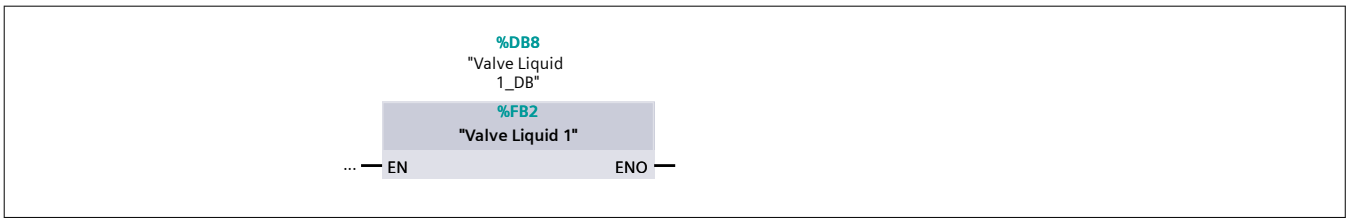
Main [OB1]

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

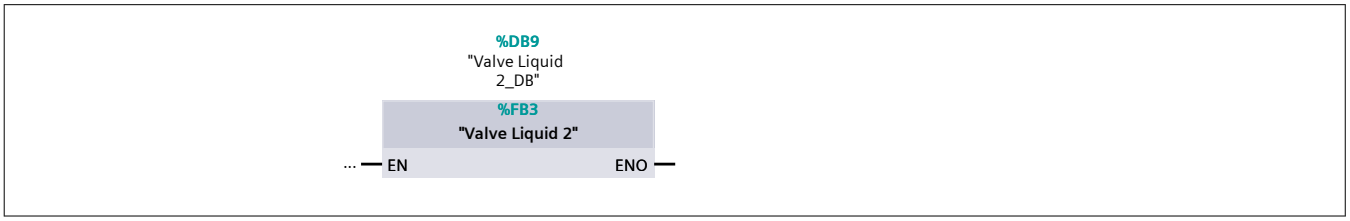
Name	Data type	Default value	Comment
Input			
Initial_Call	Bool		Initial call of this OB
Remanence	Bool		=True, if remanent data are available
Temp			
Constant			

Network 1:

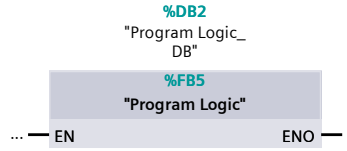
Network 2:



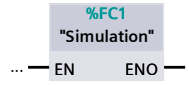
Network 3:



Network 4:

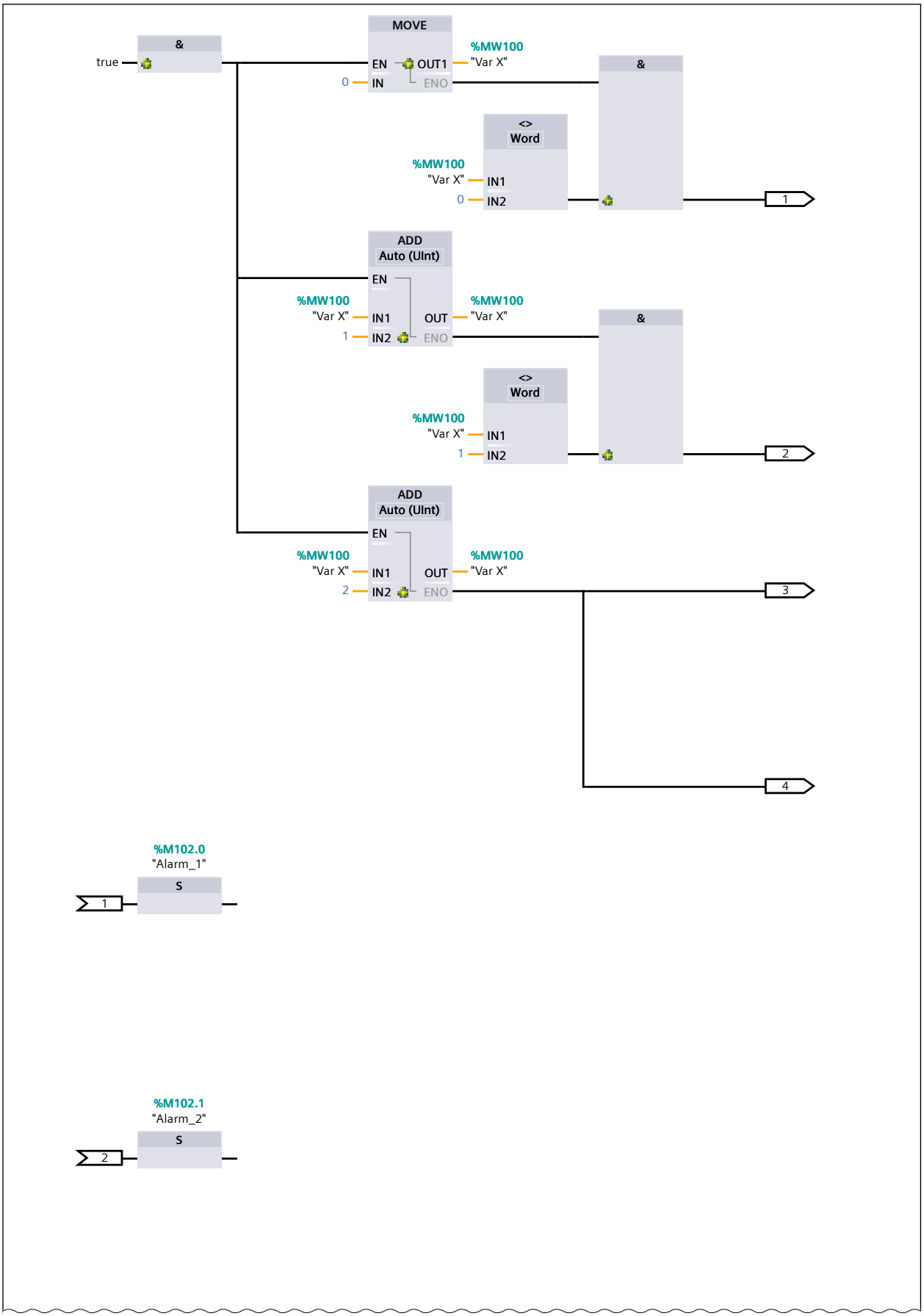


Network 5:



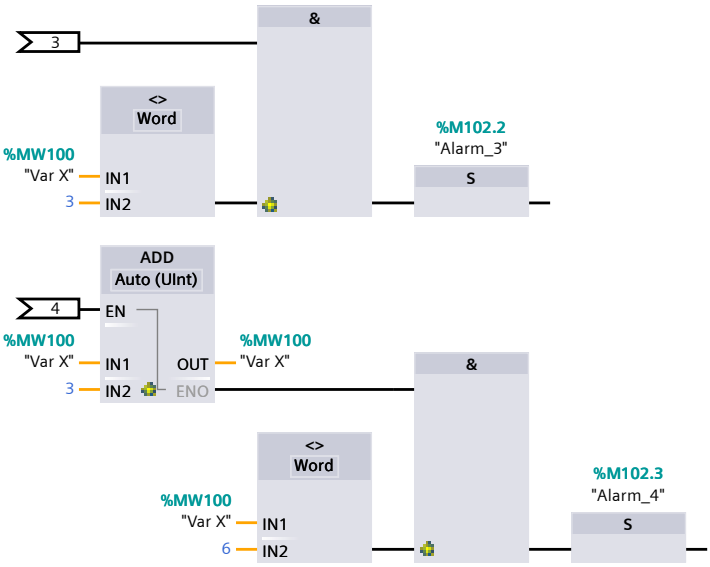
Network 6:

Network 6: (1.1 / 2.1)

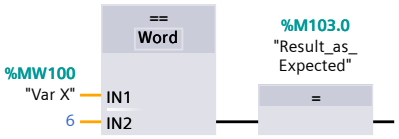


Network 6: (2.1 / 2.1)

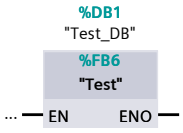
1.1 (Page1 - 3)



Network 7:



Network 8:

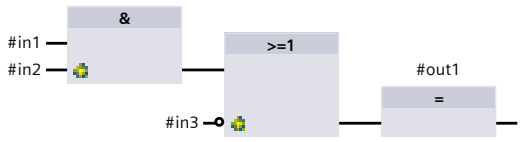


Block_FBD [FC5]

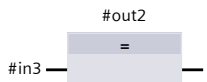
Block_FBD Properties					
General					
Name	Block_FBD	**Number**	5	**Type**	FC
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Comment
▼ Input			
in1	Bool		
in2	Bool		
in3	Bool		
▼ Output			
out1	Bool		
out2	Bool		
InOut			
Temp			
Constant			
▼ Return			
Block_FBD	Void		

Network 1:



Network 2:

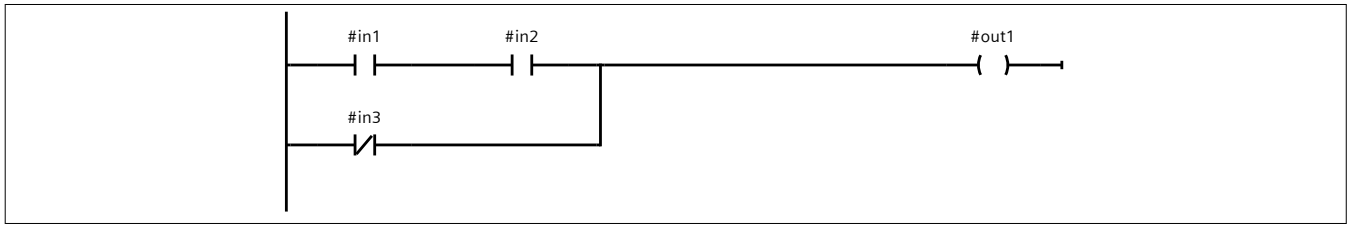


Block_LAD [FC4]

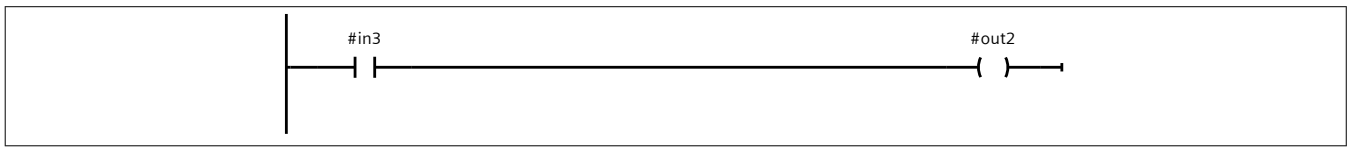
Block_LAD Properties					
General					
Name	Block_LAD	**Number**	4	**Type**	FC
Language	LAD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Comment
▼ Input			
in1	Bool		
in2	Bool		
in3	Bool		
▼ Output			
out1	Bool		
out2	Bool		
InOut			
Temp			
Constant			
▼ Return			
Block_LAD	Void		

Network 1:



Network 2:



Block_SCL [FC3]

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

Name	Data type	Default value	Comment
▼ Input			
in1	Bool		
in2	Bool		
in3	Bool		
▼ Output			
out1	Bool		
out2	Bool		
InOut			
Temp			
Constant			
▼ Return			
Block_SCL	Void		

```
0001 #out1 := (#in1 AND #in2) OR NOT #in3;
0002
0003 #out2 := #in3;
0004
```

Symbol	Address	Type	Comment
#in1		Bool	
#in2		Bool	
#in3		Bool	
#out1		Bool	
#out2		Bool	

Block_STL [FC2]

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

Name	Data type	Default value	Comment
▼ Input			
in1	Bool		
in2	Bool		
in3	Bool		
▼ Output			
out1	Bool		
out2	Bool		
InOut			
Temp			
Constant			
▼ Return			
Block_STL	Void		

Network 1:

```
0001        A(
0002        A       #in1
0003        A       #in2
0004        )
0005        ON      #in3
0006        =       #out1
```

Network 2:

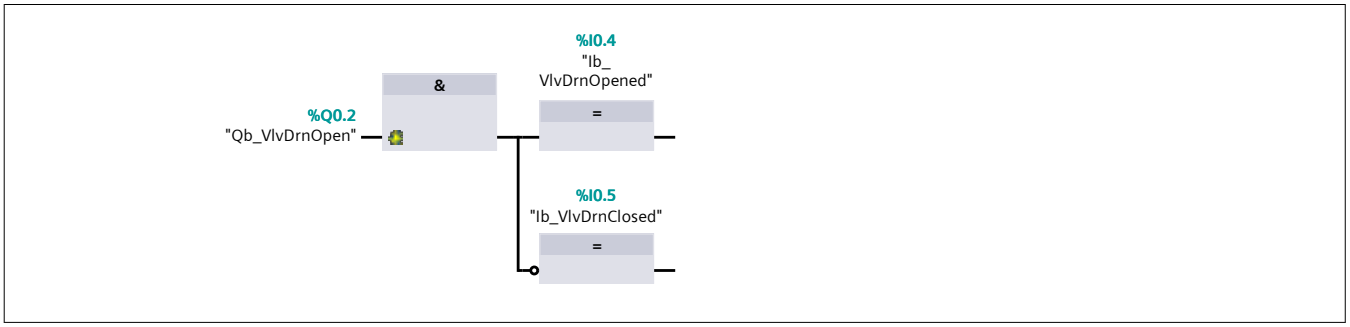
```
0001        A       #in3
0002        =       #out2
```

Simulation [FC1]

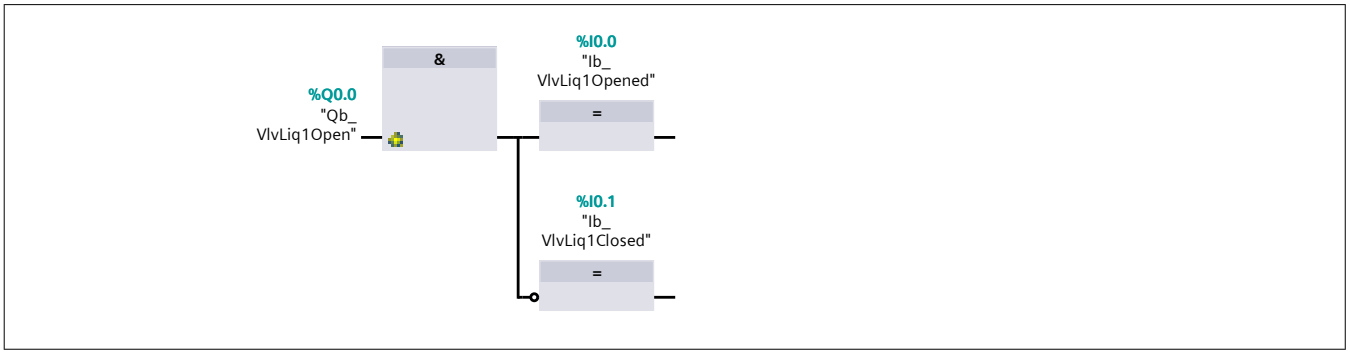
Simulation Properties					
General					
Name	Simulation	**Number**	1	**Type**	FC
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Comment
Input			
Output			
InOut			
Temp			
Constant			
▼ Return			
Simulation	Void		

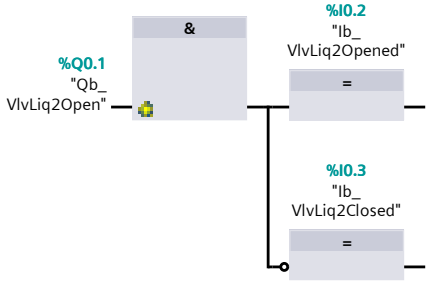
Network 1: Valve drain opened



Network 2: Valve drain opened



Network 3: Valve drain opened


%Q0.1
"Qb_
VlvLiq2Open"
&
%I0.2
"Ib_
VlvLiq2Opened"
=
%I0.3
"Ib_
VlvLiq2Closed"
=

Block_1 [FB1]

Block_1 Properties					
General					
Name	Block_1	**Number**	1	**Type**	FB
Language	GRAPH	**Numbering**	Automatic	**Network language**	LAD
Block version	V6.0				
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Input									
OFF_SQ	Bool	false	Non-retain	False	False	False	False		Turn sequence off
INIT_SQ	Bool	false	Non-retain	False	False	False	False		Set sequence to initial state
ACK_EF	Bool	false	Non-retain	False	False	False	False		Acknowledge all errors and faults
S_PREV	Bool	false	Non-retain	False	False	False	False		Output previous step in parameter S_NO
S_NEXT	Bool	false	Non-retain	False	False	False	False		Indicate next step in parameter S_NO
SW_AUTO	Bool	false	Non-retain	False	False	False	False		Automatic mode
SW_TAP	Bool	false	Non-retain	False	False	False	False		Semiautomatic/ switch with transition
SW_TOP	Bool	false	Non-retain	False	False	False	False		Semiautomatic/ ignore transition
SW_MAN	Bool	false	Non-retain	False	False	False	False		Manual mode
S_SEL	Int	0	Non-retain	False	False	False	False		Select step to be output to S_NO
S_ON	Bool	false	Non-retain	False	False	False	False		Activate step indicated in S_NO
S_OFF	Bool	false	Non-retain	False	False	False	False		Deactivate step indicated S_NO
T_PUSH	Bool	false	Non-retain	False	False	False	False		Enable transition to switch in semi automatic mode
in1	Bool	false	Non-retain	True	True	True	False		
in2	Bool	false	Non-retain	True	True	True	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
in3	Bool	false	Non-retain	True	True	True	False		
▼ Output									
S_NO	Int	0	Non-retain	False	False	False	False		Step number
S_MORE	Bool	false	Non-retain	False	False	False	False		More steps are available and can be shown in S_NO
S_ACTIVE	Bool	false	Non-retain	False	False	False	False		Step indicated in S_NO is active
ERR_FLT	Bool	false	Non-retain	False	False	False	False		Interlock or supervision group error
AUTO_ON	Bool	false	Non-retain	False	False	False	False		Automatic mode is active
TAP_ON	Bool	false	Non-retain	False	False	False	False		Semiautomatic mode/step with transition enabled
TOP_ON	Bool	false	Non-retain	False	False	False	False		Semiautomatic mode/ignore transition enabled
MAN_ON	Bool	false	Non-retain	False	False	False	False		Manual mode is active
out1	Bool	false	Non-retain	True	True	True	False		
out2	Bool	false	Non-retain	True	True	True	False		
InOut									
▼ Static									
▼ RT_DATA	G7_RTDataPlus_V6		Non-retain	False	False	False	True		Internal data area
VERSION	String[10]	'V6.0'	Non-retain	False	False	False	False		Block version
S_DISPLAY	Int	0	Non-retain	False	False	False	False		Internal display of output parameter S_NO
S_SEL_OLD	Int	0	Non-retain	False	False	False	False		Previous value in S_SEL
S_DISPIDX	USInt	255	Non-retain	False	False	False	False		Index of the step in S_NO
T_DISPIDX	USInt	255	Non-retain	False	False	False	False		Index of the transition displayed in T_NO
▼ MOP_EDGE	G7_MOPPlus_V6		Non-retain	False	False	False	True		Mode in last cycle
AUTO	Bool	false	Non-retain	False	False	False	False		Status: automatic mode
MAN	Bool	false	Non-retain	False	False	False	False		Status: manual mode

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
TAP	Bool	false	Non-retain	False	False	False	False		Status: semi automatic/switch with transition
TOP	Bool	false	Non-retain	False	False	False	False		Status: semi automatic/ignore transition
ACK_S	Bool	false	Non-retain	False	False	False	False		Request: acknowledge step at parameter S_NO
REG_S	Bool	false	Non-retain	False	False	False	False		Request: register step indicated in S_NO
T_PREV	Bool	false	Non-retain	False	False	False	False		Request: output previous valid transition in T_NO
T_NEXT	Bool	false	Non-retain	False	False	False	False		Request: output next valid transition in T_NO
LOCK	Bool	false	Non-retain	False	False	False	False		Status: interlocks activated
SUP	Bool	false	Non-retain	False	False	False	False		Status: supervisions activated
ACKREQ	Bool	false	Non-retain	False	False	False	False		Status: acknowledgment required
SSKIP	Bool	false	Non-retain	False	False	False	False		Status: "Skip steps" enabled
OFF	Bool	false	Non-retain	False	False	False	False		Request: deactivate all steps
INIT	Bool	false	Non-retain	False	False	False	False		Request: set sequence to initial state
HALT	Bool	false	Non-retain	False	False	False	False		Status: sequence halted
TMS_HALT	Bool	false	Non-retain	False	False	False	False		Status: all internal timers held
OPS_ZERO	Bool	false	Non-retain	False	False	False	False		Status: set all operands processed with N, L, D instructions to 0
SACT_DISP	Bool	false	Non-retain	False	False	False	False		Status: display active steps only
SEF_DISP	Bool	false	Non-retain	False	False	False	False		Status: display only steps with errors and disrupted steps
SALL_DISP	Bool	false	Non-retain	False	False	False	False		Status: display all steps
S_PREV	Bool	false	Non-retain	False	False	False	False		Request: output previous step to S_NO

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
S_NEXT	Bool	false	Non-retain	False	False	False	False		Request: Output next step at S_NO parameter
S_SELOK	Bool	false	Non-retain	False	False	False	False		Request: output step number from S_SEL to S_NO
S_ON	Bool	false	Non-retain	False	False	False	False		Request: activate step indicated in S_NO
S_OFF	Bool	false	Non-retain	False	False	False	False		Request: deactivate step at parameter S_NO
T_PUSH	Bool	false	Non-retain	False	False	False	False		Request: transition switching enabled
REG	Bool	false	Non-retain	False	False	False	False		Request: register all interlock and supervision errors
ACK	Bool	false	Non-retain	False	False	False	False		Request: acknowledge all interlock and supervision errors
IL_PERM	Bool	false	Non-retain	False	False	False	False		Status: permanent processing of all interlocks
T_PERM	Bool	false	Non-retain	False	False	False	False		Status: permanent processing of all transitions
ILP_MAN	Bool	false	Non-retain	False	False	False	False		Status: permanent processing of all interlocks in manual mode
LMODE	Bool	false	Non-retain	False	False	False	False		Status: learning mode is acitve
RESET_CRIT	Bool	false	Non-retain	False	False	False	False		Request: reset all initial values recorded for interlocks and transitions
▼ MOP	G7_MOP-Plus_V6		Non-retain	False	False	False	True		Mode
AUTO	Bool	true	Non-retain	False	False	False	False		Status: automatic mode
MAN	Bool	false	Non-retain	False	False	False	False		Status: manual mode
TAP	Bool	false	Non-retain	False	False	False	False		Status: semi automatic/switch with transition
TOP	Bool	false	Non-retain	False	False	False	False		Status: semi automatic/ignore transition

