Porting Applications into Concept V2.6

This document contains the following sections:

1. Overview
2. Exporting Projects from old Concept Versions
3. Installing Concept 2.6
4. Importing Applications
5. Details about Importing Applications
5.1 Importing Applications from Concept 2.0 - Patch A4
5.2 Importing Applications from Concept 2.1 - Patch B2.1
5.3 Importing Applications from Concept 2.11
5.4 Importing Applications from Concept 2.12
5.5 Importing Applications from Concept 2.2
5.6 Importing Applications from Concept 2.5
5.7 EFB Substitutions
6. Updating to the Current Exec's
7. Technical Support

1. Overview

The purpose for this document is to review the process of converting an application from previous versions of Concept to the latest version of Concept 2.6. Regardless of the version of Concept you are moving from, the process to Export/Import (Convert) your application will follow the same basic steps. Chapters 2-4 describe the general process of Export, Installation and Import. Chapter 5-7 provide additional information, necessary to understand the Concept messages during import of the export files, created by the different Concept Versions.

2. Exporting Projects from old Concept Versions

2.1 If upgrading from Concept 2.5 to Concept 2.6

- With Concept V2.6 Service Release 1 it is not necessary to convert existing projects.
- The 140 CPU x34 1xA High-End Quantum **MUST** be updated with the new firmware.
- Other CPUs need an EXEC (firmware) Upgrade only to incorporate the 2.6 bug fixes (e.g. XXMIT) or new features are to be used.

2.2 If upgrading from any Concept Version

Please follow the steps described below (2.3 – 4.2) when you plan to install Concept 2.6 and want to port your projects from a previous Concept version (prior and including Concept 2.5). Applications written in Beta versions of Concept 2.6 are not fully compatible with the released Concept version.

2.3 Process of Exporting Applications

Export your project(s) created in the old Concept version using the Concept Converter program (dbconv.exe) supplied with the earlier version of Concept. This will save your project in a <project>.asc file in the directory of your project. Repeat this step for all projects.

There are several options to export the projects. Following is a description of the different impact of these export possibilities. In all cases the local and global DTY file is exported.

- Export with used DFBs
  Exports the project with all used DFBs. This includes the loacal and the global DFBs, that are used in the project.

- Export with all DFBs + Makros
  Exports the project with all DFBs and Makros. This includes all loacal and all global DFBs and Makros.

- Project without DFB
  Exports the project without DFBs or Makros.

- Singe DFB with used DFBs / single Makro
  Exports a DFB only including DFBs used by this DFB. Also a Makro can be exported.

2.4 Move all the *.asc files just created, to a directory(s) outside of the Concept directory.

2.5 Make a backup copy of the project(s) and the *.asc files to maintain backward compatibility if the upgrade should not succeed.

Note: Handle custom EFB's and custom loadables separately. The loadables have to be copied from the "Concept/dat" sub directory to a safe place. EFB sources must also be kept at a safe place, because they must be rebuilt and installed using the EFB toolkit after the installation of Concept 2.6.

3. Installing Concept 2.6

There are two possibilities to install Concept 2.6. Replacing the old installation (3.1) or installing Concept 2.6 (3.2) in parallel.

3.1. To replace an old installation proceed as follows:
If you have installed a Concept Version which has not been authorized continue with 3.1.2 otherwise:
3.1.1 Transfer the Authorization to a floppy disk first.
3.1.2 Uninstall the old Concept Version using the uninstall dialog (Control Panel / Software)
3.1.3 Install Concept 2.6 (CD #1)
3.1.4 Install Service Release 1 (CD #2)
3.1.5. If you have transferred the Authorization to a floppy disk then transfer Authorization back from floppy disk now.

3.2. To install Concept 2.6 in parallel proceed as follows:
3.1.1 Install Concept 2.6 in a different directory than your already Concept in use.
3.1.2 Install SR1 (CD #2) in the same directory

If your old Concept Version was Concept 2.5, the authorization is still valid. You do not have to authorize it again, unless your previous installation is older than one year. Then it is required to redo the authorization process to ensure full service support for one year.

