

The following FBs now use the parameter "MasterParIDMaxVelocity" also in case that no "MasterParID" is specified , but the set position is used:
− MC_GearIn
− MC_GearInPos
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition

ID#400070844 : new function since V2.290

MC_Reset can now be used in any axis state

Until now the MC_Reset could only be used in the axis state Errorstop for acknowledging all axis errors and changing the axis state from Errorstop to Disabled or Standstill.
From now on the FB can also be used on axes, which aren't in the axis state Errorstop. All pending axis errors, axis warnings and PLCopen FB errors are thereby acknowledged. The axis state is not changed.

ID#262555 : new function since V2.290

MC_BR_VelocityControl accepts a new value of the input "Deceleration" if "Enable" is set to FALSE

To be able to end a movement, which was started with the FB MC_BR_VelocityControl, with a different deceleration than the originally set by "Deceleration", the FB accepts now a new value on the input "Deceleration", if the input "Enable" is set to FALSE.

ID#400062367 : new function since V2.290

MC_BR_Offset and MC_BR_Phasing: New parameter "MasterMaxVelocity"

The FBs MC_BR_Offset and MC_BR_Phasing have a new parameter "AdvancedParameters.MasterMaxVelocity" for specifying the master speed with which the shift profile is calculated in "ApplicationMode" mcMASTER_POSITION_BASED and mcMASTER_DISTANCE_BASED.

ID#400058950 : new function since V2.290

MC_ReadActualPosition, MC_ReadActualVelocity: The output "Position" or "Velocity" can now be faster refreshed on SG4 targets with POWERLINK

Till now the minimal refresh time of "MC_ReadActualPosition.Position" or "MC_ReadActualVelocity.Velocity" was identical to the cycle time of the NC Manager task class. From now on it is identical to the cycle time of the task class which is defined for the the handling of cyclic data.

NC Software − ACP10_MC V2.281

ID#400070355 : solved problem, solved since V2.281

MC_BR_CamTransition: Start position of the cam profile could be shifted permanently.

When MC_BR_CamTransition was used with the "CamMode" mcTIME_BASED, the start position of the cam profile within the master period was permanently shiftet, if the FB was activated while the master axis was in standstill.

NC Software − ACP10_MC V2.280

ID#400067469 : solved problem, solved since V2.280

MC_BR_RegMarkCapture001calculated wrong "ActPosition"

If a PLCopen axis factor which was unequal to "1" was used for an axis specified on input "Axis" , the first "ActPosition" values were calculated wrongly.

ID#400067363 : solved problem, solved since V2.280

MC_BR_TorqueControl: Wrong behaviour after stop of movement during a parameter update

The following problems occurred, if an MC_BR_TorqueControl was aborted by MC_Power or MC_Stop while an online update of parameters ("InitData = TRUE") was in progress.
− The output "CommandAborted" was permanently set. All other outputs were not set.
− The FB started a movement after "Enable" and "StartSignal" were set to TRUE, but the check of the mode "+mcTIME_LIMIT" did not work.

ID#400065396 : solved problem, solved since V2.280

MC_BR_CamTransition: Wrong behaviour with "CamMode" mcTIME_BASED

If the MC_BR_CamTransition was used with the "CamMode" mcTIME_BASED the following wrong behaviours could occur:
− The output "InCam" was not set while the velocity of the master axis was changing.
− The "MasterStartPosition" within the cam profile was permanently shifted with change of the master velocity.
− The error "29217: Invalid input parameter" was reported if the value "0" was assigned to the input "MasterScaling", although this is allowed.
− The input "InitData" was ignored if it was set in the same cycle as "LeadInSignal" or "LeadOutSignal" were set.

ID#254405 : solved problem, solved since V2.280

MC_BR_MoveCyclicPosition, MC_BR_MoveCyclicVelocity: Problem after network failure or drive reset

If the FBs MC_BR_MoveCyclicPosition or MC_BR_MoveCyclicVelocity were activated again after a network failure or drive reset, they occupied a new area in the POWERLINK broadcast channel. If this broadcast channel was already fully occupied, the FBs reported an error and could only be used again after a restart of the PLC.

ID#400066266 : new function since V2.280

MC_BR_CalcCamFromPoints: Coefficient a of the first polynomial ("PolynomialData[0].a") is now set to the value "0.0"

Due to roundings a value for "PolynomialData[0].a" could be calculated which is different from "0.0" in the decimal places. If this cam profile data was transferred to an axis, the error 5304: "Format error in cam profile data" was reported.

ID#261050 : new function since V2.280

New FB MC_BR_BrakeControl

Using this function block the following commands for the holding brake can be executed. Combinations of certain commands are possible.

− Open the holding brake
− Close the holding brake
− Initialize control parameters for the holding brake
− Initialize parameters for the torque check
− Execute a torque check of the holding brake
− Get the mechanical status of the holding brake

ID#259575 : new function since V2.280

MC_BR_PowerMeter: New additional mode mcMAX_IV_TIME

By using the additional mode mcMAX_IV_TIME the MC_BR_PowerMeter can now be used with an interval duration of 10 minutes. The interval, as usual, can be finished any time by using the input "RestartInterval" or by an event configured on the input "EventInput".

ID#400061080 : new function since V2.280

MC_BR_RegMarkCapture001: New additional mode mcCONTINUE_CONTROLLER_OFF

By using the additional mode mcCONTINUE_CONTROLLER_OFF the MC_BR_RegMarkCapture001 does not report an error when the controller of the axis is switched off and continues its operation.

ID#400035061 : new function since V2.280

New FBs MC_BR_InitSendParID, MC_BR_InitReceiveParID, MC_BR_ReceiveParIDOnPLC

MC_BR_InitSendParID: Initializes sending of a ParID from a drive to the network (via MA1/2/3_CYCLIC_SEND).
MC_BR_InitReceiveParID: Initializes receiving of a ParID from the network on a drive.
MC_BR_ReceiveParIDOnPLC: Reads the value of a sent ParID (via MA1/2/3_CYCLIC_SEND) from the network into the PLC.

NC Software − ACP10_MC V2.271

ID#259502 : solved problem, solved since V2.271

Handling of cyclic data in different task classes: Page fault in the initialization phase (only in V2.180 − V2.270)

If for the handling of cyclic data another task class than the NC Manager task class is defined (this is possible from V2.180 on), then in very rare cases a page fault could occur.

ID#400064382 : solved problem, solved since V2.271

MC_BR_VelocityControl, MC_BR_MoveCyclicVelocity: Incorrect movement behavior when started outside the software limits.

If the FBs MC_BR_VelocityControl or MC_BR_MoveCyclicVelocity were activated outside the software limits, the movement behavior was not correct.
Neither an error was reported if a movement in invalid direction should be started, nor a movement which was started for the valid direction was executed. In these cases the FBs set their output "Active" or "Valid"

NC Software − ACP10_MC V2.270

ID#400064399 : solved problem, solved since V2.270

MC_BR_CalcCamFromSections swapped input parameters

The function block MC_BR_CalcCamFromPoints used the value of "Configuration.EndSlope" instead of "Configuration.StartCurvature" and vice versa, if "CamType = mcNON_PERIODIC" was configured.

ID#400061396 : solved problem, solved since V2.270

MC_CamIn: Non−periodic cam is not gone through completely

If a negative master movement took place over the left boundary of a non−periodic cam and the master moved in positive direction thereafter, the non−periodic cam was exited at its right boundary although it has not been gone through completely. Now the non−periodic cam is exited not until it was completely gone through either in positive or negative master direction.

ID#255810 : new function since V2.270

MC_ReadParameter can also be called in a INIT−SP of a task now

The function block MC_ReadParameter for reading PLCopen parameters can be called in a INIT−SP of a task now.

ID#400064099 : new function since V2.270

Axis can be used without NC INIT parameter module now

Axis can now be operated with FBs of the ACP10_MC library even if no NC INIT Parameter module is specified in the NC Mapping table. Instead of that the correct intialization values can be assigned to the axis structure within a INIT SP of a task. If this is not done when no NC INIT Parameter module is specified, an error will occur during the automatic global initialization of the axis, which is reported by any FB which is called for this axis.

ID#400063956 : new function since V2.270

MC_BR_DownloadParSequ now also supports the format setting ncFORMAT_T14

With the function block MC_BR_DownloadParSequ also parameter sequences can be transferred now, whose parameter records are configured with the format "ncFORMAT_T14" (data text with 14 bytes).

ID#254460 : new function since V2.270

New FB MC_BR_DigitalCamSwitch

Using this FB a set of cam switches can be configured and operated. Compared with the FB MC_DigitalCamSwitch, the new function block provides additional functionality, such as output of the track on FB output, configuration of several sets of switching data and fast switching between these.

ID#254425 : new function since V2.270

New FB MC_BR_TorqueControl

This function block starts a torque movement with limited speed and provides additional functionalities compared to MC_TorqueControl.

ID#254420 : new function since V2.270

New FB MC_TorqueControl

This function block starts a torque movement with limited speed.

ID#400061907 : new function since V2.270

MC_Home waits now until the axis is initialized

The FB MC_Home reported the error 29207: "This movement type is currently not allowed" on execution before or while the internal initialization of the axis took place. Now the FB waits until the initialization procedure is completed and output "Busy" is set during this time.

ID#252640 : new function since V2.270

New PLCopen parameters 1010: MoveCyclicPosInterpolationMode and 1011: MoveCyclicVelInterpolationMode

When the FBs MC_BR_MoveCyclicPosition or MC_BR_MoveCyclicVelocity are used and the cycle time of the task class in which they are executed is bigger than the cycle time of the drive, the set value which is transferred from the PLC to the drive is interpolated there. The following interpolation modes are available:

0 ... interpolation is switched off
1 ... linear interpolation
2 ... quadratic interpolation (less delay time, overshoot possible)
4 ... quadratic interpolation (more delay time, no overshoot)

By default the FB MC_BR_MoveCyclicPosition uses the mode "2" and the FB MC_BR_MoveCyclicVelocity uses the mode "1". With the new PLCopen parameters, which can be written by the FB MC_WriteParameter and read by the FB MC_ReadParameter, the interpolation mode for both function blocks can be changed now by the user.

ID#400061322 : new function since V2.270

Stop index from the initilization parameters is now supported

It is possible now to select a stop index, whose parameters are configured in the initialization parameters of the axis, by writing the desired index to the PLCopen parameter 1013. MC_Stop then uses the selected stop configuration.

ID#400061362 : new function since V2.270

MC_AUTDATA_TYP: New element "EventStartPositionInInterval"

Up to four relative positions within the "StartInterval", which are used to generate the events ncS_START_IV1 to ncS_START_IV4, can be configured with the new element. The new events for a state transition of the cam profile automat can be used for a cyclic synchronization with the master position.

ID#400060748 : new function since V2.270

New FB MC_BR_GetHardwareInfo

This function block provides Model Number, Serial Number and Revision of drives, plug−in cards and motors, which are stored on the respective hardware component.

ID# 400061584 : new function since V2.270

MC_BR_InitCyclicRead: Mode mcEVERY_RECORD is supported

With the new mode mcEVERY_RECORD, the ParID will be configured in each cyclic telegram from the drive. This results in a constant refresh rate for the ParID value. However, the maximum number of ParIDs that can be read cyclically from a drive is reduced.

ID#400057942 : new function since V2.270

New FB MC_BR_SetHardwareInputs

Using this FB the digital hardware inputs of a real axis can be forced.

ID#400054573 : new function since V2.270

New PLCopen parameter 1012: DefaultMoveParameters

This parameter configures which values are transferred to the drive for the basis movement parameters , if the according FB input is left open or written with the value "0".

The following values are configurable for the transfer:
− mcFB_INPUTS: The value assigned to the FB input is transferred. (No change of behavior to earlier versions, Default setting)
− mcLIMIT_PARAMETERS: The directional limit values of the axis structure (limit.parameter) will be transferred.
− mcBASIS_PARAMETERS: The directional basis movement parameters of the axis structure (move.basis.parameter) will be transferred.

For the following FBs the behavior of transfer can be configured using this parameter:
− MC_MoveAbsolute
− MC_MoveAdditive
− MC_MoveVelocity
− MC_BR_MoveAbsoluteTriggStop
− MC_BR_MoveAdditiveTriggStop
− MC_BR_MoveVelocityTriggStop
− MC_BR_EventMoveAbsolute
− MC_BR_EventMoveAdditive
− MC_BR_EventMoveVelocity
− MC_Stop
− MC_Halt
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity
− MC_BR_VelocityControl
− MC_GearIn
− MC_GearInPos
− MC_BR_AutControl
− MC_BR_AutCommand

NC Software − ACP10_MC V2.261

ID#400061568 : solved problem, solved since V2.261

Invalid function block output status if the internal initialization of the axis was not completed

The output status of some FBs was invalid (output "Busy" was not set), if the internal initialiszation of the axis was not completed.
This could happen e.g. after a network failure, if the active axis errors were not acknowledged.

The following FBs were affected by this problem:
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_BR_CamTransition
− MC_BR_EventMoveAbsolute
− MC_BR_EventMoveAdditive
− MC_BR_EventMoveVelocity
− MC_BR_InitAutPar
− MC_BR_InitMasterParIDTransfer
− MC_CamIn
− MC_CamTableSelect
− MC_GearIn
− MC_GearInPos

NC Software − ACP10_MC V2.260

ID#400059328 : solved problem, solved since V2.260

Axes used a wrong position or velocity which is transferred via the network

Under the following circumstances a axis used a wrong position or velocity which is transferred via the network.
− The real and virtual axis of a channel of an ACOPOS on a POWERLINK Interface should use a position or velocity of different master axes or from the PLC.
− For each axis one of the following function blocks was used to configure the transfer of a position or velocity via the network.
− The function blocks which configure the transfer of a position or velocity via the network were activated simultaneously.

The following FBs were affected by this problem:
− MC_GearIn
− MC_GearInPos
− MC_CamIn
− MC_DigitalCamSwitch
− MC_BR_AutControl

− MC_BR_InitMasterParIDTransfer
− MC_BR_InitAutPar
− MC_BR_InitAutData
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition
− MC_BR_RegMarkCapture001
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity

ID#249085 : solved problem, solved since V2.260

MC_DigitalCamSwitch: Input value was applied wrongly

The PLCopen axis factor was not considered for the input value "TrackOptions.Hysteresis".

ID#248680 : solved problem, solved since V2.260

Some function blocks were using the same send slot for two or three master axis on a CAN interface

If ParIDs of more than one master axes on a CAN interface were configured for sending via the network at the same time, the same send slot was used. This problem occured if some of the following FBs were activated at the same time.

The following FBs were affected by this problem:
− MC_GearIn
− MC_GearInPos
− MC_CamIn
− MC_DigitalCamSwitch
− MC_BR_AutControl
− MC_BR_InitMasterParIDTransfer
− MC_BR_InitAutPar
− MC_BR_InitAutData
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition
− MC_BR_RegMarkCapture001

ID#248080 : solved problem, solved since V2.260

MC_ReadAxisError: Output "Valid" was set too early

The output "Valid" was already set before the error text was completely evaluated.

ID#249710 : new function since V2.260

MC_DRIVESTATUS_TYP: New element "ResetDone"

In the data type MC_DRIVESTATUS_TYP, which is used by the FB MC_BR_ReadDriveStatus, the element "ResetDone" was added. It is set if the drive was reset before the most recent activation of the network connection and therefore all parameters must be transfered anew.

ID#249700 : new function since V2.260

New FB MC_BR_GetParIDInfo

This function block determines data type and data length for a specified ParID.

ID#249650 : new function since V2.260

MC_BR_SetupController: Orientation of the axis adjustable for controller setup

For the controller setup the orientation of the axis can now be chosen out of the following two options using the parameter "Orientation" (MC_SETUP_CONTROLLER_PAR_REF):
− mcHORIZONTAL
− mcVERTICAL

ID#246320 : new function since V2.260

New FB MC_BR_AxisErrorCollector

This function block reports the following information either for one single axis or for all axes of the system.

− The output "Error" of at least one PLCopen FB is set to TRUE
− At least one axis error was reported
− At least one axis warning was reported
− A axis is in the axis state Errorstop

ID#246300 : new function since V2.260

New FB MC_BR_ReadAxisError

With this function block the information about axis errors can be determined similar to the FB MC_ReadAxisError. Additionally it offers the following functions.

− Acknowledge all queued errors automatically
− Output all additional information about the errors
− Itemize how many errors of a certain type (axis error, axis warning, function block error) are pending.

− Explicit configuration if the error text should be evaluated or not
− Complete configuration of the error text evaluation by inputs at the function block

ID#246295 : new function since V2.260

Error numbers (ErrorID) of function blocks are entered into the axis structure now

From now on all errors of PLCopen FBs are entered into the axis structure. These error numbers are displayed at the output "AxisErrorID" of the function block MC_ReadAxisError because of that. Furthermore the error text for the error numbers can be determined now. As additional information the type of the function block is output which reported the error.
Resetting the error with the input "Acknowledge" of the function block MC_ReadAxisError has no effect on the outputs "Error" and "ErrorID" of the error reporting FBs.

NC Software − ACP10_MC V2.250

ID# 400058633, 400053279 : solved problem, solved since V2.250

MC_Home: The axis position could be wrong after a repeated execution with the mode mcHOME_RESTORE_POS

If the function block MC_Home was called with "HomingMode" mcHOME_RESTORE_POS after a calibration (MC_Home with "HomingMode" other than mcHOME_RESTORE_POS), or if it was called several times with mcHOME_RESTORE_POS the axis position could be wrong, if the actual raw position of the encoder and the ratio between the NC manager cycle time and the POWERLINK cycle time was very big.