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
ACK_S	Bool	false	Non-retain	False	False	False	False		Request: acknowledge step at parameter S_NO
REG_S	Bool	false	Non-retain	False	False	False	False		Request: register step indicated in S_NO
T_PREV	Bool	false	Non-retain	False	False	False	False		Request: output previous valid transition in T_NO
T_NEXT	Bool	false	Non-retain	False	False	False	False		Request: output next valid transition in T_NO
LOCK	Bool	true	Non-retain	False	False	False	False		Status: interlocks activated
SUP	Bool	true	Non-retain	False	False	False	False		Status: supervisions activated
ACKREQ	Bool	true	Non-retain	False	False	False	False		Status: acknowledgment required
SSKIP	Bool	false	Non-retain	False	False	False	False		Status: "Skip steps" enabled
OFF	Bool	false	Non-retain	False	False	False	False		Request: deactivate all steps
INIT	Bool	true	Non-retain	False	False	False	False		Request: set sequence to initial state
HALT	Bool	false	Non-retain	False	False	False	False		Status: sequence halted
TMS_HALT	Bool	false	Non-retain	False	False	False	False		Status: all internal timers held
OPS_ZERO	Bool	false	Non-retain	False	False	False	False		Status: set all operands processed with N, L, D instructions to 0
SACT_DISP	Bool	true	Non-retain	False	False	False	False		Status: display active steps only
SEF_DISP	Bool	false	Non-retain	False	False	False	False		Status: display only steps with errors and disrupted steps
SALL_DISP	Bool	false	Non-retain	False	False	False	False		Status: display all steps
S_PREV	Bool	false	Non-retain	False	False	False	False		Request: output previous step to S_NO
S_NEXT	Bool	false	Non-retain	False	False	False	False		Request: Output next step at S_NO parameter
S_SELOK	Bool	false	Non-retain	False	False	False	False		Request: output step number from S_SEL to S_NO

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
S_ON	Bool	false	Non-retain	False	False	False	False		Request: activate step indicated in S_NO
S_OFF	Bool	false	Non-retain	False	False	False	False		Request: deactivate step at parameter S_NO
T_PUSH	Bool	false	Non-retain	False	False	False	False		Request: transition switching enabled
REG	Bool	false	Non-retain	False	False	False	False		Request: register all interlock and supervision errors
ACK	Bool	false	Non-retain	False	False	False	False		Request: acknowledge all interlock and supervision errors
IL_PERM	Bool	false	Non-retain	False	False	False	False		Status: permanent processing of all interlocks
T_PERM	Bool	false	Non-retain	False	False	False	False		Status: permanent processing of all transitions
ILP_MAN	Bool	false	Non-retain	False	False	False	False		Status: permanent processing of all interlocks in manual mode
LMODE	Bool	false	Non-retain	False	False	False	False		Status: learning mode is acitve
RESET_CRIT	Bool	false	Non-retain	False	False	False	False		Request: reset all initial values recorded for interlocks and transitions
TIME_DELTA	Time	T#0ms	Non-retain	False	False	False	False		Cycle time
▼ SQ_FLAGS	G7_SQFlagsPlus_V6		Non-retain	False	False	False	True		Sequence bit memory
ERR_FLT	Bool	false	Non-retain	False	False	False	False		Interlock and supervision group error
ERROR	Bool	false	Non-retain	False	False	False	False		Interlock group error
FAULT	Bool	false	Non-retain	False	False	False	False		Supervision group error
RT_FAIL	Bool	false	Non-retain	False	False	False	False		Runtime error
NO_SNO	Bool	false	Non-retain	False	False	False	False		Requested step number not found
NF_OFL	Bool	false	Non-retain	False	False	False	False		Overflow: too many ON or OFF requests
SA_OFL	Bool	false	Non-retain	False	False	False	False		Overflow: too many steps active

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
TV_OFL	Bool	false	Non-retain	False	False	False	False		Overflow: too many valid transitions
NO_SWI	Bool	false	Non-retain	False	False	False	False		Do not switch in this cycle
CYC_OP	Bool	false	Non-retain	False	False	False	False		Cyclic execution of the sequence after initialization
AS_MSG	Bool	true	Non-retain	False	False	False	False		Alarms during runtime enabled or disabled by instruction
SQ_BUSY	Bool	false	Non-retain	False	False	False	False		Internal edge memory bit for sequence processing
SA_BUSY	Bool	false	Non-retain	False	False	False	False		Internal edge memory bit for sequence processing
PRE_CNT	USInt	1	Non-retain	False	False	False	False		Number of permanent instructions preceding the sequencer
POST_CNT	USInt	1	Non-retain	False	False	False	False		Number of permanent instructions after the sequencer
SQ_CNT	USInt	1	Non-retain	False	False	False	False		Number of branch paths
S_CNT	USInt	3	Non-retain	False	False	False	False		Number of steps
LOCK_CNT	USInt	0	Non-retain	False	False	False	False		Number of interlocks
SUP_CNT	USInt	0	Non-retain	False	False	False	False		Number of supervisions
T_CNT	USInt	3	Non-retain	False	False	False	False		Number of transitions
SQ_PART_CNT	USInt	1	Non-retain	False	False	False	False		Number of branches
MAX_TVAL	USInt	1	Non-retain	False	False	False	False		Max. number of simultaneously valid transitions
MAX_SACT	USInt	1	Non-retain	False	False	False	False		Max. number of simultaneously active steps
AS_MSG	Byte	16#65	Non-retain	False	False	False	False		Alarm flags
▼ EXEC_BITS	Array[0..249] of Bool		Non-retain	False	False	False	False		System-internal
EXEC_BITS[0]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[1]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[2]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[3]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[4]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[5]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[6]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[7]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[8]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[9]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[10]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[11]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[12]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[13]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[14]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[15]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[16]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[17]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[18]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[19]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[20]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[21]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[22]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[23]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[24]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[25]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[26]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[27]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[28]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[29]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[30]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[31]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[32]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[33]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[34]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[35]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[36]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[37]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[38]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[39]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[40]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[41]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[42]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[43]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[44]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[45]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[46]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[47]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[48]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[49]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[50]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[51]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[52]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[53]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[54]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[55]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[56]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[57]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[58]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[59]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[60]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[61]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[62]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[63]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[64]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[65]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[66]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[67]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[68]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[69]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[70]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[71]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[72]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[73]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[74]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[75]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[76]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[77]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[78]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[79]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[80]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[81]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[82]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[83]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[84]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[85]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[86]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[87]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[88]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[89]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[90]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[91]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[92]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[93]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[94]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[95]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[96]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[97]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[98]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[99]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[100]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[101]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[102]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[103]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[104]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[105]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[106]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[107]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[108]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[109]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[110]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[111]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[112]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[113]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[114]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[115]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[116]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[117]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[118]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[119]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[120]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[121]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[122]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[123]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[124]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[125]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[126]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[127]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[128]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[129]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[130]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[131]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[132]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[133]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[134]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[135]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[136]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[137]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[138]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[139]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[140]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[141]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[142]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[143]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[144]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[145]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[146]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[147]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[148]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[149]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[150]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[151]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[152]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[153]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[154]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[155]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[156]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[157]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[158]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[159]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[160]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[161]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[162]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[163]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[164]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[165]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[166]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[167]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[168]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[169]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[170]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[171]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[172]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[173]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[174]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[175]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[176]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[177]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[178]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[179]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[180]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[181]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[182]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[183]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[184]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[185]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[186]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[187]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[188]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[189]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[190]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[191]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[192]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[193]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[194]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[195]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[196]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[197]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[198]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[199]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[200]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[201]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[202]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[203]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[204]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[205]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[206]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[207]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[208]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[209]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[210]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[211]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[212]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[213]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[214]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[215]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[216]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[217]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[218]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[219]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[220]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[221]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[222]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[223]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[224]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[225]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EX-EC_BITS[226]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[227]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[228]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[229]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[230]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[231]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[232]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[233]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[234]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[235]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[236]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[237]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[238]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[239]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[240]	Bool	false	Non-retain	False	False	False	False		System-internal
EX-EC_BITS[241]	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
EXEC_BITS[242]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[243]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[244]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[245]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[246]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[247]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[248]	Bool	false	Non-retain	False	False	False	False		System-internal
EXEC_BITS[249]	Bool	false	Non-retain	False	False	False	False		System-internal
▼ OFFSETS	G7_Offsets-Plus_V6		Non-retain	False	False	False	True		Internal offsets
SINI_OFFSET	UInt	0	Non-retain	False	False	False	False		Offset of internal array SINI[]
LSTT_OFFSET	UInt	2	Non-retain	False	False	False	False		Offset of internal array LSTT[]
ATAJ_OFFSET	UInt	5	Non-retain	False	False	False	False		Offset of internal array ATAJ[]
ATAB_OFFSET	UInt	8	Non-retain	False	False	False	False		Offset of internal array ATAB[]
PSTT_OFFSET	UInt	11	Non-retain	False	False	False	False		Offset of internal array PSTT[]
NSTT_OFFSET	UInt	14	Non-retain	False	False	False	False		Offset of internal array NSTT[]
ASSJ_OFFSET	UInt	17	Non-retain	False	False	False	False		Offset of internal array ASSJ[]
ASSB_OFFSET	UInt	20	Non-retain	False	False	False	False		Offset of internal array ASSB[]
PTTS_OFFSET	UInt	23	Non-retain	False	False	False	False		Offset of internal array PTTS[]
NTTS_OFFSET	UInt	26	Non-retain	False	False	False	False		Offset of internal array NTTS[]
SW_SQTS_OFFSET	UInt	29	Non-retain	False	False	False	False		Offset of internal array SW_SQTS[]

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
SWITCH_OFFSET	UInt	32	Non-retain	False	False	False	False		Offset of internal array SWITCH[]
TVX_OFFSET	UInt	33	Non-retain	False	False	False	False		Offset of internal array TVX[]
TTX_OFFSET	UInt	35	Non-retain	False	False	False	False		Offset of internal array TTX[]
TSX_OFFSET	UInt	37	Non-retain	False	False	False	False		Offset of internal array TSX[]
S00X_OFFSET	UInt	39	Non-retain	False	False	False	False		Offset of internal array S00X[]
SOFFX_OFFSET	UInt	41	Non-retain	False	False	False	False		Offset of internal array SOFFX[]
SONX_OFFSET	UInt	43	Non-retain	False	False	False	False		Offset of internal array SONX[]
SAX_OFFSET	UInt	45	Non-retain	False	False	False	False		Offset of internal array SAX[]
SERRX_OFFSET	UInt	47	Non-retain	False	False	False	False		Offset of internal array SERRX[]
SMX_OFFSET	UInt	51	Non-retain	False	False	False	False		Offset of internal array SMX[]
S0X_OFFSET	UInt	55	Non-retain	False	False	False	False		Offset of internal array S0X[]
S1X_OFFSET	UInt	59	Non-retain	False	False	False	False		Offset of internal array S1X[]
THRESHOLD_SUP	USInt	0	Non-retain	False	False	False	False		Threshold for step activation time
THRESHOLD_WARN	USInt	0	Non-retain	False	False	False	False		Threshold for step activation time (warning only)
▼ GC_FLAGS	G7_GCFlagsPlus_V6		Non-retain	False	False	False	True		Compiler flags
COND_ED	USInt	16#E3	Non-retain	False	False	False	False		Language in networks
SSKIP_ON	Bool	false	Non-retain	False	False	False	False		Skip steps
ACK_REQ	Bool	true	Non-retain	False	False	False	False		Acknowledgement required for reaction errors
ILP_MAN	Bool	false	Non-retain	False	False	False	False		Permanent processing of all interlocks in manual mode
SWM_LOCKED	Bool	false	Non-retain	False	False	False	False		Lock operating mode selection
SET_ENO	Bool	false	Non-retain	False	False	False	False		Set ENO automatically
IL_CAT	USInt	1	Non-retain	False	False	False	False		Category for interlock
IL_SUBCAT_1	USInt	0	Non-retain	False	False	False	False		Subcategory 1 for interlock

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
IL_SUBCAT_2	USInt	0	Non-retain	False	False	False	False		Subcategory 2 for interlock
REACT_CAT	USInt	1	Non-retain	False	False	False	False		Category for reaction
REACT_SUBCAT_1	USInt	0	Non-retain	False	False	False	False		Subcategory 1 for reaction
REACT_SUBCAT_2	USInt	0	Non-retain	False	False	False	False		Subcategory 2 for reaction
WARN_CAT	USInt	2	Non-retain	False	False	False	False		Category for warnings
WARN_SUBCAT_1	USInt	0	Non-retain	False	False	False	False		Subcategory 1 for warnings
WARN_SUBCAT_2	USInt	0	Non-retain	False	False	False	False		Subcategory 2 for warnings
CRIT_ON	Bool	false	Non-retain	False	False	False	False		Criteria analysis activated
▼ Trans1	G7_Transition-Plus_V6		Non-retain	False	False	False	True		Transition structure
TV	Bool	false	Non-retain	False	False	False	False		Transition is valid
TT	Bool	false	Non-retain	False	False	False	False		Transition is satisfied
TS	Bool	false	Non-retain	False	False	False	False		Transition switches
TNO	Int	1	Non-retain	False	False	False	False		Indicates the user-defined transition number
CRIT	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements of the transition in the current processing cycle
CRIT_OLD	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements of the transition in the previous processing cycle
CRIT_FLT	DWord	16#0	Non-retain	False	False	False	False		Copy of CRIT if an error occurs
▼ Trans2	G7_Transition-Plus_V6		Non-retain	False	False	False	True		Transition structure
TV	Bool	false	Non-retain	False	False	False	False		Transition is valid
TT	Bool	false	Non-retain	False	False	False	False		Transition is satisfied
TS	Bool	false	Non-retain	False	False	False	False		Transition switches

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
TNO	Int	2	Non-retain	False	False	False	False		Indicates the user-defined transition number
CRIT	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements of the transition in the current processing cycle
CRIT_OLD	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements of the transition in the previous processing cycle
CRIT_FLT	DWord	16#0	Non-retain	False	False	False	False		Copy of CRIT if an error occurs
▼ Trans3	G7_Transition-Plus_V6		Non-retain	False	False	False	True		Transition structure
TV	Bool	false	Non-retain	False	False	False	False		Transition is valid
TT	Bool	false	Non-retain	False	False	False	False		Transition is satisfied
TS	Bool	false	Non-retain	False	False	False	False		Transition switches
TNO	Int	3	Non-retain	False	False	False	False		Indicates the user-defined transition number
CRIT	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements of the transition in the current processing cycle
CRIT_OLD	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements of the transition in the previous processing cycle
CRIT_FLT	DWord	16#0	Non-retain	False	False	False	False		Copy of CRIT if an error occurs
▼ Step1	G7_Step-Plus_V6		Non-retain	False	False	False	True		Step structure
S1	Bool	false	Non-retain	False	False	False	False		Step is activated
L1	Bool	false	Non-retain	False	False	False	False		interlock leaving state
V1	Bool	false	Non-retain	False	False	False	False		Supervision entering state

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
R1	Bool	false	Non-retain	False	False	False	False		Reserved
A1	Bool	false	Non-retain	False	False	False	False		Error is acknowledged
S0	Bool	false	Non-retain	False	False	False	False		Step is deactivated
L0	Bool	false	Non-retain	False	False	False	False		Interlock entering state
V0	Bool	false	Non-retain	False	False	False	False		Supervision leaving state
X	Bool	false	Non-retain	False	False	False	False		Step is active
LA	Bool	false	Non-retain	False	False	False	False		Interlock is not satisfied
VA	Bool	false	Non-retain	False	False	False	False		Supervision active
RA	Bool	false	Non-retain	False	False	False	False		Reserved
AA	Bool	false	Non-retain	False	False	False	False		Reserved
SS	Bool	false	Non-retain	False	False	False	False		System-internal
LS	Bool	true	Non-retain	False	False	False	False		Direct result of the programmed interlock
VS	Bool	false	Non-retain	False	False	False	False		Direct result of the programmed supervision
SNO	Int	1	Non-retain	False	False	False	False		User step number
T	Time	T#0ms	Non-retain	False	False	False	False		Total step activation time
U	Time	T#0ms	Non-retain	False	False	False	False		Step activation time without disturbance
T_MAX	Time	T#10S	Non-retain	False	False	False	False		Maximal step activation time
T_WARN	Time	T#7S	Non-retain	False	False	False	False		Warning time
CRIT_LOC	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements in the interlock in the current processing cycle
CRIT_LOC_ERR	DWord	16#0	Non-retain	False	False	False	False		Copy of CRIT_LOC when the interlock leaves the state
SM	Bool	false	Non-retain	False	False	False	False		System-internal

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Set-point	Supervision	Comment
H_IL_ERR	Byte	16#0	Non-retain	False	False	False	False		System-internal
H_SV_FLT	Byte	16#04	Non-retain	False	False	False	False		System-internal
▼ Step2	G7_Step-Plus_V6		Non-retain	False	False	False	True		Step structure
S1	Bool	false	Non-retain	False	False	False	False		Step is activated
L1	Bool	false	Non-retain	False	False	False	False		interlock leaving state
V1	Bool	false	Non-retain	False	False	False	False		Supervision entering state
R1	Bool	false	Non-retain	False	False	False	False		Reserved
A1	Bool	false	Non-retain	False	False	False	False		Error is acknowledged
S0	Bool	false	Non-retain	False	False	False	False		Step is deactivated
L0	Bool	false	Non-retain	False	False	False	False		Interlock entering state
V0	Bool	false	Non-retain	False	False	False	False		Supervision leaving state
X	Bool	false	Non-retain	False	False	False	False		Step is active
LA	Bool	false	Non-retain	False	False	False	False		Interlock is not satisfied
VA	Bool	false	Non-retain	False	False	False	False		Supervision active
RA	Bool	false	Non-retain	False	False	False	False		Reserved
AA	Bool	false	Non-retain	False	False	False	False		Reserved
SS	Bool	false	Non-retain	False	False	False	False		System-internal
LS	Bool	true	Non-retain	False	False	False	False		Direct result of the programmed interlock
VS	Bool	false	Non-retain	False	False	False	False		Direct result of the programmed supervision
SNO	Int	2	Non-retain	False	False	False	False		User step number
T	Time	T#0ms	Non-retain	False	False	False	False		Total step activation time
U	Time	T#0ms	Non-retain	False	False	False	False		Step activation time without disturbance
T_MAX	Time	T#10S	Non-retain	False	False	False	False		Maximal step activation time

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
T_WARN	Time	T#7S	Non-retain	False	False	False	False		Warning time
CRIT_LOC	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements in the interlock in the current processing cycle
CRIT_LOC_ERR	DWord	16#0	Non-retain	False	False	False	False		Copy of CRIT_LOC when the interlock leaves the state
SM	Bool	false	Non-retain	False	False	False	False		System-internal
H_IL_ERR	Byte	16#0	Non-retain	False	False	False	False		System-internal
H_SV_FLT	Byte	16#04	Non-retain	False	False	False	False		System-internal
▼ Step3	G7_Step-Plus_V6		Non-retain	False	False	False	True		Step structure
S1	Bool	false	Non-retain	False	False	False	False		Step is activated
L1	Bool	false	Non-retain	False	False	False	False		interlock leaving state
V1	Bool	false	Non-retain	False	False	False	False		Supervision entering state
R1	Bool	false	Non-retain	False	False	False	False		Reserved
A1	Bool	false	Non-retain	False	False	False	False		Error is acknowledged
S0	Bool	false	Non-retain	False	False	False	False		Step is deactivated
L0	Bool	false	Non-retain	False	False	False	False		Interlock entering state
V0	Bool	false	Non-retain	False	False	False	False		Supervision leaving state
X	Bool	false	Non-retain	False	False	False	False		Step is active
LA	Bool	false	Non-retain	False	False	False	False		Interlock is not satisfied
VA	Bool	false	Non-retain	False	False	False	False		Supervision active
RA	Bool	false	Non-retain	False	False	False	False		Reserved
AA	Bool	false	Non-retain	False	False	False	False		Reserved
SS	Bool	false	Non-retain	False	False	False	False		System-internal
LS	Bool	true	Non-retain	False	False	False	False		Direct result of the programmed interlock

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
VS	Bool	false	Non-retain	False	False	False	False		Direct result of the programmed supervision
SNO	Int	3	Non-retain	False	False	False	False		User step number
T	Time	T#0ms	Non-retain	False	False	False	False		Total step activation time
U	Time	T#0ms	Non-retain	False	False	False	False		Step activation time without disturbance
T_MAX	Time	T#10S	Non-retain	False	False	False	False		Maximal step activation time
T_WARN	Time	T#7S	Non-retain	False	False	False	False		Warning time
CRIT_LOC	DWord	16#0	Non-retain	False	False	False	False		Status of the maximum 32 LAD/FBD elements in the interlock in the current processing cycle
CRIT_LOC_ERR	DWord	16#0	Non-retain	False	False	False	False		Copy of CRIT_LOC when the interlock leaves the state
SM	Bool	false	Non-retain	False	False	False	False		System-internal
H_IL_ERR	Byte	16#0	Non-retain	False	False	False	False		System-internal
H_SV_FLT	Byte	16#04	Non-retain	False	False	False	False		System-internal
Temp									
Constant									

Alarms

Enable alarms	True

Category	Category enabler	Display class
Error		0
Warning		0
Info		0
Category 4		0
Category 5		0
Category 6		0
Category 7		0
Category 8		0

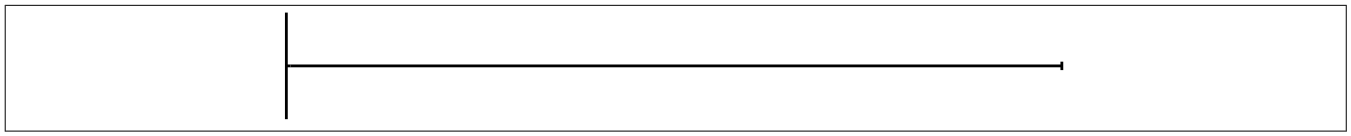
Category for interlocks	Error	**Subcategory 1 for interlocks**		**Subcategory 2 for interlocks**	

Category for supervisions	Error	**Subcategory 1 for supervisions**		**Subcategory 2 for supervisions**	
Category for GRAPH warnings	Warning	**Subcategory 1 for GRAPH warnings**		**Subcategory 2 for GRAPH warnings**	

Symbol	Address	Type	Comment

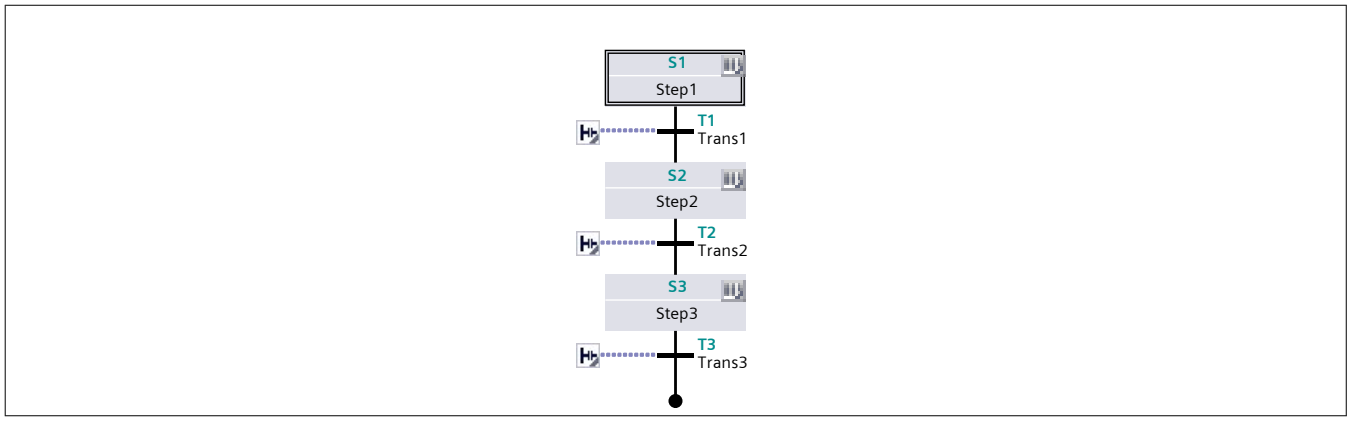
Permanent pre-instructions

1:



Sequences (1)

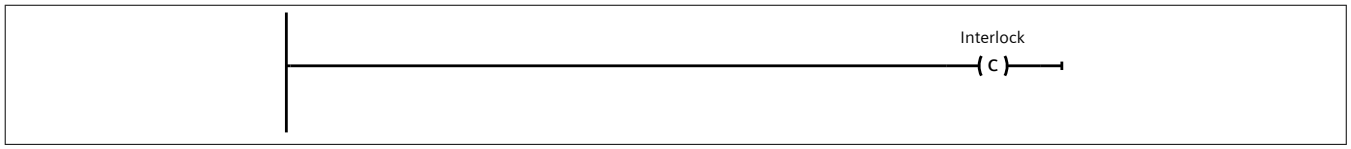
1:



S1 - [Initial step]:Step1

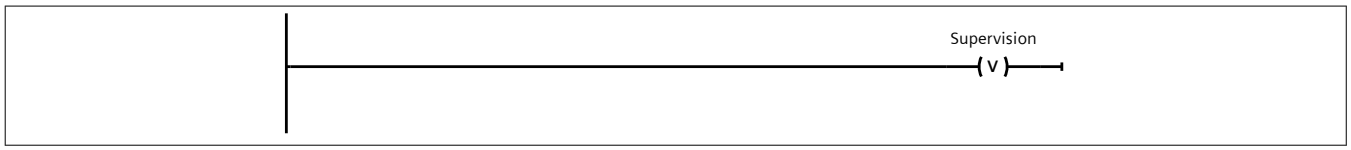
Interlock -(c)-:

Interlock alarm	
Alarm text	



Supervision -(v)-:

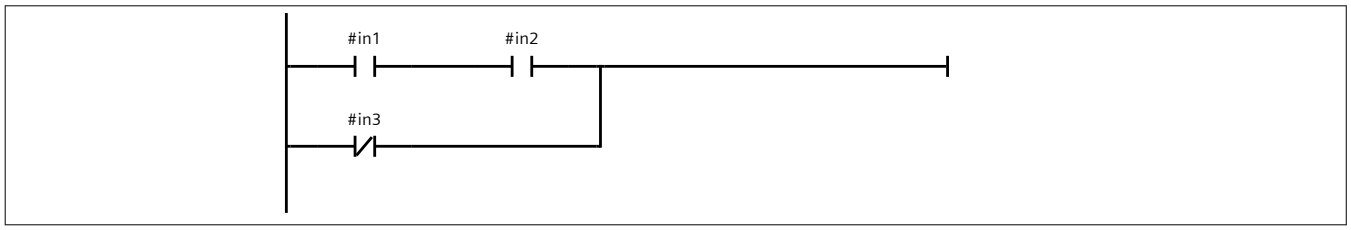
Supervision alarm	
Alarm text	



Actions:

Actions:			
Interlock	**Event**	**Qualifier**	**Action**
		R	#out1
		R	#out2

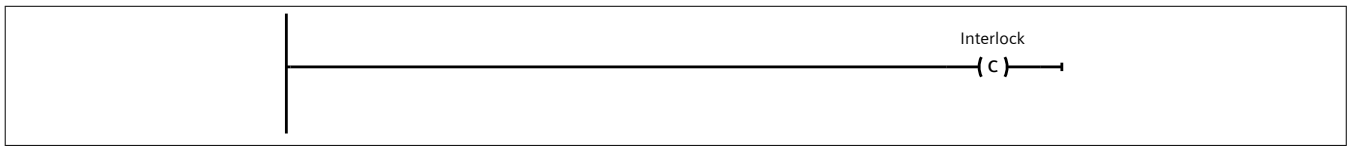
T1:Trans1



S2:Step2

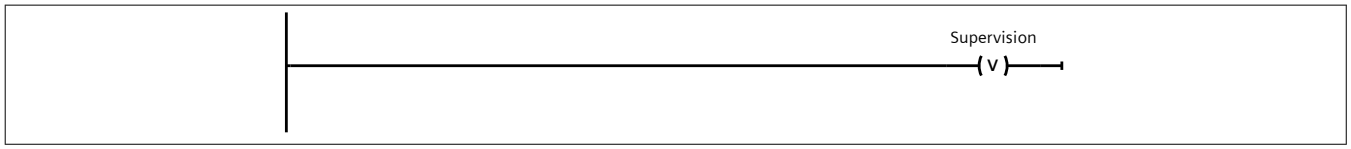
Interlock -(c)-:

Interlock alarm	
Alarm text	



Supervision -(v)-:

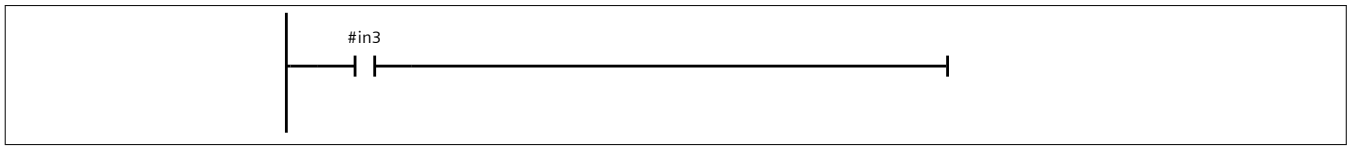
Supervision alarm	
Alarm text	



Actions:

Actions:			
Interlock	**Event**	**Qualifier**	**Action**
		S	#out1

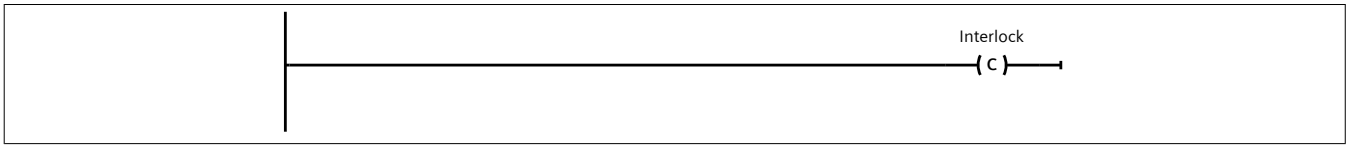
T2:Trans2



S3:Step3

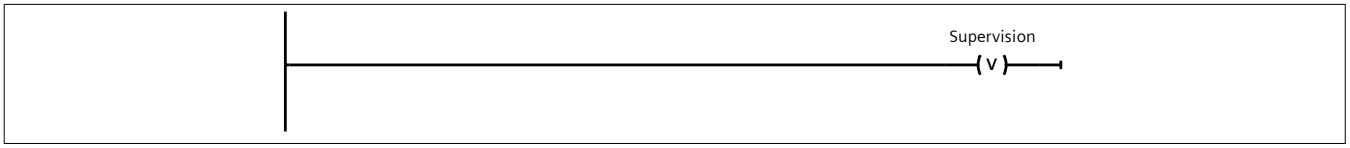
Interlock -(c)-:

Interlock alarm	
Alarm text	



Supervision -(v)-:

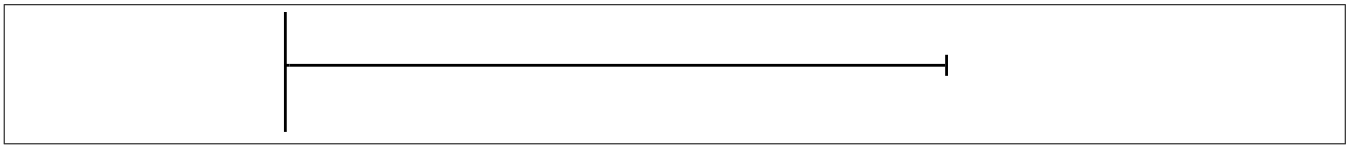
Supervision alarm	
Alarm text	



Actions:

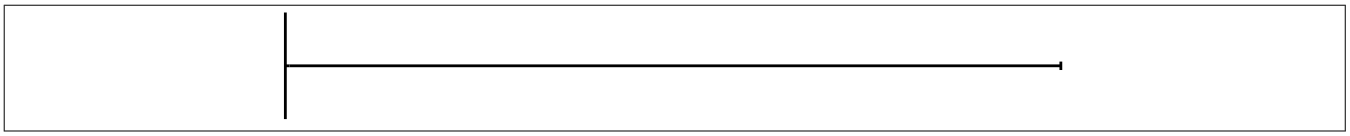
Actions:			
Interlock	Event	Qualifier	Action
		S	#out2

T3:Trans3



Permanent post-instructions

1:



Program Logic [FB5]

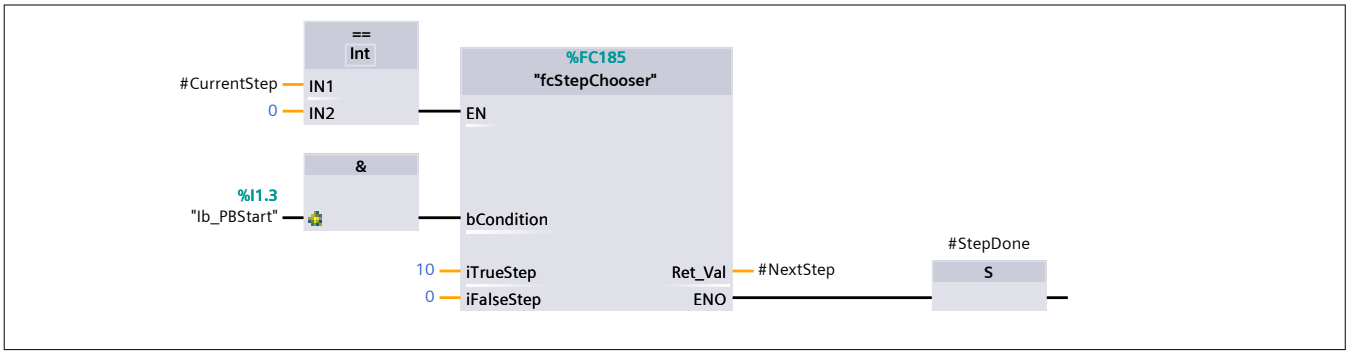
Program Logic Properties					
General					
Name	Program Logic	**Number**	5	**Type**	FB
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Set-point	Supervision	Comment
Input									
Output									
InOut									
▼ Static									

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Set-point	Supervision	Comment
StepSeq	"fbStepSequencer"			True	True	True	False		Modified by Ken Brey 2010-08-25 KLB. Added Initialization inputs and logic. Modified by Ken Brey 2006-08-08 Removed initialization of inputs. Initializing inputs doesn't do anything. The input value if un-wired will be the last value set for that input in a different call. The initialized value in the declaration section does not set it back to default if unwired. Allways supply values for all inputs. Modified by Tim Jager 2005-12-13 no block Id in error message Modified by Boris: branched -> simplified version, no errors, no timeout; still have to use static memory for TON/CurStep (might be fixed later using in/out structure) Modified by Nick Shea: 2012-03-30 Re-instated step mode
Input									
iInStep	Int	0	Non-retain	False	False	False	False		Constant: current step required for the FB to run
iInNextStep	Int	0	Non-retain	False	False	False	False		Next step to go to if step is done
bInStepDone	Bool	false	Non-retain	False	False	False	False		if step done logic is true, then we move from IN_STEP to NEXT_STEP

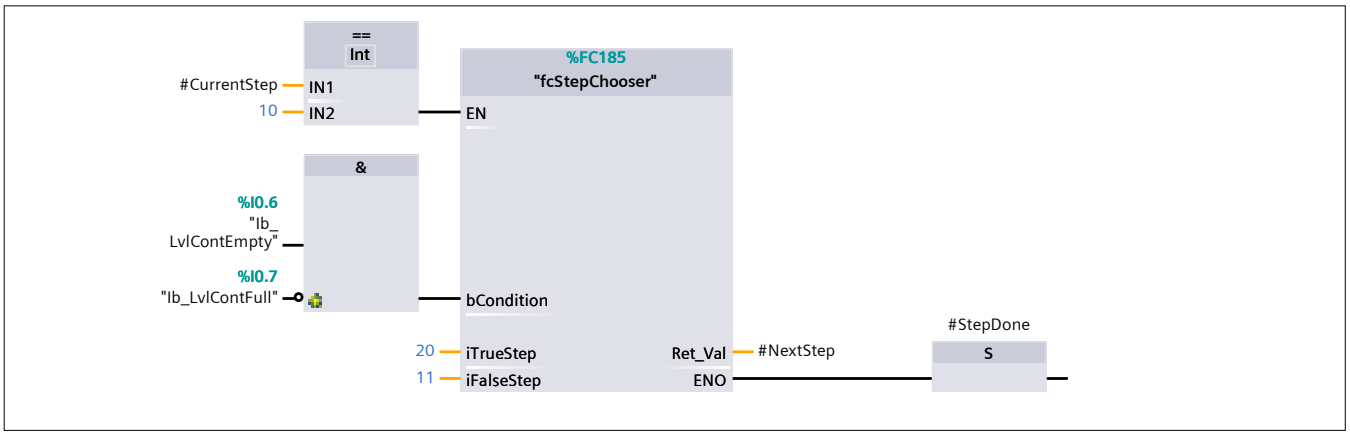
Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
tInStepDelay	Time	T#0ms	Non-retain	False	False	False	False		After the step done input is true, we wait for x seconds before moving to next
bInStepMode	Bool	false	Non-retain	False	False	False	False		Pause sequence at completion of current step
bInStepAdvance	Bool	false	Non-retain	False	False	False	False		If paused, trigger next step
bInit	Bool	false	Non-retain	False	False	False	False		
iInitStep	Int	0	Non-retain	False	False	False	False		
▼ Output									
bOutEnterEvent	Bool	false	Non-retain	False	False	False	False		
bOutExitEvent	Bool	false	Non-retain	False	False	False	False		
bOutPaused	Bool	false	Non-retain	False	False	False	False		Sequence is currently paused.
iOutCurrentStep	Int	0	Non-retain	False	False	False	False		output current step
InOut									
▼ Static									
▼ TON_StepDelay	TON_TIME		Non-retain	False	False	False	False		used to delay moving to the next step.
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
iCurrentStep	Int	0	Non-retain	False	False	False	False		Current step of the sequencer
bAlreadyInThisStep	Bool	false	Non-retain	False	False	False	False		
CurrentStep	Int	0	Non-retain	True	True	True	True		
NextStep	Int	0	Non-retain	True	True	True	False		
StepDone	Bool	false	Non-retain	True	True	True	False		
Temp									
Constant									

Network 1: 0 -- Idle

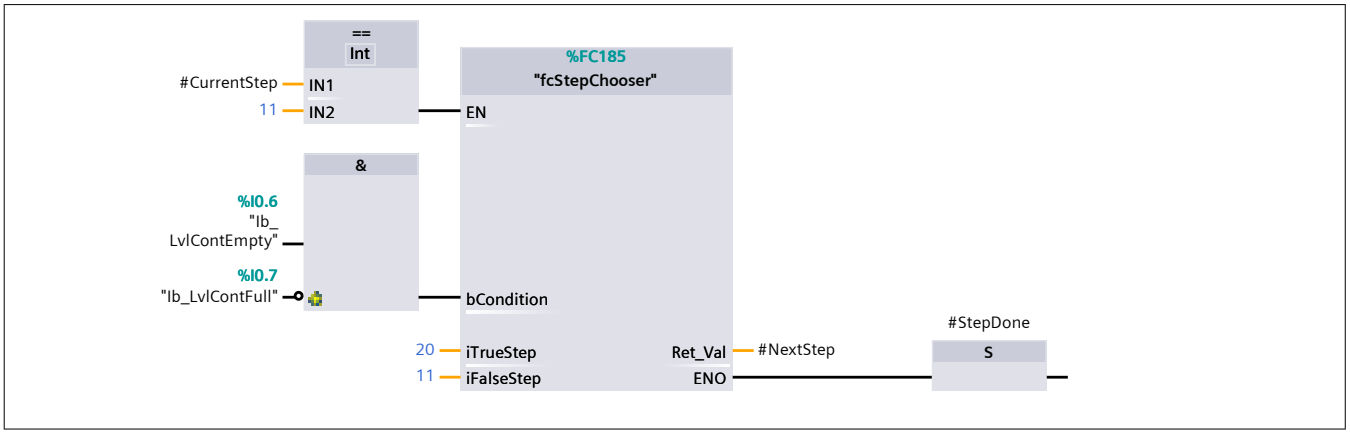


Network 3: 10 -- Controleer bak op aanwezigheid vloeistof

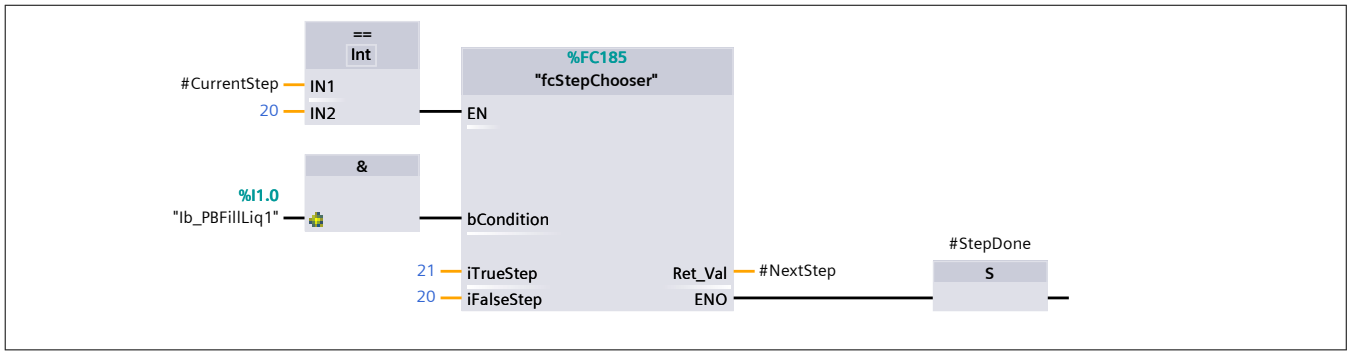
vloeistof aanwezig 10->11
geen vloeistof aanwezig 10->20



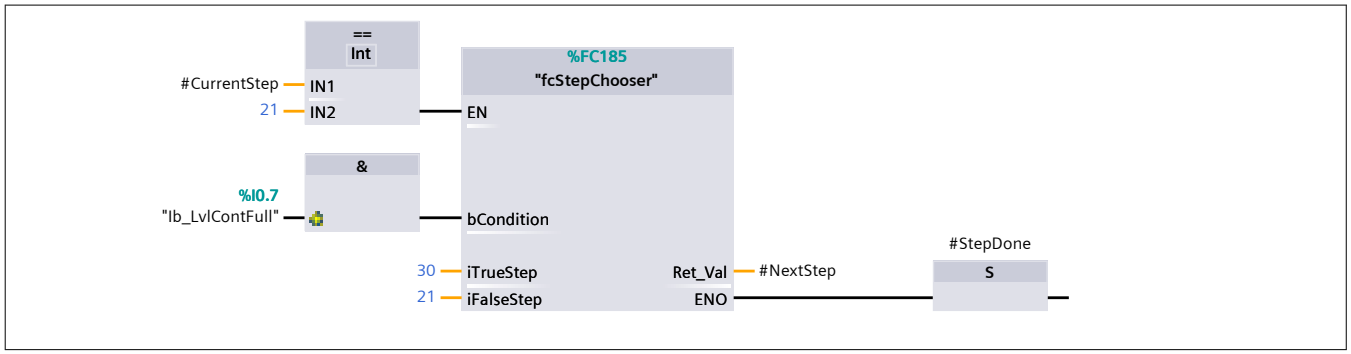
Network 4: 11 -- Vloeistof aanwezig, leeg maken tot bak leeg



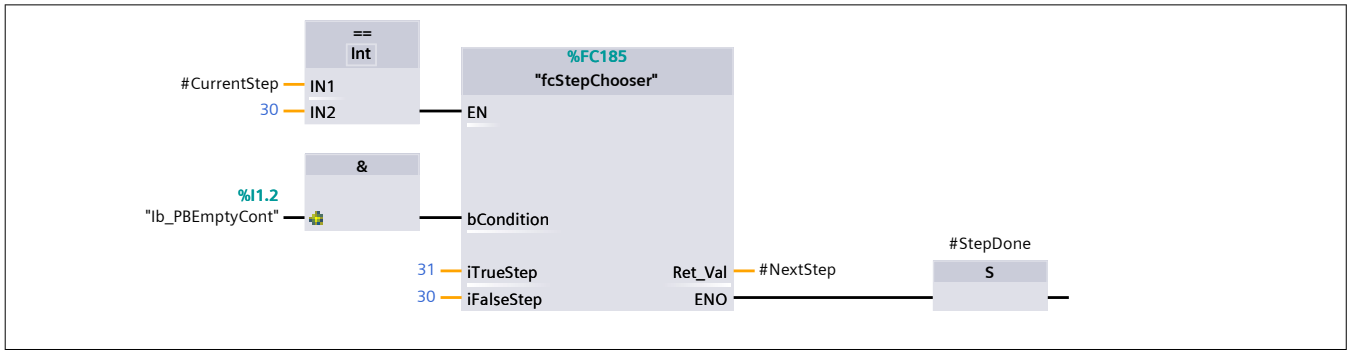
Network 6: 20 -- Aanvraag vloeistof 1



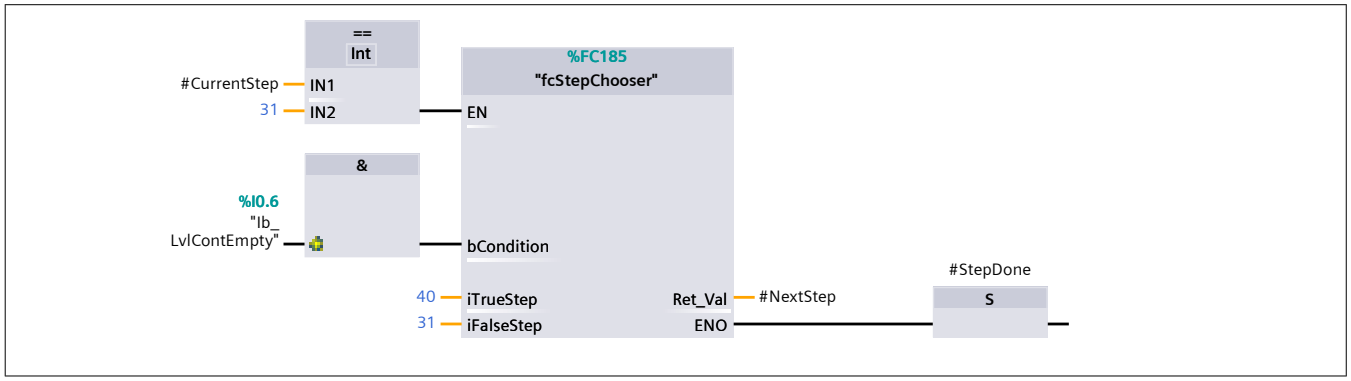
Network 7: 21 -- Vullen bak vloeistof 1 tot bak vol