3.3 Reboot your PC.

3.4 If necessary, flash the appropriate Exec to the controller (see **Updating to the Current Exec's** below)

3.5 Copy the saved *.asc files into the new project directory.

Note:
Concept EFB and Application Loader also require an update with Concept V2.6 SR1

4. Importing Applications into Concept 2.6

4.1 Run the Concept Converter 2.6 and import all your projects to be used in Concept 2.6.

4.2 Run Concept 2.6 and open your converted projects. You will be notified of Concept 2.6 changes that will effect your application. The tables found under **Details about Importing Applications** provides information on porting from previous versions of Concept as well as the EFB blocks effected and a description of the change made to the block. It may be necessary to replace a block from a previous version with a new named block. If required, this information is provided below as well.

Peculiarities when using Concept 2.5 projects

In general Concept 2.5 projects can be used in Concept 2.6 without conversion. However some projects won't connect with 'EQUAL' due to the following reasons:

1. The executable code of some EFBs have been improved. Please refer to chapter 5.6 for a list of affected EFBs. To connect with 'EQUAL' you have to download the application.

2. Some RS/SR Flipflops may show unexpected behavior if
- they were inserted once in a section as the first FB-instance,
- a variable/discrete is attached to the output pin,
- the project was exported/imported in Concept 2.5 at least once.

Under these circumstances there is the slight risk that
- the state of the Flipflop could be reset after a power cycle if the output of the Flipflop is connected to a discrete.
- the state of the Flipflop could be overwritten if there is a critical multi-assignment of the variable connected to the output of the FB.

All locations of RS/SR Flipflops, the proper operation of which might be influenced, will be detected if the project is opened for the first time with Concept 2.6. A message box will pop up to notify the customer of the problem.

Concept will repair the problem by making internal changes to the section and setting the status of the section to 'modified'. This handling will lead to the connection status 'modified'. The modification will have an effect on the PLC after 'download changes'.

If a 2.5 project is uploaded from the PLC using 2.6, any affected RS/SR Flip-flops are **only** detected after having closed and re-opened the project manually.

5. Details about Importing Applications

The following tables represent blocks, which may have been used in a previous version of Concept and whose definition has changed in Concept 2.6. There will be a message associated with each block that has changed, which appears when the user tries to open a project that has been ported from a previous version. Depending on the type of change made to the block, the user may just be informed that the block has changed internally, and it should not effect the application at all. There are other blocks whose interface has changed. This may or may not effect a customer's application. The user has the choice to substitute all instances of the old blocks with the new blocks, or ignore the new block substitution but the project will not download. A third choice is the user has the ability to substitute all occurrences of a changed block, with a new named block. If this is required, the new named block is provided in the third column of the table below.

Note: Project's desktop file (<projekt>.dsk) is not imported. Do not copy it from the previous version of Concept.

5.1 Importing Applications from Concept 2.0 Patch A4

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
O_DEBUG	new output pin "WARN_CODE"	
COMP_PID	new output pins "SP_CAS_N","YMAN_N", "OFF_N",	
ACT_DIA	code optimized	
DYN_DIA	code optimized	
GRP_DIA	code optimized	
LOCK_DIA	code optimized	
PRE_DIA	code optimized	
REA_DIA	internally used memory increased in size	
DEFUZ_INT	# of input pins reduced from 31 to 18	
DEFUZ_REAL	# of input pins reduced from 31 to 18	
DEFUZ_STI	# of input pins reduced from 30 to 9	
DEFUZ_STR	# of input pins reduced from 30 to 9	
FUZ_STERM_INT	# of input pins reduced from 31 to 4	
FUZ_STERM_REAL	# of input pins reduced from 31 to 4	
FUZ_ATERM_STI	# of input pins reduced from 31 to 9	
FUZ_ATERM_STR	# of input pins reduced from 31 to 9	
FUZ_ATERM_INT	# of input pins reduced from 25 to 9	
FUZ_ATERM_REAL	# of input pins reduced from 25 to 9	
QUANTUM	changed internally	
PLCSTAT	internally used memory increased in size	
SFCCNTRL	new output pin TERRACT	
ATI030	Changed internally reason bug fix: Raw values ("Type: Undefined") must not be divided by 10 on Resolution: 0.1 Deg.	