ID#400057857 : solved problem, solved since V2.250

MC_ReadAxisError, MC_BR_ReadDriveStatus: Problem after task download in "Copy mode"

After a task download in "Copy mode" the memory area of variables, whose addresses are applied to the function block inputs "DataAddress" or "AdrDriveStatus", can change. The FBs MC_ReadAxisError and MC_BR_ReadDriveStatus however, adopted the new addresses only after a new rising edge on the input "Enable". As a consequence the variables have not been fed by the function blocks after a task download.
From now on, the address is also utilized if the "Enable" input of the FB is already set.

ID#247080 : solved problem, solved since V2.250

MC_BR_RegMarkCalc001: Mode mcQUEUED did not work correctly, output values were not reset

1. When using the mode mcQUEUED, the values of the inputs "LengthError" and "PositionError" were not delayed by "ControllerParameters.ValuesForQueuing".
2. After the FB was deactivated by "Enable = FALSE", the values of some outputs remained set.

ID#400058685 : new function since V2.250

MC_Home: Further homing modes are allowed in axis state Disabled

The following homing modes are allowed also in axis state Disabled now:
− mcHOME_REF_PULSE
− mcHOME_DCM
− mcHOME_DCM_CORR

ID#244265 : new function since V2.250

MC_BR_SetupController: New setup modes available

The controller setup can now also be executed with the following modes:
− mcSPEED + mcUSE_FILTER_PAR
− mcISQ_F1_NOTCH + mcISQ_F2_NOTCH
− mcISQ_F1_NOTCH + mcISQ_F2_NOTCH + mcISQ_F3_NOTCH

ID#242762 : new function since V2.250

New FB MC_BR_CheckAutCompensation

With this FB the compensation parameters for an automat state can be checked for adherence of the limit values, and the limits of particular compensation parameters can be calculated respectively.

NC Software − ACP10_MC V2.241

ID#400054965 : solved problem, solved since V2.241

Deadlock after error at initialization (only in V2.200 − V2.240)

For some FBs an error during the automatic internal initialization led to setting the outputs "Error" and "ErrorID" for only one cycle, resetting the other outputs and not react on an activation or deactivation of their inputs "Execute" and "Enable" anymore. This situation could only be solved by restarting the PLC.

The following FBs were affected by this problem:
− MC_Power
− MC_ReadActualPosition
− MC_ReadActualVelocity
− MC_ReadActualTorque
− MC_ReadParameter
− MC_ReadBoolParameter
− MC_SetOverride
− MC_BR_InitModPos
− MC_BR_InitParSequ
− MC_BR_ReadDriveStatus

NC Software − ACP10_MC V2.240

ID#243490 : solved problem, solved since V2.240

MC_BR_RegMarkCapture001: Trigger search did not work.

If the function block MC_BR_RegMarkCapture001 was used for an axis with a PLCopen axis factor unequal to 1, the trigger search did not work, because the expected trigger position was shifted incorrectly.

ID#400054320 : solved problem, solved since V2.240

FB−Deadlock after execution of MC_Stop

Under the following circumstances it was possible that the FBs MC_WriteDigitalOutput, MC_BR_InitAutState and MC_BR_InitAutEvent got deadlocked, i.e. their "Busy" output was set but they did not execute their function:
− A movement was started by a FB.
− One of the function blocks mentioned above was activated.
− The transfer of the parameter list of the activated FB was aborted by MC_Stop

ID#400054339 : solved problem, solved since V2.240

MC_BR_MoveCyclicPosition, MC_BR_MoveCyclicVelocity and MC_GearIn reported the error 29207 erroneously

If one of the function blocks MC_BR_MoveCyclicPosition, MC_BR_MoveCyclicVelocity or MC_GearIn was activated while the FB MC_Halt was active, they reported error "29207: This movement type is currently not allowed" without cause. The same error was reported by the FBs MC_BR_MoveCyclicPosition and MC_BR_MoveCyclicVelocity if they were activated while a movement caused by MC_BR_EventMoveAbsolute, MC_BR_EventMoveAdditive or MC_BR_EventMoveVelocity was active.

ID#400053332 : solved problem, solved since V2.240

Prohibit one direction of movement

By setting the velocity limit for one direction to "0" (limit.parameter.v_pos, limit.parameter.v_neg) now movements into this direction can be prohibited. Till now, when using this setting, an error was reported, if a function block tried to start a movement into the allowed direction.

ID#241015 : solved problem, solved since V2.240

Axis state "Stopping" after "Errorstop" although MC_Stop reported "CommandAborted" (only in V2.230 − V2.232)

When the FBs MC_Reset and MC_Stop are activated while the state is "Errorstop", then MC_Stop sets the "CommandAborted" output at the end of the deceleration ramp, but the axis state changes to "Stopping".

ID#400051302 : solved problem, solved since V2.240

Input values of FBs were possibly not transferred correctly.

If the transfer of parameters of a FB was aborted by an error, it was possible, that a later called FB didn´t transfer its input parameters to the drive correctly. Only FBs with an active change control of parameters were affected by this problem.

ID#243140 : new function since V2.240

New FB MC_BR_ParTraceConfig

This FB makes it possible to save and load axis trace configurations to and from data objects respectively.

ID#243110 : new function since V2.240

MC_BR_ParTrace: New command mcSTART+mcSAVE

The new command mcSTART+mcSAVE makes it possible to start an axis trace and automatically save the recorded data into a data object.

ID#400054125 : new function since V2.240

MC_BR_BrakeOperation now can also be used in axis state Errorstop

With the function block MC_BR_BrakeOperation a holding brake can now also be operated in axis state Errorstop, if the controller is switched off. So far this was only possible in axis state Disabled.

ID#241495 : solved problem, solved since V2.240

MC_BR_RegMarkCapture001: "Valid" output set incorrectly in some cases

While using the mode "mcLENGTH_ONLY", if a valid trigger is detected after invalid trigger events ("MissedTriggers" > 0), then the "Valid" output is set even though no new values (e.g. "ActLength" or "LengthError") have been output. Now "Valid" is only set if 2 consecutive valid triggers are detected and new, usable values have been calculated.

ID#241140 : solved problem, solved since V2.240

MC_SETUP_OUTPUT_REF: DataObjectIdent with wrong data type.

The structure element "DataObjectIdent" of the data structure MC_SETUP_OUTPUT_REF was of data type USINT instead of UDINT until now.

The result was a wrong value shown on this output element, if the data object index exceeded 255.

The following FBs were affected by this problem:
− MC_BR_SetupController
− MC_BR_SetupInductionMotor
− MC_BR_SetupMotorPhasing
− MC_BR_SetupIsqRipple

ID#240695 : solved problem, solved since V2.240

MC_BR_RegMarkCapture001: Manual search not ended after a valid trigger was found

When the manual search detected a valid trigger, the internal mechanism wasn't reset from search mode to normal mode.
As a result, the expected trigger position was still incorrect by the amount "LengthChange", which could easily cause valid triggers to be missed because they are assumed to be outside of the window.

ID#240650 : solved problem, solved since V2.240

MC_BR_RegMarkCapture001: Outputs were not set correctly

If invalid trigger events ("MissedTriggers" > 0) are followed by valid triggers, the "MissedTriggers" output was set to 0, but all other outputs, including "Valid", "ValidTriggers", "LengthError" and "PositionError" were not set, incremented or assigned values, or were set one or several cycles delayed.

ID#400049291 : solved problem, solved since V2.240

MC_BR_Offset, MC_BR_Phasing: FBs could report the error 29217.

MC_BR_Offset and MC_BR_Phasing reported the error 29217: "Invalid input parameter" if a "MasterParID" was assigned and "MasterParIDMaxVelocity" was set to zero on one of the FBs mentioned below .
− MC_GearIn
− MC_GearInPos
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_BR_CamTransition

ID#400045757 : solved problem, solved since V2.240

MC_BR_Offset, MC_BR_Phasing: At reapeted activation it was possible that only the first shift was performed.

If after the first successfully performed shift, the inputs "Enable" and "InitData" of the FBs MC_BR_Offset or MC_BR_Phasing were reset in the same cycle and were also set in the same cycle at a new activation, no further shifting was possible.

NC Software − ACP10_MC V2.232

ID#400052807 : solved problem, solved since V2.232

The axis state was changed to Errorstop although no axis error was reported (only in V2.230 − V2.231)

1) In certain cases with cyclic position set values, the status bit12 (Stop after drive event active) was set without reaching the SW limits. Due to this problem, it could occur, that the axis changed its state to Errorstop, although no axis error was reported.

2) If the drive detected that the SW limits would be really exceeded, the status bit12 was set at the beginning of the stop ramp and the axis changed its state to Errorstop. If a movement stop (e.g. with MC_Stop, MC_Power, ...) was applied by the application program while the stop ramp was active, it could happen that the expected error (5003/5004: Positive/Negative SW limit reached) was not reported.

NC Software − ACP10_MC V2.230

ID#400049666 : new function since V2.230

MC_BR_MoveCyclicPosition: Ok to specify a position outside the period of a periodic axis

Previously, only a position within the range "0 < x < period" could be specified for a periodic axis using the function block MC_BR_MoveCyclicPosition. The FB will now also accept a position outside of this range for a periodic axis. The periodic position will continue to be calculated by the ACP10_MC library. Therefore, the periodic position will also be displayed on the FB MC_ReadActualPosition. The periodic position will also be valid when starting other movement FBs.
This update makes it possible to operate periodic ACP10_MC axes using ARNC0 rotary axes.

ID#239920 : solved problem, solved since V2.230

MC_BR_CamTransition: CamMode mcDISTANCE_BASED and MasterParID lead to error 29226

Parametrizing "CamMode = mcDISTANCE_BASED" and a MasterParID for MC_BR_CamTransition led to the error 29226: "Error on drive. Use MC_ReadAxisError for details".

ID#239281 : solved problem, solved since V2.230

MC_BR_VelocityControl does not revert changes, if not enough free cyclic write data available on drive

Once the function block reports error 29264: "Cyclic write data full" the axis behavior afterwards is different. Due to parameter download to the control loop via the function block. From now on the control loop will be changed afterwards, if cyclic write data have been initialized correctly.

ID#239180 : solved problem, solved since V2.230

The function blocks MC_BR_GetCamMasterPosition and MC_BR_GetCamSlavePosition could calculate a wrong output value.

After the following sequence it was possible that a wrong value was calculated by the function blocks MC_BR_GetCamMasterPosition and MC_BR_GetCamSlavePosition:
− The function block MC_BR_GetCamMasterPosition is called with a master axis with an axis factor unequal to 1 or MC_BR_GetCamSlavePosition is called with a slave axis with an axis factor unequal to 1.
− Reset of input "Execute".
− MC_BR_GetCamMasterPosition is called again without an assigned master axis or MC_BR_GetCamSlavePosition is called again without an assigned slave axis.

ID# 400036648, 400041830 : solved problem, solved since V2.230

An axis error during a movement not always led to the state Errorstop

An axis error during a movement did not lead to the state Errorstop as intended under the following circumstances:
− MC_Stop was called during the deceleration ramp
− MC_Power was disabled during the deceleration ramp
− All errors were acknowledged during the deceleration ramp

NC Software − ACP10_MC V2.220

ID#236980 : new function since V2.220

New FB MC_BR_SetupIsqRipple

MC_BR_SetupIsqRipple: Starts and stops the setup for the ISQ−Ripple compensation and saves the data determined during setup.

ID#235810 : new function since V2.220

New FB MC_BR_AutCommand

With this function block the following actions for the cam automat can be executed:
− start the automat
− stop the movement on the slave axis
− restart the slave axis after stop of the movement or abort of the movement after an axis error
− end the cam automat
− set the signals 1−4 of the cam automat
− reset the signals 1−4 of the cam automat
− transferring the parameter for the lock of the online parameter change or cam download

ID#400038858 : new function since V2.220

MC_BR_PowerMeter: The function block can now also be activated, if the controller is switched off.

The function block MC_BR_PowerMeter can also be activated now, if the controller of the power supply module is switched off.
With an active power supply module no valid power data can be determined in this case, so the output "Valid" is not set or it is reset if the controller is switched off while the power evaluation is active. As soon as the controller is active again, valid data are displayed on the outputs and "Valid" is set.
With the passive power supply module the determined and displayed values are always valid.

ID#400050162 : solved problem, solved since V2.220

MC_BR_PowerMeter returned no information at the output "PowerData" after a restart of the power supply module

If the function block MC_BR_PowerMeter was again called after the power supply module was restarted while the PLC was running, no information at the output "PowerData" was returned.

ID#237830 : solved problem, solved since V2.220

Function blocks with an "Execute" input did not report network failures (only in V2.200 − V2.21x)

In case of a network failure the outputs "Error" and "ErrorID" of function blocks with "Execute" inputs were not set for one task class cycle, if the input "Execute" was already reset.

ID#400050132 : solved problem, solved since V2.220

MC_BR_PowerMeter reported error 29235 for PPS

If MC_BR_PowerMeter was called on a passive power supply module, it reported the error 29235.

ID#400050042 : solved problem, solved since V2.220

Deadlock after reading or writing of a single ParIDs

A deadlock of function blocks for an axis could occur, if one of the following function blocks was called shortly after a MC_BR_TouchProbe, MC_CamIn or MC_GearInPos was activated.
− MC_BR_ReadParID
− MC_BR_WriteParID
− MC_BR_ReadParIDText
− MC_BR_WriteParIDText
− MC_BR_ReadAutPosition

Other FBs subsequently report the status, "Busy," when called.

ID#400049661 : solved problem, solved since V2.220

After a MC_BR_InitModPos FB was called, the FB MC_ReadActualPosition displayed a position greater than the axis period

After a non periodic axis was changed into a periodic axis with the FB MC_BR_InitModPos, a position greater than the axis period was provided by MC_ReadActualPosition. Each NC Manager cycle the position was compensated by one period. As a result it could take some time until the correct position was shown within the period.

ID#237090 : solved problem, solved since V2.220

MC_BR_CamTransition reported an error even if correct input values were used

The function block reported the error 29217: "Invalid input parameter" though correct input values were used, if "Master" and "Slave" were axes of the same channel (e.g. the virtual axis of a channel is "Master" and the real axis of the same channel is "Slave").

ID#400049106 : solved problem, solved since V2.220

Under certain circumstances the axis state never changed to "DiscreteMotion" (only in V2.000 − V2.21x)

With the following conditions the axis state did not become "DiscreteMotion":
− Cycle time of the task class in which the PLCopen FBs are called is greater than the cycle time of the NC Manager task class.
− The duration of the movement is shorter than the cycle time of the task class in which the PLCopen FBs are called.

This behaviour could lead to problems in application programs where changing the state in a state sequencer e.g. is depending on the axis state.

The following FBs were affected by this problem:
− MC_Halt
− MC_MoveAdditive
− MC_MoveAbsolute
− MC_BR_MoveAdditiveTriggStop
− MC_BR_MoveAbsoluteTriggStop
− MC_BR_EventMoveAdditive (only with "Mode = mcONCE")
− MC_BR_EventMoveAbsolute (only with "Mode = mcONCE")

NC Software − ACP10_MC V2.211

ID#400048772 : solved problem, solved since V2.211

Real and virtual axes on the same channel sometimes used SPT resources from the respective other axis

The following are a few examples of what could occur due to this problem:

1. When using the same MC_BR_EventMove FB type on real and virtual axes on the same channel, the last called FB used the same target position, distance and speed respectively as the first FB that was called.

2 . When using MC_BR_MoveCyclicVelocity FBs on real and virtual axes on the same channel, the speed of the last called FB was used for both axes.

3 . The phase shift and offset shift for an axis are unintentionally set to 0 when the following occurs:
− Coupling FBs used on the real and virtual axis of a channel.
− One or both of the axes also uses an MC_BR_Phasing or MC_BR_Offset
− The coupling is started for one axis

The following FBs were affected by this problem:
− MC_BR_EventMoveAbsolute
− MC_BR_EventMoveAdditive
− MC_BR_EventMoveVelocity
− MC_BR_MoveCyclicVelocity
− MC_GearIn
− MC_GearInPos
− MC_CamIn
− MC_BR_AutControl
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition

NC Software − ACP10_MC V2.210

ID#400047174 : new function since V2.210

MC_BR_TouchProbe now supports additional functions for trigger events

Positive edge and evaluation of the signal width using only "TriggerInput.MinWidth". The status is set and the window position is shifted after "TriggerInput.MinWidth".
Necessary parameter settings:
− TriggerInput.Edge = mcP_EDGE
− TriggerInput.MinWidth > 0
− TriggerInput.MaxWidth = 0

Time average (or latch average) value of positive and negative edge and evaluation of the signal width with "TriggerInput.MinWidth" and "TriggerInput.MaxWidth". Processing begins at negative edge.
Necessary parameter settings:
− TriggerInput.Edge = mcMIDDLE
− TriggerInput.MaxWidth > TriggerInput.MinWidth >= 0

ID#233645 : new function since V2.210

Determine exact cause of error for axes that can't be linked

If the master and slave axes specified on a link FB are not able to be linked, then the cause of error can be determined accurately now. In the past, the function block only registered the error 29200:
"The axis object is invalid" or 29298: "Error in network configuration".

Function block now outputs Error 29226: "Error on Drive", and the exact cause of error can be read as axis error using the MC_ReadAxisError function block.