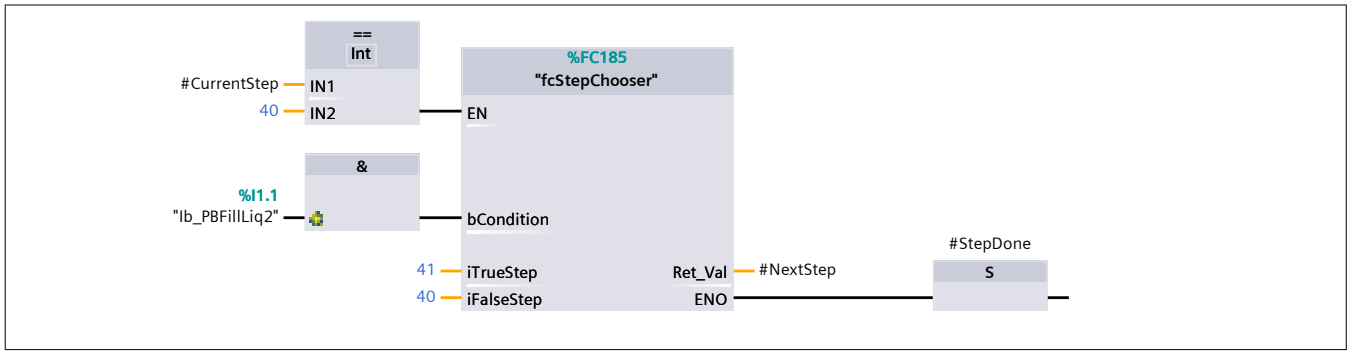
Network 9: 30 -- Aanvraag leegmaken bak vloeistof 1



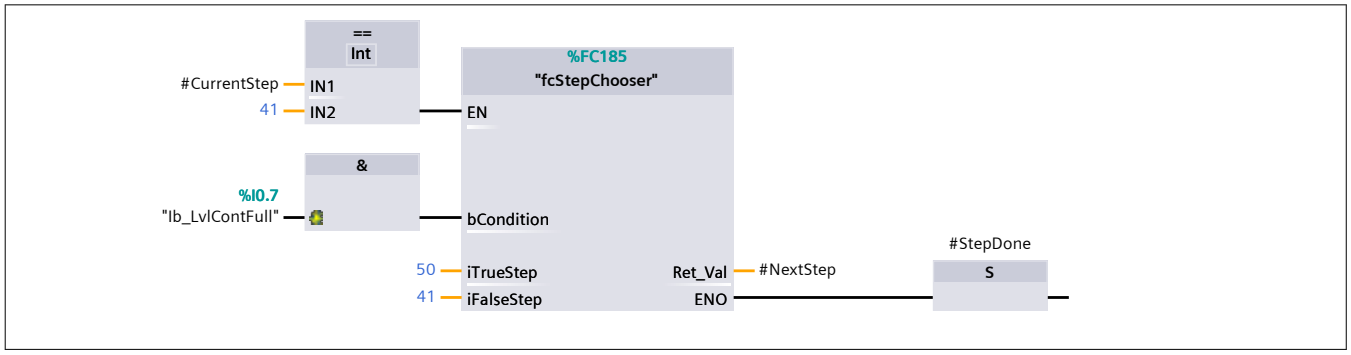
Network 10: 31 -- Leeg maken bak vloeistof 1



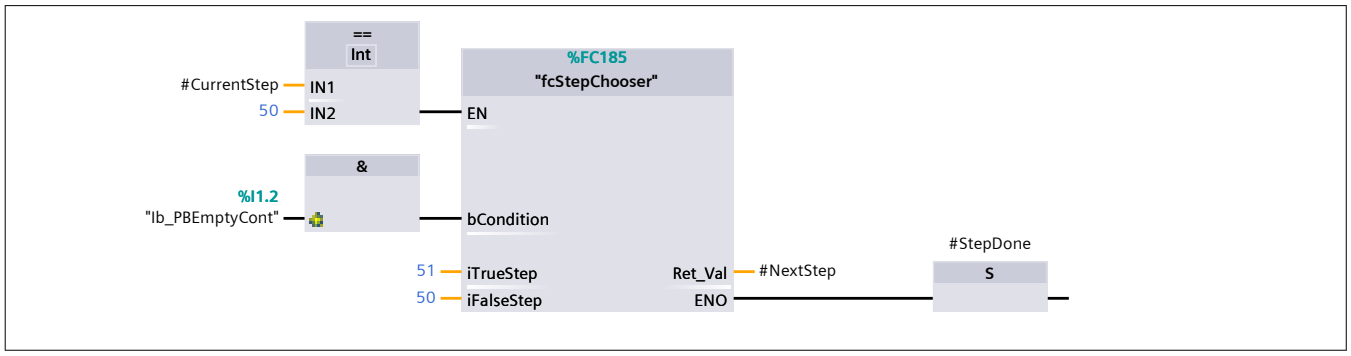
Network 12: 40 -- Aanvraag vloeistof 2



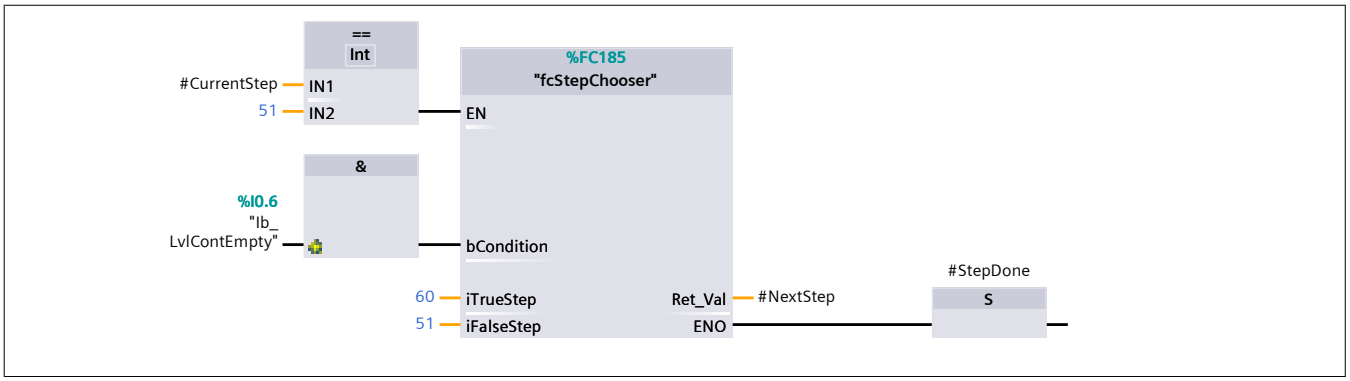
Network 13: 41 -- Vullen bak vloeistof 2



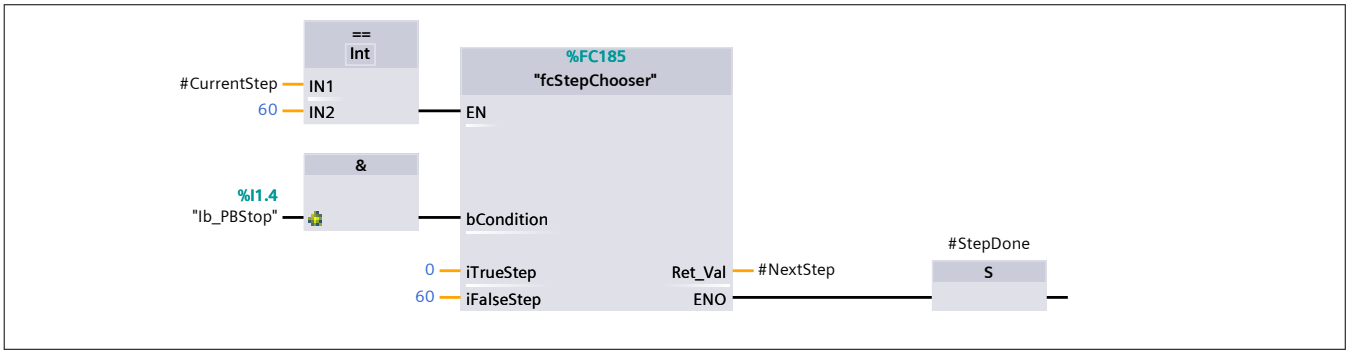
Network 15: 50 -- Aanvraag leegmaken bak vloeistof 2



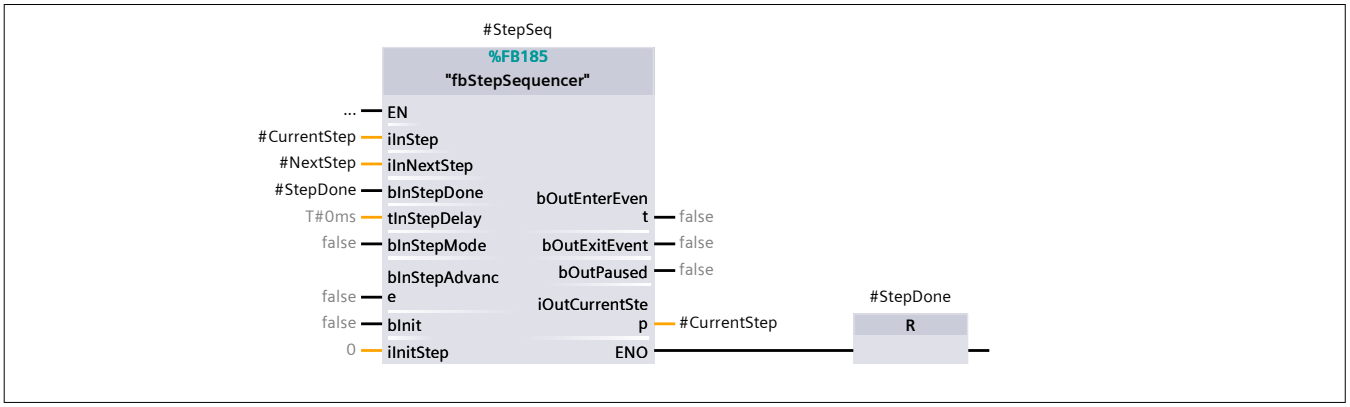
Network 16: 51 -- Leeg maken bak vloeistof 2



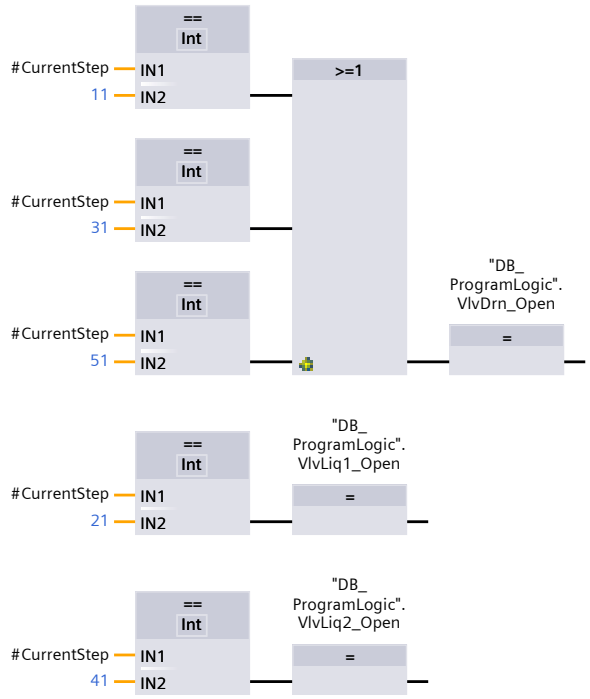
Network 18: 60 -- Cyclus klaar



Network 20: Step Sequencer



Network 22: Outputs


==
Int
#CurrentStep
IN1
11
IN2
==
Int
#CurrentStep
IN1
31
IN2
==
Int
#CurrentStep
IN1
51
IN2
>=1
"DB_
ProgramLogic".
VlvDrn_Open
=
==
Int
#CurrentStep
IN1
21
IN2
"DB_
ProgramLogic".
VlvLiq1_Open
=
==
Int
#CurrentStep
IN1
41
IN2
"DB_
ProgramLogic".
VlvLiq2_Open
=

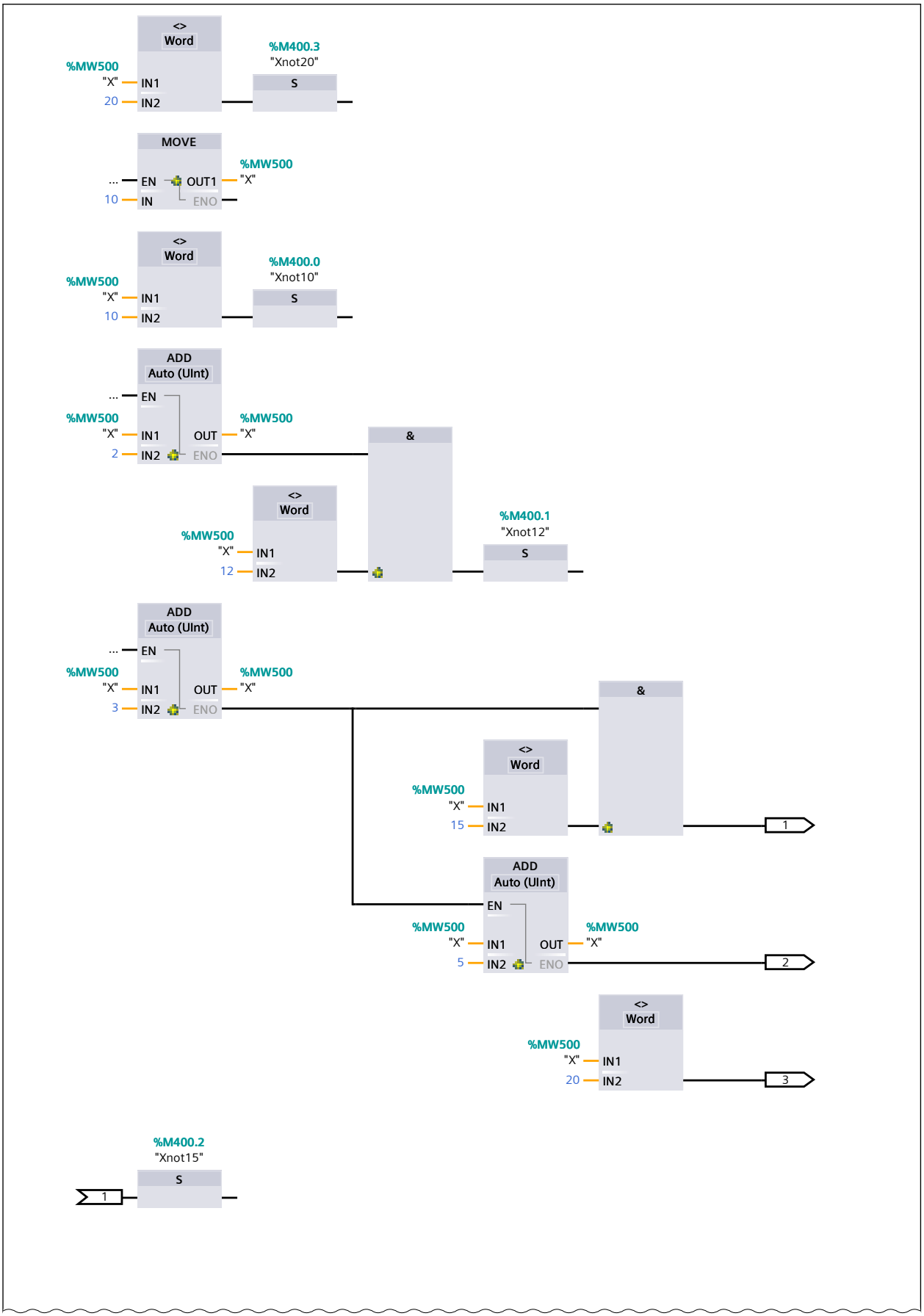
Test [FB6]

Test Properties					
General					
Name	Test	**Number**	6	**Type**	FB
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
Static									
Temp									
Constant									

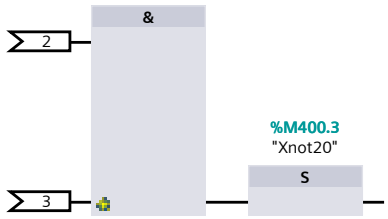
Network 1: X != 10

Network 1: X != 10 (1.1 / 2.1)

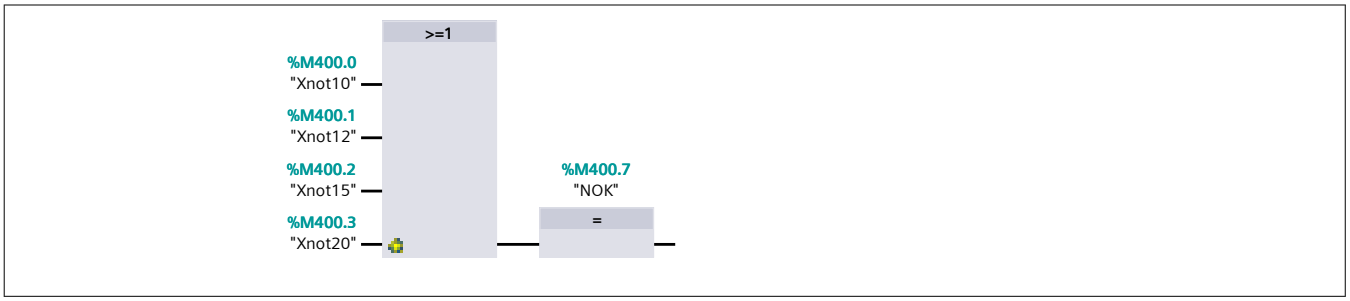


Network 1: X != 10 (2.1 / 2.1)

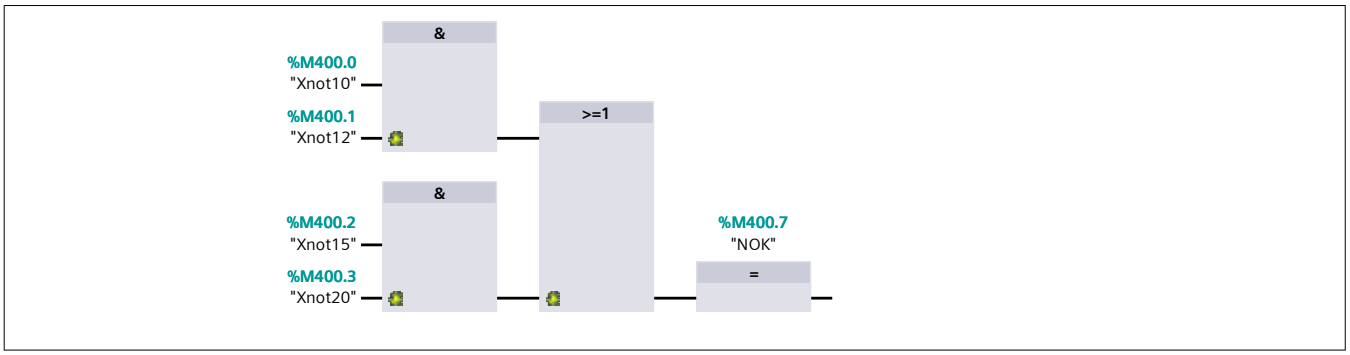
1.1 (Page9 - 2)



Network 2: Result NOK



Network 3: Result NOK



Valve Drain [FB4]

Valve Drain Properties					
General					
Name	Valve Drain	**Number**	4	**Type**	FB
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ VlvDrn	"fbValve_Solenoid"			True	True	True	False		
▼ Input									
tInTimeout	Time	T#0ms	Non-retain	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	Non-retain	False	False	False	False		Mode Selection
bInEstop	Bool	false	Non-retain	False	False	False	False		Estop
bInSignalHome	Bool	false	Non-retain	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	Non-retain	False	False	False	False		Work position feedback
bInEnable	Bool	false	Non-retain	False	False	False	False		Home and Work Enabled
bInCommandWork	Bool	false	Non-retain	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	Non-retain	False	False	False	False		Reset Error
bInSimulate	Bool	false	Non-retain	False	False	False	False		Activate device simulation
▼ Output									
bOutCommandHome	Bool	false	Non-retain	False	False	False	False		Home position command
bOutCommandWork	Bool	false	Non-retain	False	False	False	False		Work position command

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutActiveHome	Bool	false	Non-retain	False	False	False	False		Valve is in home position
bOutActiveWork	Bool	false	Non-retain	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	Non-retain	False	False	False	False		Block in auto mode
bOutError	Bool	false	Non-retain	False	False	False	False		Error exists
▼ ERROR_Valve	"udtError_Valve"		Non-retain	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	Non-retain	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	Non-retain	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Work position feedback still active
▼ InOut									
HMI_ValveControl	"udtHMI_ValveControl"			False	False	False	False		HMI valve control
▼ Static									
▼ ErrorScroller	"fbErrorScroller"			False	False	False	False		Sub-block to handle error scroller
▼ Input									
bInError01	Bool	false	Set in IDB	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	Set in IDB	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	Set in IDB	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	Set in IDB	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	Set in IDB	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	Set in IDB	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	Set in IDB	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	Set in IDB	False	False	False	False		Error 8 In Error Array

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError09	Bool	false	Set in IDB	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	Set in IDB	False	False	False	False		Error 10 In Error Array
bInError11	Bool	false	Set in IDB	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	Set in IDB	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	Set in IDB	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	Set in IDB	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	Set in IDB	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	Set in IDB	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	Set in IDB	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	Set in IDB	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	Set in IDB	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	Set in IDB	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	Set in IDB	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	Set in IDB	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	Set in IDB	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	Set in IDB	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	Set in IDB	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	Set in IDB	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	Set in IDB	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	Set in IDB	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	Set in IDB	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	Set in IDB	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	Set in IDB	False	False	False	False		An Error Exists