5.2 Importing Applications from Concept 2.1 Patch B2.1

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
ACT_DIA (CC2.1, with STATION-pin)	no longer supported	XACT_DIA
ACTDIAB (CC2.1, no STATION-pin)	no longer supported	ACT_DIA
ACT_DIA (CC2.1B2, no STATION-pin)	equivalent to ACT_DIA Changed Internally	ACT_DIA
DYN_DIA (CC2.1, with STATION-pin)	no longer supported	XDYN_DIA
DYNDIAB (CC2.1, no STATION-pin)	no longer supported	DYN_DIA
DYN_DIA (CC2.1B2, no STATION-pin)	equivalent to DYN_DIA Changed Internally	DYN_DIA
GRP_DIA (CC2.1, with STATION-pin, with 2 input pins)	no longer supported	XGRP_DIA
GRPDIAB (CC2.1, no STATION-pin, with extensible pins)	no longer supported	GRP_DIA
GRP_DIA (CC2.1B2, no STATION-pin, with extensible pins)	equivalent to GRP_DIA Changed Internally	GRP_DIA
LOCK_DIA (CC2.1, with STATION-pin)	no longer supported	XLOCK_DIA
LOCKDIAB (CC2.1, no STATION-pin)	no longer supported	LOCK_DIA
LOCK_DIA (CC2.1B2, no STATION-pin)	equivalent to LOCK_DIA Changed Internally	LOCK_DIA
PRE_DIA (CC2.1, with STATION-pin)	no longer supported	XPRE_DIA
PREDIAB (CC2.1, no STATION-pin)	no longer supported	PRE_DIA
PRE_DIA (CC2.1B2, no STATION-pin)	equivalent to PRE_DIA Changed Internally	PRE_DIA
REA_DIA (CC2.1, with STATION-pin)	no longer supported	XREA_DIA
READIAB (CC2.1, without STATION-pin) no longer supported	no longer supported	REA_DIA
REA_DIA (CC2.1B2, no STATION-pin)	internally used memory increased in size Interface was Changed	
XACT (CC2.1)	internally used memory increased in size	
XACT (CC2.1B2)	equivalent to XACT Changed Internally	
I_SCA20_WARN (CC2.1)	no longer supported	I_SCALE_WARN

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
I_SCA20 (CC2.1)	no longer supported	I_SCALE
ERR2HMI	Output pin WAF no longer supported	
DEFUZ_INT	# of input pins reduced from 31 to 18	
DEFUZ_REAL	# of input pins reduced from 31 to 18	
DEFUZ_STI	# of input pins reduced from 30 to 9	
DEFUZ_STR	# of input pins reduced from 30 to 9	
FUZ_STERM_INT	# of input pins reduced from 31 to 4	
FUZ_STERM_REAL	# of input pins reduced from 31 to 4	
FUZ_ATERM_STI	# of input pins reduced from 31 to 9	
FUZ_ATERM_STR	# of input pins reduced from 31 to 9	
FUZ_ATERM_INT	# of input pins reduced from 25 to 9	
FUZ_ATERM_REAL	# of input pins reduced from 25 to 9	
HTB5	internally used memory increased in size	
PLCSTAT	internally used memory increased in size	
SFCCNTRL	New output pin TERRACT	
ATI030	Changed internally reason bug fix:Raw values (”Type: Undefined”) must not be divided by 10 on Resolution: 0.1 Deg.	

5.3 Importing Applications from Concept 2.11

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
REA_DIA (without STATION-pin)	internally used memory increased in size	
ERR2HMI	output pin WAF no longer supported	
DEFUZ_INT	# of input pins reduced from 31 to 18	
DEFUZ_REAL	# of input pins reduced from 31 to 18	
DEFUZ_STI	# of input pins reduced from 30 to 9	
DEFUZ_STR	# of input pins reduced from 30 to 9	
FUZ_STERM_INT	# of input pins reduced from 31 to 4	
FUZ_STERM_REAL	# of input pins reduced from 31 to 4	
FUZ_ATERM_STI	# of input pins reduced from 31 to 9	
FUZ_ATERM_STR	# of input pins reduced from 31 to 9	
FUZ_ATERM_INT	# of input pins reduced from 25 to 9	
FUZ_ATERM_REAL	# of input pins reduced from 25 to 9	
PLCSTAT	internally used memory increased in size	
XSFCCNTRL	new input pin RESSTEPT	
GET_BIT	input pin "IN" of data type ANY changed to data type WORD. input pin "REVERS" no longer supported	
SET_BIT	output pin "RES" of data type ANY	