This improvement has been made on the following FBs:
− MC_CamIn
− MC_GearIn
− MC_GearInPos
− MC_BR_InitMasterParIDTransfer
− MC_BR_InitAutPar
− MC_BR_InitAutData
− MC_BR_CamTransition
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_AutControl
− MC_BR_MoveCyclicVelocity
− MC_BR_MoveCyclicPosition

ID#233640 : new function since V2.210

Performance increase on inactive function blocks.

The call time for inactive function blocks has been minimized by optimizing the sequence in the FB.
It now takes up to 70% less time than before to call inactive function blocks (average 50% faster).

ID#232650 : new function since V2.210

New PLCopen parameter 1009: Automat positioning tolerance

With MC_MoveAbsolut, a position with the internal decimal places of the automat position can be approached via +mcAUTOMAT_POS in order to ensure a high−precision automat restart.
If the difference between the set position and the target position on a periodic axis is smaller than or equal to the parameter 1009, then the selected direction will be ignored and the target position will be approached by the shortest distance.

ID#235310 : solved problem, solved since V2.210

Input values of coupling FBs were applied wrongly

The following input values could be applied differing by 1 unit, particularly if they were negative (e.g. −1999 instead of −2000):
− FB MC_GearInPos: MasterSyncPosition and MasterStartDistance
− FB MC_BR_CamDwell: SlaveScaling
− FB MC_BR_AutoCamDwell: SlaveLength
− FB MC_BR_CamTransition: SlaveScaling

The following input values were not multiplied by the PLCopen axis factors:
− FB MC_BR_AutoCamDwell: SlaveLength and MasterLength

ID#234175 : solved problem, solved since V2.210

MC_BR_InitAutData used either no factors or partially used the wrong PLCopen axis factors

The parameter "MasterSpeedMax" was not multiplied by the PLCopen axis factor of the master axis if a master reference and no "MasterParID" was used.
The parameters "MasterStartInterval", "StartMaRelPos" and "MasterCompDistance" were mistakenly multiplied by the slave's PLCopen axis factor, instead of the master's, if a master reference and no "MasterParID" was used.

ID#234165 : solved problem, solved since V2.210

MC_BR_CamTransition could trigger division by ZERO

If the value "0" or a value smaller than 1/PLCopen_ModPos factor was specified on the "MasterInterval" input, then MC_BR_CamTransition caused a division by ZERO. Now when this occurs, error 29217 "Invalid input parameter" will be registered.

ID#233390 : solved problem, solved since V2.210

When a FB error occurred, the slave stayed coupled to the master, but its axis status was set to Standstill

Coupling function blocks that detected an error didn't stop the slave axis, but changed the axis state to Standstill.
Now the slave is stopped when an error occurs.

Affected FBs:
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_CamTransition
− MC_BR_AutControl (didn't change the axis status to Standstill)

ID#232660 : solved problem, solved since V2.210

MC_WriteParameter: SW end position deviates from specified value by +/− 1 unit

If the SW end positions are written with MC_WriteParameter, the effective internal values could deviate from the specified values by +/− 1 unit.

ID#232645 : solved problem, solved since V2.210

MC_MoveAbsolute: Direction + mcAUTOMAT_POS also works on non−periodic axis

The additive setting mcAUTOMAT_POS on the direction input of MC_MoveAbsolute now also works on non−periodic axes. The specified position plus the internal decimal places of the automat position is approached, which allows an automat restart to be performed with more precision.

ID# 400037129, 400038213 : solved problem, solved since V2.210

MC_Home: New homing mode mcHOME_AXIS_REF

With the new homing mode mcHOME_AXIS_REF all homing parameters in the axis structure including the position are used for homing. The input "Position" of MC_Home is not taken into account.

NC Software − ACP10_MC V2.200

ID#400039171 : new function since V2.200

Outputs were not set cyclically

With some function blocks, the outputs "Error" and "ErrorID" were not set cyclically and were able to be overwritten by the application program or in the watch window.

ID#400044390 : solved problem, solved since V2.200

MC_MoveVelocity: In rare cases "InVelocity" was not reported

In rare cases (e.g. for non−integral velocity values) it could occur that the FB MC_MoveVelocity did not set the exit "InVelocity", although the axis reached the target velocity.

ID#229990 : solved problem, solved since V2.200

Function blocks that require SPT FBs on the drive in order to function properly were possibly not able to create or access these resources

Under certain circumstances, some function blocks were not able to create or access the required SPT FB resources on the drive. This resulted in an error or incorrect behavior on the affected function blocks.

Affected function blocks:
− MC_BR_AutControl
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_BR_CamTransition
− MC_BR_EventMoveAbsolute
− MC_BR_EventMoveAdditive
− MC_BR_EventMoveVelocity
− MC_BR_HomeAcpEncoder
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity
− MC_BR_Offset
− MC_BR_Phasing
− MC_BR_PowerMeter
− MC_BR_RegMarkCapture001
− MC_BR_TouchProbe
− MC_BR_VelocityControl
− MC_CamIn
− MC_DigitalCamSwitch
− MC_GearIn
− MC_GearinPos
− MC_Phasing
− MC_TouchProbe

ID#229980 : solved problem, solved since V2.200

Incorrect output behavior upon network failure

If communication between the drive and controller was disrupted by a network failure, then the function blocks did not perform correctly.
The output "Error" was not set and the output "ErrorID" changed between the values "0" and "29265".
This affected all of the function blocks from the ACP10_MC library.

ID#400035116 : solved problem, solved since V2.200

New FB MC_BR_CyclicReadDataInfo

MC_BR_CyclicReadDataInfo: Provides administrative information about the cyclic telegrams from a drive

NC Software − ACP10_MC V2.191

ID#400044414 : solved problem, solved since V2.191

MC_BR_ReadAutPosition reports error 29226 in unfavorable circumstances

After a rising edge on the "Execute" input, the MC_BR_ReadAutPosition FB reports error 29226: "Error on drive. Use MC_ReadAxisError for details" if parameters are being transferred to or from the drive at the same moment.
This error was caused by the occurring axis error 32063: "Data address zero (set/read parameter via service interface)".

ID#400044704 : solved problem, solved since V2.191

MC_BR_VelocityControl: Values of inputs were not applied; Problem with NC−Test

− Now the values of the inputs "Acceleration" and "Deceleration" will be transferred to the drive.
− Now the movement which was started by the FB MC_BR_VelocityControl will not be aborted, if the NC Test for this axis is opened.

NC Software − ACP10_MC V2.190

ID#227315 : new function since V2.190

New FB MC_BR_VelocityControl

MC_BR_VelocityControl: Configures and starts a movement with cyclic velocity transfer, in which only the velocity and current controller of the drive are active.

ID#226950 : new function since V2.190

New FB MC_BR_CalcCamFromPoints

MC_BR_CalcCamFromPoints: Calculation of a polynomial cam profile from two node vectors.

ID#226935 : new function since V2.190

New FB MC_BR_CamTransition

MC_BR_CamTransition: Starts a cam profile coupling with optional entry and exit and optional transition between cam profiles. Specifying a time for the cam profile is possible.

ID#226845 : new function since V2.190

New FB MC_BR_SetupMotorPhasing

MC_BR_SetupMotorPhasing: Starts and stops the setup for phasing for an motor and saves the data determined during setup.

ID#400042928 : solved problem, solved since V2.190

MC_BR_MoveCyclicVelocity: The information of the input "Direction" was not used. (only in V2.170 − V2.180)

The direction of the movement of the axis was only depending on the sign of the value of the input "CyclicVelocity".

ID#400038891 : solved problem, solved since V2.190

MC_BR_RegMarkCapture mit Modus "+ mcINTERVAL_EVENT" not functioning correctly

Under the following conditions, the function block did not calculate the value of the output "ActPosition" correctly with the additional mode "+ mcINTERVAL_EVENT":
− All parameters required for the mode "+ mcINTERVAL_EVENT" were already set in the input structure "TriggerInput"
− The function block was activated without the additional mode "+ mcINTERVAL_EVENT"
− The input "InitData" was set after the function block was activated
− After the function block was deactivated, the mode was changed to "+ mcINTERVAL_EVENT" and then the function block was activated again

ID#400040234 : solved problem, solved since V2.190

An invalid axis reference could lead to a pagefault

The function block MC_BR_InitMasterParIDTransfer caused a pagefault, if the axes assigned to the inputs "Master" and "Slave" were not linkable.

A pagefault could also be caused by the following function blocks, if an invalid axis reference was assigned to the input "Axis" or "Slave" for one cycle:
− MC_BR_InitMasterParIDTransfer
− MC_ReadDigitalOutput
− MC_ReadDigitalInput
− MC_BR_AutControl
− MC_WriteParameter
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity

ID#400039347 : solved problem, solved since V2.190

It was possible that some function blocks were using the same send slot for real and virtual master

If ParIDs of the real and virtual axis of an ACOPOS communication channel were configured for sending via the network at the same time, the same send slot was used. This could happen if some of the following FBs were activated at the same time.

The following FBs were affected by this problem:
− MC_GearIn
− MC_GearInPos
− MC_CamIn
− MC_DigitalCamSwitch
− MC_BR_AutControl
− MC_BR_InitMasterParIDTransfer
− MC_BR_InitAutPar
− MC_BR_InitAutData
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_BR_RegMarkCapture001

ID#400038618 : solved problem, solved since V2.190

MC_BR_InitAxisSubjectPar: PLCopen parameters have not been refreshed

If the FB MC_BR_InitAxisSubjectPar was used to initialize changed limit values of an axis, the PLCopen parameters have not been refreshed.

NC Software − ACP10_MC V2.180

ID#224520 : new function since V2.180

Cyclic data to/from the drive via POWERLINK independent of the NC Manager task class

Previously, cyclic data via POWERLINK was always handled by the ACP10_MC library in the task class configured as "Task class for NC Manager task". From now on, the following settings can be used to change the task class in which the cyclic data should be handled.

Global settings for a POWERLINK interface in the ACP10 configuration:
− Task class for handling of cyclic data with PLCopen (only for SG4)

Local settings for an ACOPOS communication channel in the NC mapping record of a real or virtual axis in the "Additional Data" column with the following XML attribute:
− PLCopen_CyclicData_TaskClass = "<TaskClass_Number>" (TaskClass_Number: 0,1,2 or 3, 0: Use NC Manager task class)

Note:
The real and virtual axis with the same node number and the same channel number are operated using the same ACOPOS communication channel. The following error is output if different task classes are defined for the real and the virtual axis from the same communication channel:
− 32499: PLCopen_CyclicData_TaskClass: Values for real and virtual axis are not equal

ID#400039568 : solved problem, solved since V2.180

Deadlock after activation of a coupling of axes on a CAN bus (only in V2.170 − V2.172)

After the activation of the coupling between two axes on a CAN bus, the master axis could not be used anymore. Other FBs subsequently reported the status "Busy" when called.

The following FBs were concerned by this Problem:
− MC_GearIn
− MC_GearInPos
− MC_CamIn
− MC_DigitalCamSwitch
− MC_BR_AutControl
− MC_BR_InitMasterParIDTransfer
− MC_BR_InitAutPar
− MC_BR_InitAutData
− MC_BR_CamDwell
− MC_BR_AutoCamDwell

ID#400038674 : solved problem, solved since V2.180

MC_BR_AutControl always Busy

If MC_Stop is called for the slave axis shortly before MC_BR_AutControl is enabled, MC_BR_AutControl always shows that it is busy, but there is no error on the Error and ErrorID outputs. Resetting the Enable input and then setting it again takes MC_BR_AutControl out of the busy status.

ID#223630 : solved problem, solved since V2.180

MC_BR_GetErrorText: The error text was eventually not determined.

If the input "Execute" of the function block MC_BR_GetErrorText was set for only a few cycles, it was possible that the error text was not determined.

ID#400037909 : solved problem, solved since V2.180

MC_BR_ReadActualPosition: After homing the new axis position was displayed too late.

After homing, the function block MC_ReadActualPosition displayed the new position of an axis one task cycle after the output "Valid" was set.

ID#400036085 : solved problem, solved since V2.180

The axis state "StandStill" was activated to early

The axis state "StandStill" was already activated after the halt command was successfully sent to the drive and not when the axis stand still by the following function blocks:
− MC_BR_AutControl
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_BR_MoveCyclicPosition
− MC_BR_MoveCyclicVelocity

NC Software − ACP10_MC V2.172

ID#400037720 : solved problem, solved since V2.172

Until now, MC_BR_AutControl checked the controller status and reference status when setting signals and changing the ParLock input

The function block MC_BR_AutControl checked the controller status and the reference status when setting signals and changing the ParLock input. This caused the error number 29206 "The controller is off" or 29205 "Axis not referenced" to be output. Starting in V2.172, these two states will only be checked with movement commands (Start, Stop, Restart).

ID#400037644 : solved problem, solved since V2.172

MC_BR_AutControl sometimes reports error 29206 when Enable=TRUE

If the controller was switched off when MC_BR_AutControl was active (MC_Power or axis error), one or more signal entries were set from 1 to 0 and MC_BR_AutControl was disabled, then MC_BR_AutControl rported error 29206 "The controller is off" right after setting the "Enable" input again and as soon as an action was performed (Start, Stop, Restart, Signal1−4, ParLock).

ID#221630 : solved problem, solved since V2.172

Linked movement does not start if master position is close to DINT overflow

If the internal position of a periodic master axis was close to DINT overflow (less than 2 periods), then movements linked to this master axis would sometimes not start.

Affected FBs:
− MC_CamIn
− MC_BR_InitAutPar
− MC_BR_InitAutData
− MC_BR_AutControl
− MC_BR_CamDwell
− MC_BR_AutoCamDwell

ID#400033458 : solved problem, solved since V2.172

After DINT overflow of the master position, linked movements were no longer able to be started

Linked movements were no longer able to be started after (internal) DINT overflow of the master position of a periodic master axis. The link would only begin after the master axis (internal) had reached a positive DINT position again. The link is now started at the next possible position within the current period or in the next period if the master position is already greater than that of the start position.

Affected FBs:
− MC_BR_InitAutData (started by MC_BR_AutControl)
− MC_BR_CamDwell
− MC_BR_AutoCamDwell
− MC_DigitalCamSwitch (switching ponints can be shifted)

ID#400032353 : solved problem, solved since V2.172

Input values were not rounded correctly

Some of the input values of the following function blocks were simply cut off and not rounded correctly before they were transferred to the drive:
− MC_BR_AutControl
− MC_BR_AutoCamDwell
− MC_BR_CamDwell
− MC_CamIn
− MC_BR_InitAutData
− MC_BR_InitAutState
− MC_BR_InitAutPar

NC Software − ACP10_MC V2.171

ID#400034856 : solved problem, solved since V2.171

MC_TouchProbe reports error 29230 in unfavorable circumstances (only in V2.020 − V2.170)

After a rising edge on the "Execute" input, the MC_TouchProbe FB reports error 29230: "Internal error: Error at parameter list transfer" if parameters are being transferred to or from the drive at the same time.

ID#220315 : solved problem, solved since V2.171

MC_BR_MoveCyclicVelocity, MC_BR_MoveCyclicPosition: A page fault occurs if the cycle time of the NC manager task class is different than the cycle time of the POWERLINK network (only in V2.170)

A page fault occurs when there are different cycle times for the NC manager task class and the POWERLINK network to which the axes operated by the FBs are connected.

ID#220310 : solved problem, solved since V2.171

MC_BR_MoveCyclicVelocity: Commanded speed might not have been reached (only in V2.170)

The function for assigning cyclic velocity limits the velocity to the value of the basis movement parameter. This could cause a problem if a basis movement function block with a small value on the "Velocity" input was called before MC_BR_MoveCyclicVelocity. Now the FB always initializes the basis movement parameters with the limit values configured for the axis.

ID#400035270 : solved problem, solved since V2.171

MC_ReadAxisError: Error 29260 reported.

When there is no error text module specified on the "DataObjectName" input, the FB determines the error texts using the error text module that is specified in the init parameter module. This causes the FB to reports the error 29260: "No data object name specified," if it is called

immediately after starting the controller with "Enable = 1".

NC Software − ACP10_MC V2.170

ID#218385 : new function since V2.170

New FB MC_BR_MoveCyclicVelocity

Configures and starts a movement with cyclic velocity transfer

ID#218380 : new function since V2.170

New FB MC_BR_PowerMeter

Starts and stops the measurement of power data of an ACOPOSmulti power supply module and outputs the evaluated values

ID#400031217 : new function since V2.170

MC_BR_CyclicRead: New mode mcEVERY_RECORD

With the new mode mcEVERY_RECORD, the ParID will be configured in each cyclic telegram from the drive. This results in a constant refresh rate for the ParID value. However, the maximum number of ParIDs that can be read cyclically from a drive is reduced.

ID# 400030208, 400031383 : new function since V2.170

New FBs MC_BR_ReadParIDText, MC_BR_WriteParIDText

MC_BR_ReadParIDText: The value of a ParID is read from the drive and output as text
MC_BR_WriteParIDText: The value for a ParID is passed on to the FB as text, converted to the correct data type and transferred to the drive

ID#400032741 : solved problem, solved since V2.170

Wrong axis state after error during a homing procedure

If an axis error occurs that causes the controller to be switched off immediately during an active homing procedure, then the axis mistakenly changes to the state Disabled. Now when this occurs, the axis will change to the state Errorstop as intended by the PLCopen standard.

NC Software − ARNC0 Wichtige Information

ID#457530 : Important Information

ARNC0 versions V2.51.3 up to V2.99.9

POWERLINK or SDC interfaces defined in the ARNC0 configuration are not longer supported from ARNC0 V3.00.0 or higher.