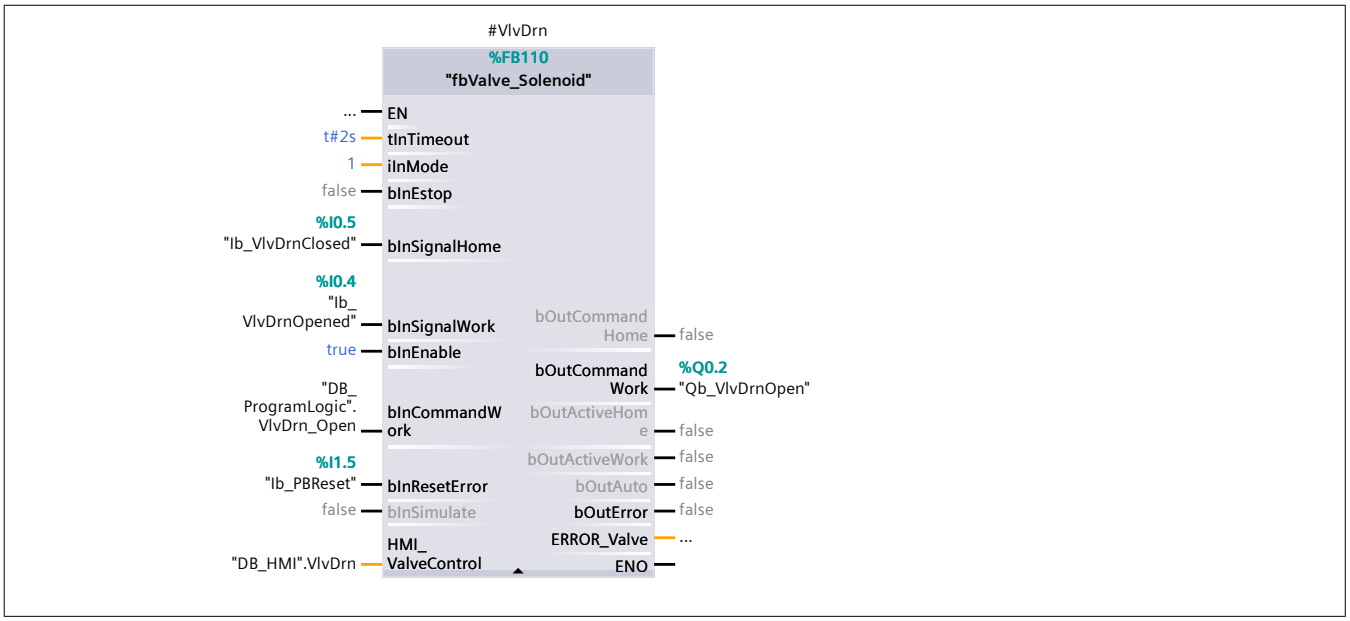
Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iOutScrollingErrorNumber	Int	0	Set in IDB	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		Non-retain	False	False	False	False		Delay between each scroll for a new error
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		Set in IDB	False	False	False	False		
abErrors[1]	Bool	false	Set in IDB	False	False	False	False		
abErrors[2]	Bool	false	Set in IDB	False	False	False	False		
abErrors[3]	Bool	false	Set in IDB	False	False	False	False		
abErrors[4]	Bool	false	Set in IDB	False	False	False	False		
abErrors[5]	Bool	false	Set in IDB	False	False	False	False		
abErrors[6]	Bool	false	Set in IDB	False	False	False	False		
abErrors[7]	Bool	false	Set in IDB	False	False	False	False		
abErrors[8]	Bool	false	Set in IDB	False	False	False	False		
abErrors[9]	Bool	false	Set in IDB	False	False	False	False		

Name	Data type	Default value	Retain	Acces-sible from HMI/OPC UA/Web API	Wri ta-ble fro m HM I/O PC UA/ We b API	Visible in HMI engi-neer-ing	Set-point	Super-vision	Comment
abErrors[10]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[11]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[12]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[13]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[14]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[15]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[16]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[17]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[18]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[19]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[20]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[21]	Bool	false	Set in IDB	False	Fals e	False	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[22]	Bool	false	Set in IDB	False	False	False	False		
abErrors[23]	Bool	false	Set in IDB	False	False	False	False		
abErrors[24]	Bool	false	Set in IDB	False	False	False	False		
abErrors[25]	Bool	false	Set in IDB	False	False	False	False		
abErrors[26]	Bool	false	Set in IDB	False	False	False	False		
abErrors[27]	Bool	false	Set in IDB	False	False	False	False		
abErrors[28]	Bool	false	Set in IDB	False	False	False	False		
abErrors[29]	Bool	false	Set in IDB	False	False	False	False		
abErrors[30]	Bool	false	Set in IDB	False	False	False	False		
iNextScrollNum	Int	1	Non-retain	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	Non-retain	False	False	False	False		Index of current error position
bScrolling	Bool	false	Non-retain	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	Non-retain	False	False	False	False		
▼ TON_TimeOut	TON_TIME		Non-retain	False	False	False	False		Timer for Error Timeout

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
iLastMode	Int	0	Non-retain	False	False	False	False		Last mode code
bNewMode	Bool	false	Non-retain	False	False	False	False		New mode selected
bEnableHome	Bool	false	Non-retain	False	False	False	False		Home position enabled
bEnableWork	Bool	false	Non-retain	False	False	False	False		Work position enabled
bAutoMode	Bool	false	Non-retain	False	False	False	False		Auto Mode is active
bManualMode	Bool	false	Non-retain	False	False	False	False		Manual Mode is active
bReset	Bool	false	Non-retain	False	False	False	False		
bTON_TimeOut	Bool	false	Non-retain	False	False	False	False		
bPB_Home	Bool	false	Non-retain	False	False	False	False		
bPB_Work	Bool	false	Non-retain	False	False	False	False		
bPB_ResetError	Bool	false	Non-retain	False	False	False	False		
Temp									
Constant									

Network 1:


#VlvDrn
%FB110
"fbValve_Solenoid"
... EN
t#2s tInTimeout
1 iInMode
false bInEstop
%I0.5
"Ib_VlvDrnClosed" bInSignalHome
%I0.4
"Ib_VlvDrnOpened" bInSignalWork
true bInEnable
"DB_ProgramLogic".VlvDrn_Open bInCommandWork
%I1.5
"Ib_PBReset" bInResetError
false bInSimulate
"DB_HMI".VlvDrn HMI_ValveControl
bOutCommandHome false
bOutCommandWork %Q0.2 "Qb_VlvDrnOpen"
bOutActiveHome false
bOutActiveWork false
bOutAuto false
bOutError false
ERROR_Valve ...
ENO

Valve Liquid 1 [FB2]

Valve Liquid 1 Properties					
General					
Name	Valve Liquid 1	**Number**	2	**Type**	FB
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ VlvLiq1	"fbValve_Solenoid"			True	True	True	False		
▼ Input									
tInTimeout	Time	T#0ms	Non-retain	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	Non-retain	False	False	False	False		Mode Selection
bInEstop	Bool	false	Non-retain	False	False	False	False		Estop
bInSignalHome	Bool	false	Non-retain	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	Non-retain	False	False	False	False		Work position feedback
bInEnable	Bool	false	Non-retain	False	False	False	False		Home and Work Enabled
bInCommandWork	Bool	false	Non-retain	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	Non-retain	False	False	False	False		Reset Error
bInSimulate	Bool	false	Non-retain	False	False	False	False		Activate device simulation
▼ Output									
bOutCommandHome	Bool	false	Non-retain	False	False	False	False		Home position command
bOutCommandWork	Bool	false	Non-retain	False	False	False	False		Work position command

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutActiveHome	Bool	false	Non-retain	False	False	False	False		Valve is in home position
bOutActiveWork	Bool	false	Non-retain	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	Non-retain	False	False	False	False		Block in auto mode
bOutError	Bool	false	Non-retain	False	False	False	False		Error exists
▼ ERROR_Valve	"udtError_Valve"		Non-retain	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	Non-retain	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	Non-retain	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Work position feedback still active
▼ InOut									
HMI_ValveControl	"udtHMI_ValveControl"			False	False	False	False		HMI valve control
▼ Static									
▼ ErrorScroller	"fbErrorScroller"			False	False	False	False		Sub-block to handle error scroller
▼ Input									
bInError01	Bool	false	Set in IDB	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	Set in IDB	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	Set in IDB	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	Set in IDB	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	Set in IDB	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	Set in IDB	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	Set in IDB	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	Set in IDB	False	False	False	False		Error 8 In Error Array

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError09	Bool	false	Set in IDB	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	Set in IDB	False	False	False	False		Error 10 In Error Array
bInError11	Bool	false	Set in IDB	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	Set in IDB	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	Set in IDB	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	Set in IDB	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	Set in IDB	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	Set in IDB	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	Set in IDB	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	Set in IDB	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	Set in IDB	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	Set in IDB	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	Set in IDB	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	Set in IDB	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	Set in IDB	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	Set in IDB	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	Set in IDB	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	Set in IDB	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	Set in IDB	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	Set in IDB	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	Set in IDB	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	Set in IDB	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	Set in IDB	False	False	False	False		An Error Exists

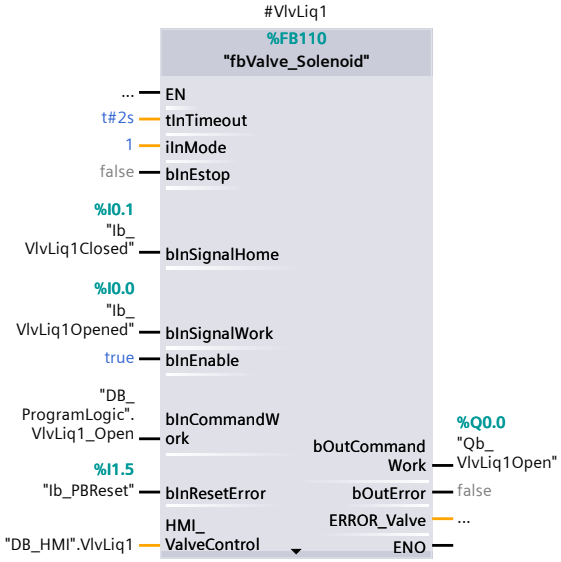
Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iOutScrollingErrorNumber	Int	0	Set in IDB	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		Non-retain	False	False	False	False		Delay between each scroll for a new error
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		Set in IDB	False	False	False	False		
abErrors[1]	Bool	false	Set in IDB	False	False	False	False		
abErrors[2]	Bool	false	Set in IDB	False	False	False	False		
abErrors[3]	Bool	false	Set in IDB	False	False	False	False		
abErrors[4]	Bool	false	Set in IDB	False	False	False	False		
abErrors[5]	Bool	false	Set in IDB	False	False	False	False		
abErrors[6]	Bool	false	Set in IDB	False	False	False	False		
abErrors[7]	Bool	false	Set in IDB	False	False	False	False		
abErrors[8]	Bool	false	Set in IDB	False	False	False	False		
abErrors[9]	Bool	false	Set in IDB	False	False	False	False		

Name	Data type	Default value	Retain	Acces-sible from HMI/OPC UA/Web API	Wri ta-ble fro m HM I/O PC UA/ We b API	Visible in HMI engi-neer-ing	Set-point	Super-vision	Comment
abErrors[10]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[11]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[12]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[13]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[14]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[15]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[16]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[17]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[18]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[19]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[20]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[21]	Bool	false	Set in IDB	False	Fals e	False	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[22]	Bool	false	Set in IDB	False	False	False	False		
abErrors[23]	Bool	false	Set in IDB	False	False	False	False		
abErrors[24]	Bool	false	Set in IDB	False	False	False	False		
abErrors[25]	Bool	false	Set in IDB	False	False	False	False		
abErrors[26]	Bool	false	Set in IDB	False	False	False	False		
abErrors[27]	Bool	false	Set in IDB	False	False	False	False		
abErrors[28]	Bool	false	Set in IDB	False	False	False	False		
abErrors[29]	Bool	false	Set in IDB	False	False	False	False		
abErrors[30]	Bool	false	Set in IDB	False	False	False	False		
iNextScrollNum	Int	1	Non-retain	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	Non-retain	False	False	False	False		Index of current error position
bScrolling	Bool	false	Non-retain	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	Non-retain	False	False	False	False		
▼ TON_TimeOut	TON_TIME		Non-retain	False	False	False	False		Timer for Error Timeout

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
iLastMode	Int	0	Non-retain	False	False	False	False		Last mode code
bNewMode	Bool	false	Non-retain	False	False	False	False		New mode selected
bEnableHome	Bool	false	Non-retain	False	False	False	False		Home position enabled
bEnableWork	Bool	false	Non-retain	False	False	False	False		Work position enabled
bAutoMode	Bool	false	Non-retain	False	False	False	False		Auto Mode is active
bManualMode	Bool	false	Non-retain	False	False	False	False		Manual Mode is active
bReset	Bool	false	Non-retain	False	False	False	False		
bTON_TimeOut	Bool	false	Non-retain	False	False	False	False		
bPB_Home	Bool	false	Non-retain	False	False	False	False		
bPB_Work	Bool	false	Non-retain	False	False	False	False		
bPB_ResetError	Bool	false	Non-retain	False	False	False	False		
Temp									
Constant									

Network 1:


#VlvLiq1
%FB110
"fbValve_Solenoid"
...
EN
t#2s
tInTimeout
1
iInMode
false
bInEstop
%I0.1
"Ib_
VlvLiq1Closed"
bInSignalHome
%I0.0
"Ib_
VlvLiq1Opened"
bInSignalWork
true
bInEnable
"DB_
ProgramLogic".
VlvLiq1_Open
bInCommandW
ork
bOutCommand
Work
%Q0.0
"Qb_
VlvLiq1Open"
%I1.5
"Ib_PBReset"
bInResetError
bOutError
false
ERROR_Valve
...
"DB_HMI".VlvLiq1
HMI_
ValveControl
ENO

Valve Liquid 2 [FB3]

Valve Liquid 2 Properties					
General					
Name	Valve Liquid 2	**Number**	3	**Type**	FB
Language	FBD	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ VlvLiq2	"fbValve_Solenoid"			True	True	True	False		
▼ Input									
tInTimeout	Time	T#0ms	Non-retain	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	Non-retain	False	False	False	False		Mode Selection
bInEstop	Bool	false	Non-retain	False	False	False	False		Estop
bInSignalHome	Bool	false	Non-retain	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	Non-retain	False	False	False	False		Work position feedback
bInEnable	Bool	false	Non-retain	False	False	False	False		Home and Work Enabled
bInCommandWork	Bool	false	Non-retain	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	Non-retain	False	False	False	False		Reset Error
bInSimulate	Bool	false	Non-retain	False	False	False	False		Activate device simulation
▼ Output									
bOutCommandHome	Bool	false	Non-retain	False	False	False	False		Home position command
bOutCommandWork	Bool	false	Non-retain	False	False	False	False		Work position command

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutActiveHome	Bool	false	Non-retain	False	False	False	False		Valve is in home position
bOutActiveWork	Bool	false	Non-retain	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	Non-retain	False	False	False	False		Block in auto mode
bOutError	Bool	false	Non-retain	False	False	False	False		Error exists
▼ ERROR_Valve	"udtError_Valve"		Non-retain	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	Non-retain	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	Non-retain	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Work position feedback still active
▼ InOut									
HMI_ValveControl	"udtHMI_ValveControl"			False	False	False	False		HMI valve control
▼ Static									
▼ ErrorScroller	"fbErrorScroller"			False	False	False	False		Sub-block to handle error scroller
▼ Input									
bInError01	Bool	false	Set in IDB	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	Set in IDB	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	Set in IDB	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	Set in IDB	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	Set in IDB	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	Set in IDB	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	Set in IDB	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	Set in IDB	False	False	False	False		Error 8 In Error Array

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError09	Bool	false	Set in IDB	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	Set in IDB	False	False	False	False		Error 10 In Error Array
bInError11	Bool	false	Set in IDB	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	Set in IDB	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	Set in IDB	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	Set in IDB	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	Set in IDB	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	Set in IDB	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	Set in IDB	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	Set in IDB	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	Set in IDB	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	Set in IDB	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	Set in IDB	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	Set in IDB	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	Set in IDB	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	Set in IDB	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	Set in IDB	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	Set in IDB	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	Set in IDB	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	Set in IDB	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	Set in IDB	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	Set in IDB	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	Set in IDB	False	False	False	False		An Error Exists

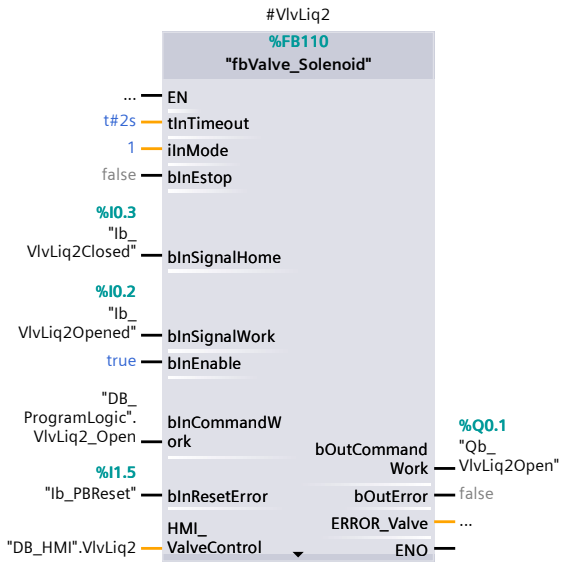
Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iOutScrollingErrorNumber	Int	0	Set in IDB	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		Non-retain	False	False	False	False		Delay between each scroll for a new error
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		Set in IDB	False	False	False	False		
abErrors[1]	Bool	false	Set in IDB	False	False	False	False		
abErrors[2]	Bool	false	Set in IDB	False	False	False	False		
abErrors[3]	Bool	false	Set in IDB	False	False	False	False		
abErrors[4]	Bool	false	Set in IDB	False	False	False	False		
abErrors[5]	Bool	false	Set in IDB	False	False	False	False		
abErrors[6]	Bool	false	Set in IDB	False	False	False	False		
abErrors[7]	Bool	false	Set in IDB	False	False	False	False		
abErrors[8]	Bool	false	Set in IDB	False	False	False	False		
abErrors[9]	Bool	false	Set in IDB	False	False	False	False		

Name	Data type	Default value	Retain	Acces-sible from HMI/OPC UA/Web API	Wri ta-ble fro m HM I/O PC UA/ We b API	Visible in HMI engi-neer-ing	Set-point	Super-vision	Comment
abErrors[10]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[11]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[12]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[13]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[14]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[15]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[16]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[17]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[18]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[19]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[20]	Bool	false	Set in IDB	False	Fals e	False	False		
abErrors[21]	Bool	false	Set in IDB	False	Fals e	False	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[22]	Bool	false	Set in IDB	False	False	False	False		
abErrors[23]	Bool	false	Set in IDB	False	False	False	False		
abErrors[24]	Bool	false	Set in IDB	False	False	False	False		
abErrors[25]	Bool	false	Set in IDB	False	False	False	False		
abErrors[26]	Bool	false	Set in IDB	False	False	False	False		
abErrors[27]	Bool	false	Set in IDB	False	False	False	False		
abErrors[28]	Bool	false	Set in IDB	False	False	False	False		
abErrors[29]	Bool	false	Set in IDB	False	False	False	False		
abErrors[30]	Bool	false	Set in IDB	False	False	False	False		
iNextScrollNum	Int	1	Non-retain	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	Non-retain	False	False	False	False		Index of current error position
bScrolling	Bool	false	Non-retain	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	Non-retain	False	False	False	False		
▼ TON_TimeOut	TON_TIME		Non-retain	False	False	False	False		Timer for Error Timeout

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
iLastMode	Int	0	Non-retain	False	False	False	False		Last mode code
bNewMode	Bool	false	Non-retain	False	False	False	False		New mode selected
bEnableHome	Bool	false	Non-retain	False	False	False	False		Home position enabled
bEnableWork	Bool	false	Non-retain	False	False	False	False		Work position enabled
bAutoMode	Bool	false	Non-retain	False	False	False	False		Auto Mode is active
bManualMode	Bool	false	Non-retain	False	False	False	False		Manual Mode is active
bReset	Bool	false	Non-retain	False	False	False	False		
bTON_TimeOut	Bool	false	Non-retain	False	False	False	False		
bPB_Home	Bool	false	Non-retain	False	False	False	False		
bPB_Work	Bool	false	Non-retain	False	False	False	False		
bPB_ResetError	Bool	false	Non-retain	False	False	False	False		
Temp									
Constant									

Network 1:


#VlvLiq2
%FB110
"fbValve_Solenoid"
...
EN
t#2s
tInTimeout
1
iInMode
false
bInEstop
%I0.3
"Ib_
VlvLiq2Closed"
bInSignalHome
%I0.2
"Ib_
VlvLiq2Opened"
bInSignalWork
true
bInEnable
"DB_
ProgramLogic".
VlvLiq2_Open
bInCommandW
ork
bOutCommand
Work
%Q0.1
"Qb_
VlvLiq2Open"
%I1.5
"Ib_PBReset"
bInResetError
bOutError
false
ERROR_Valve
...
"DB_HMI".VlvLiq2
HMI_
ValveControl
ENO

DB_HMI [DB3]

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

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Static									
▼ VlvLiq1	"udtHMI_ValveControl"		False	True	True	True	False		
iMode	Int	0	False	True	True	True	False		Current mode
iErrorCode	Int	0	False	True	False	True	False		Error code
iStatus	Int	0	False	True	False	True	False		Status for HMI display
bPB_ResetError	Bool	false	False	True	True	True	False		PB Reset block errors
bPB_Home	Bool	false	False	True	True	True	False		PB Move to home in manual mode
bPB_Work	Bool	false	False	True	True	True	False		PB Move to work in manual mode
bPBEN_ResetError	Bool	false	False	True	False	True	False		PB Reset error enabled
bPBEN_Home	Bool	false	False	True	False	True	False		PB Home enabled
bPBEN_Work	Bool	false	False	True	False	True	False		PB Work enabled
bHomeOn	Bool	false	False	True	False	True	False		Home command is on
bWorkOn	Bool	false	False	True	False	True	False		Work command is on
bSignalHome	Bool	false	False	True	False	True	False		Home feedback
bSignalWork	Bool	false	False	True	False	True	False		Work feedback
bError	Bool	false	False	True	False	True	False		Error status
bInterlock	Bool	false	False	True	False	True	False		Valve interlocked

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
VlvLiq2	"udtHMI_ValveControl"		False	True	True	True	True		
iMode	Int	0	False	True	True	True	False		Current mode
iErrorCode	Int	0	False	True	False	True	False		Error code
iStatus	Int	0	False	True	False	True	False		Status for HMI display
bPB_ResetError	Bool	false	False	True	True	True	False		PB Reset block errors
bPB_Home	Bool	false	False	True	True	True	False		PB Move to home in manual mode
bPB_Work	Bool	false	False	True	True	True	False		PB Move to work in manual mode
bPBEN_ResetError	Bool	false	False	True	False	True	False		PB Reset error enabled
bPBEN_Home	Bool	false	False	True	False	True	False		PB Home enabled
bPBEN_Work	Bool	false	False	True	False	True	False		PB Work enabled
bHomeOn	Bool	false	False	True	False	True	False		Home command is on
bWorkOn	Bool	false	False	True	False	True	False		Work command is on
bSignalHome	Bool	false	False	True	False	True	False		Home feedback
bSignalWork	Bool	false	False	True	False	True	False		Work feedback
bError	Bool	false	False	True	False	True	False		Error status
bInterlock	Bool	false	False	True	False	True	False		Valve interlocked
VlvDrn	"udtHMI_ValveControl"		False	True	True	True	True		
iMode	Int	0	False	True	True	True	False		Current mode
iErrorCode	Int	0	False	True	False	True	False		Error code
iStatus	Int	0	False	True	False	True	False		Status for HMI display
bPB_ResetError	Bool	false	False	True	True	True	False		PB Reset block errors
bPB_Home	Bool	false	False	True	True	True	False		PB Move to home in manual mode
bPB_Work	Bool	false	False	True	True	True	False		PB Move to work in manual mode
bPBEN_ResetError	Bool	false	False	True	False	True	False		PB Reset error enabled

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bPBEN_Home	Bool	false	False	True	False	True	False		PB Home enabled
bPBEN_Work	Bool	false	False	True	False	True	False		PB Work enabled
bHomeOn	Bool	false	False	True	False	True	False		Home command is on
bWorkOn	Bool	false	False	True	False	True	False		Work command is on
bSignalHome	Bool	false	False	True	False	True	False		Home feedback
bSignalWork	Bool	false	False	True	False	True	False		Work feedback
bError	Bool	false	False	True	False	True	False		Error status
bInterlock	Bool	false	False	True	False	True	False		Valve interlocked

DB_ProgramLogic [DB4]

