Temperature_20146124,20146128_V15

Project							
Name:	Tempera-ture_20146124,20146128_V15	**Creation time:**	10/14/2022 6:26:14 AM	**Last change**	12/15/2022 3:46:21 PM	**Author:**	Windows 8.1 Pro
Last modified by:	Hieu	**Version:**					
Comment:							

Operating system	
Name	**Description**
Operating system	Microsoft Windows 10 Pro
Version of the operating system	6.3.9600.0
Operating system service pack	
Version of the Internet Explorer	11.789.19041.0
Computer name	DESKTOP-JEVFFQ7
User name	DESKTOP-JEVFFQ7\Hieu
Installation path of the TIA Portal	C:\Program Files\Siemens\Automation\Portal V15

Components		
Name	**Version**	**Release**
TIA Portal Multiuser Server V15 - TIA Portal Multiuser Server Single Setup-Package V15.0 (MUSERVERV15)	V15.0	V15.00.00.00_26.01.00.01
SIMATIC S7-PLCSIM (S7_PLCSIM_V15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - SIMATIC S7-PLCSIM V15.0 (S7_PLCSIM_V15)	V15.0	V15.00.00.00_26.00.05.01
TIA Administrator - AWB Licensing Module V1.0 + SP1 (TIAADMIN)	V1.0 + SP1	V01.00.01.00_01.22.00.03
TIA Administrator - AWB Software Management V1.0 + SP1 (TIAADMIN)	V1.0 + SP1	V01.00.01.00_01.22.00.03
TIA Administrator - TIA UMC Agent Configurator Module V1.0 + SP1 (TIAADMIN)	V1.0 + SP1	V01.00.01.00_01.22.00.03
TIA Administrator - TIA Administrator V1.0 SP1 (TIAADMIN)	V1.0 + SP1	V01.00.01.00_01.22.00.03
Totally Integrated Automation Portal V15 - TIA Portal Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - HM All Editions Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - HM NoBasic Single Se-tupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - Hardware Support Base Package 0 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - Multiuser Client Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - STEP 7 Single Setup-Package V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - Hardware Support Base Package 02 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - Hardware Support Base Package 03 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - Hardware Support Base Package 04 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - Support Base Package TO-01 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - Support Base Package TO-02 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - Hardware Support Base Package WCF-01 V15.0 (TIAP15)	V15.0	V15.00.00.00_01.01.00.02
Siemens Totally Integrated Automation Portal V15 - TIACOMPCHECK Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - Simatic Single Setup-Package V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - WinCC Single Setup-Package V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - Openness SetupPack-age V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - WinCC Transfer Current All Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - WinCC Transfer Current CAP Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - WinCC Transfer Manda-tory Single SetupPackage V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
User Management Component - UserManagementComponentx64 01.9 + SP1 (UMC64)	V01.9 + SP1 + Upd3	V01.09.01.03_01.01.00.11
Siemens Totally Integrated Automation Portal V15 - Simatic Single Setup-Package 32 Bit V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
Siemens Totally Integrated Automation Portal V15 - WinCC Single Setup-Package 32 Bit V15.0 (TIAP15)	V15.0	V15.00.00.00_26.01.00.01
SIMATIC HMI License Manager Panel Plugin (x64)	15.0.0.0	V15.00.00.00_26.01.00.01
SIMATIC NCM FWL 64	5.6.0.3	K5.6.0.3_1.1.0.2
NCM GPRS 64	01.02.00.00	V1.2.0.0_2.1.0.1
SIMATIC PLCSIM 64	15.01.00	15.01.00.00_17.00.02.01
SIMATIC Device Drivers	9.2	09.02.04.00_01.04.00.05
Automation Software Updater	02.03.0000	V02.03.00.00_01.01.00.48
SIMATIC HMIProvider	7.0	K07.00.03.00_01.01.00.01
SIEMENS OPC	3.9	03.09.06.00_01.13.00.01
SIMATIC WinCC OPC Alarm & Events Server	3.9	03.09.06.00_01.13.00.01
SIMATIC WinCC OPC Data Access Server	3.9	03.09.06.00_01.13.00.01
SIMATIC WinCC OPC Historical Data Access Server	3.9	03.09.06.00_01.13.00.01
SIMATIC WinCC OPC XML Client	3.9	03.09.06.00_01.13.00.01

Totally Integrated Automation Portal

Name	Version	Release
PCS7 Common Classes	8.2	08.02.00.00_01.13.00.01
SIMATIC HMI ProSave	15.0.0.0	V15.00.00.00_26.01.00.01
SIMATIC HMI Symbol Library	16.0.0.0	V16.00.00.00_29.01.00.01
SIMATIC HMI Touch Input	13.0.1.0	V13.00.01.00_25.01.00.01
SIMATIC Runtime Interfaces	2.1	K02.01.00.03_01.01.00.01
SIMATIC Version View	1.7.10.0	K1.7.10.0_1.1.0.1
SIMATIC Device Drivers WoW	29.2	29.02.04.00_01.04.00.05
SIMATIC Event Database	5.6	05.06.00.00_03.01.00.01
SIMATIC Asset Manager	K2.4.1.0	V02.04.01.00_01.56.00.01
SeCon	2.5	V02.05.02.00_01.02.00.01
SIMATIC Station Observer	K7.3.0.1	V07.03.00.01_01.03.00.01
SIMATIC SCS	V7.4.0.0	V07.04.00.00_01.23.00.02
SIMATIC WinCC Common Archiving	V7.4.0.0	V07.04.00.00_01.59.00.01
WinCC Runtime Advanced Simulator	15.0.0.0	V15.00.00.00_26.01.00.01

Products

Name	Version	Release
TIA Portal Multiuser Server	V15.0	V15.00.00.00_26.01.00.01
SIMATIC S7-PLCSIM	V15.0	V15.00.00.00_26.00.05.01
TIA Administrator	V1.0	V01.00.00.00_01.00.00.01
SIMATIC STEP 7 Professional - WinCC Advanced	V15.0	V15.00.00.00_26.01.00.01
User Management Component x64	V1.9 SP1	V01.20.00.00_01.01.00.01
Automation License Manager	V6.0 + SP9 + Upd2	06.00.09.02_01.01.00.02
FORDM		
S7-PLCSIM	V5.4 + SP8	V05.04.08.01_01.24.00.01
SIMATIC ProSave	V15.0	V15.00.00.00_26.01.00.01
WinCC Runtime	V7.4	V07.04.00.00_01.59.00.01
WinCC Configuration	V7.4	V07.04.00.00_01.59.00.01
WinCC OPC Server	V3.9 + SP6	03.09.06.00_01.13.00.01
WinCC OPC-UA Client	V1.0	01.00.00.00_01.26.00.02
WinCC OPC-UA Server	V1.0 + SP4	01.00.04.00_01.22.00.01
SIMATIC WinCC Smart Tools	V7.4	V07.04.00.00_01.59.00.01