ARNC0 V2.51.3 to V2.99.9 versions contain extensions / bug fixes based on ARNC0 V2.51.2.
In ARNC0 V2.51.3 to V2.99.9 implemented extensions / bug fixes do not apply to versions from V3.00.0.

ID#451410 : Important Information

Interfaces not longer supported by ARNC0

With ARNC0 V3.10.0 or higher, ACP10 and SDC axes can be used only with PLCopen (set "Use PLCopen" in the Wizard to insert axes).

If POWERLINK or SDC interface are defined in the ARNC0 configuration, the ARNC0 startup will be aborted (entry in the logger).
ARNC0 supports only virtual interfaces (PV name="VIRTUAL" Mode="0").

ID#450105 : Important Information

Minimum Requirements for ARNC0 V3.10.0

Starting with ARNC0 V3.10.0 your system has to meet the following requirements:

− Automation Studio 3.0.90.32 up to 3.1.0.0 or
− Automation Studio 4.1.7.61 or higher

− Automation Runtime V3.00 or higher
− Automation Runtime B3.01 or higher if ACP10 axes via PLCopen IF are used

ID#407820 : Important Information

Included drive operating systems

The ARNC0 requires the Library ACP10man. Starting with ARNC0 V2.45.0 versions of both libraries, except for the last digit of the version number, must be identical.
The drive operating system with the version of Library ACP10man is used.

ID#312242 : Important Information

From ARNC0 V1.37.0, drives with CAN interface will not be supported anymore.

ID#283305 : Important Information

Minimum AR version for PLCopen IF in ARNC0

ACP10 axes accessing via PLCopen are supported in ARNC0 by AR version B3.01 or higher.

ID#257892 : Important Information

NC Manager task−class Stack Usage

When running in Automation Runtime B3.01 (or higher) ARNC0 versions 1.05.2 and higher utilise a cyclic task class (TC#1 or starting with V1.25.1 the NC Manager task−class, respectively) for calculating axis set positions in real−time. Since ARNC0 uses the stack memory of that task−class, it can be necessary to increase the task−class stack size.

Especially when programming multiple coordinate system transformations (e.g. frame operations, G92, G192, G292, G53−G59, or G159) in a row −− i.e. without any movement blocks in between −− the default task−class stack size might be too small. Each coordinate system transformation consumes approximately 800 Bytes of stack memory and if they are programmed in a row the stack consumption is approximately 800*n Bytes (n being the number of subsequent coordinate system transformations).

ID#239197 : Important Information

Minimum ARNC0 version for AR A3.08 or higher

For AR versions E3.08 or higher only the ARNC0 versions V1.252 or higher can be used.
If an ARNC0 version before V1.252 is used with AR versions E3.08 or higher , then the ARNC0 initialization will be aborted (Error description in AR Logger : "NC Manager: NC Manager module not found", ASCII data: "arnc0man.br not found!")

For AR versions A3.08 or higher only the ARNC0 versions V1.220 or higher can be used.

ID#234012 : Important Information

Minimum Requirements for ARNC0 V1.20.0

Starting with ARNC0 V1.20.0 your system has to meet the following requirements:
− Automation Studio 3.0.80.25 or higher
− Automation Runtime V3.00 or higher

ID#206552 : Important Information

Minimum Requirements for ARNC0 V1.00.0

Starting with ARNC0 V1.00.0 your system has to meet the following requirements:
− Automation Studio 3.0.80 or higher
− Automation Runtime O2.95 or higher

ID#102522 : Important Information

External encoder operation

An external encoder is operated correctly only on slot 3 of the ACOPOS.

NC Software − ARNC0 V1.421

ID#363390 : solved problem, solved since V1.421

Page fault if number of elements in block buffer for back tracing CNC−path configured low

Page fault occurred if number of elements in block buffer was configured lesser than default and first command in NC program was non−movement path command (M−function, path−synchronous assignment, ...).

ID#361972 : solved problem, solved since V1.421

Page fault if G222 is active

A page fault may occur, if G222 is active and the desired remaining distance is not sufficient (warning 7177 arises).

ID#400123054 : solved problem, solved since V1.421

Limited range of automatic tangential axis offset

Range of automatic tangential axis offset was only 0 − 360.

ID#400060837 : solved problem, solved since V1.421

Page fault on ARNC0 axes

In very rare cases, a page fault may occur when an axis movement is aborted or the controller is switched on. This affects only ARNC0 axes.

ID#355955 : solved problem, solved since V1.421

Declaration of dynamic PVs

1. Error has been fixed in declaration of dynamic PVs in IEC−ST program.

2. Declaration of dynamic PVs is supported in Interpreter configuration file "gmcipvar" by specifying Ref="Yes"

Syntax:

<PV Alias="alias_name" Type="type_name" Ref="Yes">task_name:pv_name</PV>

ID#357750 : new function since V1.421

Inline IF statement support

Syntax of IF statement was extended, inline IF statement is newly supported.
This extension is valid for G−Code and Alternative language.

Syntax:
$IF <condition> [$THEN] [$IF <condition>...] <commands>

Example:
$IF R1==2 $THEN G0 X10
is equivalent to:
$IF R1==2 (If the value from R1 is equal to 2,)
G01 X10 (the X axis is moved to position 10)
$ENDIF

ID#363512 : Information valid since V1.421

Included drive operating systems

Library Acp10man with version 2.42.0 to 2.42.9 required.

The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.420

ID#356010 : solved problem, solved since V1.420

ST Motion Extension − wrong scope for default values and temporary variables

Default values and temporary variables was shared among CNC channels.

ID#355825 : solved problem, solved since V1.420

Use of only fractional part of number for feedrate without space

It was not possible to use a literal of fraction type after the F literal (for feedrate) without a space. (eg: F.1)

ID#400115995 : solved problem, solved since V1.420

G102 with target point in joint space

If full transformation is active in CNC channel, then target point of generally oriented circle (G102) can be defined in joint space.

ID#350565 : solved problem, solved since V1.420

Limited range of program number

Range of program number (nr_ncprog) was only 2^31−1 instead of 2^32−1.

ID#358000 : new function since V1.420

Extension of workspace monitoring

Main working area can be defined as a cylinder inscribed into the cuboid (base of the cylinder in xy rectangle of the cuboid, centralized in it, and with maximal possible radius and height).

Links of zero length are not considered in self−collision detection. Two links are controlled for a collision only if there is at least one nonzero link between them, independently from their defined diameters (see ARM_DIAMETER, G320.4).

Wire−frame model of the robot can consist of more 3D points now (24 instead of 10 points). Therefore, e.g. wire−frame model of tripod (type B, TRF_DATA13_typ) from transformation library V>=1.23.0 can be used with ARNC0 V>=1.42.0.

ID#354695 : new function since V1.420

New option for parser

A new parser option 'AllowConditionsWithAssignEq' was added to allow or deny the use of "assign to" inside a condition with meaning of "equal to". Default: denied.

ID#354575 : new function since V1.420

SET/GET methods for controlling CNC parameter access

It is possible to define get/set methods for controlling CNC parameter access.

ID#400119956 : new function since V1.420

New system variable $SIM_S_NCPROG

The system variable $SIM_S_NCPROG provide an access to current path position during run in simulation mode (ncSIMULATION, ncSWITCH_ON).

ID#349230 : new function since V1.420

Starting IEC−ST CNC programs from data objects

To start a CNC program in IEC−ST syntax the program name must ends with '_iec' sufix.

ID#356827 : new function since V1.420

Optional stop mode (stop at M01) can be switched on or off even if a CNC program is active.

ID#356167 : new function since V1.420

Skip function operating mode can be switched on or off even during active CNC program.

ID#350397 : new function since V1.420

G181/G182: Back Line

The "back−line" function allows an easy way to program linear−linear or circular−linear block combinations. The endpoint is programmed and the intersection point will be automatically calculated.

ID#400118434 : new function since V1.420

ARNC0 error text: Number of additional error text for all errors limited to maximum 3

ID#356162 : Information valid since V1.420

Included drive operating systems

Library Acp10man with version 2.42.0 to 2.42.9 required.

The drive operating system with the same version as Acp10man is used.

ID#353557 : solved problem, solved since V1.420

G211 (blended move mode): Path speed too high

Entrance speed at first block after G211 activation or after a stand still may be too high.

ID#400118142 : solved problem, solved since V1.420

Blended move mode (G211) is not taken into consideration for run time calculation in CNC simulation mode.

NC Software − ARNC0 V1.412

ID#356247 : Information valid since V1.412

Included drive operating systems

Library Acp10man with version 2.41.0 to 2.41.9 required.

The drive operating system with the same version as Acp10man is used.

ID#356337 : solved problem, solved since V1.412

Error 1114 and 1120 may occur sporadically.

ID#356237 : solved problem, solved since V1.412

Page Fault in CNC simualtion mode (only V1.41.0 and V1.41.1)

Page fault at program start may occur if CNC simulation mode is active

NC Software − ARNC0 V1.411

ID#356157 : Information valid since V1.411

Included drive operating systems

Library Acp10man with version 2.41.0 to 2.41.9 required.

The drive operating system with the same version as Acp10man is used.

ID#400120757 : solved problem, solved since V1.411

"NC SW INIT aborted" by ARNC0MAN because of "NC object already in NC mapping table" (only in V1.370 − V1.410)

Under the following conditions it could happen, that the startup of ARNC0MAN was falsely aborted with the logger errors "NC SW INIT aborted" and "NC object already in NC mapping table":
− Two NC objects were defined with the same name length
− These NC objects have the same NC object type
− These NC objects have the same channel number
− These NC objects belong to an NC module with the same node number

− These NC objects belong to the same network interface type (e.g. ncPOWERLINK_IF, ncVIRTUAL_IF)
− These NC objects do not belong to the same network interface

With these logger errors the startup should only then be aborted, if the NC objects belong to the same network interface, and the following parameters are also equal:
− NC object type
− Channel number
− Node number

NC Software − ARNC0 V1.410

ID#345990 : solved problem, solved since V1.410

Syntax error in macro expansion

If a macro expression was placed behind a G−Code on the same line (in the same NC block), a syntax error occurred.

ID#349490 : new function since V1.410

ST Motion Extensions − TRF_LIB V2.00.2 and higher supported

ID#347635 : new function since V1.410

Workspace monitoring without self−collision detection

Workspace monitoring can be activated without self−collision detection (modifier SELF_COLLISION_OFF of WS_CTRL_ON).

ID#346725 : new function since V1.410

Suppress path single step halt on current NC block

New command NOHALT was introduced to suppress path single step for current NC block.
Syntax:
[NOHALT] [N<number>] [<NC Commands>]
Description:
− NOHALT suppresses halting on the NC block where was programmed
− NOHALT takes effect only in ncSTANDARD + ncSBL_CONTROL and ncBLOCKNUMBER + ncSBL_CONTROL modes
− NOHALT command is valid only on the same NC block where was programmed

ID#346240 : new function since V1.410

G102 with rotation angle

G102 can be programmed with rotation angle of the circle. If the angle is defined, the programmed end point and the circle point are used for a determination of the circle (its plane and orientation) and the new end point is then computed out of the programmed rotation angle. If angle is greater than 360 degrees, more than one full rotation is done.

ID#347237 : new function since V1.410

G65: CDC activation and deactvation with auxiliary line and circle

G65 provides an easy CDC activation and deactivation on inner corners.

ID#400115203 : new function since V1.410

New system variable $V_PATH_MODE

The system variable $ V_PATH_MODE allows to program in the CNC program independently for each block the mode for calculation of the path feed (ncCNC or ncCNC+ncLINEAR).

ID#340820 : new function since V1.410

Programmed target position shift for linear blocks (G65)

The command G65 allows to shift the target position of linear blocks in the CNC program.

ID#349957 : Information valid since V1.410

Included drive operating systems

Library Acp10man with version 2.41.0 to 2.41.9 required.

The drive operating system with the same version as Acp10man is used.

ID#349627 : solved problem, solved since V1.410

Error 7742 (ACP10_MC FB error or aborted) splitted

If an error message contains more than three additional information, the determination the error text in the application task provides the message "buffer too small for all text" instead of the error text output..
For this reason, error 7742 (ACP10_MC FB error or aborted) with four additional information is splitted:
− Error 7742 ("ACP10_MC FB Error") if a FUB error arises
− Error 7746 ("ACP10_MC FB aborted by an other command") if a FUB execution will be aborted by a command

ID#400117553 : solved problem, solved since V1.410

Negative path velocity if short path sections are skipped over.

If path sections are skipped over when traversing a path section transition at high velocity, numeric effects can results in a negative path velocity.
The path velocity is normally limited in the dynamic calculator to the point where at least one scan is included. However, there are cases in which movement is still faster (e.g. v_jump>0) and short path sections may be skipped over.

ID#400114300 : solved problem, solved since V1.410

ARNC0: 1115: "Error at writing prior command

When writing prior commands (i.e. commands which are also allowed during active CNC program, such as abortingl a CNC program), it may happen that error 1115: "Error at writing prior command" occurs. Additionally error 1120 "Error with command distribution" may occur.

NC Software − ARNC0 V1.401

ID#343952 : solved problem, solved since V1.401

Not smooth speed profile in G126 spline

If there is a stop directly after G126 spline the speed can unexpectedly decrease. This can happen when programming G126 0 together with a movement and the whole movement is consumed with that spline. Decreasing of a speed is eliminated if EXTENDED_ROUNDING is used before an activation of G126.

ID#342035 : solved problem, solved since V1.401

Multiplied coupling coefficients

If a coupling on axes is defined (TRF_LIB 2.xx), then unexpected offsets could occur on axes within a start of NC program.

ID#344230 : new function since V1.401

ST Motion Extensions − position latch supported

MoveLSearch command latches positions after trigger event during linear movement.

ID#345520 : Information valid since V1.401

Included drive operating systems

Library Acp10man with version 2.40.0 to 2.40.9 required.

The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.400

ID#336965 : solved problem, solved since V1.400

Out−of−Memory when calling user−defined G−function with many arguments

Loading NC program containing call of user−defined G−function with many arguments (problem was occurring from 16 up) caused following two errors:
15245: Out of Memory
15649: Internal Error − AIL Generator line opcode buffer full

ID#336515 : solved problem, solved since V1.400

Unstable behaviour of NC program related to end of file

Program run was unstable (occasional pagefault or $GOTO was misbehaving) if the program's source code was ended with an empty line just after every 100th line.

ID#336845 : new function since V1.400

ST Motion Extensions − Strong type check for motion command arguments

Data type of motion command argument is now checked when NC program is being loaded, not when NC program is running.

ID#335820 : new function since V1.400

ST Motion Extensions − Motion packet log supported

ID#335715 : new function since V1.400

ST Motion Extensions − Interface change for MXJointToPointEx and MXPointToJointEx

Data type of conversion function arguments for reference values were changed.

ID#333707 : new function since V1.400

Setup for induction and synchronous motors: New optional parameters

The below listed new parameters are offered in following sub structures:
setup.motor_induction.parameter.optional
setup.motor_synchron.parameter.optional

phase: Motor phase (1,2,3)
invcl_a1: Inverter characteristic: Gain factor
invcl_a2: Inverter characteristic: Exponent [1/A]

ID#333702 : new function since V1.400

Setup for controller: New parameter "kv_percent"

The Autotuning function first determines the basic values for the kv parameters of speed and position controller. The percentage defined by "kv_percent" (50..150%) is then multiplied to these values in order to calculate the final controller parameters.

"kv_percent=0" corresponds to 100%.

A value less than 100% increases the robustness of the controller with regard to parameter variations on the machine.

ID#333745 : new function since V1.400

New mode to allow/suppress path single step mode in CNC program

New mode for path single step mode: ncSTANDARD+ncSBL_CONTROL and ncBLOCKNUMBER+ncSBL_CONTROL.
The commands SBLOF_PATH(G720)/SBLON_PATH(G721) allow to define sections in the CNC program where path single step mode is suppressed.

ID#400052099 : new function since V1.400

ACP10 axes can be used for G107

Both ACP10 axes and ARNC0 axes can be used as external axis oject for axis limit switch (G107) in the CNC program. If ACP10 axes are used, the parameter "limits.paramater.sw_end_enable" is not available.

ID#340790 : Information valid since V1.400

Included drive operating systems

Library Acp10man with version 2.40.0 to 2.40.9 required.

The drive operating system with the same version as Acp10man is used.

ID#400106846 : solved problem, solved since V1.400

Path speed to high on circular blocks

Due to an error in the dynamics calculation, it could happen that circle blocks were traveled too fast. At block transitions, the path speed was reduced to the correct value.

NC Software − ARNC0 V1.392

ID#400109861 : solved problem, solved since V1.392

Spindle slope compensation ncCYCLIC caused cyclic time violation

Switching the controller off can cause cyclic time violation while spindle slope compensation ncCYCLIC is on.

ID#339575 : Information valid since V1.392

Included drive operating systems

Library Acp10man with version 2.39.0 to 2.39.9 required.

The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.391

ID#336100 : new function since V1.391

Non−movements in the middle of G126 spline

If G170 is programmed between two movements inside a range of active G126 area, and if there are also non−movements programmed between those two movements, then those non−movements would be executed in the middle of the rounding spline by default. If G170 is equipped with a modifier FUNC_BEFORE_ROUNDING (non−modal modifier), then those non−movements are executed before the spline.

ID#337502 : Information valid since V1.391

Included drive operating systems

Library Acp10man with version 2.39.0 to 2.39.9 required.

The drive operating system with the same version as Acp10man is used.