DB_ProgramLogic Properties					
General					
Name	DB_ProgramLogic	**Number**	4	**Type**	DB
Language	DB	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Static									
VlvLiq1_Open	Bool	false	False	True	True	True	False		
VlvLiq2_Open	Bool	false	False	True	True	True	False		
VlvDrn_Open	Bool	false	False	True	True	True	False		

Program Logic_DB [DB2]

Program Logic_DB Properties					
General					
Name	Program Logic_DB	**Number**	2	**Type**	DB
Language	DB	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ StepSeq	"fbStepSequencer"		False	True	True	True	False		Modified by Ken Brey 2010-08-25 KLB. Added Initialization inputs and logic. Modified by Ken Brey 2006-08-08 Removed initialization of inputs. Initializing inputs doesn't do anything. The input value if un-wired will be the last value set for that input in a different call. The initialized value in the declaration section does not set it back to default if un-wired. Allways supply values for all inputs. Modified by Tim Jager 2005-12-13 no block Id in error message Modified by Boris: branched -> simplified version, no errors, no timeout; still have to use static memory for TON/CurStep (might be fixed later using in/out structure) Modified by Nick Shea: 2012-03-30 Re-instated step mode
▼ Input									

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iInStep	Int	0	False	False	False	False	False		Constant: current step required for the FB to run
iInNextStep	Int	0	False	False	False	False	False		Next step to go to if step is done
bInStepDone	Bool	false	False	False	False	False	False		if step done logic is true, then we move from IN_STEP to NEXT_STEP
tInStepDelay	Time	T#0ms	False	False	False	False	False		After the step done input is true, we wait for x seconds before moving to next
bInStepMode	Bool	false	False	False	False	False	False		Pause sequence at completion of current step
bInStepAdvance	Bool	false	False	False	False	False	False		If paused, trigger next step
bInit	Bool	false	False	False	False	False	False		
iInitStep	Int	0	False	False	False	False	False		
▼ Output									
bOutEnterEvent	Bool	false	False	False	False	False	False		
bOutExitEvent	Bool	false	False	False	False	False	False		
bOutPaused	Bool	false	False	False	False	False	False		Sequence is currently paused.
iOutCurrentStep	Int	0	False	False	False	False	False		output current step
InOut									
▼ Static									
▼ TON_StepDelay	TON_TIME		False	False	False	False	False		used to delay moving to the next step.
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
iCurrentStep	Int	0	False	False	False	False	False		Current step of the sequencer
bAlreadyInThisStep	Bool	false	False	False	False	False	False		
CurrentStep	Int	0	False	True	True	True	True		
NextStep	Int	0	False	True	True	True	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
StepDone	Bool	false	False	True	True	True	False		

Test_DB [DB1]

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

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
Static									

Valve Drain_DB [DB7]

Valve Drain_DB Properties					
General					
Name	Valve Drain_DB	**Number**	7	**Type**	DB
Language	DB	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ VlvDrn	"fbValve_Solenoid"		False	True	True	True	False		
▼ Input									
tInTimeout	Time	T#0ms	False	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	False	False	False	False	False		Mode Selection
bInEstop	Bool	false	False	False	False	False	False		Estop
bInSignalHome	Bool	false	False	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	False	False	False	False	False		Work position feedback
bInEnable	Bool	false	False	False	False	False	False		Home and Work Enabled
bInCommandWork	Bool	false	False	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	False	False	False	False	False		Reset Error
bInSimulate	Bool	false	False	False	False	False	False		Activate device simulation
▼ Output									
bOutCommandHome	Bool	false	False	False	False	False	False		Home position command
bOutCommandWork	Bool	false	False	False	False	False	False		Work position command
bOutActiveHome	Bool	false	False	False	False	False	False		Valve is in home position

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutActiveWork	Bool	false	False	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	False	False	False	False	False		Block in auto mode
bOutError	Bool	false	False	False	False	False	False		Error exists
ERROR_Valve	"udtError_Valve"		False	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	False	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	False	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	False	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	False	False	False	False	False		Work position feedback still active
InOut									
HMI_ValveControl	"udtHMI_ValveControl"		False	False	False	False	False		HMI valve control
Static									
ErrorScroller	"fbErrorScroller"		False	False	False	False	False		Sub-block to handle error scroller
Input									
bInError01	Bool	false	False	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	False	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	False	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	False	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	False	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	False	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	False	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	False	False	False	False	False		Error 8 In Error Array
bInError09	Bool	false	False	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	False	False	False	False	False		Error 10 In Error Array

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError11	Bool	false	False	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	False	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	False	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	False	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	False	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	False	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	False	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	False	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	False	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	False	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	False	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	False	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	False	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	False	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	False	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	False	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	False	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	False	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	False	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	False	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	False	False	False	False	False		An Error Exists

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iOutScrollingErrorNumber	Int	0	False	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		False	False	False	False	False		Delay between each scroll for a new error
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		False	False	False	False	False		
abErrors[1]	Bool	false	False	False	False	False	False		
abErrors[2]	Bool	false	False	False	False	False	False		
abErrors[3]	Bool	false	False	False	False	False	False		
abErrors[4]	Bool	false	False	False	False	False	False		
abErrors[5]	Bool	false	False	False	False	False	False		
abErrors[6]	Bool	false	False	False	False	False	False		
abErrors[7]	Bool	false	False	False	False	False	False		
abErrors[8]	Bool	false	False	False	False	False	False		
abErrors[9]	Bool	false	False	False	False	False	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[10]	Bool	false	False	False	False	False	False		
abErrors[11]	Bool	false	False	False	False	False	False		
abErrors[12]	Bool	false	False	False	False	False	False		
abErrors[13]	Bool	false	False	False	False	False	False		
abErrors[14]	Bool	false	False	False	False	False	False		
abErrors[15]	Bool	false	False	False	False	False	False		
abErrors[16]	Bool	false	False	False	False	False	False		
abErrors[17]	Bool	false	False	False	False	False	False		
abErrors[18]	Bool	false	False	False	False	False	False		
abErrors[19]	Bool	false	False	False	False	False	False		
abErrors[20]	Bool	false	False	False	False	False	False		
abErrors[21]	Bool	false	False	False	False	False	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[22]	Bool	false	False	False	False	False	False		
abErrors[23]	Bool	false	False	False	False	False	False		
abErrors[24]	Bool	false	False	False	False	False	False		
abErrors[25]	Bool	false	False	False	False	False	False		
abErrors[26]	Bool	false	False	False	False	False	False		
abErrors[27]	Bool	false	False	False	False	False	False		
abErrors[28]	Bool	false	False	False	False	False	False		
abErrors[29]	Bool	false	False	False	False	False	False		
abErrors[30]	Bool	false	False	False	False	False	False		
iNextScrollNum	Int	1	False	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	False	False	False	False	False		Index of current error position
bScrolling	Bool	false	False	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	False	False	False	False	False		
▼ TON_TimeOut	TON_TIME		False	False	False	False	False		Timer for Error Timeout

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
iLastMode	Int	0	False	False	False	False	False		Last mode code
bNewMode	Bool	false	False	False	False	False	False		New mode selected
bEnable-Home	Bool	false	False	False	False	False	False		Home position enabled
bEnable-Work	Bool	false	False	False	False	False	False		Work position enabled
bAutoMode	Bool	false	False	False	False	False	False		Auto Mode is active
bManual-Mode	Bool	false	False	False	False	False	False		Manual Mode is active
bReset	Bool	false	False	False	False	False	False		
bTON_Time-Out	Bool	false	False	False	False	False	False		
bPB_Home	Bool	false	False	False	False	False	False		
bPB_Work	Bool	false	False	False	False	False	False		
bPB_Rese-tError	Bool	false	False	False	False	False	False		

Valve Liquid 1_DB [DB8]

Valve Liquid 1_DB Properties					
General					
Name	Valve Liquid 1_DB	**Number**	8	**Type**	DB
Language	DB	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ VlvLiq1	"fbValve_Solenoid"		False	True	True	True	False		
▼ Input									
tInTimeout	Time	T#0ms	False	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	False	False	False	False	False		Mode Selection
bInEstop	Bool	false	False	False	False	False	False		Estop
bInSignalHome	Bool	false	False	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	False	False	False	False	False		Work position feedback
bInEnable	Bool	false	False	False	False	False	False		Home and Work Enabled
bInCommandWork	Bool	false	False	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	False	False	False	False	False		Reset Error
bInSimulate	Bool	false	False	False	False	False	False		Activate device simulation
▼ Output									
bOutCommandHome	Bool	false	False	False	False	False	False		Home position command
bOutCommandWork	Bool	false	False	False	False	False	False		Work position command
bOutActiveHome	Bool	false	False	False	False	False	False		Valve is in home position

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutActiveWork	Bool	false	False	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	False	False	False	False	False		Block in auto mode
bOutError	Bool	false	False	False	False	False	False		Error exists
ERROR_Valve	"udtError_Valve"		False	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	False	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	False	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	False	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	False	False	False	False	False		Work position feedback still active
InOut									
HMI_ValveControl	"udtHMI_ValveControl"		False	False	False	False	False		HMI valve control
Static									
ErrorScroller	"fbErrorScroller"		False	False	False	False	False		Sub-block to handle error scroller
Input									
bInError01	Bool	false	False	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	False	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	False	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	False	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	False	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	False	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	False	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	False	False	False	False	False		Error 8 In Error Array
bInError09	Bool	false	False	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	False	False	False	False	False		Error 10 In Error Array

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError11	Bool	false	False	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	False	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	False	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	False	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	False	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	False	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	False	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	False	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	False	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	False	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	False	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	False	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	False	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	False	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	False	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	False	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	False	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	False	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	False	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	False	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	False	False	False	False	False		An Error Exists

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iOutScrollingErrorNumber	Int	0	False	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		False	False	False	False	False		Delay between each scroll for a new error
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		False	False	False	False	False		
abErrors[1]	Bool	false	False	False	False	False	False		
abErrors[2]	Bool	false	False	False	False	False	False		
abErrors[3]	Bool	false	False	False	False	False	False		
abErrors[4]	Bool	false	False	False	False	False	False		
abErrors[5]	Bool	false	False	False	False	False	False		
abErrors[6]	Bool	false	False	False	False	False	False		
abErrors[7]	Bool	false	False	False	False	False	False		
abErrors[8]	Bool	false	False	False	False	False	False		
abErrors[9]	Bool	false	False	False	False	False	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[10]	Bool	false	False	False	False	False	False		
abErrors[11]	Bool	false	False	False	False	False	False		
abErrors[12]	Bool	false	False	False	False	False	False		
abErrors[13]	Bool	false	False	False	False	False	False		
abErrors[14]	Bool	false	False	False	False	False	False		
abErrors[15]	Bool	false	False	False	False	False	False		
abErrors[16]	Bool	false	False	False	False	False	False		
abErrors[17]	Bool	false	False	False	False	False	False		
abErrors[18]	Bool	false	False	False	False	False	False		
abErrors[19]	Bool	false	False	False	False	False	False		
abErrors[20]	Bool	false	False	False	False	False	False		
abErrors[21]	Bool	false	False	False	False	False	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[22]	Bool	false	False	False	False	False	False		
abErrors[23]	Bool	false	False	False	False	False	False		
abErrors[24]	Bool	false	False	False	False	False	False		
abErrors[25]	Bool	false	False	False	False	False	False		
abErrors[26]	Bool	false	False	False	False	False	False		
abErrors[27]	Bool	false	False	False	False	False	False		
abErrors[28]	Bool	false	False	False	False	False	False		
abErrors[29]	Bool	false	False	False	False	False	False		
abErrors[30]	Bool	false	False	False	False	False	False		
iNextScrollNum	Int	1	False	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	False	False	False	False	False		Index of current error position
bScrolling	Bool	false	False	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	False	False	False	False	False		
▼ TON_TimeOut	TON_TIME		False	False	False	False	False		Timer for Error Timeout

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
iLastMode	Int	0	False	False	False	False	False		Last mode code
bNewMode	Bool	false	False	False	False	False	False		New mode selected
bEnable-Home	Bool	false	False	False	False	False	False		Home position enabled
bEnable-Work	Bool	false	False	False	False	False	False		Work position enabled
bAutoMode	Bool	false	False	False	False	False	False		Auto Mode is active
bManual-Mode	Bool	false	False	False	False	False	False		Manual Mode is active
bReset	Bool	false	False	False	False	False	False		
bTON_Time-Out	Bool	false	False	False	False	False	False		
bPB_Home	Bool	false	False	False	False	False	False		
bPB_Work	Bool	false	False	False	False	False	False		
bPB_Rese-tError	Bool	false	False	False	False	False	False		

Valve Liquid 2_DB [DB9]

Valve Liquid 2_DB Properties					
General					
Name	Valve Liquid 2_DB	**Number**	9	**Type**	DB
Language	DB	**Numbering**	Automatic		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Input									
Output									
InOut									
▼ Static									
▼ VlvLiq2	"fbValve_Solenoid"		False	True	True	True	False		
▼ Input									
tInTimeout	Time	T#0ms	False	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	False	False	False	False	False		Mode Selection
bInEstop	Bool	false	False	False	False	False	False		Estop
bInSignalHome	Bool	false	False	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	False	False	False	False	False		Work position feedback
bInEnable	Bool	false	False	False	False	False	False		Home and Work Enabled
bInCommandWork	Bool	false	False	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	False	False	False	False	False		Reset Error
bInSimulate	Bool	false	False	False	False	False	False		Activate device simulation
▼ Output									
bOutCommandHome	Bool	false	False	False	False	False	False		Home position command
bOutCommandWork	Bool	false	False	False	False	False	False		Work position command
bOutActiveHome	Bool	false	False	False	False	False	False		Valve is in home position

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutActiveWork	Bool	false	False	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	False	False	False	False	False		Block in auto mode
bOutError	Bool	false	False	False	False	False	False		Error exists
ERROR_Valve	"udtError_Valve"		False	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	False	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	False	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	False	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	False	False	False	False	False		Work position feedback still active
InOut									
HMI_ValveControl	"udtHMI_ValveControl"		False	False	False	False	False		HMI valve control
Static									
ErrorScroller	"fbErrorScroller"		False	False	False	False	False		Sub-block to handle error scroller
Input									
bInError01	Bool	false	False	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	False	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	False	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	False	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	False	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	False	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	False	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	False	False	False	False	False		Error 8 In Error Array
bInError09	Bool	false	False	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	False	False	False	False	False		Error 10 In Error Array

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError11	Bool	false	False	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	False	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	False	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	False	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	False	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	False	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	False	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	False	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	False	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	False	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	False	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	False	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	False	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	False	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	False	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	False	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	False	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	False	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	False	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	False	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	False	False	False	False	False		An Error Exists

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
iOutScrollingErrorNumber	Int	0	False	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		False	False	False	False	False		Delay between each scroll for a new error
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		False	False	False	False	False		
abErrors[1]	Bool	false	False	False	False	False	False		
abErrors[2]	Bool	false	False	False	False	False	False		
abErrors[3]	Bool	false	False	False	False	False	False		
abErrors[4]	Bool	false	False	False	False	False	False		
abErrors[5]	Bool	false	False	False	False	False	False		
abErrors[6]	Bool	false	False	False	False	False	False		
abErrors[7]	Bool	false	False	False	False	False	False		
abErrors[8]	Bool	false	False	False	False	False	False		
abErrors[9]	Bool	false	False	False	False	False	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[10]	Bool	false	False	False	False	False	False		
abErrors[11]	Bool	false	False	False	False	False	False		
abErrors[12]	Bool	false	False	False	False	False	False		
abErrors[13]	Bool	false	False	False	False	False	False		
abErrors[14]	Bool	false	False	False	False	False	False		
abErrors[15]	Bool	false	False	False	False	False	False		
abErrors[16]	Bool	false	False	False	False	False	False		
abErrors[17]	Bool	false	False	False	False	False	False		
abErrors[18]	Bool	false	False	False	False	False	False		
abErrors[19]	Bool	false	False	False	False	False	False		
abErrors[20]	Bool	false	False	False	False	False	False		
abErrors[21]	Bool	false	False	False	False	False	False		

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[22]	Bool	false	False	False	False	False	False		
abErrors[23]	Bool	false	False	False	False	False	False		
abErrors[24]	Bool	false	False	False	False	False	False		
abErrors[25]	Bool	false	False	False	False	False	False		
abErrors[26]	Bool	false	False	False	False	False	False		
abErrors[27]	Bool	false	False	False	False	False	False		
abErrors[28]	Bool	false	False	False	False	False	False		
abErrors[29]	Bool	false	False	False	False	False	False		
abErrors[30]	Bool	false	False	False	False	False	False		
iNextScrollNum	Int	1	False	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	False	False	False	False	False		Index of current error position
bScrolling	Bool	false	False	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	False	False	False	False	False		
▼ TON_TimeOut	TON_TIME		False	False	False	False	False		Timer for Error Timeout

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
PT	Time	T#0ms	False	False	False	False	False		
ET	Time	T#0ms	False	False	False	False	False		
IN	Bool	false	False	False	False	False	False		
Q	Bool	false	False	False	False	False	False		
iLastMode	Int	0	False	False	False	False	False		Last mode code
bNewMode	Bool	false	False	False	False	False	False		New mode selected
bEnable-Home	Bool	false	False	False	False	False	False		Home position enabled
bEnable-Work	Bool	false	False	False	False	False	False		Work position enabled
bAutoMode	Bool	false	False	False	False	False	False		Auto Mode is active
bManual-Mode	Bool	false	False	False	False	False	False		Manual Mode is active
bReset	Bool	false	False	False	False	False	False		
bTON_Time-Out	Bool	false	False	False	False	False	False		
bPB_Home	Bool	false	False	False	False	False	False		
bPB_Work	Bool	false	False	False	False	False	False		
bPB_Rese-tError	Bool	false	False	False	False	False	False		

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fbErrorScroller [FB330] [fbErrorScroller V 3.0.3]

fbErrorScroller Properties					
General					
Name	fbErrorScroller	**Number**	330	**Type**	FB
Language	FBD	**Numbering**	Manual		
Information					
Title	Scrolls through the error codes for display on the HMI	**Author**	DMC	**Comment**	
Family	Error	**Version**	0.1	**User-defined ID**	

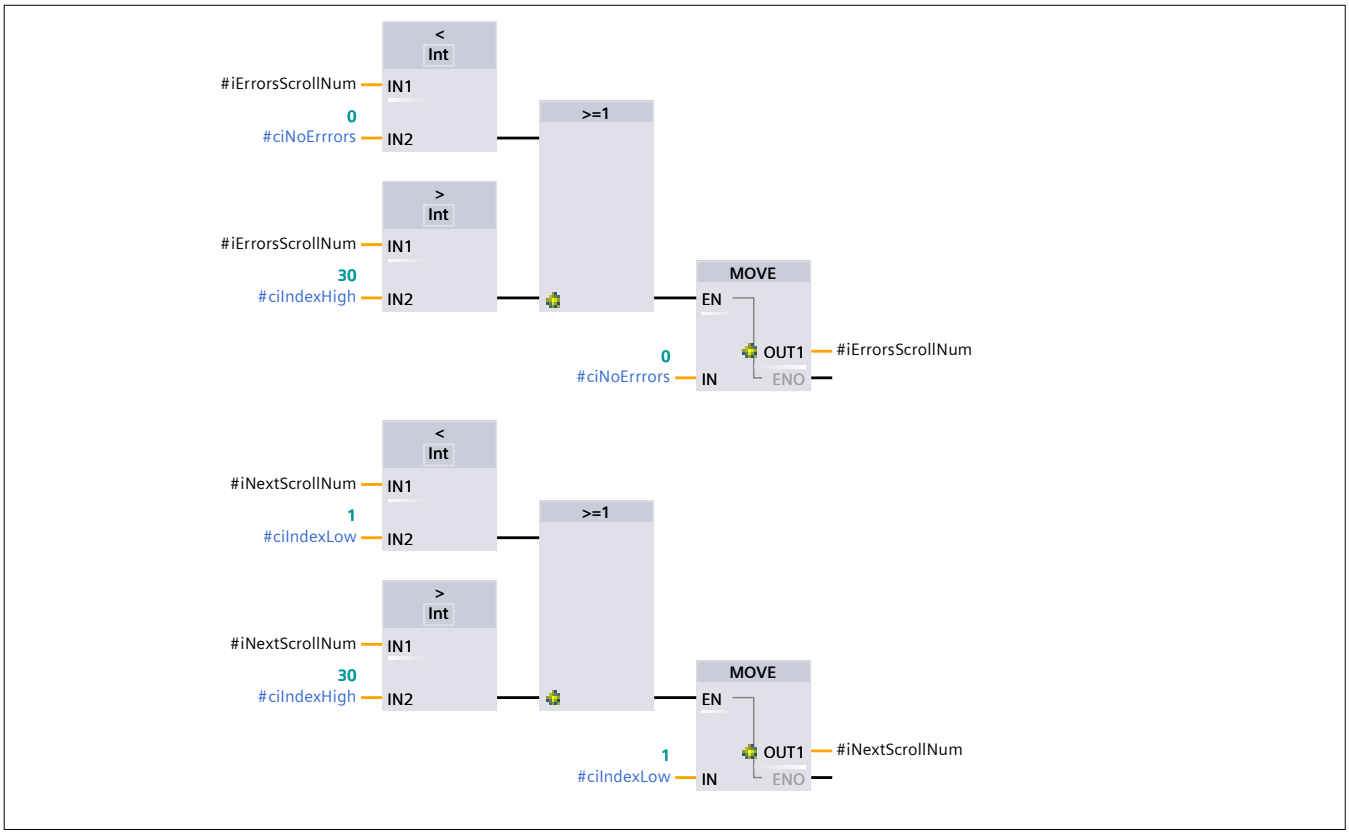
Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Input									
bInError01	Bool	false	Set in IDB	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	Set in IDB	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	Set in IDB	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	Set in IDB	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	Set in IDB	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	Set in IDB	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	Set in IDB	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	Set in IDB	False	False	False	False		Error 8 In Error Array
bInError09	Bool	false	Set in IDB	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	Set in IDB	False	False	False	False		Error 10 In Error Array
bInError11	Bool	false	Set in IDB	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	Set in IDB	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	Set in IDB	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	Set in IDB	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	Set in IDB	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	Set in IDB	False	False	False	False		Error 16 In Error Array