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
	changed to data type WORD input pin "REVERS" no longer supported	
ATI030	Changed internally reason bug fix: Raw values (”Type: Undefined”) must not be divided by 10 on Resolution: 0.1 Deg.	

5.4 Importing Applications from Concept 2.12

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
REA_DIA (without STATION-pin)	internally used memory increased in size	
DEFUZ_INT	# of input pins reduced from 31 to 18	
DEFUZ_REAL	# of input pins reduced from 31 to 18	
DEFUZ_STI	# of input pins reduced from 30 to 9	
DEFUZ_STR	# of input pins reduced from 30 to 9	
FUZ_STERM_INT	# of input pins reduced from 31 to 4	
FUZ_STERM_REAL	# of input pins reduced from 31 to 4	
FUZ_ATERM_STI	# of input pins reduced from 31 to 9	
FUZ_ATERM_STR	# extensible pins reduced from 31 to 9	
FUZ_ATERM_INT	# extensible pins reduced from 25 to 9	
FUZ_ATERM_REAL	# extensible pins reduced from 25 to 9	
PLCSTAT	internally used memory increased in size	
XSFCCNTRL	internally used memory increased in size	
REV_XFER		New with Concept 2.5
ATI030	Changed internally reason bug fix: Raw values ("Type: Undefined") must not be divided by 10 on Resolution: 0.1 Deg.	

5.5 Importing Applications from Concept 2.2

The following EFBs have been changed internally and will be automatically substituted when importing applications into Concept 2.6

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
HTB5	HANDTABL LIB EFB internally changed due to changed symbol description. Boolean outputs changed to “StateOUPTPUT“.	
FIFO and LIFO	Outputs parameters FULL and EMPTY are set now to 1 for one	

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
	scan.	
AMM090	Broken wire status bits now included in status	
ANA_4I_2O	Code optimization – no effect on function	
ANA_16I	Code optimization – no effect on function	
ANA_4I2O_C	Code optimization – no effect on function	
ANA_4I2O_V	Code optimization – no effect on function	
ANA_4I_M	Code optimization – no effect on function	
ANA_4O	Code optimization – no effect on function	
ANA_8I	Code optimization – no effect on function	
DAU204	Broken wire status bits now included in status	
DIG_16I	Code optimization – no effect on function	
DIG_16I12O_MON	Code optimization – no effect on function	
DIG_16I16O	Code optimization – no effect on function	
DIG_16O	Code optimization – no effect on function	
IMIO_IN	Code optimization – no effect on function	
IMIO_OUT	Code optimization – no effect on function	
MIX_4I_2O	Code optimization – no effect on function	
NOA_611	Code optimization – no effect on function	
O_PHYS_W	Code optimization – no effect on function	
QPR_16I_12O	Code optimization – no effect on function	
UNI_I	Code optimization – no effect on function	
UNI_I_O	Code optimization – no effect on function	
UNI_O	Code optimization – no effect on function	
ABS_UINT	Code optimization – no effect on function	
ABS_UDINT	Code optimization – no effect on function	
All EFBs in DIAGNOSE library	Internal fixes to improve process diagnostics support	
XXMIT	MODBUS messaging improved	
MODBUSP_ADDR	EFB name is harmonized to upper case	