ID#400109709 : solved problem, solved since V1.391

Unexpexted movement if G217/G218/G219 (axis mapping) is used.

There is an unexpected movement if axis mapping (G217/G218/G219) is used more than once.

NC Software − ARNC0 V1.390

ID#334910 : solved problem, solved since V1.390

ST Motion Extensions − new features

− new command SetM introduced for setting M function(s)
− added parameter Pth for MoveA and MoveC commands
− new structure element RotAxis in MXPointType
− support of 5−axis robots with automatic tangential axis on input of inverse kinematic transformation

ID#334905 : solved problem, solved since V1.390

ST Motion Extensions − cumulative fix

− JointToPoint ended with error for several mechanics (mechanics with no modes)
− PointToJoint always returned joints closest to zero
− PointToJoint and JointToPoint read information from CNC channel without synchronization
− base frame entirely ignored for MoveJ command
− base frame axes entirely ignored for MoveA command

ID#330080 : solved problem, solved since V1.390

Path synchronous jobs in simulation mode

Simulation run of programs containing path−synchronous operations: Jobs (path−synchronous variable assignment, function calls) can be terminated with error 15798: "Insufficient Path Synch jobs configured − all jobs active in block_buffer ".

ID#400075752 : solved problem, solved since V1.390

NC progam start mode ncFILE_XL+ncBLOCKMONITOR not working in simulation mode

Run of NC program started in ncFILE_XL+ncBLOCKMONITOR mode was terminated with error 15245: "Out of Memory"

ID#333650 : new function since V1.390

A meaning of orientation in path axes for user mechanical systems

Fourth, fifth and sixth path axes of the user mechanical system can be combined to form an orientation of the robot. Then G−codes dealing with orientation (G818, G819, G395−G399, etc.) behave the same as it was standard 6ax robot. To enable that, the mechanical description (TRF_DATA00_typ::_mech_ place holder) must start with two special UDINT values. The first one is the accessing code 81881906 (which evokes that G818 and G819 behave like for 6ax robot). The second UDINT in TRF_DATA00_typ::_mech_ is the angles' type which is used to compose 4th, 5th and 6th path axes into the rotation matrix (or vice versa, to decompose the matrix into proper Cardan/Euler angles).

ID#332750 : new function since V1.390

Segmentation in path planner for G102

Segmentation in path planner (SEG=<n>) was extended from lines to the circle interpolation in general orientation (G102). If such a circle is programmed with its target position in path axes, then the segmentation considers the real circular path, and not only a connection between its start and end point. Joint coordinates for the target position of the circle are correct then, and e.g. a point to point movement can follow.

ID#332060 : new function since V1.390

Start NC program with specified subprogram call sequence

When starting NC program by NC Action ncPROGRAM, ncSTART, the sequence of NC−block/line numbers can be specified in name of main program (move.ncprogram.name). This sequence (up to last element) then specifies position of subprogram which should be entered when NC program is started.
Syntax:
<program_name>[:{:N<number>|:<number>}...]

ID#331235 : new function since V1.390

TRF_LIB 2.xx supported in ARNC0

TRF_LIB versions 2.xx can now be used together with ARNC0. Older transformation library (versions 1.xx) can be used without any change as well.

ID#330495 : new function since V1.390

G153 in Workspace monitoring

G153 (Position coordinates in the machine coordinate system) can be used on NC blocks with definitions of protected areas (PROTBLOCK_DEF and PROTHSPACE_DEF) as well as on NC blocks with a definition of workspace boundaries (WS_MAIN_DEF). G153 is not propagated to the next NC blocks.

ID#400109816 : Information valid since V1.390

DPR−Trace: At the command "55 Initialize axis settings (1)" random values are displayed for rot_period and rot_offset

ID#333142 : Information valid since V1.390

Included drive operating systems

Library Acp10man with version 2.39.0 to 2.39.9 required.

The drive operating system with the same version as Acp10man is used.

ID#400109496 : solved problem, solved since V1.390

Unexpected movement at CDC activation

At CDC activation with G137 in areas with short blocks, it is possible that a contour violation will not be detected. In this case with active G38, the CNC program will not be aborted, with active G39 an unexpected long movement will be travelled.

ID#333477 : solved problem, solved since V1.390

CDC: Unexpected movement on inner corners if tool radius will be changed online.

If CDC is active and the tool radius will be changed ($RAD), it is possible that at inner corners a contour violation will not be detected. In this case, with active G38, the CNC program will not be aborted, with active G39 an unexpected long movement will be travelled.

ID#331837 : solved problem, solved since V1.390

Automatic deactivation of jolt filter on drive for CNC movements

An axis jolt filter can be defined on both the ARNC0 and the drive. The dynamic calculation takes in consideration only the axis jolt filter defined in ARNC0. With the element <cnc_obj>.axis.axis[].drive_axfilter the user can choice if the filter on the drive is automatically disabled for CNC movements. By default both jolt filter are active during CNC movements.

ID#330762 : solved problem, solved since V1.390

Block transitions not rounded even though G126 is active

With active G126, it is possible that block transitions will not be rounded. Conditions: "decoder.v_path_mode = ncSTANDARD" and axes of type ncLINEAR are involved in the movement.
Whether a transition will be rounded depends on how much the linear axes are involved in the path speed.

NC Software − ARNC0 V1.381

ID#400078325 : new function since V1.381

ARNC0 axes: An additive element for cam coupling will be immediately taken in consideration.

ARNC0 axes: With ncACTION(ncCAM_PROF, ncSET) the additive element will be taken in consideration immediately. The return value of the ncACTION is either ncOK or an error number (but never ncACTIVE).

ID#332752 : Information valid since V1.381

Included drive operating systems

Library Acp10man with version 2.38.0 to 2.38.9 required.

The drive operating system with the same version as Acp10man is used.

ID#333007 : solved problem, solved since V1.381

NC manager error (40xxx) during PLC startup could cause a page fault (only in V1.370 − V1.380)

ID#332937 : solved problem, solved since V1.381

Deadlock after aborting a CNC program

A deadlock can occur if a CNC program will be aborted immediately after start and the system load on target is very high.

ID#400103374 : solved problem, solved since V1.381

Sporadic page fault if controller will be switched on

If the controller will be switched on after a movement abort (e.g.; basic movement, CNC program), in very rare cases a page fault can occur.

NC Software − ARNC0 V1.380

ID#324175 : solved problem, solved since V1.380

Interpreter axes system variable not updated

Values of Interpreter axes system variables as $MA_POS_LIMIT_PLUS (pos_sw_end) are not updated if its value is changed (initial value from system start−up remains). The error regards only axes defined in a ACP10 mapping table with CNC_Enabled="1".

ID#400102811 : solved problem, solved since V1.380

NC action ncPROGRAM, ncLOAD was not properly refused in forbidden states

ID#400053378 : solved problem, solved since V1.380

Wrong determination of restart position after restart

After restarting an NC program from positions where the interpreter execution is stopped (like G170 or synchronous M−function followed by G172) the recording of any value to the restart buffer was turned off even if the restart is switched on.. In case of restarting the NC program from a position behind the previous restart point the live instead of recorded values were used for determining the restart position.

ID#322580 : new function since V1.380

Motion Extensions of IEC−ST Interpreter

New system of motion commands, conversion functions and data structures has been designed for controlling any kind of robots or CNC systems. Motion Extensions are activated by inserting new arnc0mx library to Automation Studio project. The ARNC0 will automatically search for the Motion Extensions and then adopt them to its instruction set.
Note: Motion Extensions require presence of TRF_LIB from version V1.16.0 in Automation Studio project and Automation Runtime from version V3.08.

ID#322575 : new function since V1.380

IEC−ST supported in the GMC interpreter

The GMC interpreter has been extended to offer possibility to process IEC−ST files. The GMC interpreter supports the syntax used by the Automation Studio IEC−ST compiler, plus extensions related to motion programming (Motion Extensions) and memory organization between CNC channels (e.g. scope definition of variables used in the CNC system).
Note: While IEC−ST is fully supported in ARNC0 from V1.38.0, the IEC−ST Motion Extensions require presence of arnc0mx library in Automation Studio project.

ID#325035 : new function since V1.380

Parameter FORCE_FLUSH for NC_BLOCK_SKIP_ON

If full kinematic transformations are switched on, if NC_BLOCK_SKIP_ON is active and equipped with a parameter FORCE_FLUSH, and if a call of the transformation (direct or inverse one) is not successful in path planner, then G171 is generated automatically (and the corresponding movement NC block is skipped as in a case of NC_BLOCK_SKIP_ON without FORCE_FLUSH).

ID#320565 : new function since V1.380

Long name for CNC program

The allowed length of the name of CNC programs and CNC ini programs was increased (99 significant characters + string terminator).

ID#329560 : Information valid since V1.380

Included drive operating systems

Library Acp10man with version 2.38.0 to 2.38.9 required.

The drive operating system with the same version as Acp10man is used.

ID#400101365 : solved problem, solved since V1.380

G193 − wrong path speed profile at blocktransition with stand still.

At block transition with not programmed stand still (e.g. reversing of an axis movement) it can happen that a wrong pathspeed profile (feed rate) will be travelled.

ID#249807 : solved problem, solved since V1.380

G193 (liear feed rate) at block transition with accuracy hold

The feed rate will be continusly ramped down to zero before block transition wih accuracy hold (G60, synchronous M−function). In the subsequent block the feed rate will be linearly increased to the programmed value.

NC Software − ARNC0 V1.373

ID#328925 : solved problem, solved since V1.373

ARNC0 axes: Error 107036 when initializing an ACOPOS device

When using ARNC0 axes on a POWERLINK network, during ACOPOS initialization the actual position is requested for the monitor data with "CYCLIC_MON_PARID=111". If an encoder is not connected (e.g. when using an ACOPOSmulti power supply module), then the ACOPOS module will report error 7036 (Encoder: Interface ID invalid), which in turn results in ARNC0 error 107036.

Remedy:
If no encoder should be used for an axis, it is possible to disable the request of actual position for the monitor data by entering AxisConfig="NoActualPosition" in the "Additional data" column for this axis in the ARNC0 mapping table.

The error occurs only when using ACP10 software V2.37.0 − V2.38.0.

ID#329202 : Information valid since V1.373

Included drive operating systems

Library Acp10man with version 2.37.0 to 2.37.9 required.

The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.372

ID#325257 : Information valid since V1.372

Included drive operating systems

Library Acp10man with version 2.37.0 to 2.37.9 required.

The drive operating system with the same version as Acp10man is used.

ID#400102061 : solved problem, solved since V1.372

Error 7185 at restart or block search if ncROTARY axes are used.

Error 7185 ("Position modulo out of 'In−Position−Tolerance' at RESTART of CNC move ") may occur, when the restart position is located in the immediate vicinity of an interval boundary . If the error arrises depends on the numerical values of the positions and parameters.

NC Software − ARNC0 V1.371

ID#323922 : Information valid since V1.371

Included drive operating systems

Library Acp10man with version 2.37.0 to 2.37.9 required.

The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.370

ID#319265 : solved problem, solved since V1.370

Wrong restart info in rotated coordinate system

From version 1.29.0, wrong restart info could be shown if the restart point is defined as ncPATHDISTANCE, and if it is inside the second or later movement after change of coordinate system's rotation (Gx92, FRAMEs). Axes' positions were shown in local coordinate system, not in global one.

ID#318595 : solved problem, solved since V1.370

NC program can't be reloaded if the init program is specified

Loading or starting of already loaded but modified NC program (reloading) failed with error 15307: "Program failed to load" with additional info "Status 15243". Error occurred only if init program (<cnc_obj>.move.ncprogram.init_prg) was specified.

ID#318365 : solved problem, solved since V1.370

Delay before G102 if full transformation is switched on

There might be a delay before G102 (Circle interpolation in general orientation) if full transformation was switched on. Furthermore, during that delay, a nonzero path speed could be shown in CNC monitor.

ID#317815 : solved problem, solved since V1.370

False identifier's ambiguity detected

Name of newly declared item (variable, function, etc.) can be wrongly detected as ambiguous. For example, variable of name 'getpos_status' is stated as ambiguous with already declared function 'getpos()'. Error is presented only in ARNC0 V1.36.1.

ID#315110 : solved problem, solved since V1.370

Possible memory violation when configuring max. path jobs

Configuring of the maximum number of path synchronous execution jobs (<MPQUEUE ... MaxPathJobs= "<number>"/> in gmcipsys) to values higher than default (256) may result to memory violation.

ID#319275 : new function since V1.370

Enable channel−ID wildcard character '*' in file device name

The channel−ID wildcard character '*' can be used in the file device name for the main program files and subprogram files. The wildcard is substituted for the channel identity character 'A' (1st channel), 'B' (2nd channel), etc. The settings is valid for <MAINSEARCHPATH> and <INCLUDEPATH> options in interpreter system configuration files (gmcipsys and gmcipus).

ID#318330 : new function since V1.370

Workspace monitoring available in 2D and 1D

Workspace monitoring and self−collision do not require full 3D Cartesian space anymore (i.e. three ncCNC axes in CNC channel). Namely in case of 2D, xy−plane is considered, and therefore z−coordinates of protected blocks can be omitted. In case of 1D, y− and z−coordinates can be omitted.

ID#315970 : new function since V1.370

New interpreter configuration files

Two new interpreter configuration files added:
− gmcipus: user override for (interpreter) system configuration (added to GmcIpConfig package)
− gmcipuc: user override for interpreter instance (channel) configuration (added to GmcIpUserConfig package)
Note: if any of configurations is not presented on target the warning in AS logger will occur.

ID#314880 : new function since V1.370

Overloading of SCF and ICF

Content of SCF (System Configuration File − gmcipsys) and ICF (Interpreter Configuration File − gmcipcfg) can be overridden by later−provided definitions (e.g. by definitions in included XML files).

ID#313297 : new function since V1.370

New NC actions for transferring any data blocks

A new interface is now available for uploading/downloading all types of data blocks (ParIDs with the type "DATA" or "BRMOD") using the NC actions listed below. The input/output parameters for this interface are contained in the "datblock" substructure of the data structures for real and virtual axes. This makes it also possible to upload/download data blocks in the NC Test.

ncaction(ax_obj,ncDATBLOCK,ncUPLOAD)
The binary data for the defined data block is read from ACOPOS and saved into the specified data object.

ncaction(ax_obj,ncDATBLOCK,ncDOWNLOAD)
The binary data for the defined data block is read from the specified data object and transferred to ACOPOS.

Parameters:
datobj_name: Name of the data object
datblock_par_id: Parameter ID of the data block
idx1_par_id: Parameter ID of the data block Index1 (set to 0 if not used)
idx1: Data block Index1
idx2_par_id: Parameter ID of data block Index2 (set to 0 if not used)
idx2: Data block Index2

ID#313292 : new function since V1.370

New NC actions for transferring ACOPOS parameter tables

A new interface is now available for uploading/downloading data blocks. This new interface can also be used to upload/download ACOPOS parameter tables using the NC actions listed below. The input/output parameters for this interface are contained in the "datblock" substructure of the data structures for real and virtual axes. This makes it also possible to upload/download ACOPOS parameter tables in the NC Test.

ncaction(ax_obj,ncACP_PAR+ncDATBLOCK,ncUPLOAD)
The specified ACOPOS parameter table is processed by the NC manager. ACOPOS reads each parameter in the ACOPOS parameter table individually and writes its value to the ACOPOS parameter table. Once all parameters have been read, the data module for the ACOPOS parameter table is regenerated with the updated parameter values.

ncaction(ax_obj,ncACP_PAR+ncDATBLOCK,ncDOWNLOAD)
The specified ACOPOS parameter table is processed by the NC manager, and the parameters it contains are transferred to ACOPOS individually.

Parameters:
datobj_name: Name of the ACOPOS parameter table

ID#309702 : new function since V1.370

New mode for interpreter single step and breakpoint halt

With "decoder.s_step.mode = ncSTEP_INTO+ncPATH" or "ncSTEP_OVER+ncPATH", the user can select whether the path follows immediately the interpreter or not.

ID#298545 : new function since V1.370

G04: Display remaining time in the CNC monitor

ID#313837 : Information valid since V1.370

ARNC0 manager error will written into the dpr command trace.

ID#313832 : Information valid since V1.370

ARNC0 writes axis errors also into the network command trace.

ID#313307 : Information valid since V1.370

Included drive operating systems

Library Acp10man with version 2.37.0 to 2.37.9 required.

The drive operating system with the same version as Acp10man is used.

ID#319340 : solved problem, solved since V1.370

The maximum number of CNC channels was increased from 16 to 24.

ID#400099982 : solved problem, solved since V1.370

Feddrate change if G25 is active

If feed rate will be changed and G25 is active, the new value will not be used in all consecutive movement blocks.

ID#310765 : solved problem, solved since V1.370

TCP additive elements in standstill

If there are more CNC channels, and if TCP additive elements are used in standstill, then the data might be mixed through channels −− namely if there is no movement in NC program / NC block before the standstill.

ID#400095711 : solved problem, solved since V1.370

G126: Transitions between very short blocks will not be rounded

Transitions will not be rounded, if the block execution time of the affected blocks is shorter then two CNC cycles.

ID#400093695 : solved problem, known since MC_ARNC0_V1.33.1, solved since V1.370

G144 can't be disabled

Continuous alignment of the tangential axis (G144) can't be disabled in the CNC program using G145.

ID#400088453 : solved problem, solved since V1.370

Undefined movement according to G217/218/219

If another block than a movement block comes before a G217/218/219 mapping, it is possible that one of the two axes carries out an undefined movement after enabling or disabling the mapping function.