Temperature_20146124,20146128_V15

PLC_1 [CPU 313C-2 DP]

PLC_1					
General					
Name	PLC_1	**Author**	Windows 8.1 Pro	**Comment**	
Rack	0	**Slot**	2		
General\Catalog information					
Short designation	CPU 313C-2 DP	**Description**	Work memory 64KB; 0.1ms/1000 instructions; DI16/DO16 integrated; 3 pulse outputs (2.5kHz); 3 channels counting and measuring with 24 V (30kHz) incremental encoders; MPI +DP interface (DP master or DP slave); multi-tier configuration up to 31 modules; capable of sending and receiving in direct data exchange; constant bus cycle time; routing; S7 communication (loadable FBs/FCs); firmware V2.6; also available as SIPLUS module with article number 6AG1 313-6CF03-2AB0.	**Article number**	6ES7 313-6CF03-0AB0
Firmware version	V2.6				
General\Identification & Maintenance					
Plant designation		**Location identifier**			
MPI interface\General					
Name	MPI interface_1	**Comment**			
MPI interface\MPI address\Interface networked with					
Subnet:	Not networked				
MPI interface\MPI address\Parameters					
Address:	2	**Highest address:**	31	**Transmission speed:**	187.5 kbps
DP interface [X2]\General					
Name	DP interface_1	**Comment**			
DP interface [X2]\PROFIBUS address\Interface networked with					
Subnet:	Not networked				
DP interface [X2]\PROFIBUS address\Parameters					
Address:	2	**Highest address:**		**Transmission speed:**	
DP interface [X2]\Operating mode					
Operating mode	DP master	**DP master system:**	Not created	**Assigned DP Master:**	Not assigned
DP interface [X2]\Operating mode\DPOperatingModeAddOnsMenu					
Test, commissioning and routing	False	**Watchdog**	True		
DP interface [X2]\Time synchronization\SIMATIC mode					
Synchronization type	None	**Time interval**	None		

DP interface [X2]\SYNC/FREEZE

Group	SYNC	FREEZE	Comment
1	True	True	
2	True	True	
3	True	True	
4	True	True	
5	True	True	
6	True	True	
7	True	True	
8	True	True	

DP interface [X2]\Diagnostics addresses\Diagnostics addresses					
Start address	1023				
DI 16/DO 16\General					
Name	DI 16/DO 16_1	**Comment**			
DI 16/DO 16\General\Catalog information					
Short designation	DI 16/DO 16	**Description**	Digital input/output DI16 + DO16		
DI 16/DO 16\Inputs\Channel group 0 - 3					
Input delay	3ms				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 0\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 0\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 1\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 1\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 2\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 2\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 3\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 0 - 3\Hardware interrupt channel 3\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7					
Input delay	3ms				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 4\Rising (positive) edge					
Rising (positive) edge	False				

DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 4\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 5\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 5\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 6\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 6\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 7\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 4 - 7\Hardware interrupt channel 7\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11					
Input delay	3ms				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 8\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 8\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 9\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 9\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 10\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 10\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 11\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 8 - 11\Hardware interrupt channel 11\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15					
Input delay	3ms				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 12\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 12\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 13\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 13\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 14\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 14\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 15\Rising (positive) edge					
Rising (positive) edge	False				
DI 16/DO 16\Inputs\Channel group 12 - 15\Hardware interrupt channel 15\Falling (negative) edge					
Falling (negative) edge	False				
DI 16/DO 16\I/O addresses\Input addresses					
Start address	124.0	**End address**	125.7	**Process image**	OB1-PI
Interrupt OB number	40				
DI 16/DO 16\I/O addresses\Output addresses					
Start address	124.0	**End address**	125.7	**Process image**	OB1-PI
Count\General					
Name	Count_1	**Comment**			
Count\General\Catalog information					
Short designation	Count	**Description**	3 channels; counting and frequency measurement at 30 kHz, pulse width modulation at 2.5 kHz switching frequency		
Count\Interrupt selection					
Interrupt selection	None				
Count\Channel 0					
Operating mode	Not configured				
Count\Channel 1					
Operating mode	Not configured				
Count\Channel 2					
Operating mode	Not configured				
Count\I/O addresses\Input addresses					
Start address	768	**End address**	783	**Process image**	None
Interrupt OB number	40				
Count\I/O addresses\Output addresses					
Start address	768	**End address**	783	**Process image**	None

Startup					
Startup if preset configuration does not match actual configuration	True	**Startup after POWER ON**	Warm restart		
Startup\Monitoring time for					
Ready message from modules	650x 100 ms	**Parameter transfer to modules**	100x 100 ms		
Cycle					
Cycle monitoring time	150ms	**Cycle load due to communication**	20%	**OB85 call if I/O access error occurs**	No OB85 call
Clock memory					
Clock memory	False	**Memory byte**	0		

Interrupts\Time-of-day interrupts\				
OB number	**Priority**	**Active**	**Execution**	**Start time**
OB 10:	2	False	None	1994-01-01 00:00:00.000

Interrupts\Time-delay interrupts\		
OB number	**Priority**	**Process image partition(s)**
OB 20:	3	None

Interrupts\Cyclic interrupts\				
OB number	**Priority**	**Execution**	**Phase offset**	**Unit**
OB 35:	12	250	0	ms

Interrupts\Hardware interrupts\		
OB number	**Priority**	**Process image partition(s)**
OB 40:	16	None

Interrupts\Interrupts for DPV1\	
OB number	**Priority**
OB 55:	2
OB 56:	2
OB 57:	2

Interrupts\Asynchronous error interrupts\	
OB number	**Priority**
OB 82:	26
OB 85:	26
OB 86:	26
OB 87:	26

Diagnostics system					
Report cause of STOP	True				
System diagnostics\General					
Activate system diagnostics for this device	False				
Time of day					
Correction factor	0ms				
Time of day\Synchronization on PLC					
Type of synchronization	None	**Time interval**	None		
Time of day\Synchronization on MPI					
Type of synchronization	None	**Time interval**	None		
Operating mode					
	Test mode	**Max. cycle time for test functions**	ms		
Retentive memory					
Number of memory bytes starting at MB 0	16	**Number of S7 timers starting at T 0**	0	**Number of S7 counters starting at C 0**	8
Protection					
Password		**Confirm password**			
Protection					
Level of protection	Depending on the mode selector setting				
Protection\ \Can be canceled with password					
Can be canceled with password	False				
Connection resources					
PG communication:	1	**OP communication:**	1	**S7 basic communication:**	0
S7 communication:	0	**Maximum number of S7 connection resources:**	8		
Overview of addresses\Overview of addresses\Overview of addresses					
Inputs	True	**Outputs**	True	**Address gaps**	False
Slot	True				