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
BYTE_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
INT_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
UINT_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
DINT_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
UDINT_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
REAL_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
WORD_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
TIME_TO_BOOL	Warning of Data loss (Out of Range Error) removed	
INT_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
UINT_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
DINT_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
UDINT_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
REAL_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
WORD_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
TIME_TO_BYTE	Warning of Data loss (Out of Range Error) removed	
DINT_TO_WORD	Warning of Data loss (Out of Range Error) removed	
UDINT_TO_WORD	Warning of Data loss (Out of Range Error) removed	
REAL_TO_WORD	Warning of Data loss (Out of Range Error) removed	
TIME_TO_WORD	Warning of Data loss (Out of Range Error) removed	
LIB CONT_CTL / Group Controller AUTOTUNE PIDFF PI_B STEP2 STEP3 LIB CONT_CTL / Group Conditioning INTEGRATOR QDTIME VEL_LIM LIB CONT_CTL / Group Mathematics COMP_DB LIB CONT_CTL /	BOOL outputs changed to StateOUTPUT..Fix problem if 0x reference is connected to a BOOL output. Behavior now as in Concept V2.1x.	

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
Group Setpoint management RAMP LIB CONT_CTL / Group Output processing MS SERVO LIB CONT_CTL / Group CLC_PRO DEADTIME FGEN PCON2 PCON3 SCON3 LIB CONT_CTL / Group CLC DELAY INTEGRATOR1 LIMV PI1 PID1 PIDP1 LIB EXTENDED / Group Measurement AVGMV LOOKUP_TABLE1 LIB COMM / Group IBS_NOA_PCP ICNT ICOM LIB LIB984 / Group LIB984 R2T SRCH T2T LIB EXPERTS / Group MVB MVB_INFO MVB_RED		

5.6 Importing Applications from Concept 2.5

Applications in Concept 2.5 using RS/SR Flip-flop function blocks will not be able to connect EQUAL with the controller when opening with Concept 2.6. This is due to a fix that was made to RS/SR Flip-flop function block. With Concept 2.6 all locations of RS/SR Flip-flops will be detected upon first opening the project.
A message box will pop up to notify the customer of the problem. Concept will repair the problem by making internal changes to the section and setting the status of the section to 'modified'. This handling will lead to the connection status 'modified'. A ‘download change’ will download the repaired section and the status will become EQUAL.

If a 2.5 project is uploaded from the PLC using 2.6, any affected RS/SR Flip-flops are only detected after having closed and re-opened the project manually.

The following EFBs have been changed internally and will be automatically substituted upon opening application after an import or opening a Concept 2.5 application in Concept 2.6.

Previous Block Name	Change Made to Block	Concept 2.6 Replacement
COMM Library **ICNT** and **ICOM**	Version changed due to an changed library group name.	
EXPERTS Library **MVB_RED** and **MVB_INFO**	Version changed this was omitted in Concept 2.5	
CONT_CTL Library PIDFF	Bumpless behavior of the output of EFB **PIDFF** when switching from manual mode to automatic mode.	
LIB984 Library PUT_4X	EFB **PUT_4X** works now with last configured register	
ANA_IO Library XBP	Bug fixed for Quantum with XBE and DIO via NOM if analog module is on identical slot number as the NOM	

5.7 EFB Substitutions

If some of the EFBs used in your application have been changed within Concept 2.6 (interface changed/internally changed) this issue is brought to your attention via a message box the first time you open your application. There are instances where you are faced with an option to substitute the old function blocks. If you choose not to substitute an EFB then you cannot download to the PLC, and the analyzer will prompt you with an appropriate error.

The number of extensible pins for EFBs of the **FUZZY** library has been adjusted to its documented and functional supported amount. Links and variables attached to pins higher than the new limit (which didn't have any effect and thus should never be used) will be deleted. All other logic will be ported correctly.

The **CONF_20** library containing diagnostic and I_SCALE EFBs was introduced in V2.1 B1.1 accidentally and does not exist in Concept 2.6. If you have used these EFBs in your application, a dialog will open giving you the opportunity to substitute the EFBs in Concept 2.6. Please refer to the table below to determinate the EFBs with the same interface and functionality for substitution.