ID#400088110 : solved problem, known since V1.32.0, solved since V1.370

Axis from typ ncROTARY can be positioned to the upper bound of the intervall

Example: Intervall 360°: Axis can be positined to 360°, but the allowed range is 0 − 359,99...°.
For this reason, the restart position of the axis can differ one periode and the restart will be aborted with an error.
Note: Use the value in the CNC structure, values showen in the CNC test window are rounded.

ID#400081708 : solved problem, solved since V1.370

Wrong axis is used in a CNC channel

Wrong axis may be used in a CNC channel if the name of an axis is equal to the first part of the name of an other axis (e.g. "AxX" and "AxX1")

NC Software − ARNC0 V1.361

ID#308885 : new function since V1.361

Dual−use compliant robots in ARNC0

Dual−use compliant robots from TRF_LIB can be used in ARNC0 even without arnc0ext library. Transformation library version V1.14.0 or higher must be used.

ID#308600 : new function since V1.361

New AIL builtin functions / procedure to access the current block number

SetCurBlockNr() and GetCurBlockNr() allowes to overwrite and read respectively the block number of the current block.

ID#307562 : new function since V1.361

New system variables to scale programmed values.

New system variables $SCALE_MAIN_PLANE_AXES, $SCALE_NORMAL_MAIN_PLANE_AXIS, $SCALE_LINEAR_AXES, $SCALE_GEOMETRY_PARAMETER to scale programmed coordinates and geometry parameters.

ID#308667 : Information valid since V1.361

Included drive operating systems

Library Acp10man with version 2.36.0 to 2.36.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.360

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.360

ID#307155 : solved problem, solved since V1.360

DISPLOF caused error 15798

DISPLOF (suppress NC block monitor) caused error 15798 (Insufficient Path Synch jobs configured)

ID#400068902 : solved problem, known since V1.26.1, solved since V1.360

Incompatibility of G102 and kinematic transformations

If a circle is programmed with G102 while kinematic transformations are active, then joint axes could be planned to move to the wrong positions. These wrong positions are used for the axes only if G102 is not followed by another interpolated movement. Therefore, having G102 as the latest instruction in an NC program was producing an incorrect movement, as well as having G102 followed by a PTP movement, or G102 followed by dwell time G4, or G102 in a combination with G60, etc.

ID#300152 : new function since V1.360

Setup for induction motors: New optional parameter "phase_cross_sect"

setup.motor_induction.parameter.optional.phase_cross_sect: Cross section of a phase

ID#300142 : new function since V1.360

Automatic determination of motor parameters for synchronous motors

NC structure component "setup.motor_synchron"
NC actions "ncSETUP+ncMOTOR_SYNCHRON,ncSTART" and "ncSETUP+ncMOTOR_SYNCHRON,ncSAVE"

ID#300117 : new function since V1.360

New homing variants: Homing on block, fixed direction

New homing modes:
ncBLOCK_TORQUE: Homing on block with torque limit as condition for "block reached"
ncBLOCK_DS: Homing on block with lag error limit as condition for "block reached"

New homing parameters:
fix_dir: Fixed direction ON/OFF
torque_lim: Torque limit for homing on block
ds_block: Lag error for block detection
ds_stop: Lag error for stopping a movement

ID#292675 : new function since V1.360

Data type of NC system variables $AA_IM and $AA_IW changed from DINT to LREAL

ID#303900 : new function since V1.360

New type of start position ncFILEOFFSET+ncSKIP_PARSE

New type of start position introduced for CNC programs (start_pos_type) introduced − ncFILEOFFSET+ncSKIP_PARSE. The ncSKIP_PARSE ensures that a G−code before a specified byte offset (start_pos) is entirely skipped.

ID#302157 : new function since V1.360

New G code "G239": Allow contour violation on small blocks if CDC is active.

No program abort if there are contour violations caused by small path sections and a large tool diameter. Contrary to G39 the contour violation will not be minimized and no blocks will be removed.

ID#305482 : Information valid since V1.360

Included drive operating systems

Library Acp10man with version 2.36.0 to 2.36.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.360

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#301602 : solved problem, solved since V1.360

G212: No edge or approach process at a full circle

If G212 is active, it can happen that at the begin of a full circle no edge/approach process will be inserted.
If G212+G138/G139+CDC activation, it can happen that no edge/approach process will be inserted (dependig on the geometry of the contour).

ID#400093244 : solved problem, solved since V1.360

Program abort (error 8147) if CDC is active

CNC program will be aborted, if f the tool radius and the programmed radius are nearla equal.

ID#400087105 : solved problem, solved since V1.360

Program with G201 blocks + multiple restart

Multiple restart of an NC program with more then one G201 block will be aborted with an error (error 7743: "Position out of 'In−Position−Tolerance' at START/RESTART of CNC move")

NC Software − ARNC0 V1.350

ID#400090997 : solved problem, solved since V1.350

ncVARIABLE, ncGETINFO fails when locking variables from one channel and some variables are already locked on another channel

ID#400088445 : solved problem, solved since V1.350

(p)RTCP mechanics from TRF_LIB in ARNC0

If joint axis's properties of any joint axis in (r)RTCP mechanics is set to the non−default value (i.e. to TRF_MATH_NEGATIVE), then this settings is lost if TRF_LIB V>1.07.1 is used together with ARNC0 V<1.35.0.

ID#298110 : new function since V1.350

Current offsets in ARNC0NCCTR_typ

Current offsets (and not only rotations) are available via ARNC0NCCTR_typ. The offsets originate from G92/191/292 or FRAMEs.

ID#400090906 : new function since V1.350

Using of the axis name in NC program for the axis which is not defined in "cnc_obj.axis.ais[i]" structure

The new settings in Intepreter configuration file ensures that no syntax error will be reported if the axis is not defined

ID#296842 : new function since V1.350

G212 + CDC: Change in Behaviour

To generate the path speed profile for G212 and CDC is active, the programmed contour and not the equidistant contour will be used. To distinguish inserting an edge process or a fine edge process, the angle in the active main plane will be use.

ID#299867 : Information valid since V1.350

Included drive operating systems

Library Acp10man with version 2.35.0 to 2.35.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.350

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#298612 : solved problem, solved since V1.350

Program execution stopes if CDC is active

If CDC is active, it can happen that the CNC stopes in G00 blocks with CDC overshooting is active ($CDC_OVS_DISTANCE > 100%). The NC program can be aborted.

ID#400091806 : solved problem, solved since V1.350

Error 7745 arises at the start / restart of an CNC program (known since ARNC0 V1.33.0)

Caused by a timing problem in the ARNC0, it can happen, that error 7745 (axis already moving) occours at the start / restart of an CNC program.

NC Software − ARNC0 V1.341

ID#294675 : solved problem, solved since V1.341

System variable $AX_V_JUMP not updated for G105

System variable $AX_V_JUMP was not updated when G105 (setting the" v_jump" parameter) was programmed. On contrary, the $AX_A_JUMP was updated for G106. The behavior is now consistent.

ID#400089615 : solved problem, solved since V1.341

NC actions for variable access: statuses not properly updated

The statuses <cnc_obj>.var_access.status.active and <cnc_obj>.var_access.status.complete was not properly updated for NC actions ncVARIABLE, ncGETINFO and ncVARIABLE, ncRELEASE.

ID#295515 : Information valid since V1.341

Included drive operating systems

Library Acp10man with version 2.34.0 to 2.34.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.341

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.340

ID#294230 : Information valid since V1.340

Included drive operating systems

Library Acp10man with version 2.34.0 to 2.34.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.340

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#400082317 : solved problem, solved since V1.340

Deadlock for ncFILE_XL programs started with byte offset

If an NC program was started in ncFILE_XL start mode with nonzero byte offset (start_pos_type = ncFILEOFFSET) then a deadlock occured.

ID#400078071 : solved problem, solved since V1.340

Kinematic transformations in standstill

Kinematic transformations are active also in situations where no movement is produced but tcp_add_el[] are changed, i.e. in halt, on synchronous M−flags, during dwell times, etc.

NC Software − ARNC0 V1.331

ID#294405 : Information valid since V1.331

Included drive operating systems

Library Acp10man with version 2.33.0 to 2.33.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.330

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID# 400089399, 400088645, 400092044 : solved problem, known since 1.32.0, solved since V1.331

Missing error text (only in V1.311 − V1.330)

Error text hasn't been found for some error numbers.

NC Software − ARNC0 V1.330

ID#282055 : solved problem, solved since V1.330

CNC Block Monitor didn't show the NC Block with G102

When the NC block with programmed G102 is executed the element "ncblock" of CNC Block Monitor structure didn't show that NC block.

ID#285422 : new function since V1.330

Changes in the status message for G212

The content of the system variable $PSM1_PHASE and of the monitor element "cnc_object.monitor.PSM_phase" is extended (see ARNC0 help).

ID#288127 : Information valid since V1.330

Included drive operating systems

Library Acp10man with version 2.33.0 to 2.33.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.330

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#283772 : solved problem, solved since V1.330

Start of a CNC program even if an axis is already moving.

A CNC program can be started even if a movement on an axis − used in the CNC system − is already active (only ACP10 and SDC axes).

ID#400082978 : solved problem, solved since V1.330

Position jump on axis at program start

If a CNC program will be aborted by an axis error, a position jump on this axis can occur during the next program start. This effects ACP10 and SDC axes.

ID#282442 : solved problem, solved since V1.330

Missing set positions in one cycle

In very rare cases it can happen that no set positions are calculated for one cycle.

ID#282127 : solved problem, solved since V1.330

G212 (path speed mode 1)

The path speed can be to high on tangential block transitions if G212 (path speed mode 1) is active. This occours only on "fine edge processes".

NC Software − ARNC0 V1.320

ID#276197 : new function since V1.320

G212 (path speed mode #1) new

G212 defines the path speed profile at block transition (dwell time at block transition, reduced speed at begin of the following movement blocks)

ID#279792 : Information valid since V1.320

Included drive operating systems

Library Acp10man with version 2.32.0 to 2.32.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.320

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#281467 : solved problem, solved since V1.320

NC−Actions not accepted if a ParId−Trace is active (only ARNC0 Axes)

Some ncActions (e.g. ncCONTROLLER / ncSWITCH_OFF) are not accepted if a ParId−Trace is active on an ARNC0 axis.

ID#270960 : solved problem, solved since V1.320

Incorrect target position when activating CDC with G137

If CDC is deactivated and then re−activated one block later, then the target position of the entry block is usually not correct in relation to the active main plane.
The error only occurs when G137 is active.

ID#223882 : solved problem, solved since V1.320

Contour violation if s_jump_t = 180° and CDC is active

Contour violation on outer corners with alpha = 180° (inversion of movement) and if s_jump_t is set to 180° and CDC is active.

NC Software − ARNC0 V1.311

ID#277125 : solved problem, solved since V1.311

Occasional error 15256 on loading NC programs

The error 15265: "PLC variable data−length mismatch" occasionally occurred when NC programs containing declarations of function blocks was parallelly loaded on more CNC channels.

ID#278170 : Information valid since V1.311

Included drive operating systems

Library Acp10man with version 2.31.0 to 2.31.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.310

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#277232 : solved problem, solved since V1.311

Incorrect status cnc_obj−>global.init after ncGLOBAL, ncINIT (CNC system)

Status cnc_obj−>global.init will not be set to ncTRUE if a NC program was loaded into the memory.

ID#277092 : solved problem, solved since V1.311

CNC program abort (mode ncAXIS) ignored directly after program start

A program abort (ncMOVE, ncE_STOP with parameter ncAXIS) will be ignored, if program abort will be performed directly after program start.

ID#400078230 : solved problem, solved since V1.311

Incorrect execution order of M−parameters and synchronous M−function

The order of execution might be incorrect, if a synchronous M−function is programmed after an M−parameter, a path synchronous variable or a path synchronous, non−blocking FUB. The execution order is correct after a movement block or after the program is started.

NC Software − ARNC0 V1.310

ID#273690 : new function since V1.310

New Restart Mode "ncABORT_LINE"

ID#272810 : new function since V1.310

CDC: Overshooting on acute angles ($CDC_OVS_DISTANCE)

ID#274257 : Information valid since V1.310

Included drive operating systems

Library Acp10man with version 2.30.0 to 2.30.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.301

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.302

ID#272420 : Information valid since V1.302

Included drive operating systems

Library Acp10man with version 2.30.0 to 2.30.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.300

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#400075901 : solved problem, solved since V1.302

ACP10 axes and ARNC0: Fractional part of SW limits (CNC units) will be removed

SW limit values are converted from axis units into CNC units (division by the unit factor) in the ARNC0. The remainder will not be taken in consideration.

NC Software − ARNC0 V1.301

ID#271775 : solved problem, solved since V1.301

Fixed memory leak from path−synch assigments (e.g. MF1=1) near end of NC program

ID#400074886 : solved problem, solved since V1.301

Errors with additional information in CNC channel after a call of external functions

If an error with additional information was issued in a CNC channel after a call of external functions (e.g. functions from TRF_LIB), then it could lead to a pagefault.

ID#263940 : solved problem, solved since V1.301

G201 and t_axfilter from "cnc_obj.axis.axis[i]" structure

The t_axfilter was set for an axis which is used as a trigger source. If the movement distance of this axis was equal to zero for the programmed NC block with G201 then the trigger wasn't detected.

ID#271875 : new function since V1.301

TRF_direct3() and TRF_inverse3() from TRF_LIB usable in ARNC0

The third kind of direct and inverse transformations provided by TRF_direct3() and TRF_inverse3() functions from TRF_LIB is accessible in ARNC0.

ID#271870 : new function since V1.301

Tangential axis inside kinematic transformations

If the tangential axis is configured either as a path or as a joint axis, its position is not overwritten by outputs of the transformations. There can be a need for such a configuration (see e.g. TRF_direct3() and TRF_inverse3() functions for non−perpendicular 5ax mechanics, i.e. TRF_DATA05_typ from TRF_LIB).

ID#271765 : new function since V1.301

Introducing ip_global preprocessing macros

Syntax:
define ip_global <name> as <text>
Macro can be removed with undefine statement:
undefine <name>

ID#271755 : new function since V1.301

Line continuation and line−break characters

New syntax introduced:
"\" − Line continuation (continue the current NC block on the next line)
"@@" − Line break (divide the line of G−code to two syntactically separate NC blocks)

ID#271720 : new function since V1.301

Reducing memory consumption for very short NC programs

Each NC program is loaded to a separate memory partition for effective memory clean−up during unloading. The minimum size of the memory partition was set to 384KB. This can cause wasting of resources if a large number of short NC programs has to be loaded to memory all at once − e.g. calling of multiple global subprograms.
New attributes for ncMANAGER was introduced that enable user to control size of memory partitions:
ARNC0MemPartMin="<min_val>" − Minimum size of Interpreter memory partition [hexadecimal]
ARNC0MemPartMax="<max_val>" − Maximum size of Interpreter memory partition [hexadecimal]

ID#400072686 : new function since V1.301

G135 − Intersection path

To keep the contour violations as small as possible, the endpoint of the circular block is approached via the shortest path. In the past, the block was traversed in the same direction of rotation as the programmed block.

ID#271790 : Information valid since V1.301

Included drive operating systems

Library Acp10man with version 2.30.0 to 2.30.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.300

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.300

ID#268550 : new function since V1.300

The maximum number of CNC channels was increased from 8 to 16

ID#268560 : Information valid since V1.300

Included drive operating systems

Library Acp10man with version 2.29.0 to 2.29.9 required.

CAN:

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.291

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.290

ID#263840 : solved problem, solved since V1.290

NC action "ncGLOBAL, ncLOAD+ncINIT" fails without showing an error after unsuccessful start of axis compensation

ID#268410 : Information valid since V1.290

Included drive operating systems

Library Acp10man with version 2.29.0 to 2.29.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.291

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#268390 : Information valid since V1.290

CNC plot buffer is extended by programmed feedrate.

ID#268380 : Information valid since V1.290

New G−code syntax elements

New G−code syntax elements introduced:
EXTERN − subprogram prototype
VAR − argument passed by reference
MCALL − modal subprogram call

ID#400070918 : solved problem, solved since V1.290

Automatic tangential axis (G141): Movement blocks with G00 are ignored.

Movement blocks with G00 are ignored after an automatic tangential axis is reactivated (G141).

ID#263275 : solved problem, solved since V1.290

Deadlock after CDC deactivation

CNC system is blocked if G172 (or STOPRE) is programmed immediatelly after a block with G40. The program can be aborteted by the user.

ID#400061917 : solved problem, solved since V1.290

NC program can't be restarted if transformation is used

If the transformation library or G195 (RTCP) is used, the restart will be aborted with error 7743 (Position out of 'In−Position−Tolerance' at START/RESTART of CNC move).

NC Software − ARNC0 V1.281

ID#400072360 : solved problem, solved since V1.281

M function programmed before blocks with zero movement distance has not been set if the rounding edges (G126) was active (only in V1.270 − V1.280).

ID#266790 : solved problem, solved since V1.281

Path−synchronous variable has not been assigned before blocks with circular interpolation if the rounding edges (G126) was active (only in V1.270 − V1.280).

ID#267500 : Information valid since V1.281

Included drive operating systems

Library Acp10man with version 2.28.0 to 2.28.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.280

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.280

ID#263495 : solved problem, solved since V1.280

Occasional cycle time violation from TC#1

Combination of intensive subprogram calling and programming of multiple path synchronous jobs (e.g. FBs) from an NC program could cause a cycle time violation of TC#1.