Type	Addr. from	Addr. to	Module	PIP	Device name	Device number	Size	Master / IO system	Rack	Slot
I*	1023	1023	DP interface_1	---	PLC_1 [CPU 313C-2 DP]	-	0 Bits	-	0	2 X2
I	124	125	DI 16/DO 16_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	2 Bytes	-	0	2 2
O	124	125	DI 16/DO 16_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	2 Bytes	-	0	2 2
I	768	783	Count_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	16 Bytes	-	0	2 4
O	768	783	Count_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	16 Bytes	-	0	2 4
I	256	271	CP 343-1 Lean_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	16 Bytes	-	0	4
O	256	271	CP 343-1 Lean_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	16 Bytes	-	0	4
I	272	275	AI 2x12BIT_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	4 Bytes	-	0	5
O	288	291	AO 2x12BIT_1	OB1-PI	PLC_1 [CPU 313C-2 DP]	-	4 Bytes	-	0	6

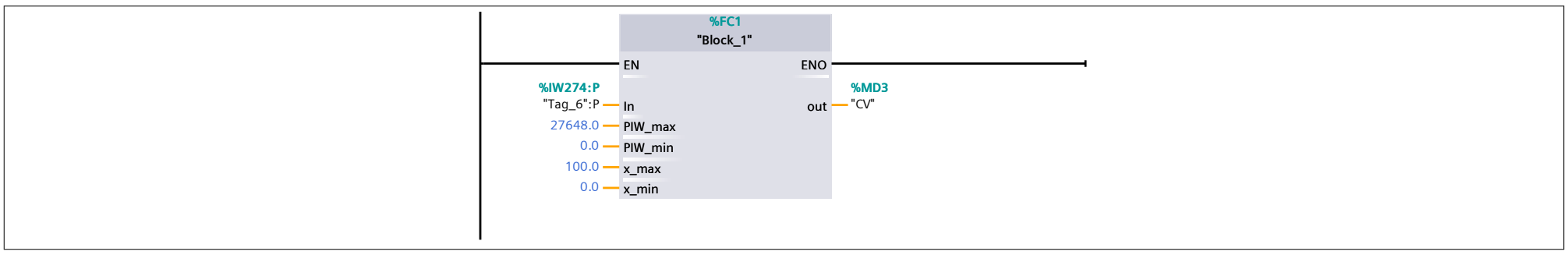
Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Program blocks

Main [OB1]

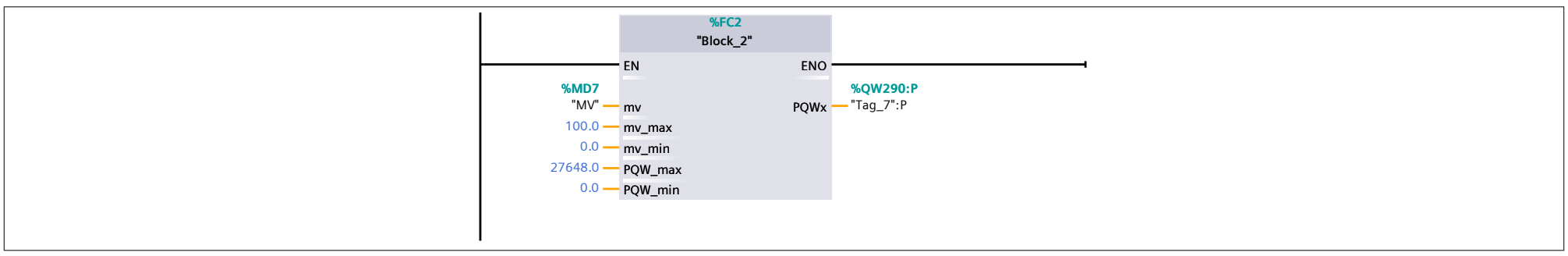
Main Properties							
General							
Name	Main	**Number**	1	**Type**	OB	**Language**	LAD
Numbering	Automatic						
Information							
Title	"Main Program Sweep (Cycle)"	**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Offset	Default value	Comment
▼ Temp				
OB1_EV_CLASS	Byte	0.0		Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)
OB1_SCAN_1	Byte	1.0		1 (Cold restart scan 1 of OB 1), 3 (Scan 2-n of OB 1)
OB1_PRIORITY	Byte	2.0		Priority of OB Execution
OB1_OB_NUMBR	Byte	3.0		1 (Organization block 1, OB1)
OB1_RESERVED_1	Byte	4.0		Reserved for system
OB1_RESERVED_2	Byte	5.0		Reserved for system
OB1_PREV_CYCLE	Int	6.0		Cycle time of previous OB1 scan (milliseconds)
OB1_MIN_CYCLE	Int	8.0		Minimum cycle time of OB1 (milliseconds)
OB1_MAX_CYCLE	Int	10.0		Maximum cycle time of OB1 (milliseconds)
OB1_DATE_TIME	Date_And_Time	12.0		Date and time OB1 started
Constant				

Network 1:

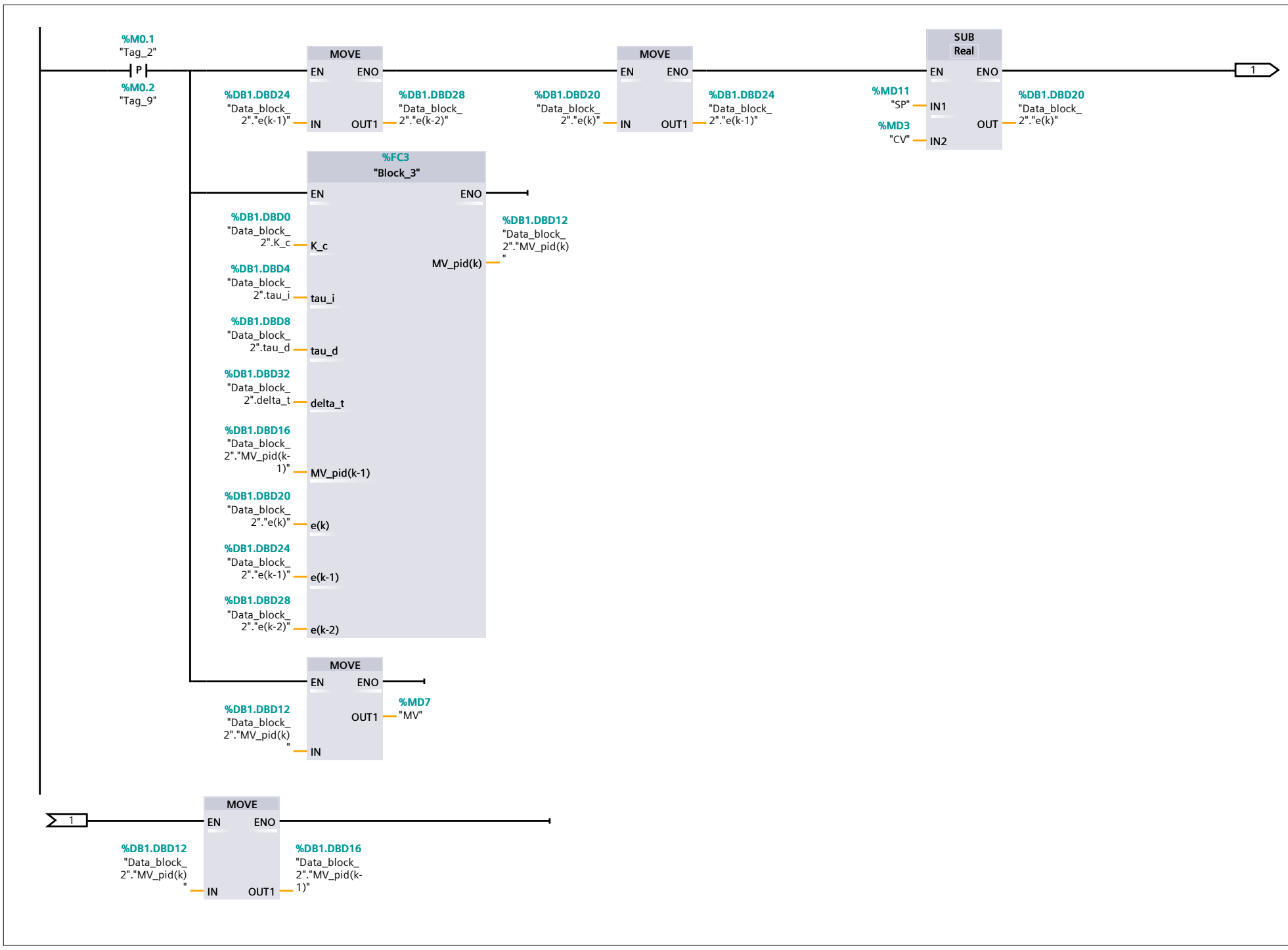


Network 2:



Network 3:

Network 3:


%M0.1
"Tag_2"
P
%M0.2
"Tag_9"
MOVE
EN
ENO
%DB1.DBD24
"Data_block_2"."e(k-1)"
IN
OUT1
%DB1.DBD28
"Data_block_2"."e(k-2)"
MOVE
EN
ENO
%DB1.DBD20
"Data_block_2"."e(k)"
IN
OUT1
%DB1.DBD24
"Data_block_2"."e(k-1)"
SUB
Real
EN
ENO
%MD11
"SP"
IN1
%MD3
"CV"
IN2
OUT
%DB1.DBD20
"Data_block_2"."e(k)"
1
%FC3
"Block_3"
EN
ENO
%DB1.DBD0
"Data_block_2".K_c
K_c
%DB1.DBD12
"Data_block_2"."MV_pid(k)"
MV_pid(k)
%DB1.DBD4
"Data_block_2".tau_i
tau_i
%DB1.DBD8
"Data_block_2".tau_d
tau_d
%DB1.DBD32
"Data_block_2".delta_t
delta_t
%DB1.DBD16
"Data_block_2"."MV_pid(k-1)"
MV_pid(k-1)
%DB1.DBD20
"Data_block_2"."e(k)"
e(k)
%DB1.DBD24
"Data_block_2"."e(k-1)"
e(k-1)
%DB1.DBD28
"Data_block_2"."e(k-2)"
e(k-2)
MOVE
EN
ENO
%DB1.DBD12
"Data_block_2"."MV_pid(k)"
IN
OUT1
%MD7
"MV"
1
MOVE
EN
ENO
%DB1.DBD12
"Data_block_2"."MV_pid(k)"
IN
OUT1
%DB1.DBD16
"Data_block_2"."MV_pid(k-1)"

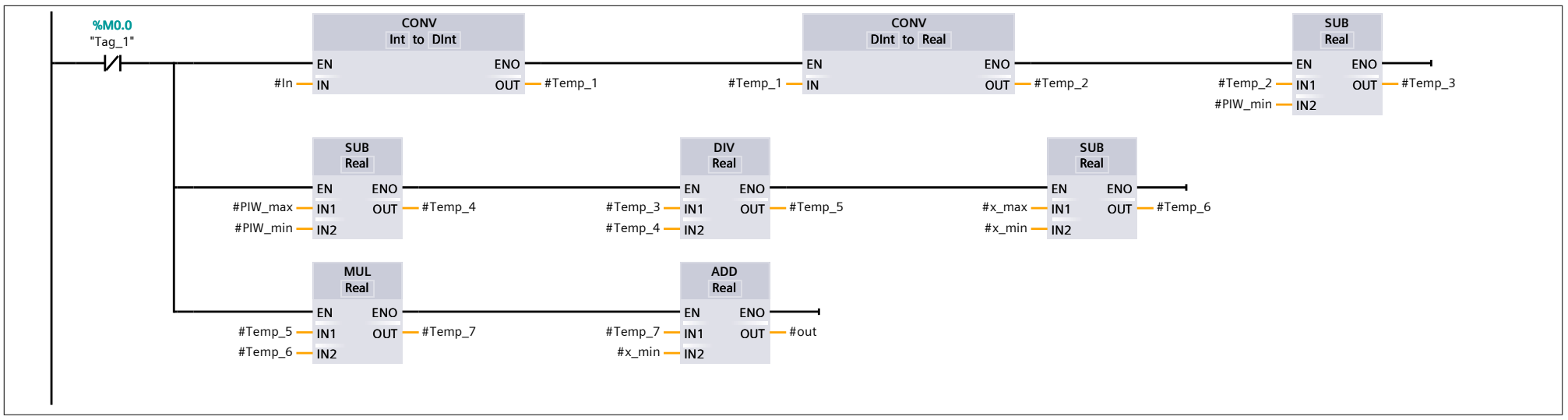
Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Program blocks

Block_1 [FC1]

Block_1 Properties							
General							
Name	Block_1	**Number**	1	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Offset	Default value	Comment
▼ Input				
In	Int			
PIW_max	Real			
PIW_min	Real			
x_max	Real			
x_min	Real			
▼ Output				
out	Real			
InOut				
▼ Temp				
Temp_1	DInt	0.0		
Temp_2	Real	4.0		
Temp_3	Real	8.0		
Temp_4	Real	12.0		
Temp_5	Real	16.0		
Temp_6	Real	20.0		
Temp_7	Real	24.0		
Constant				
▼ Return				
Block_1	Void			