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError17	Bool	false	Set in IDB	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	Set in IDB	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	Set in IDB	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	Set in IDB	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	Set in IDB	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	Set in IDB	False	False	False	False		Error 22 In Error Array
bInError23	Bool	false	Set in IDB	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	Set in IDB	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	Set in IDB	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	Set in IDB	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	Set in IDB	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	Set in IDB	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	Set in IDB	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	Set in IDB	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	Set in IDB	False	False	False	False		An Error Exists
iOutScrollingErrorNumber	Int	0	Set in IDB	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		Non-retain	False	False	False	True		Delay between each scroll for a new error
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors	Array[#ciIndexLow..#ciIndexHigh] of Bool		Set in IDB	False	False	False	False		
abErrors[1]	Bool	false	Set in IDB	False	False	False	False		
abErrors[2]	Bool	false	Set in IDB	False	False	False	False		
abErrors[3]	Bool	false	Set in IDB	False	False	False	False		
abErrors[4]	Bool	false	Set in IDB	False	False	False	False		
abErrors[5]	Bool	false	Set in IDB	False	False	False	False		
abErrors[6]	Bool	false	Set in IDB	False	False	False	False		
abErrors[7]	Bool	false	Set in IDB	False	False	False	False		
abErrors[8]	Bool	false	Set in IDB	False	False	False	False		
abErrors[9]	Bool	false	Set in IDB	False	False	False	False		
abErrors[10]	Bool	false	Set in IDB	False	False	False	False		
abErrors[11]	Bool	false	Set in IDB	False	False	False	False		
abErrors[12]	Bool	false	Set in IDB	False	False	False	False		
abErrors[13]	Bool	false	Set in IDB	False	False	False	False		
abErrors[14]	Bool	false	Set in IDB	False	False	False	False		
abErrors[15]	Bool	false	Set in IDB	False	False	False	False		
abErrors[16]	Bool	false	Set in IDB	False	False	False	False		
abErrors[17]	Bool	false	Set in IDB	False	False	False	False		
abErrors[18]	Bool	false	Set in IDB	False	False	False	False		
abErrors[19]	Bool	false	Set in IDB	False	False	False	False		
abErrors[20]	Bool	false	Set in IDB	False	False	False	False		
abErrors[21]	Bool	false	Set in IDB	False	False	False	False		
abErrors[22]	Bool	false	Set in IDB	False	False	False	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[23]	Bool	false	Set in IDB	False	False	False	False		
abErrors[24]	Bool	false	Set in IDB	False	False	False	False		
abErrors[25]	Bool	false	Set in IDB	False	False	False	False		
abErrors[26]	Bool	false	Set in IDB	False	False	False	False		
abErrors[27]	Bool	false	Set in IDB	False	False	False	False		
abErrors[28]	Bool	false	Set in IDB	False	False	False	False		
abErrors[29]	Bool	false	Set in IDB	False	False	False	False		
abErrors[30]	Bool	false	Set in IDB	False	False	False	False		
iNextScrollNum	Int	1	Non-retain	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	Non-retain	False	False	False	False		Index of current error position
bScrolling	Bool	false	Non-retain	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	Non-retain	False	False	False	False		
▼ Temp									
bErrorExists	Bool								Error Exists
▼ Constant									
ciNoErrrors	Int	0							
ciIndexLow	Int	1							
ciIndexHigh	Int	30							

Network 1: Check for valid array indexes



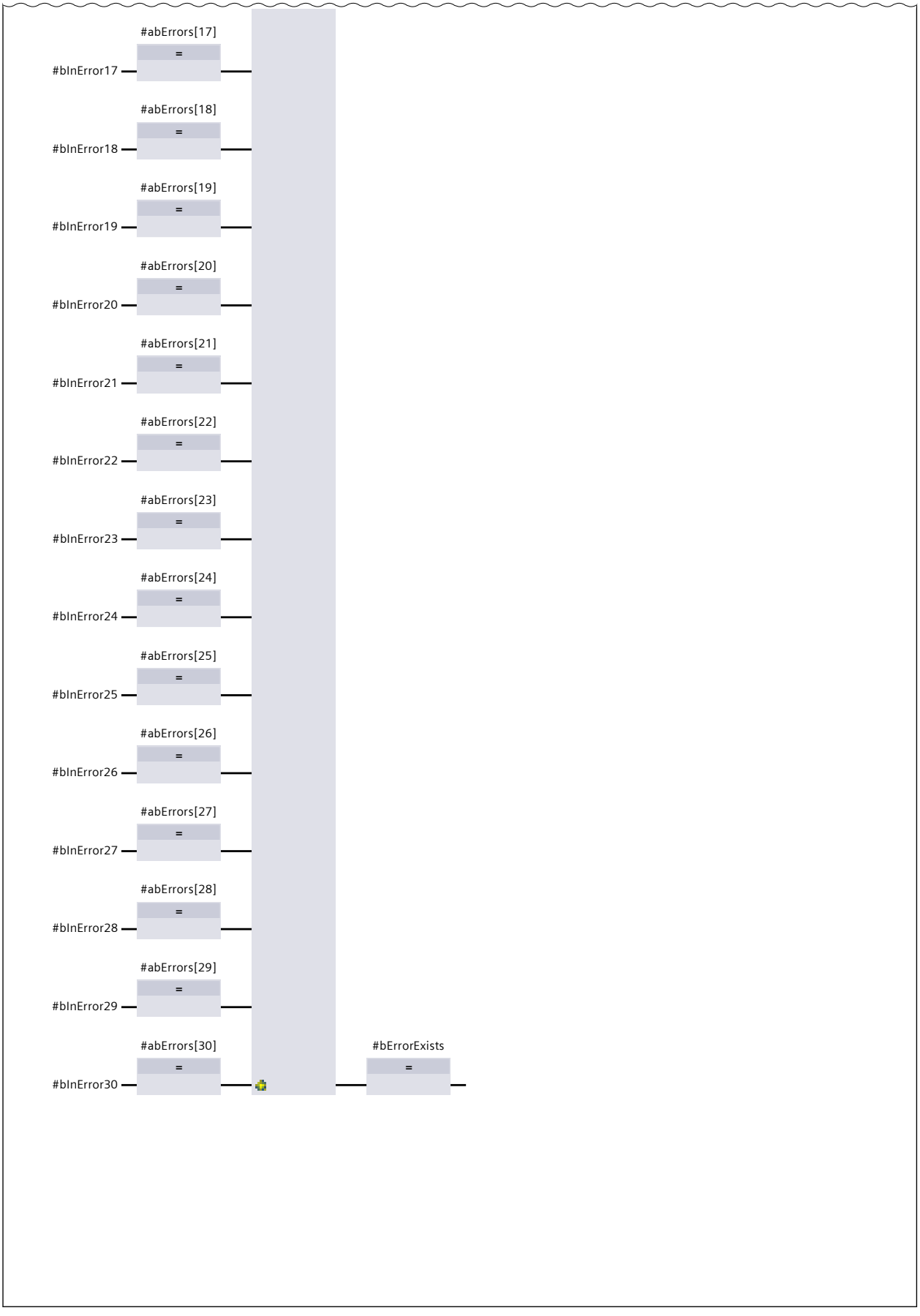
Network 2: Check if error exists

OR all of the possible errors. If any error Exists, SET bErrorExists

Network 2: Check if error exists (1.1 / 2.1)

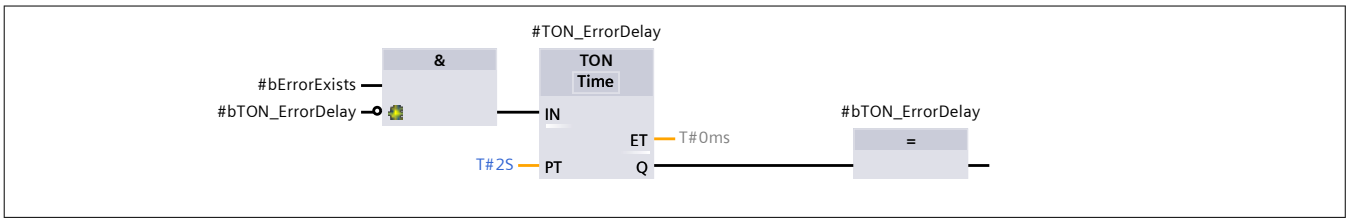
Network 2: Check if error exists (2.1 / 2.1)

1.1 (Page20 - 6)



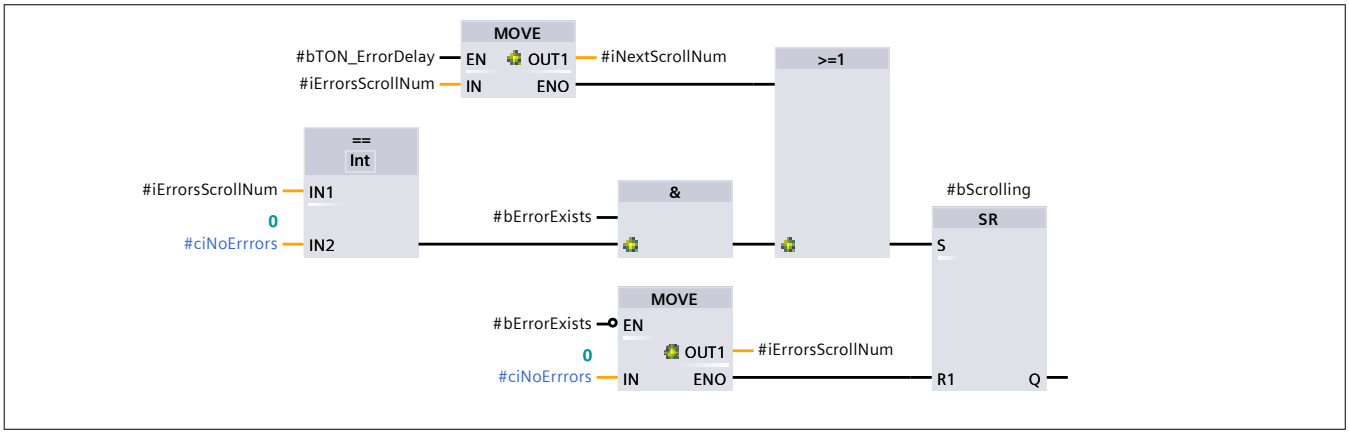
Network 3: Timer to change displayed error

========== Scroll errors on HMI ==========
Timed delay



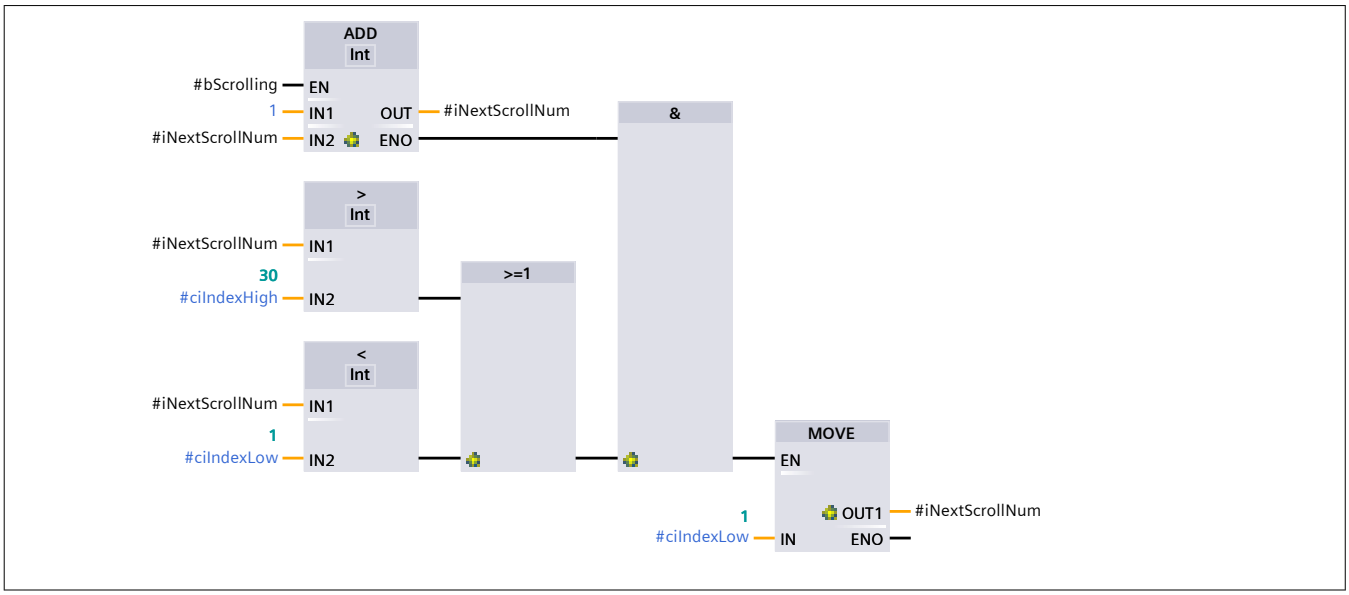
Network 4: Set bit to scroll for the next error

Set a static bit indicating that we are scrolling.
Each pass cycle through the function, we will increment.
If there is no error, set the scroll num to 0 and turn off scrolling.
It scrolls to an error immediately when an error occurs.



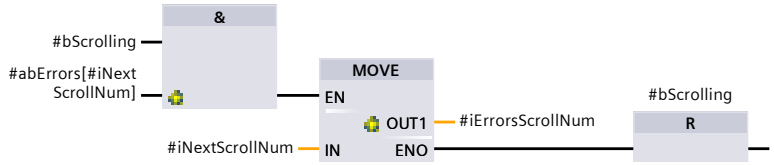
Network 5: Increment the error index checked

The function will only increment the scroll num one value per scan.
It will scroll until it finds the next active error, then stop scrolling.
Roll iNextScrollNum to 0 if it exceeds 30.



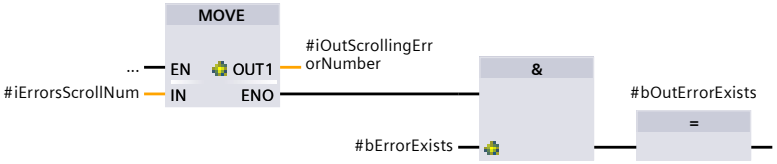
Network 6: Check if the next scroll number has an error

If we found an error, stop scrolling.

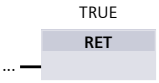


Network 7: Output: Error

Output the index of the error that exists.



Network 8: Set ENO



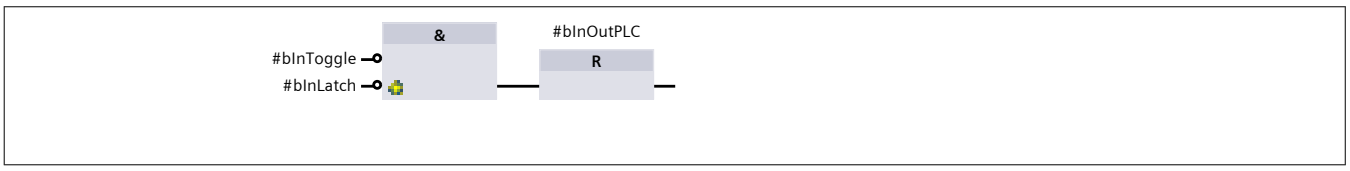
Open Library V15 / Resources / HMI

fcHMIBitEnable [FC329] [fcHMIBitEnable V 3.0.3]

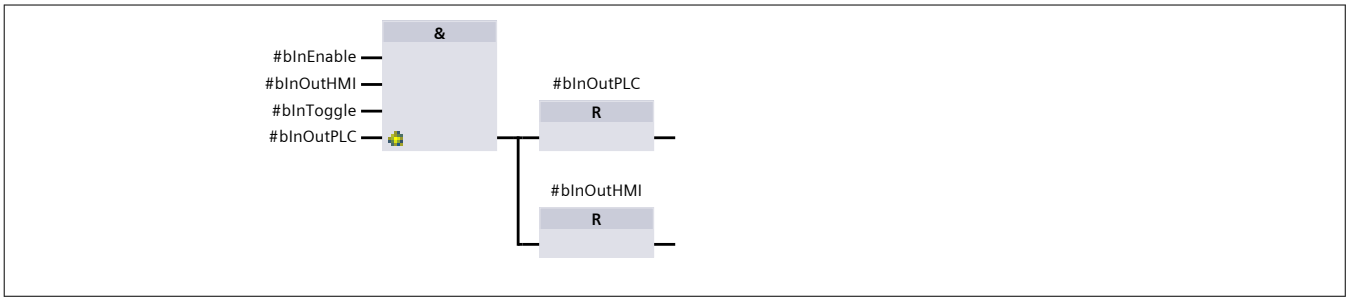
fcHMIBitEnable Properties					
General					
Name	fcHMIBitEnable	**Number**	329	**Type**	FC
Language	FBD	**Numbering**	Automatic		
Information					
Title	Handles an async reading of an HMI bit to avoid race conditions, includes an enable bit	**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Comment
▼ Input			
bInToggle	Bool		
bInLatch	Bool		
bInEnable	Bool		
▼ Output			
bOutEnable	Bool		
▼ InOut			
bInOutHMI	Bool		
bInOutPLC	Bool		
Temp			
Constant			
▼ Return			
fcHMIBitEnable	Void		

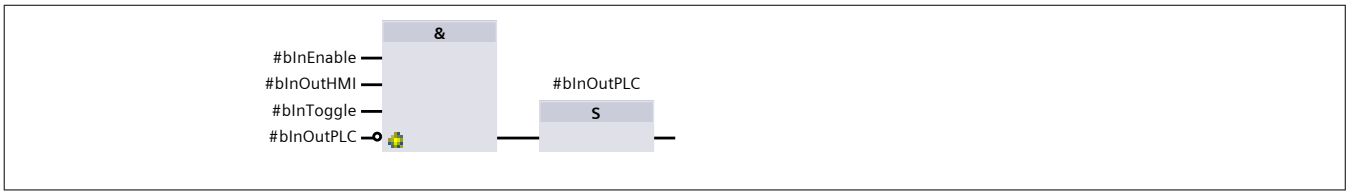
Network 1: If not latching or toggling, reset the PLC bit every scan



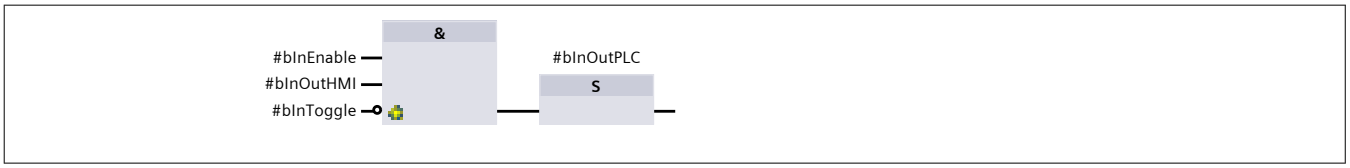
Network 2: Reset PLC bit if on and toggling



Network 3: Set PLC bit if off and toggling



Network 4: If not toggling, set PLC bit



Network 5: Pass through enable

Network 6: Reset HMI Bit

Network 7: Set ENO

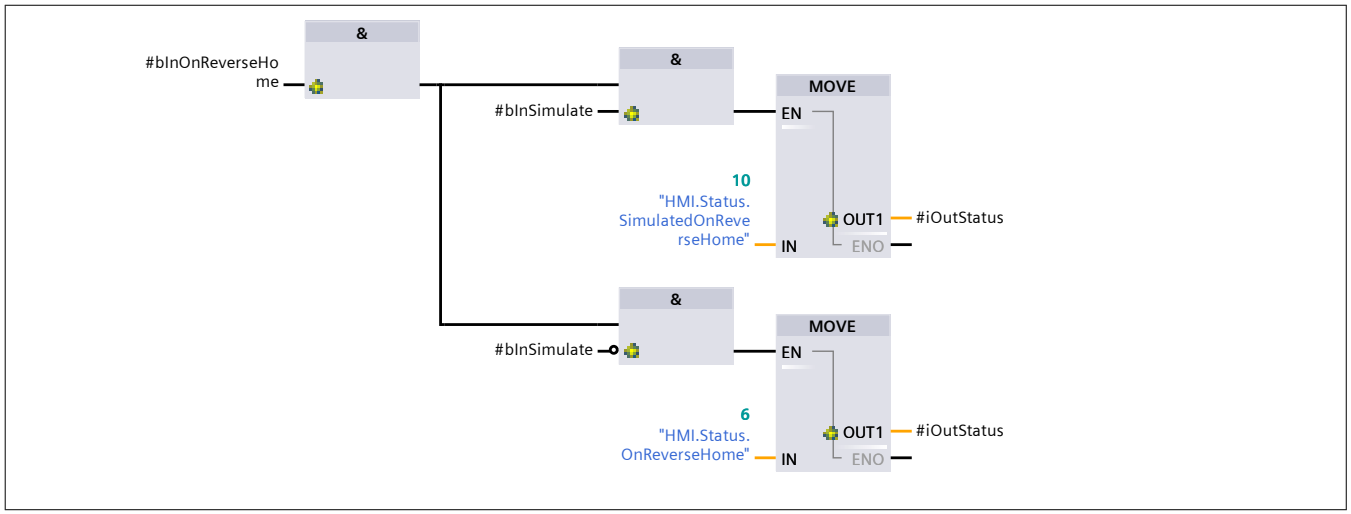
Open Library V15 / Resources / HMI

fcSetHMIStatusSimulation [FC333] [fcSetHMIStatusSimulation V 3.0.4]

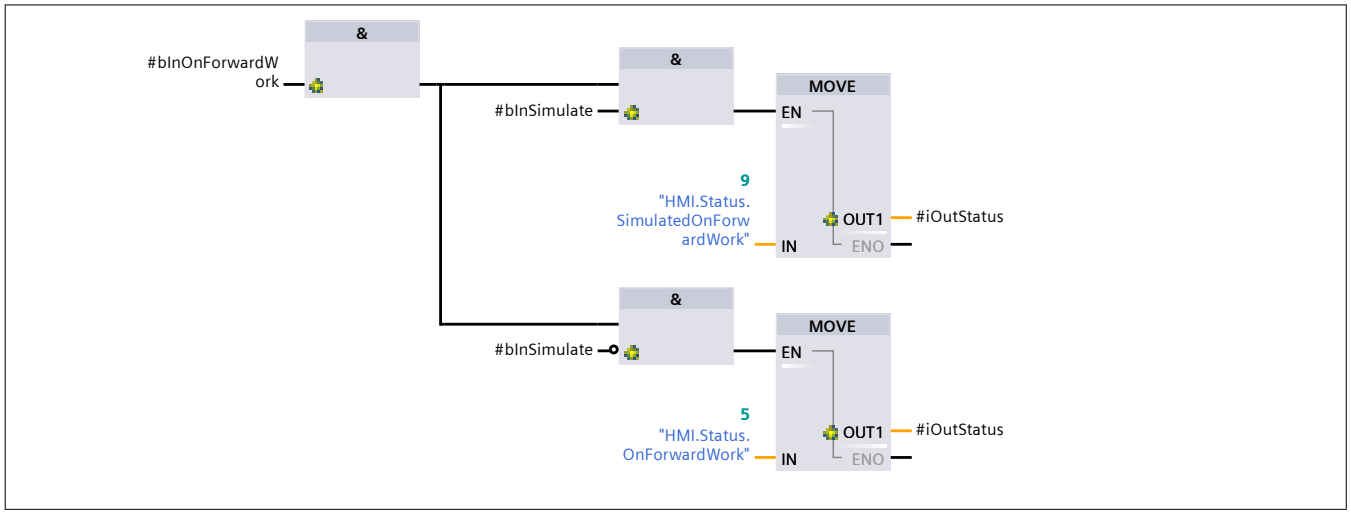
fcSetHMIStatusSimulation Properties					
General					
Name	fcSetHMIStatusSimula-tion	**Number**	333	**Type**	FC
Language	FBD	**Numbering**	Automatic		
Information					
Title	Sets HMI Status	**Author**		**Comment**	Wrapper function for set-ting the HMI status of a device In order of priority: 1. E-stop 2. Error 3. Forward/Work Position 4. Reverse/Home Position 5. Forward/Work On 6. Reverse/Home On 7. None
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Comment
▼ Input			
bInEstop	Bool		
bInError	Bool		
bInForwardWork	Bool		
bInReverseHome	Bool		
bInOnForwardWork	Bool		
bInOnReverseHome	Bool		
bInSimulate	Bool		
▼ Output			
iOutStatus	Int		
InOut			
Temp			
Constant			
▼ Return			
fcSetHMIStatusSimulation	Void		