ID#263115 : solved problem, solved since V1.280

Workspace monitoring − change to modelling based on the robot arm radius

Problem occurred if the protected area lay closer than the robot arm radius.

ID#400051865 : solved problem, solved since V1.280

New parameter "ipl_mode"

The new parameter "ipl_mode" in the "cnc_obj.axis.axis[i]" structure − interpolation mode for cyclic position. Parameter is valid only for ACP10 axes. The problem with a position overshoot at the end of an NC program has been solved with this new parameter.

ID# 400051713, 400051247 : solved problem, solved since V1.280

Error caused by Axis Factor not equal to 1

Axis Factor not equal 1 can be now set for ACP10 axes used in a CNC channel

ID#263630 : Information valid since V1.280

Included drive operating systems

Library Acp10man with version 2.28.0 to 2.28.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.280

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.273

ID#262650 : solved problem, solved since V1.273

Optional brackets for functions with no arguments in the alternative language 1 G−Code

In the alternative language 1 G−Code a function that does not require any arguments can be called without using brackets.

ID#262590 : solved problem, solved since V1.273

Exception 9101 − address error after <ncMOVE, ncSTOP>

Exception 9101 occurs if <ncMOVE, ncSTOP> NC action is sent before the first <ncPROGRAM, ncLOAD/ncSTART> if any additional LANG_INCLUDE files were loaded during ARNC0 startup.

ID#262575 : solved problem, solved since V1.273

Program freezes if it runs out of path synchronous commands (only in V1.251 − V1.272)

Starting with ARNC0 V1.25.1 the interpreter keeps track of all path synchronous jobs (path synchronous variable assignment, function calls) that are in the backtracing buffer (block_buffer).
The interpreter was only keeping track of a fixed amount of path synchronous jobs. The high value for <cnc_obj>.limits.block_buffer together with a high number of path synchronous jobs in an NC program caused the interpreter to run out of available jobs and freeze up.
The number of path synchronous jobs is now configurable in gmcipcfg in <MPQUEUE> section.

ID#262150 : solved problem, solved since V1.273

Output of blocks with non−synchronous technology functions or path synchronous variables and tool data number in the wrong order.

If a block with a tool data number follows immediately after a block with a non−synchronous technology function (S and T functions) or a calculation with path−synchronous variables, then the block with the tool data number will be output first.
Note: Both blocks are output in the same ARNC0 cycle, which is why this effect can only be observed in single−step operation in Halt mode after each block (this occurs only in ARNC0 V1.27.0 to V1.27.2).

ID#400063767 : solved problem, solved since V1.273

Restart not possible if restart switched off and on.

If the function for saving restart info is switched off and on (ncRESTART, ncSWITCH_OFF / ncSWITCH_ON) between aborting and restarting an NC program, the restart will be aborted with error 15307 (Program failed to load).

ID#262295 : Information valid since V1.273

Included drive operating systems

Library Acp10man with version 2.27.0 to 2.27.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555

For ACOPOS 8V1xxx.00−2: ACP10SYS V2.271

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.272

ID#260980 : Information valid since V1.272

Included drive operating systems

Library Acp10man with version 2.27.0 to 2.27.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.271

POWERLINK:
The drive operating system with the same version as Acp10man is used.

NC Software − ARNC0 V1.271

ID#232652 : new function since V1.271

Program end command (e.g. M30) allowed in controll blocks (e.g. block with $IF)

ID#260325 : Information valid since V1.271

Included drive operating systems

Library Acp10man with version 2.27.0 to 2.27.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.271

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#260210 : solved problem, solved since V1.271

NC block with G170 + non synchronous M function, wrong order of execution (only ARNC0 V1.27.0)

In blocks with G170 + non synchronous M function, the M flag will be set not before G170 will be acknowledged.

NC Software − ARNC0 V1.270

ID#252125 : new function since V1.270

Decomposition of frame to orientation angles and offsets

For determining the angles, depending on the used angle type, the interpreter functions F_TO_ANGLES, F_TO_EULER and F_TO_RPY are provided. For determining the offsets of the frame the function F_TO_TRANS is available.

ID#256647 : Information valid since V1.270

Included drive operating systems

Library Acp10man with version 2.27.0 to 2.27.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.271

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#253145 : Information valid since V1.270

Memory optimization within the interpreter

Both the own memory usage of the interpreter and the memory consumption for loaded programs have been reduced.

ID#400065531 : solved problem, solved since V1.270

Polar Coordinate Machine: To low path Speed at Circular and Linear Blocks.

Numerical problems in dynamic calculation can cause low path speed.

ID#400064009 : solved problem, solved since V1.270

Ploar Coordinate Machine: Low Path Speed at tangential Block Transitions.

The axes jolt filter was not be taken in consideraten in the calculation of path speed at tangential block transitions. The calculated value of path speed at block transition was too small. (only for polar coordinate machines)

ID#400059569 : solved problem, solved since V1.270

Deadlock while executing an NC program

A Deadlock in the CNC system can occur, if the following sequence is processed repeatedly with the same NC program:
(1) Start NC program
(2) Stop NC program
Thedeadlock can only be resolved with a warm restart of the PLC.

ID#400062135 : solved problem, solved since V1.270

Non synchronous Technology Functions will set on a wrong path position if G126 is active.

Non synchronous Technology Functions will set on the begin of the bezier spline instead in the centre of the spline if G126 is active.

NC Software − ARNC0 V1.261

ID#254322 : Information valid since V1.261

Included drive operating systems

Library Acp10man with version 2.26.0 to 2.26.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.262

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#254317 : solved problem, solved since V1.261

Startup of ARNC0 axes get stuck in network phase 80 (only in V1.251 − V1.260)

ARNC0 axes with channel number 2, belonging to a drive connected to the POWERLINK network, get stuck in network phase 80 during startup.

NC Software − ARNC0 V1.260

ID#242667 : new function since V1.260

Parameterized subroutine return (RET)

Usually, the end of subroutine returns to the calling program and the lines following the subroutine call will be executed. Parameterized RET allowes program resumption at another, user defined position

ID#252382 : Information valid since V1.260

Included drive operating systems, dependency

Library Acp10man with version 2.26.0 to 2.26.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.260

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#251792 : solved problem, solved since V1.260

Circular blocks: standstill at block transition.

A standstill can occur at block transition between circular−circular blocks or circlular−linear blocks.
The error can occur if the parameter "cnc_obj−>limit.blocktransition = ncSTANDARD" or "cnc_obj−>limit.blocktransition = ncAUTO" is set.

NC Software − ARNC0 V1.252

ID#248880 : solved problem, solved since V1.252

Reverse movement problem

Pagefault occurred if a path synchronous variable was assigned while moving backwards in an NC block.

ID#248795 : solved problem, solved since V1.252

Error in trigger configuration for axes accessed with PLCopen IF

It was not possible to select only the desired trigger events for the axes accessed with PLCopen IF. This can now be done using the configuration parameter "cnc_object.axis.axis[i].trg_source.trg_conf".

ID#234112 : solved problem, solved since V1.252

ARNC0 Deadlock if the same axis was connected to a CNC channel more than once

ID#249930 : new function since V1.252

CNC programming instructions ADR and SIZEOF

ADR[] − determines the address of a data point
SIZEOF[] − determines the size of a variable in bytes

ID#249740 : new function since V1.252

Memory consumption optimization

Size of AIL opcode which was generated when loading NC program has been reduced.

ID#249382 : Information valid since V1.252

Included drive operating systems

Library Acp10man with version 2.25.0 to 2.25.9 required.

CAN:
For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.250

POWERLINK:
The drive operating system with the same version as Acp10man is used.

ID#249512 : solved problem, solved since V1.252

G211 − Improved speed profile for short NC blocks

G211 (blended move mode) active: The combination of short NC blocks and long programmed acceleration time $TA could lead to dips in path speed profile.

NC Software − ARNC0 V1.251

ID#248045 : solved problem, solved since V1.251

Pagefault when restarting NC program

A pagefault could occur by restarting an NC program with rotary axes (ncROTARY). Problem only in the version V1.25.0.

ID#247817 : new function since V1.251

The cyclic ARNC0 task is now installed in the NC Manager task class

The real−time part of the ARNC0 is now installed into the "NC Manager task class" which can be defined via the Arnc0cfg.ncc configuration module. Up to now, the "NC Manager task class" was solely used for the communication between ARNC0 and the application tasks, whereas the real−time part of the ARNC0 has always been installed into TC#1 (unless the ForceSIOS parameter was set).

ID#248300 : Information valid since V1.251

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.241
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.241

ID#400059370 : solved problem, solved since V1.251

Page Fault or Memory Access Violation during backward movement on the path.

During backward movement on the path a page fault or a memory access violation can occur if path synchronous variables or function blocks are used or if subprograms are called.

ID#400058384 : solved problem, solved since V1.251

Startup of POWERLINK axes blocked in phase 80

If POWERLINK axes with node numbers greater or equal 100 are used, the startup of the axes may block in network phase 80.

NC Software − ARNC0 V1.250

ID# 400056079, 400062509 : solved problem, solved since V1.250

Corrupted error text modules

Some of the error texts have not been evaluated correctly after calling of NC action ncMESSAGE, ncTEXT.
NOTE: All error text modules on an automation target must be updated for correct determination of error texts in ARNC0 V1.25.0!

ID#400058124 : new function since V1.250

New start modes for NC action ncPROGRAM, ncSTART

Two new start modes ncFILE_XL+ncBLOCKMONITOR and ncDNC+ncBLOCKMONITOR have been defined to enable CNC block monitor for large or streamed NC programs.

ID#247420 : new function since V1.250

New parameters "rot_period" and "rot_offset"

The new parameters "rot_period" and "rot_offset" in the "cnc_obj.axis.axis[i]" structure can be used to set the period and offset of a rotary axis (ncROTARY+...).

ID#247410 : new function since V1.250

A new axis type in ARNC0: ncNOFEED

The single axes can be excluded from the feed rate calculation by adding ncNOFEED to the axis type. This makes it possible to exclude the axes of the types:

ncCNC + ncNOFEED
ncLINEAR + ncNOFEED
ncLINEAR + ncNOSTOP + ncNOFEED
ncROTARY + ncNOFEED
ncROTARY + ncNOSTOP + ncNOFEED
ncROTARY + ncSHORT_PATH + ncNOFEED
ncROTARY + ncNOSTOP + ncSHORT_PATH + ncNOFEED

from the feed rate calculation.

ID#242672 : new function since V1.250

New Systemvaribales $P_EP and $P_EM

ID#242287 : new function since V1.250

G180

(1) Beside the current syntax "G180=000" also "G180" is allowed.
(2) The last circle in a series of joined blocks may be programmed with center point, radius and angle.

ID#247575 : Information valid since V1.250

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.241
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.241

ID#243502 : solved problem, solved since V1.250

Error in Restartinfo when read from a data module.

When loading Restartinfo from a data module, the restart may be aborted with error 7150 ("Mismatched NC program lengths upon 'RESTART'").
Condition: Parameter cnc_obj−>restart.parameter.param_buffer = 0

ID#400053445 : solved problem, solved since V1.250

Incorrect angle of rotation in G102

If the last circular block before G102 is a full circle (360° angle of rotation), then the programmed arc as well as a full circle might be traversed in the block with G102.
Whether the error will occur or not depends on the position of the center point.

ID#400052417 : solved problem, solved since V1.250

G70/G71 was taken in consideration also for axe of the type ncROTARY.

Inch/mm conversion not allowed for angle units.

NC Software − ARNC0 V1.242

ID#246200 : solved problem, solved since V1.242

G172 can cause a CNC−system deadlock (only in V1.24.0 − V1.24.1)

ID#247167 : Information valid since V1.242

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.241
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.241

NC Software − ARNC0 V1.241

ID#245135 : new function since V1.241

Check of the orientation axes

When full transformations are switched on, the user is informed via a warning from ARNC0 when the positions of the programmed orientation axes in NC program are not uniquely defined.

ID#245115 : Information valid since V1.241

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.240
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.240

NC Software − ARNC0 V1.240

ID#244030 : solved problem, solved since V1.240

Performance issue fixed: re−loading of modified global subprogram had been very slow.

ID#243575 : solved problem, solved since V1.240

The G201 at NC block with zero movement distance caused a deadlock.

ID#243765 : new function since V1.240

Extended monitor data

NC monitor structure have been extended with the call_level element which displays current call level of subprograms. The hierarchy of subprogram calling can be displayed as NC block numbers in a data buffer provided by an application program. An address of the data buffer has to be specified during ncBLOCKMON, ncSET calling.

ID#243150 : new function since V1.240

Accepting an ncPROGRAM,ncLOAD when an NC program is active

An ncAction ncPROGRAM,ncLOAD should be accepted when an NC program is active. The new functionality should allow user to speed−up loading of global subprograms if they are modified between the NC program start and calling of them.

ID#243945 : Information valid since V1.240

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.240
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.240

ID#400053501 : solved problem, solved since V1.240

Invalid set position values in network interface

In very rare cases, an invalid value (NaN) is entered in the network interface for the decimal part of the set position.

ID#400030537 : solved problem, solved since V1.240

Restart − Deadlock at program abort

ARNC0 may become blocked if the program is aborted while restarting an NC program and ARNC0 is in the state "Waiting for movement to continue". The target must be restarted in order to remove the deadlock.

NC Software − ARNC0 V1.232

ID#242370 : Information valid since V1.232

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.232
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.232

ID#242465 : solved problem, solved since V1.232

Workspace monitoring − self collision reported too early

Self collision error has been reported too early.

ID#242320 : solved problem, solved since V1.232

Unit factor not considered by G200/G201

The CNC unit factor was not taken in consideration by the latch position calculation (functions G200/G201).

NC Software − ARNC0 V1.231

ID#240955 : new function since V1.231

Workspace monitoring − diameters of the robot arms as an array

Diameters of the robot arms can be defined as an array of values − separately for each arm.

ID#242070 : Information valid since V1.231

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.232
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.232

ID#400053739 : solved problem, solved since V1.231

System Crash if a ACOPOS parameter table is downloaded

During the download of an ACOPOS parameter table (ncACP_PAR + ncSERVICE, ncDOWNLOAD) the system can crash (page fault). In ARNC0 V1.22.0 and higher

ID#240975 : solved problem, solved since V1.231

NC monitor status "name_ncprog" not properly updated

The name of curent NC program "name_ncprog" has not been properly updated for global subprograms.

ID#240970 : solved problem, solved since V1.231

Workspace monitoring − diameter of the robot arm not considered

Diameter of the robot arm hasn't been considered by crossing a protected area.

ID#400052416 : solved problem, solved since V1.231

Contour violation when wrapping is active

A contour violation occured when wrapping or mapping was active and CDC with arc transitions (G133) was chosen.

ID#240557 : solved problem, solved since V1.231

Error determining the RESTART−INFO in single−step operation

If the RESTART−INFO is determined with the parameter "restart.info.parameter.restart_type = ncBLOCKNUMBER") while single−step operation is active (path generator), then cryptic characters might be output for blocks:
− with a shift of the coordinate system (e.g. G92, G54)
− with synchronous or non−synchronous M−functions
− with real−time parameters (M−parameters)
− with dwell time (G04)
Whether the error will occur or not depends on the internal timing of the ARNC0.

ID#239420 : solved problem, solved since V1.231

G201 and NC program restart

NC program restart and restart info didn't run correctly if G201 had been used.

ID#400043500 : solved problem, known since V1.038, solved since V1.231

Deadlock with neagtive override

ARNC0 was blocked if the following sequence was executed:
− start NC block or NC program
− set OVR to neative value
− wait until startposition of NC program is reached
− set OVR to zero
− set OVR to a negative value again.
Restart of target was needed to resolve the deadlock.

NC Software − ARNC0 V1.230

ID#240450 : new function since V1.230

Motion packet log

If enabled in Arnc0cfg, the motion packet log continuously records the contents of each motion packet packet into .mpl files. This functionality is switched on by default.
The log files are written into mplog* file devices which must be created by a user, one device per CNC channel (by default mplogA for 1st CNC channel, mplogB for 2nd CNC channel, ...).
New NC actions have been defined:
"ncMP_LOG, ncSWITCH_OFF" − switches the motion packet logging off
"ncMP_LOG, ncSWITCH_ON" − switches the motion packet logging on

ID#237477 : new function since V1.230

Logical operators

Following logical operators have been added to the G−code syntax:
&& − logical binary AND
|| − logical binary OR
XOR − logical binary XOR
! − logical unary NOT

ID#240445 : Information valid since V1.230

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.230
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.230

ID#240285 : solved problem, solved since V1.230

The movement didn't slow down to standstill if G201 was used in a rotated product coordinate system

The G92 or $WFRAME was used to rotate the product coordinate system. If an axis with a programmed zero distance was set as a trigger source then the movement dindn't slowdown to standstill at NC block with G201 when the trigger occured.

ID#240260 : solved problem, solved since V1.230

Latch system variables not set for CNC channel higher than 1

ID#400051683 : solved problem, solved since V1.230

Pagefault when calling AIL local function

ARNC0 crashed when analyzing a template function that contained a call to an AIL local function.

ID#239200 : solved problem, solved since V1.230

The M0 was skipped at the NC block with move distance equal to 0.0

ID#239075 : solved problem, solved since V1.230

NC program file not closed if syntax error

NC program file was locked if a global subprogram loaded from the main program contained a syntax error.