Network 1:



Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Program blocks

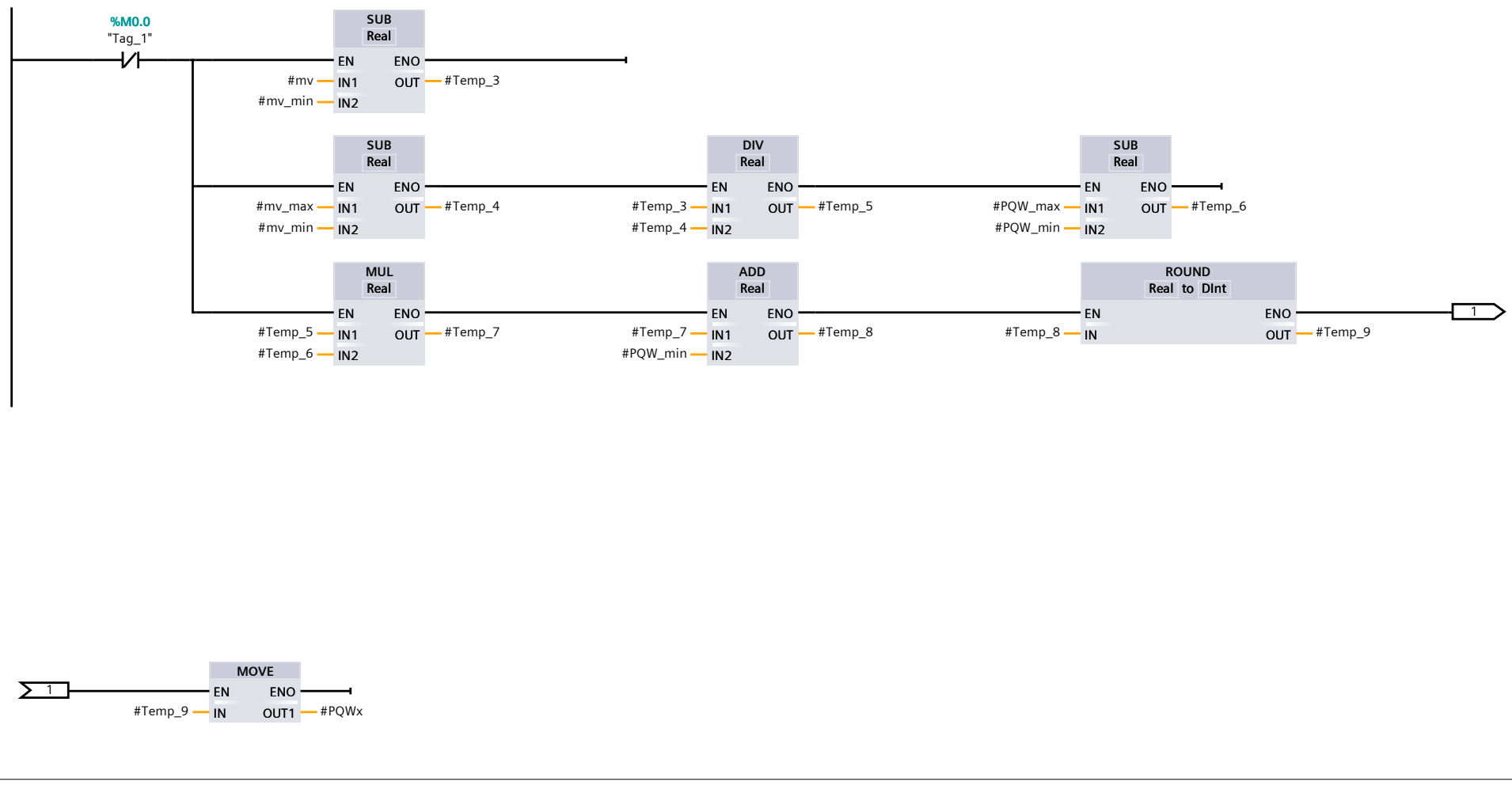
Block_2 [FC2]

Block_2 Properties							
General							
Name	Block_2	**Number**	2	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Offset	Default value	Comment
▼ Input				
mv	Real			
mv_max	Real			
mv_min	Real			
PQW_max	Real			
PQW_min	Real			
▼ Output				
PQWx	Int			
InOut				
▼ Temp				
Temp_3	Real	0.0		
Temp_4	Real	4.0		
Temp_5	Real	8.0		
Temp_6	Real	12.0		
Temp_7	Real	16.0		
Temp_8	Real	20.0		
Temp_9	DInt	24.0		
Constant				
▼ Return				
Block_2	Void			

Network 1:

Network 1:



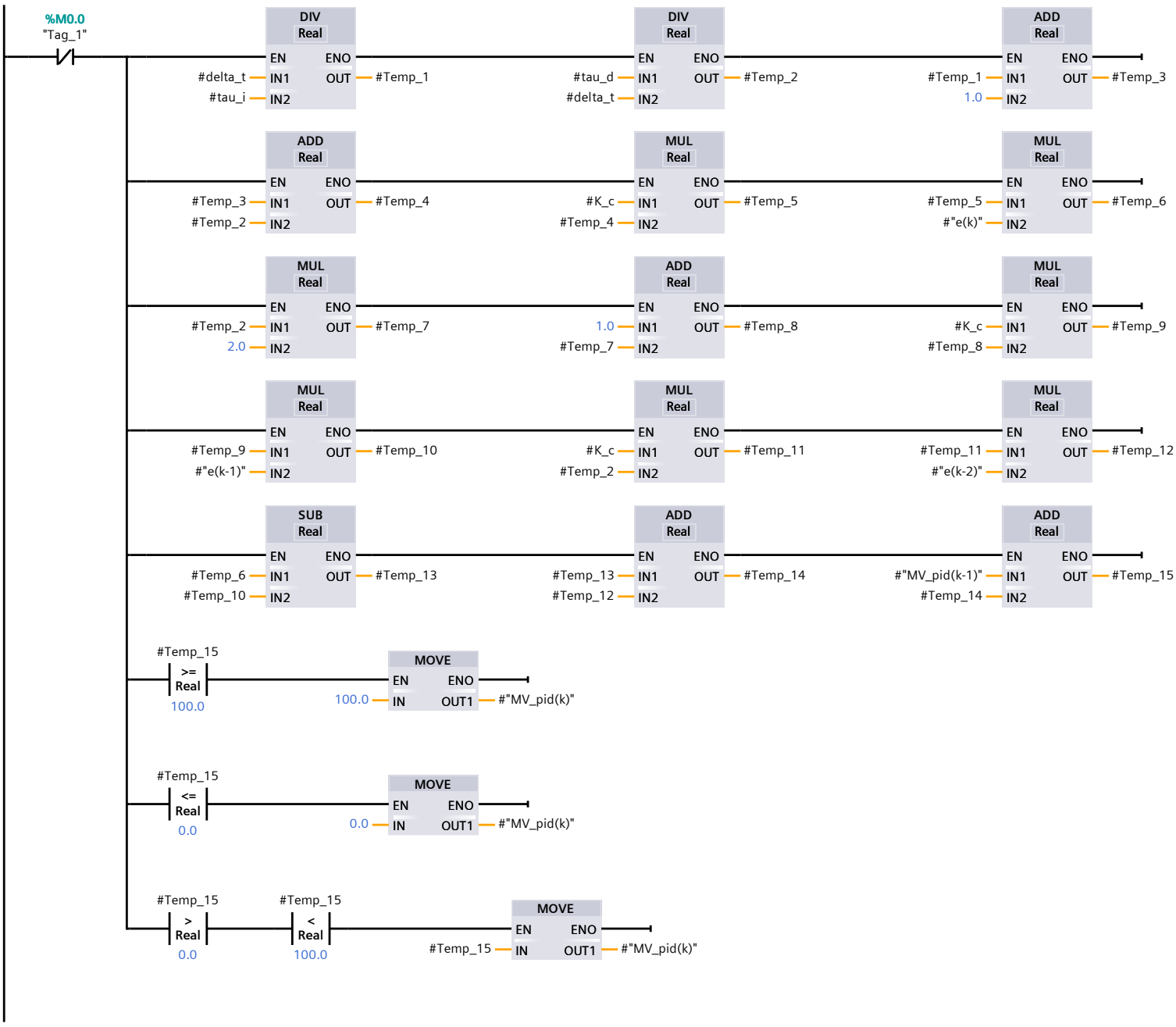
Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Program blocks