	Previous Concept Version	Concept 2.6 Equivalent Block
Library	**CONF_20/Diag_Base**	**Diagno/Diagnostics**
	ACTDIAB	ACT_DIA
	DYNDIAB	DYN_DIA
	GRPDIAG	GRP_DIA
	LOCKDIAB	LOCK_DIA
	PREDIAB	PRE_DIA
	READIAB	REA_DIA
Library	**CONF_20/Analog_IO_Scaling**	**ANA_IO/ANALOG_IO_SCALING**
	I_SCA20	I_SCALE
	I_SCA20_WARN	I_SCALE_WARN

6. Updating to the Current Exec's

Run the loader utility (ExecLoad.exe, must be installed on your hard disk) and re-flash your controllers with the appropriate exec. Refer to the file **InfoSRxe.PDF** (x means number of Service Release) for the correct exec to download.
It is highly recommended to power cycle the PLC after loading a new exec to the PLC.

7. Technical Support

Stripped Quantum (140 CPU 13 xxS)
The new loadable **EMUQ** used for Floating point emulation must be manually installed in the loadable list if your application is using REAL arithmetic with the stripped Quantum 140 113 xxS (no Co-Processor)

Hybrid applications (LL984 and IEC Program)
With Concept 2.1x / 2.2 the changes to solve the "remove disable coil" problem (subject: RDE and IEC-located coil) introduced the changes that coils can't be **written** from both an IEC section and a LL984 section. The analyzer generates an error message.

LD Editor, DFBs written in LD from previous versions of Concept 2.2
The representation for the LD editor has changed to cell orientation (switched to grid mode). The graphical conversion is done when opening the section and may alter the graphical appearance.
If you have ported an application from a previous version that contained one or more LD sections, you will be prompted to review all LD sections when you open your Concept 2.5/2.6 project. For each LD section you will be prompted with the following message: 'The section '<section>' was created with Concept 2.12 or older. Do you want to update this section. Attention: The section will be rearranged and you cannot undo this operation'. If you select YES, then your logic will be reformatted in a grid fashion. If you select NO, your blocks are not substituted, but you will not be allowed to download.

After converting an existing project, which contains LD DFBs you must open up each LD section for the conversion to take place. (Nested DFBs must be opened in the correct bottom-up sequence). The sequence is not longer an issue with Concept V2.5/2.6, use the project menu item “Synchronize versions of nested DFBs“.

If you choose to upgrade into the grid representation, you may find there LD sections, which require manual modifications.

Ethernet Configuration Screen
The Quantum Ethernet module configuration is no longer accessed through the module parameter button on the IO Map. It has been moved to the Ethernet I/O Scanner screen found on the Configure menu.

Memory requirements
The memory required to access discrete references has increased. An internal IEC (mirror) buffer is no longer used.
The size of the application is slightly different between Concept 2.1 and 2.2 and following versions of Concept because of a changed accessing 0x and 1x references. The direct access (read or write) of these references may increase your code.

Process diagnostics error buffer (4 Kbytes) is not longer allocated by default since Concept V2.2. This reduces the overhead of DFB instance data compared to versions 2.1/2.11.

Default value for global data (Off-line memory statistics dialog) is reduced from 16K to 4Kbytes with Concept V2.5.

E.g.

Application type	**Used total memory in Kbytes**			**Delta**		
Concept Version 2.6	**2.0**	**2.1/2.11**	**2.2**	**2.0/2.2**	**2.1/2.2**	**2.2/2.5-**
steel	247,2	289,3	256,2	+ 3,6%	-11.4%	
chemical	287,8	311,7	296,8	+ 3,1%	- 4,7%	
flow control	102,7	121,4	105,3	+ 2.5%	- 13,2%	Over all
automotive*	-	125,5	160,9	-	+28,2%	
mining	-	167.6	170.1	-	+ 1.4%	-10%
mining	-	307.0	314.1	-	+ 2.3%	

***** With diagnostic buffer enabled and very extensive use of 0x or 1x registers.

Force
The behavior of disable has been changed with Concept 2.2. 0x/1x references will be set to the given value in the scan regardless of the logic evaluation. 0x/1x references, which are used in IEC sections, behave now as it does in LL984 sections.

User EFBs from versions prior to Concept 2.5 have to be recompiled with the EFB Toolkit for Concept 2.6. User EFBs from Concept 2.5 can be used directly.