NC Software − ARNC0 V1.220

ID#238180 : new function since V1.220

$CO_ORDS_MODE, $CENTER_MODE, $MOVE_CMD_MODE

New system variables have been added:
$CO_ORDS_MODE represents modal coordinate definition
$CENTER_MODE represents modal circle center point definition
$MOVE_CMD_MODE represents modal movement command

ID#237940 : new function since V1.220

TRANS, ROT, ATRANS, AROT

New functions for programming of zero point offset and rotation of coordinate system have been added.

ID#237910 : new function since V1.220

Non−modally effective, coordinate programming mode specifiers

The coordinate programimng mode (relative or absolute) can be specified non−modally with the AC and IC statements.

ID#237865 : new function since V1.220

GOTO Statement

A jump to NC block with defined block number can be created with the GOTO statement.

ID#236635 : new function since V1.220

Setup ISQ−Ripple for automatically determing the ripple parameters

New NC structure component "setup.isq_ripple".
New NC actions "ncSETUP+ncISQ_RIPPLE,ncSTART" und "ncSETUP+ncISQ_RIPPLE,ncSAVE".

ID#233727 : new function since V1.220

G211 (Blended Move Mode)

Prommable, linear feed rate profile on block transitions.

ID#239215 : Information valid since V1.220

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.220
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.220

ID#239212 : solved problem, solved since V1.220

SG4 target system with AR A3.08 or higher: Error 9650 when using ARNC0 before V1.220

After optimizations some system functions are no longer contained in AR versions A3.08 or higher, which are needed by ARNC0 versions before V1.220. If a ARNC0 version before V1.220 is used with AR versions A3.08 or higher, then the following error is indicated during the project transfer or registered in the Logger during the PLC startup:
− 9650: Library function not available (System GOT)

For AR versions A3.08 or higher only the ARNC0 versions V1.220 or higher can be used.

ID#237822 : solved problem, solved since V1.220

Axis error during emergency stop: Movement state will not be actualized.

If an axis error (e.g. lag error) occurs while an emergency stop is active; it can happen that the movement state of the axis and the CNC−system will not be set correct after stand still. Possibly a restart of the targe is necessary.

ID#237740 : solved problem, solved since V1.220

G201 in CNC simulation mode

NC program containing G201 got stuck if was run in CNC simulation mode.

ID#237735 : solved problem, solved since V1.220

G172 in CNC simulation mode

NC program containing G172 got stuck if was run in CNC simulation mode.

ID#237045 : solved problem, solved since V1.220

The G201 didn't work properly if as a trigger source was used an axis on SDC IF

The movement at NC block with G201 didn't slow down to standstill if the trigger was forced inside the trigger path section.

ID#234757 : solved problem, solved since V1.220

Exceedance of programmed feed rate at block transition

Athough G111 is programmed, the programmed feed rate of the consecutive block can be exceeded at block transition.

ID#234540 : solved problem, solved since V1.220

Deadlock issued by G201

NC program got stuck if there was the G201 function in the last NC block.

NC Software − ARNC0 V1.211

ID#236285 : Information valid since V1.211

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.211
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.211

ID#236465 : solved problem, solved since V1.211

Using G172 when the CDC is active will cause an NC program standstill

ID#236102 : solved problem, solved since V1.211

Interpreter does not find task−local PVs

On rare occasions the Interpreter was not able to find task−local PVs that were declared in the Configuration−Module "gmcipvar" by using the syntax "TaskName:PvName".

ID#236045 : solved problem, solved since V1.211

Pagefault G200/G201

Pagefault occurred when an axis in standstill has been used as trigger source for G200/G201 functions and less than 15 axes have been configured in the CNC channel. This problem occurred only in version V1.21.0.

ID#400048448 : solved problem, solved since V1.211

Error when calling an NC subprogram

A syntax error occured when calling a global subprogram with a name that starts with a number.

ID#234760 : solved problem, solved since V1.211

Robot orientation axes moved after a change was made to the product coordinate system

NC Software − ARNC0 V1.210

ID#235227 : Information valid since V1.210

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.210
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.210

NC Software − ARNC0 V1.201

ID#234345 : solved problem, solved since V1.201

G200 and G201 − axis in standstill as trigger source

Wrong positions of CNC axes have been latched, if an axis in standstill had been used as a trigger source for the function G200 or G201.

ID#233920 : solved problem, solved since V1.201

Workspace monitoring: Extension for Frames

Workspace could previously only be defined in the global coordinate system, now can it be defined in any coordinate system. The current coordinate system is remembered together with each protected area.

ID#228277 : solved problem, solved since V1.201

Functions G70 and G71 are ignored for the rotary axes

The units switch (G70 and G71) is from now ignored for the rotary axes (ncROTARY). The system units are always used for the rotary axes.

NC Software − ARNC0 V1.200

ID#233102 : Information valid since V1.200

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.201
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.201

ID#232817 : solved problem, solved since V1.200

The movement state of an axis was not correct after movement abort

After abort of a movement (axis movement or CNC program) the axis state was set to move.mode = ncOFF, before the axis was in standstill.

ID#227727 : solved problem, solved since V1.200

Exceedance of axis acceleration on tangential corners due to t_axfilter

The axis jolt filter can cause a violation of the allowed axis acceleration limits (acceleration on the path was not taken in consideration).

NC Software − ARNC0 V1.102

ID#232990 : Information valid since V1.102

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.201
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.201

ID#233075 : solved problem, solved since V1.102

Memory footprint grew by 4 bytes per timestamp check

The timestamp is checked for each NC program start and each global subprogram call. Each timestamp check consumed 4 bytes of free memory.

ID#232770 : solved problem, solved since V1.102

The G201 deactivated programmed rotation of the coordinate system

ID#232735 : solved problem, solved since V1.102

Status of NC action remained "ncACTIVE"

Status of the NC action remained ncACTIVE after global init performed for a CNC object with more than 4 axes in a basis version of ARNC0.

ID#400046593 : solved problem, solved since V1.102

NC program got stuck on short path elements

The NC Program got stuck on very short path elements if the path element had to be skipped because of high path speed (warning 7236 "Contour segment had to be skipped, contour speed too high"), and if the element was followed by a non−tangential transition.

NC Software − ARNC0 V1.101

ID#232680 : Information valid since V1.101

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.201
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.201

ID#400045295 : solved problem, solved since V1.101

The parameter global.init not set

The parameter global.init of an axis object hasn't been set in some cases, if the axis object had been represented by a global PV.

NC Software − ARNC0 V1.100

ID# 400046336, 400046111 : solved problem, known since 1.09.7, solved since V1.100

Page Fault during Boot Phase with Win7/ARsim (AR000)

When working with ARsim (AR000) on Windows 7, the ARNC0 caused a page fault during the system boot phase.

ID#232417 : Information valid since V1.100

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.200
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.200

ID#231897 : solved problem, solved since V1.100

Member "class" of structure ARNC0MSREC_typ renamed to "errorclass"

In order to use ARNC0 in C++ programs the structure member "class" of ARNC0MSREC_typ has to be renamed to "errorclass". "class" is recogniced as keyword for the C++ compiler and leads to an error.

ID#400045497 : solved problem, known since 1.09.6, solved since V1.100

Path speed is reduced to zero on short NC blocks.

Sometimes the movement on the path stops at short NC blocks, if mode "cnc_obj−>limit.blocktransition = ncAUTO" is set.

NC Software − ARNC0 V1.093

ID#231787 : Information valid since V1.093

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.200
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.200

NC Software − ARNC0 V1.092

ID#231560 : Information valid since V1.092

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.191
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.191

ID#231530 : solved problem, solved since V1.092

Homing procedure aborted by error

The homing procedure on an ARCN0 axis was aborted with the error 5112: "Search Home procedure cancelled by Event ". The error started to occur in ARNC0 version 1.05.2 in combination with Automation Runtime B3.01.

ID#231315 : solved problem, solved since V1.092

Page Fault during ARsim (AR000) Boot Phase

When working on ARsim (AR000), a rather high number of axes could have caused an ARNC0 page fault during the system boot phase.

ID#226497 : solved problem, solved since V1.092

Trajectory speed jump because of different path acceleration at consecutive blocks

If in several blocks a lower path acceleration is programmed (e.g. G110), the path speed will not ramp to zero at a stand still but the speed will be forced to zero by the ARNC0. Furthermore the allowed acceleration on the axes can be violated.

NC Software − ARNC0 V1.091

ID#230100 : Information valid since V1.091

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.190
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.190

ID#230720 : solved problem, solved since V1.091

Pagefault trying to configure more than 2 CNC channels

Pagefault occurred if user configured more than 2 CNC channels in the NC deployment table. This error was present from version 1.02.0.

ID#230705 : solved problem, solved since V1.091

Error stopping NC block or NC program

The following errors occured after an NC block or NC program was stopped during the loading phase: 10106: Event not allowed in curret state", 15743: "Errors detected in block text" and 15319; "Operation aborted by user". The error 10106 was additionally followed by a deadlock.

ID#230155 : solved problem, solved since V1.091

Error 1114 with NC−Action ncGLOBAL/ncINIT

When there is a high CPU load on the runtime target, the NC action ncGLOBAL/ncINIT could fail with error 1114.

ID#230095 : solved problem, solved since V1.091

Deadlock if NC−program was aborted when calling global subprogram

A deadlock would occur if an NC−program, which had called a global NC subprogram, was aborted by an error.

ID#230085 : solved problem, solved since V1.091

Pagefault when calling NC−subprogram with parameters

A deadlock would occur if an NC−program, which had called a global NC subprogram, was aborted by an error.

ID#400043708 : solved problem, solved since V1.091

The synchronized M Function is ignored if a path−synchronous variable is used in the same NC block.

NC Software − ARNC0 V1.090

ID#228755 : solved problem, solved since V1.090

Interpreter−Error was displayed in wrong CNC−Channel

An Interpreter−Error (e.g. Interpreter detects a syntax error during NC−Action ncPROGRAM/ncLOAD) in a CNC−Channel with Index other than 0 might have affected the CNC−Channel with Index 0.

ID#226952 : solved problem, solved since V1.090

Negative values for G108/G109/G110 ACC=<value> were not rejected

An error is is reported if the path acceleration exceeds the valid range.

ID#229340 : new function since V1.090

PLCopen IF in ARNC0

ACP10 axes kann be accessed with PLCopen IF from ARNC0
New NC structure component "cnc_object.axis.axis[i].nc_object_plcopen"

ID#228590 : new function since V1.090

Version control on config files according to ARNC0 version number

The standard configuration (AS package "GmcIpConfig") files must have a version number that matches the first three digits of the ARNC0 version number (Vx.yy.z)

ID#228575 : new function since V1.090

Setup phasing for automatically determining the commutation offset

New NC structure component "setup.motor_phasing".
New NC actions "ncSETUP+ncMOTOR_PHASING,ncSTART" und "ncSETUP+ncMOTOR_PHASING,ncSAVE".

ID#228555 : new function since V1.090

Trigger Configuration for axes accessed with PLCopen IF

New NC structure component "cnc_object.axis.axis[i].trg_source.nc_object_plcopen".
New NC structure component "cnc_object.axis.axis[i].trg_source.trg_conf".

ID#227795 : new function since V1.090

Compensation of axis errors for axes accessed with PLCopen IF

New NC structure component "cnc_object.axis.axis[i].ax_compensation".

ID#225877 : new function since V1.090

New Debugfunctionality for CNC Program Execution

− Breakpoints
− Varable watch and force function
− Expression execution
− Direct access to interpreter variables from PLC application tasks
− CNC blockmonitor display either path synchronous or interpreter synchronous

ID#228560 : Information valid since V1.090

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.190
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.190

ID#225882 : Information valid since V1.090

Extension of Interpreter Single Step Functionality

− Step into subprograms or step over
− Definition of a number of blocks to halt after

ID#228750 : solved problem, solved since V1.090

The ARNC0 trace failed with the error 2104: Invalid NC object for trace test data .

The trace test data were set properly but NC object "ncMODULE" issued the error 2104.

ID#228642 : solved problem, solved since V1.090

AILHeader section is limited to 4096 bytes in language configuration file (LCF).

ID#228595 : solved problem, solved since V1.090

Path speed drops to zero when assigning path synchronous variable

When path synchronous variable e.g. M−parameter was assigned in NC−program the path speed always dropped to zero. This happened even when the path synchronous variable was assigned between two tangentially connected path elements.

ID#227440 : solved problem, solved since V1.090

ncAUTOSAVE on ARwin (AR010) − Problem regarding access time

Trace with ncAUTOSAVE setting (saves trace data in text file automatically) took a long time when running on ARwin (AR010). The access time has now been optimized.

ID#227400 : solved problem, solved since V1.090

Position jump when using CAM wrapping

A position jump could occur on the rotary axis when the CAM wrapping hasn't been switched off in the previous NC program.

ID#227310 : solved problem, solved since V1.090

Internal errors after calling of external function from NC−program

Error sequence 10638, 10640, 10636 (internal errors) occurred as a response to a ncPROGRAM/ncSTART NC−Action if a previous program run had been aborted by a runtime error caused by an external function call (in case of a path−synchronous function with return type STATUS that returned a value between 1 and 65533).

ID#400041582 : solved problem, known since ARNC0 V 1.05.6, solved since V1.090

NC action ncAXES, ncINIT + cycle time violation

NC action ncAXES,ncINIT was adapted so that it no longer causes a cycle time violation when CPU load is too high.

ID#226460 : solved problem, solved since V1.090

G193, G194 not working since ARNC0 V1.00.0

The functions G193/194 (enable/disable "Linear feed characteristic" mode) have not been working since version V1.00.0. The functions G193, G194 are now supported again.

ID#226015 : solved problem, solved since V1.090

POWERLINK drive startup

If a drive that had not finished starting up was switched to ncCNCSYS simulation mode, the remaining drives didn't finish starting up.

ID#224940 : solved problem, solved since V1.090

Page fault when initializing the axis settings

A page fault occurs while initializing the axis settings if the axis object "cnc_object.axis.axis[i].nc_object" has not been assigned to a CNC object.

ID#400038567 : solved problem, solved since V1.090

Rotation angle H falsely interpreted as variable name

Syntax error occurred when using G02 argument H (rotation angle) after use of variable starting with H.

ID#400034909 : solved problem, solved since V1.090

Axis Movement State at NC Program Emergency Stop

At NC program emergency stop (ncMOVE, ncE_STOP) with the parameter cnc_obj−>move.e_stop.path = ncAXIS, the axis movement state will be set to axis_obj−>move.mode = ncOFF before the axis stands still.

NC Software − ARNC0 V1.070

ID#226295 : Information valid since V1.070

Included drive operating systems

For ACOPOS 8V1xxx.00−1: ACP10SYS V0.555
For ACOPOS 8V1xxx.00−2: ACP10SYS V2.180
For ACOPOSmulti 8BVxxxx.xx−x: ACP10SYS V2.180

ID#226305 : solved problem, solved since V1.070

FRAME independent from TRF_LIB version

Reorientation of axes is now independent from the TRF_LIB version if FRAME is used.

ID#226300 : solved problem, solved since V1.070

Usage of local_frame without frame axes

local_frame is used also if frame axes are not defined. Values from the transformation variable are then considered.

1A4000.02 Automation Tools

I/O Switchboard

ID#400083307 : solved problem, known since unbekannt, solved since V3.00.90.21 SP0x

Support for DATE_AND_TIME data type.

Starting with Win IO Version 3.0, the DATE_AND_TIME data type is also supported. Implementation on the I/O switchboard will follow with Version 3.0.3.0001

1A4000.02 Automation Studio 2x

Languages

ID#400056581 : solved problem, known since V2.7.0.0020 SP13, solved since V3.00.90.07

Recursion when using a field variable in CheckBounds

Using a local field variable in the CheckBounds function causes an unintended recursion and subsequently a cold restart.

Workspace − Hardware Configuration

ID#400068078 : solved problem, known since V2.7.0.0020 SP13, solved since V3.00.90.12

Unable to enter parameters for the Profibus master modules

The hardware configuration no longer offers access to the settings of the Profibus master modules (3NW150.60−1, 2NW100.50−1) for SG3. The corresponding tab is not visible.

1A4000.02 Automation Net/PVI

Linie − INA2000

ID#400044791 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.08

Error 4813 when transferring project after "Rebuild All"

Transferring certain projects terminates with Error 4813 if a "Rebuild All" is performed first.

1A4000.02 Automation Help

General

ID#400049392 : solved problem, known since V3.00.80.31 SP01, solved since V3.00.90.12

Addtional information 0x80004008 E_EXISTS is not described in error description 28700.

Motion − ACP10_MC

ID#400068552 : solved problem, known since V3.00.81.28 SP0x, solved since V3.00.90.12

Motion Samples: All errors have been acknowledged at once.

Under the following circumstances it was possible, that the error handling in the Motion Samples LibACP10MC_SingleAx_XX, LibACP10MC_Gear_XX, LibACP10MC_Cam_XX and LibACP10MC_Automat_XX was not correct, and all errors were acknowledged at once:
1. The switch−on command for the controller (XxxxControl.Command.Power = 1) is not set yet.
2. There are several errors active (e.g. due to a temporary network failure) on the respective axis.
3. The command for acknowledging (XxxControl.Command.ErrorAcknowledge) is given for once.

1A4000.02 (2.0 Automation Runtime SG4)

IO System − Powerlink

ID#258187 : solved problem, known since ARSG4_3.07.2_B03.07, solved since V3.00.90.11

Firmware Update for SafeMC did not complete.

Due to a change in A3.08, the firmware update for SafeMC modules doesn't complete. The R/E LED for SafeMC modules continues to double−blink green.
Starting with J3.08, the firmware update for SafeMC modules functions correctly again.