Block_3 [FC3]

Block_3 Properties							
General							
Name	Block_3	**Number**	3	**Type**	FC	**Language**	LAD
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Offset	Default value	Comment
▼ Input				
K_c	Real			
tau_i	Real			
tau_d	Real			
delta_t	Real			
MV_pid(k-1)	Real			
e(k)	Real			
e(k-1)	Real			
e(k-2)	Real			
▼ Output				
MV_pid(k)	Real			
InOut				
▼ Temp				
Temp_1	Real	0.0		
Temp_2	Real	4.0		
Temp_3	Real	8.0		
Temp_4	Real	12.0		
Temp_5	Real	16.0		
Temp_6	Real	20.0		
Temp_7	Real	24.0		
Temp_8	Real	28.0		
Temp_9	Real	32.0		
Temp_10	Real	36.0		
Temp_11	Real	40.0		
Temp_12	Real	44.0		
Temp_13	Real	48.0		
Temp_14	Real	52.0		
Temp_15	Real	56.0		
Constant				
▼ Return				
Block_3	Void			

Network 1:


%M0.0
"Tag_1"
DIV
Real
EN
ENO
#delta_t
IN1
OUT
#Temp_1
#tau_i
IN2
DIV
Real
EN
ENO
#tau_d
IN1
OUT
#Temp_2
#delta_t
IN2
ADD
Real
EN
ENO
#Temp_1
IN1
OUT
#Temp_3
1.0
IN2
ADD
Real
EN
ENO
#Temp_3
IN1
OUT
#Temp_4
#Temp_2
IN2
MUL
Real
EN
ENO
#K_c
IN1
OUT
#Temp_5
#Temp_4
IN2
MUL
Real
EN
ENO
#Temp_5
IN1
OUT
#Temp_6
#"e(k)"
IN2
MUL
Real
EN
ENO
#Temp_2
IN1
OUT
#Temp_7
2.0
IN2
ADD
Real
EN
ENO
1.0
IN1
OUT
#Temp_8
#Temp_7
IN2
MUL
Real
EN
ENO
#K_c
IN1
OUT
#Temp_9
#Temp_8
IN2
MUL
Real
EN
ENO
#Temp_9
IN1
OUT
#Temp_10
#"e(k-1)"
IN2
MUL
Real
EN
ENO
#K_c
IN1
OUT
#Temp_11
#Temp_2
IN2
MUL
Real
EN
ENO
#Temp_11
IN1
OUT
#Temp_12
#"e(k-2)"
IN2
SUB
Real
EN
ENO
#Temp_6
IN1
OUT
#Temp_13
#Temp_10
IN2
ADD
Real
EN
ENO
#Temp_13
IN1
OUT
#Temp_14
#Temp_12
IN2
ADD
Real
EN
ENO
#"MV_pid(k-1)"
IN1
OUT
#Temp_15
#Temp_14
IN2
#Temp_15
>=
Real
100.0
MOVE
EN
ENO
100.0
IN
OUT1
#"MV_pid(k)"
#Temp_15
<=
Real
0.0
MOVE
EN
ENO
0.0
IN
OUT1
#"MV_pid(k)"
#Temp_15
>
Real
0.0
#Temp_15
<
Real
100.0
MOVE
EN
ENO
#Temp_15
IN
OUT1
#"MV_pid(k)"

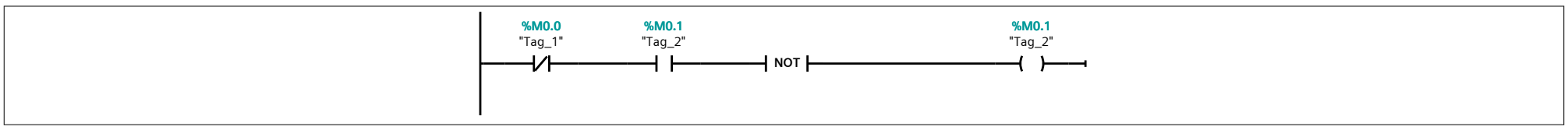
Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Program blocks

CYC_INT5 [OB35]

CYC_INT5 Properties							
General							
Name	CYC_INT5	**Number**	35	**Type**	OB	**Language**	LAD
Numbering	Manual						
Information							
Title	"Cyclic Interrupt"	**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Offset	Default value	Comment
▼ Temp				
OB35_EV_CLASS	Byte	0.0		Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)
OB35_STRT_INF	Byte	1.0		16#36 (OB 35 has started)
OB35_PRIORITY	Byte	2.0		Priority of OB Execution
OB35_OB_NUMBR	Byte	3.0		35 (Organization block 35, OB35)
OB35_RESERVED_1	Byte	4.0		Reserved for system
OB35_RESERVED_2	Byte	5.0		Reserved for system
OB35_PHASE_OFFSET	Word	6.0		Phase offset (msec)
OB35_RESERVED_3	Int	8.0		Reserved for system
OB35_EXC_FREQ	Int	10.0		Frequency of execution (msec)
OB35_DATE_TIME	Date_And_Time	12.0		Date and time OB35 started
Constant				

Network 1:



Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Program blocks

Data_block_2 [DB1]

Data_block_2 Properties							
General							
Name	Data_block_2	**Number**	1	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Offset	Start value	Retain	Accessible from HMI/OPC UA	Writable from HMI/OPC UA	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Static										
K_c	Real	0.0	0.0	True	True	True	True	False		
tau_i	Real	4.0	0.0	True	True	True	True	False		
tau_d	Real	8.0	0.0	True	True	True	True	False		
MV_pid(k)	Real	12.0	0.0	True	True	True	True	False		
MV_pid(k-1)	Real	16.0	0.0	True	True	True	True	False		
e(k)	Real	20.0	0.0	True	True	True	True	False		
e(k-1)	Real	24.0	0.0	True	True	True	True	False		
e(k-2)	Real	28.0	0.0	True	True	True	True	False		
delta_t	Real	32.0	0.0	True	True	True	True	False		

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP]

Technology objects

This folder is empty.

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / PLC tags / Default tag table [11]

PLC tags

PLC tags									
	Name	Data type	Address	Retain	Accessible from HMI/OPC UA	Writable from HMI/OPC UA	Visible in HMI engineering	Supervision	Comment
	Tag_1	Bool	%M0.0		True	True	True		
	Tag_2	Bool	%M0.1		True	True	True		
	Tag_3	Int	%IW272		True	True	True		
	Tag_5	Int	%IW290		True	True	True		
	Tag_7	Int	%QW290		True	True	True		
	CV	Real	%MD3		True	True	True		
	MV	Real	%MD7		True	True	True		
	Tag_9	Bool	%M0.2		True	True	True		
	SP	Real	%MD11		True	True	True		
	Tag_4	Int	7W274-1		True	True	True		
	Tag_6	Int	%IW274		True	True	True		

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / PLC tags / Default tag table [11]

User constants

User constants				
	Name	Data type	Value	Comment

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP]

PLC data types

This folder is empty.

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Watch and force tables

Force table

Name	Address	Display format	Force value	Comment

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Watch and force tables

Watch table_1

Name	Address	Display format	Modify value	Comment
"SP"	%MD11	Floating-point number	40.0	
"CV"	%MD3	Floating-point number	0.0	
"MV"	%MD7	Floating-point number	0.0	
"Data_block_2".K_c	%DB1.DBD0	Floating-point number	30.0	
"Data_block_2".tau_i	%DB1.DBD4	Floating-point number	26.08	
"Data_block_2".tau_d	%DB1.DBD8	Floating-point number	0.1	
"Data_block_2".delta_t	%DB1.DBD32	Floating-point number	0.5	

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / PLC supervisions & alarms

PLC alarms

PLC alarms
No entries

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / PLC supervisions & alarms

User diagnostics alarms

User diagnostics alarms
No entries

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / PLC supervisions & alarms

System alarms

System alarms
No entries

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP]

PLC alarm text lists

This folder is empty.

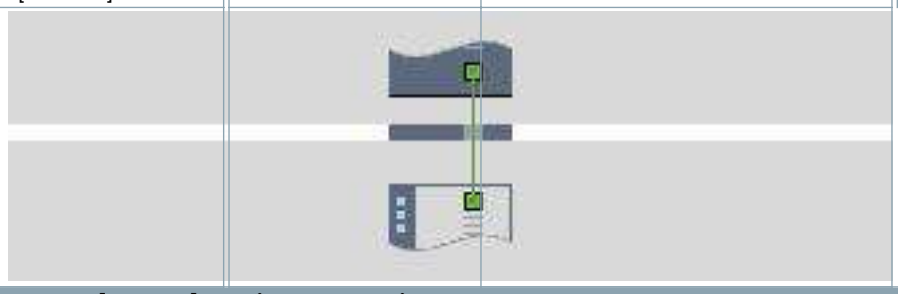
Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Local modules

PS 307 5A_1

This folder is empty.

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Local modules

CP 343-1 Lean_1 [CP 343-1 LEAN]

CP 343-1 Lean_1					
General					
Name	CP 343-1 Lean_1	**Author**	Windows 8.1 Pro	**Comment**	
Rack	0	**Slot**	4		
General\Catalog information					
Short designation	CP 343-1 Lean	**Description**	S7 CP for Industrial Ethernet TCP/IP with SEND/RECEIVE and FETCH/WRITE interface, PROFINET IO device, UDP, TCP with/without RFC 1006, IP multi-cast, S7 communication (server), S7 routing, SNMP, Web diagnostics, initi-alization over LAN time-of-day sync. using SIMATIC mode or NTP, module replacement without PG, 2-port switch, 10/100 Mbps, IP configuration using DHCP/FB, MRP, firmware V2.4	**Article number**	6GK7 343-1CX10-0XE0
Firmware version	V2.4				
General\Identification & Maintenance					
Plant designation		**Location identifier**			
Options\Module access protection					
Protection level	Not locked				
Options\UDP buffering					
Disable UDP frame buffering	Option not set				
Options\Web server					
Enable web server	Option set				
Anchor (ParameterNode_MPI1_Menu)					
The TreeNode Param-eter-Node_MPI1_Menu was not filled by some ACF					
PROFINET interface [X1]\General					
Name	PROFINET interface_1	**Comment**			
PROFINET interface [X1]\Ethernet addresses\Interface networked with					
Subnet:	PN/IE_1				
PROFINET interface [X1]\Ethernet addresses\IP protocol					
IP configuration	Set IP address in the project	**IP address:**	192.168.0.1	**Subnet mask:**	255.255.255.0
Use router	False				
PROFINET interface [X1]\Ethernet addresses\PROFINET					
Generate PROFINET device name auto-matically	True	**PROFINET device name:**	plc_1.cp 343-1 lean_1	**Converted name:**	plcxb1.cpxa343-1xaleanxb1ea58
Device number:	0				
PROFINET interface [X1]\Advanced options\Interface options					
Use IEC V2.2 LLDP mode	True	**Keep-Alive connec-tion monitoring**	30s		
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\General					
Name	Port_1	**Comment**		**Name**	Port_2
Comment					
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port interconnection\Local port:					
Local port:	CP 343-1 Lean_1\PROFINET inter-face_1 [X1]\Port_1 [X1 P1 R]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port interconnection\Partner port:					
	Monitoring of partner port is not pos-sible	**Partner port:**	Any partner		
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotia-tion**	True
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology dis-covery**	False	**End of the sync do-main**	False
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Diagnostics addresses\Diagnostics addresses					
Start address	1022	**Start address**	1021		
PROFINET interface [X1]\Time-of-day synchronization					
Enable time-of-day synchronization	Option not set	**Synchronization method**	SIMATIC	**Direction**	Automatic
Use corrected time	Option not set	**NTP server**	0.0.0.0	**NTP server**	0.0.0.0
NTP server	0.0.0.0	**NTP server**	0.0.0.0	**Time zone**	(UTC +01:00) Berlin, Bern, Brussels, Rome, Stockholm, Vienna
Synchronization cycle	60s	**Time-of-day synchro-nization on the full minute**	Option not set	**Forward time of day to station**	Option set

PROFINET interface [X1]\Operating mode			
IO device	False		
PROFINET interface [X1]\Diagnostics addresses\Diagnostics addresses			
Start address	1023		
I/O addresses\Input addresses			
Start address	256	**End address**	271
I/O addresses\Output addresses			
Start address	256	**End address**	271

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Local modules

AI 2x12BIT_1

AI 2x12BIT_1					
General					
Name	AI 2x12BIT_1	**Author**	Windows 8.1 Pro	**Comment**	
Rack	0	**Slot**	5		
General\Catalog information					
Short designation	AI 2x12BIT	**Description**	Analog input module AI2 x U/I/R/RTD/TC; 14 bits of resolution; accuracy appr. 1%; grouping 2; common mode voltage appr. 2.3VDC; configurable diagnostics; hardware interrupts; 20-pin front connector	**Article number**	6ES7 331-7KB02-0AB0
Firmware version					
Inputs\General\Diagnostics					
Diagnostics interrupt	Deactivated				
Inputs\General\Hardware interrupts					
Hardware interrupt when limit violated	Deactivated	**RidPrefixHwInterrupt**	49152	**Event name:**	0
Hardware interrupt:	0	**Hardware interrupt**	Hardware interrupt	**HardwareInterruptChannelForModule**	32768
HardwareInterruptEventIdNull	0	**HardwareInterrupt-Priority**	5		
Inputs\Channel 0 - 1\Diagnostics					
Group diagnostics	Deactivated	**Check for wire break**	Deactivated		
Inputs\Channel 0 - 1\Measuring					
Measurement type	4-WMT current (4-wire measuring transducer)	**Measuring range**	0..20 mA	**Position of measuring range selection module**	[C]
Interference frequency suppression	50Hz	**Integration time**	20ms		
Inputs\Channel 0 - 1\Trigger for hardware interrupt\Channel 0					
High limit		**Low limit**			
I/O addresses\Input addresses					
Start address	272	**End address**	275	**Process image**	None
Interrupt OB number	40				

Temperature_20146124,20146128_V15 / PLC_1 [CPU 313C-2 DP] / Local modules

AO 2x12BIT_1

AO 2x12BIT_1					
General					
Name	AO 2x12BIT_1	**Author**	Windows 8.1 Pro	**Comment**	
Rack	0	**Slot**	6		
General\Catalog information					
Short designation	AO 2x12BIT	**Description**	Analog output module AO2 x U/I 12bits of resolution; accuracy appr. 0.6%; grouping 2; common mode voltage appr. 3VDC; configurable diagnostics; configurable substitute value for output; 20-pin front connector	**Article number**	6ES7 332-5HB01-0AB0
Firmware version					
Outputs\Enable					
Diagnostics interrupt	Deactivated				
Outputs\Channel 0\Diagnostics					
Group diagnostics	Deactivated				
Outputs\Channel 0\Output					
Output type	Current	**Output range**	4 to 20 mA	**Reaction to CPU STOP**	Output has no current or voltage
Substitute value					
Outputs\Channel 1\Diagnostics					
Group diagnostics	Deactivated				
Outputs\Channel 1\Output					
Output type	Current	**Output range**	4 to 20 mA	**Reaction to CPU STOP**	Output has no current or voltage
Substitute value					
I/O addresses\Output addresses					
Start address	288	**End address**	291	**Process image**	None

Temperature_20146124,20146128_V15

Ungrouped devices

This folder is empty.

Temperature_20146124,20146128_V15

Security settings

This folder is empty.

Temperature_20146124,20146128_V15 / Common data

Alarm classes

Alarm classes			
Name	**Display name**	**Acknowledgment**	**Priority**
Acknowledgement	A	True	0
No Acknowledgement	NA	False	0

Temperature_20146124,20146128_V15 / Common data

Logs

This folder is empty.

Temperature_20146124,20146128_V15 / Languages & resources

Project languages

Languages
Reference language
English (United States)

Editing language
English (United States)

Other project languages
Empty

Temperature_20146124,20146128_V15 / Languages & resources / Project texts

Project texts

Project texts		
English (United States)	**Category**	**Reference**
	Other text category	Temperature_20146124,20146128_V15\Comment
"Cyclic Interrupt"	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\Block title
"Main Program Sweep (Cycle)"	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\Block title
1 (Cold restart scan 1 of OB 1), 3 (Scan 2-n of OB 1)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_SCAN_1
1 (Organization block 1, OB1)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_OB_NUMBR
16#36 (OB 35 has started)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_STRT_INF
35 (Organization block 35, OB35)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_OB_NUMBR
A	Alarm class text	Temperature_20146124,20146128_V15\Acknowledgement\AlarmClassData_IDisplayNam-ing_DisplayName
A	Alarm class text	Temperature_20146124,20146128_V15\Acknowledgement\ShortName
Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_EV_CLASS
Bits 0-3 = 1 (Coming event), Bits 4-7 = 1 (Event class 1)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_EV_CLASS
Cycle time of previous OB1 scan (milliseconds)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_PREV_CYCLE
Date and time OB1 started	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_DATE_TIME
Date and time OB35 started	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_DATE_TIME
Frequency of execution (msec)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_EXC_FREQ
Maximum cycle time of OB1 (milliseconds)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_MAX_CYCLE
Minimum cycle time of OB1 (milliseconds)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_MIN_CYCLE
NA	Alarm class text	Temperature_20146124,20146128_V15\No Acknowledgement\AlarmClassData_IDisplayNam-ing_DisplayName
NA	Alarm class text	Temperature_20146124,20146128_V15\No Acknowledgement\ShortName
Phase offset (msec)	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_PHASE_OFFSET
Priority of OB Execution	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_PRIORITY
Priority of OB Execution	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_PRIORITY
Reserved for system	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_RESERVED_2
Reserved for system	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\Main [OB1]\OB1_RESERVED_1
Reserved for system	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_RESERVED_1
Reserved for system	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_RESERVED_2
Reserved for system	Block comment	Temperature_20146124,20146128_V15\PLC_1 [CPU 313C-2 DP]\Program blocks\CYC_INT5 [OB35]\OB35_RESERVED_3