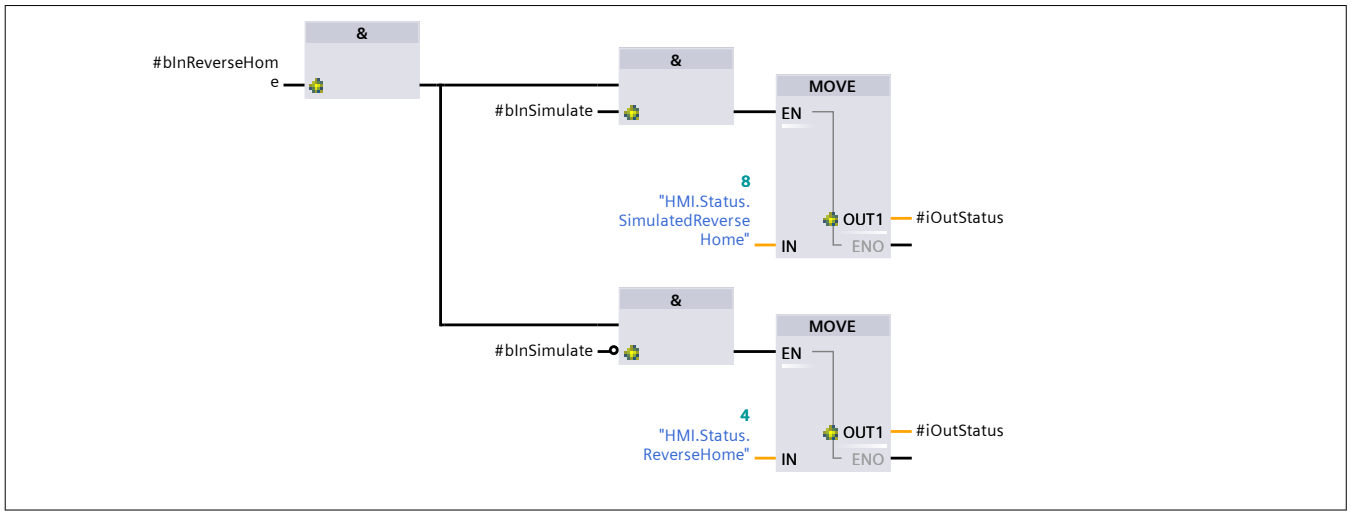
Network 1: Set Reverse/Home On



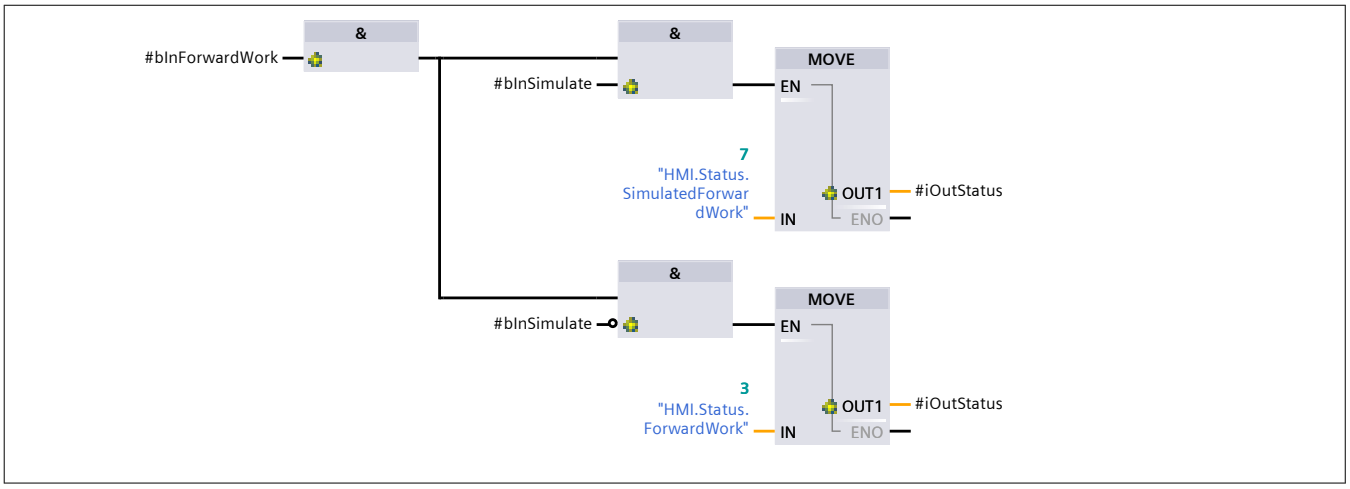
Network 2: Set Forward/Work On



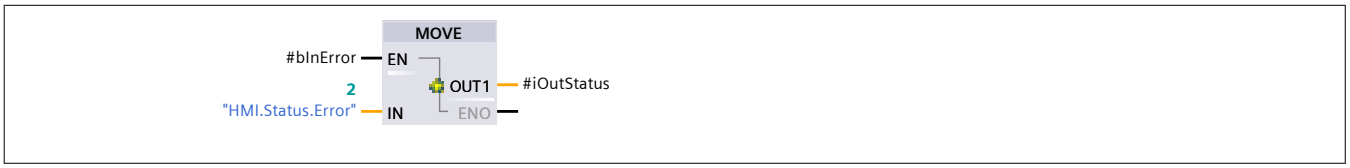
Network 3: Set Reverse/Home Position



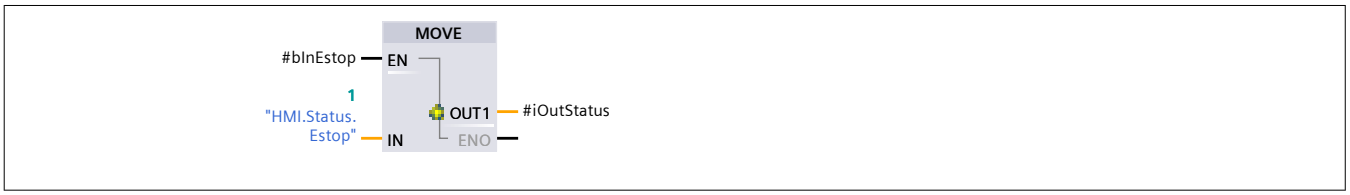
Network 4: Set Forward/Work Position



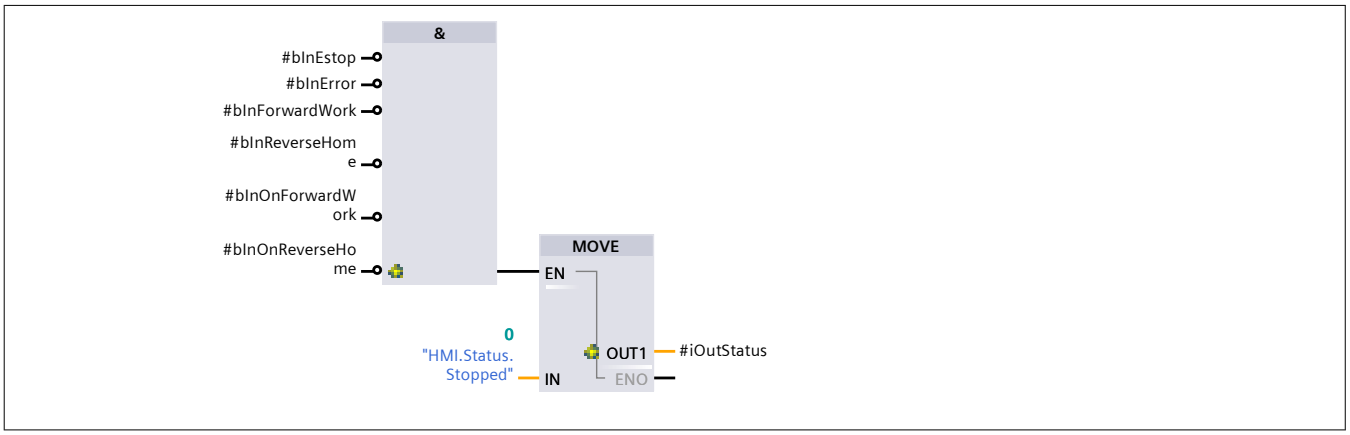
Network 5: Set Error



Network 6: Set Estop



Network 7: Set to none/stopped if nothing is selected



Network 8: Set ENO


TRUE
RET
...

Open Library V15 / Devices

fbValve_Solenoid [FB110] [fbValve_Solenoid V 3.0.6 in test]

fbValve_Solenoid Properties					
General					
Name	fbValve_Solenoid	**Number**	110	**Type**	FB
Language	FBD	**Numbering**	Manual		
Information					
Title	Controls a double- or single-acting valve	**Author**		**Comment**	
Family		**Version**	0.1	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Set-point	Supervision	Comment
▼ Input									
tInTimeout	Time	T#0ms	Non-retain	False	False	False	False		Timeout time for an actuator's feedback to activate before giving a fault
iInMode	Int	0	Non-retain	False	False	False	False		Mode Selection
bInEstop	Bool	false	Non-retain	False	False	False	False		Estop
bInSignalHome	Bool	false	Non-retain	False	False	False	False		Home position feedback
bInSignalWork	Bool	false	Non-retain	False	False	False	False		Work position feedback
bInEnable	Bool	false	Non-retain	False	False	False	False		Home and Work Enabled
bInCommand-Work	Bool	false	Non-retain	False	False	False	False		Move to work position in automatic mode
bInResetError	Bool	false	Non-retain	False	False	False	False		Reset Error
bInSimulate	Bool	false	Non-retain	False	False	False	False		Activate device simulation
▼ Output									
bOutCommand-Home	Bool	false	Non-retain	False	False	False	False		Home position command
bOutCommand-Work	Bool	false	Non-retain	False	False	False	False		Work position command
bOutActiveHome	Bool	false	Non-retain	False	False	False	False		Valve is in home position
bOutActiveWork	Bool	false	Non-retain	False	False	False	False		Valve is in work position
bOutAuto	Bool	false	Non-retain	False	False	False	False		Block in auto mode

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bOutError	Bool	false	Non-retain	False	False	False	False		Error exists
▼ ERROR_Valve	"udtError_Valve"		Non-retain	False	False	False	False		Valve error structure
NoHomeFeedback	Bool	false	Non-retain	False	False	False	False		Home position feedback not active
NoWorkFeedback	Bool	false	Non-retain	False	False	False	False		Work position feedback not active
HomeFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Home position feedback still active
WorkFeedbackStillActive	Bool	false	Non-retain	False	False	False	False		Work position feedback still active
▼ InOut									
▼ HMI_ValveControl	"udtHMI_ValveControl"			False	False	False	False		HMI valve control
iMode	Int			False	False	False	False		Current mode
iErrorCode	Int			False	False	False	False		Error code
iStatus	Int			False	False	False	False		Status for HMI display
bPB_ResetError	Bool			False	False	False	False		PB Reset block errors
bPB_Home	Bool			False	False	False	False		PB Move to home in manual mode
bPB_Work	Bool			False	False	False	False		PB Move to work in manual mode
bPBEN_ResetError	Bool			False	False	False	False		PB Reset error enabled
bPBEN_Home	Bool			False	False	False	False		PB Home enabled
bPBEN_Work	Bool			False	False	False	False		PB Work enabled
bHomeOn	Bool			False	False	False	False		Home command is on
bWorkOn	Bool			False	False	False	False		Work command is on
bSignalHome	Bool			False	False	False	False		Home feedback
bSignalWork	Bool			False	False	False	False		Work feedback
bError	Bool			False	False	False	False		Error status
bInterlock	Bool			False	False	False	False		Valve interlocked

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
Static									
ErrorScroller	"fbErrorScroller"			False	False	False	True		Sub-block to handle error scroller
Input									
bInError01	Bool	false	Set in IDB	False	False	False	False		Error 1 In Error Array
bInError02	Bool	false	Set in IDB	False	False	False	False		Error 2 In Error Array
bInError03	Bool	false	Set in IDB	False	False	False	False		Error 3 In Error Array
bInError04	Bool	false	Set in IDB	False	False	False	False		Error 4 In Error Array
bInError05	Bool	false	Set in IDB	False	False	False	False		Error 5 In Error Array
bInError06	Bool	false	Set in IDB	False	False	False	False		Error 6 In Error Array
bInError07	Bool	false	Set in IDB	False	False	False	False		Error 7 In Error Array
bInError08	Bool	false	Set in IDB	False	False	False	False		Error 8 In Error Array
bInError09	Bool	false	Set in IDB	False	False	False	False		Error 9 In Error Array
bInError10	Bool	false	Set in IDB	False	False	False	False		Error 10 In Error Array
bInError11	Bool	false	Set in IDB	False	False	False	False		Error 11 In Error Array
bInError12	Bool	false	Set in IDB	False	False	False	False		Error 12 In Error Array
bInError13	Bool	false	Set in IDB	False	False	False	False		Error 13 In Error Array
bInError14	Bool	false	Set in IDB	False	False	False	False		Error 14 In Error Array
bInError15	Bool	false	Set in IDB	False	False	False	False		Error 15 In Error Array
bInError16	Bool	false	Set in IDB	False	False	False	False		Error 16 In Error Array
bInError17	Bool	false	Set in IDB	False	False	False	False		Error 17 In Error Array
bInError18	Bool	false	Set in IDB	False	False	False	False		Error 18 In Error Array
bInError19	Bool	false	Set in IDB	False	False	False	False		Error 19 In Error Array
bInError20	Bool	false	Set in IDB	False	False	False	False		Error 20 In Error Array
bInError21	Bool	false	Set in IDB	False	False	False	False		Error 21 In Error Array
bInError22	Bool	false	Set in IDB	False	False	False	False		Error 22 In Error Array

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
bInError23	Bool	false	Set in IDB	False	False	False	False		Error 23 In Error Array
bInError24	Bool	false	Set in IDB	False	False	False	False		Error 24 In Error Array
bInError25	Bool	false	Set in IDB	False	False	False	False		Error 25 In Error Array
bInError26	Bool	false	Set in IDB	False	False	False	False		Error 26 In Error Array
bInError27	Bool	false	Set in IDB	False	False	False	False		Error 27 In Error Array
bInError28	Bool	false	Set in IDB	False	False	False	False		Error 28 In Error Array
bInError29	Bool	false	Set in IDB	False	False	False	False		Error 29 In Error Array
bInError30	Bool	false	Set in IDB	False	False	False	False		Error 30 In Error Array
▼ Output									
bOutErrorExists	Bool	false	Set in IDB	False	False	False	False		An Error Exists
iOutScrollingErrorNumber	Int	0	Set in IDB	False	False	False	False		Current Index when scrolling through errors
InOut									
▼ Static									
▼ TON_ErrorDelay	TON_TIME		Non-retain	False	False	False	True		Delay between each scroll for a new error
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
▼ abErrors	Array[1..30] of Bool		Set in IDB	False	False	False	False		
abErrors[1]	Bool	false	Set in IDB	False	False	False	False		
abErrors[2]	Bool	false	Set in IDB	False	False	False	False		
abErrors[3]	Bool	false	Set in IDB	False	False	False	False		
abErrors[4]	Bool	false	Set in IDB	False	False	False	False		
abErrors[5]	Bool	false	Set in IDB	False	False	False	False		

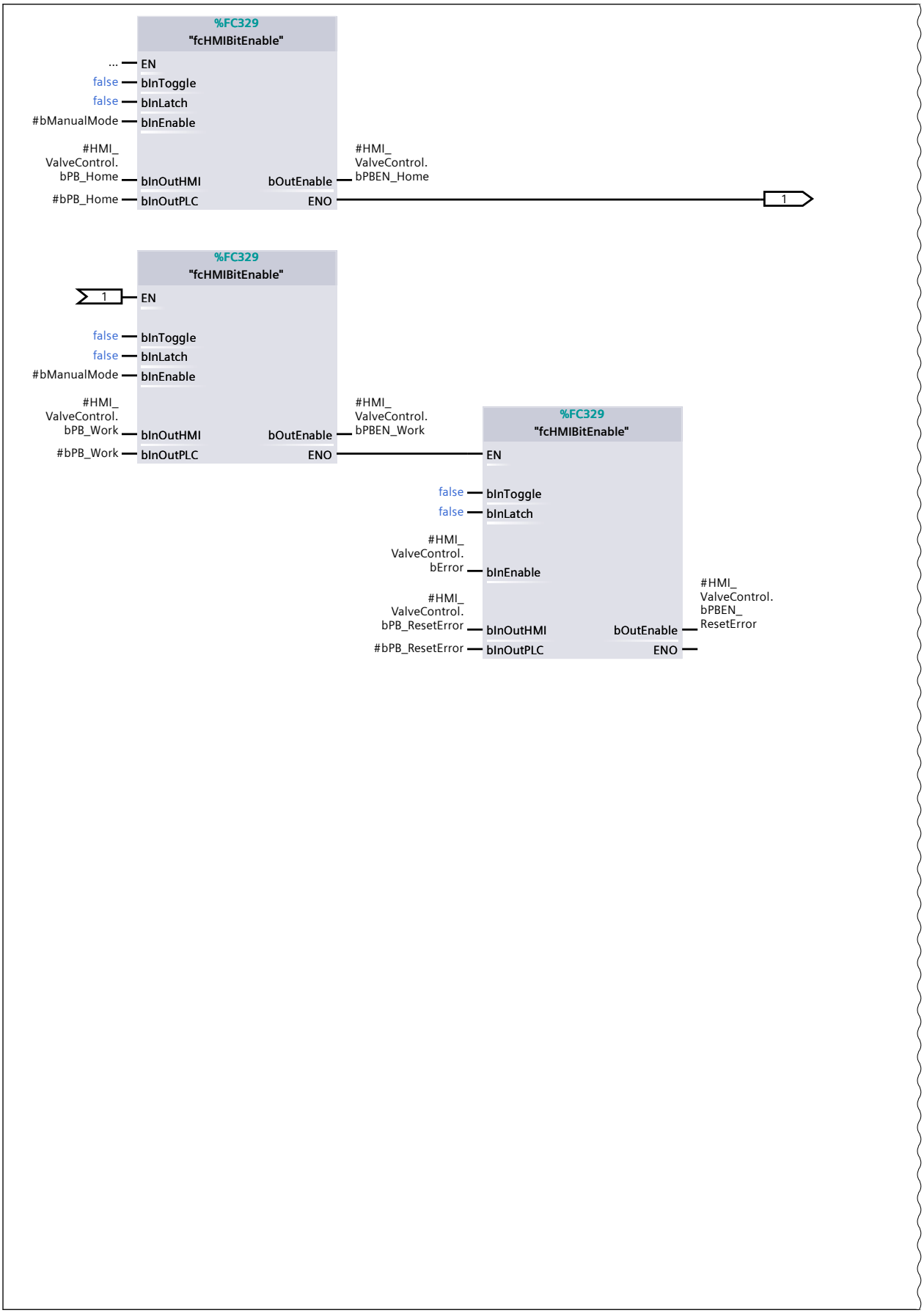
Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[6]	Bool	false	Set in IDB	False	False	False	False		
abErrors[7]	Bool	false	Set in IDB	False	False	False	False		
abErrors[8]	Bool	false	Set in IDB	False	False	False	False		
abErrors[9]	Bool	false	Set in IDB	False	False	False	False		
abErrors[10]	Bool	false	Set in IDB	False	False	False	False		
abErrors[11]	Bool	false	Set in IDB	False	False	False	False		
abErrors[12]	Bool	false	Set in IDB	False	False	False	False		
abErrors[13]	Bool	false	Set in IDB	False	False	False	False		
abErrors[14]	Bool	false	Set in IDB	False	False	False	False		
abErrors[15]	Bool	false	Set in IDB	False	False	False	False		
abErrors[16]	Bool	false	Set in IDB	False	False	False	False		
abErrors[17]	Bool	false	Set in IDB	False	False	False	False		
abErrors[18]	Bool	false	Set in IDB	False	False	False	False		
abErrors[19]	Bool	false	Set in IDB	False	False	False	False		
abErrors[20]	Bool	false	Set in IDB	False	False	False	False		
abErrors[21]	Bool	false	Set in IDB	False	False	False	False		
abErrors[22]	Bool	false	Set in IDB	False	False	False	False		
abErrors[23]	Bool	false	Set in IDB	False	False	False	False		
abErrors[24]	Bool	false	Set in IDB	False	False	False	False		
abErrors[25]	Bool	false	Set in IDB	False	False	False	False		
abErrors[26]	Bool	false	Set in IDB	False	False	False	False		
abErrors[27]	Bool	false	Set in IDB	False	False	False	False		
abErrors[28]	Bool	false	Set in IDB	False	False	False	False		
abErrors[29]	Bool	false	Set in IDB	False	False	False	False		

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
abErrors[30]	Bool	false	Set in IDB	False	False	False	False		
iNextScrollNum	Int	1	Non-retain	False	False	False	False		Index of next error position
iErrorsScrollNum	Int	1	Non-retain	False	False	False	False		Index of current error position
bScrolling	Bool	false	Non-retain	False	False	False	False		Indicates we are scrolling
bTON_ErrorDelay	Bool	false	Non-retain	False	False	False	False		
▼ TON_TimeOut	TON_TIME		Non-retain	False	False	False	True		Timer for Error Timeout
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
iLastMode	Int	0	Non-retain	False	False	False	False		Last mode code
bNewMode	Bool	false	Non-retain	False	False	False	False		New mode selected
bEnableHome	Bool	false	Non-retain	False	False	False	False		Home position enabled
bEnableWork	Bool	false	Non-retain	False	False	False	False		Work position enabled
bAutoMode	Bool	false	Non-retain	False	False	False	False		Auto Mode is active
bManualMode	Bool	false	Non-retain	False	False	False	False		Manual Mode is active
bReset	Bool	false	Non-retain	False	False	False	False		
bTON_TimeOut	Bool	false	Non-retain	False	False	False	False		
bPB_Home	Bool	false	Non-retain	False	False	False	False		
bPB_Work	Bool	false	Non-retain	False	False	False	False		
bPB_ResetError	Bool	false	Non-retain	False	False	False	False		
▼ Temp									
tTimeoutElapsed	Time								Elapsed time for TON_Timeout
bTemp	Bool								
Constant									

Network 1: ---------- Inputs

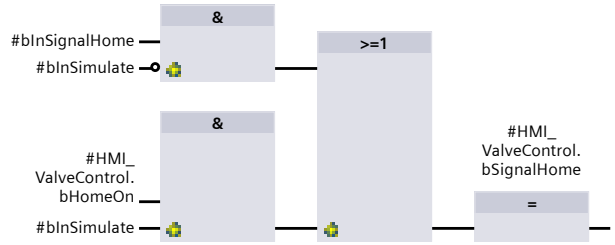
Network 2: Read HMI input buttons

Network 2: Read HMI input buttons (1.1 / 1.2)

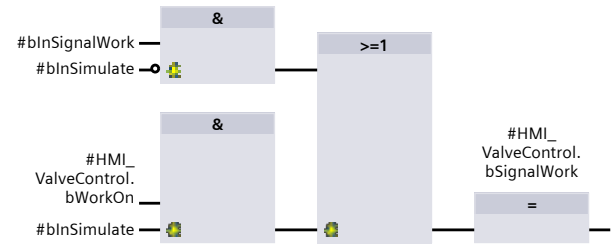


Network 2: Read HMI input buttons (1.2 / 1.2)

Network 3: Update the signal home bit

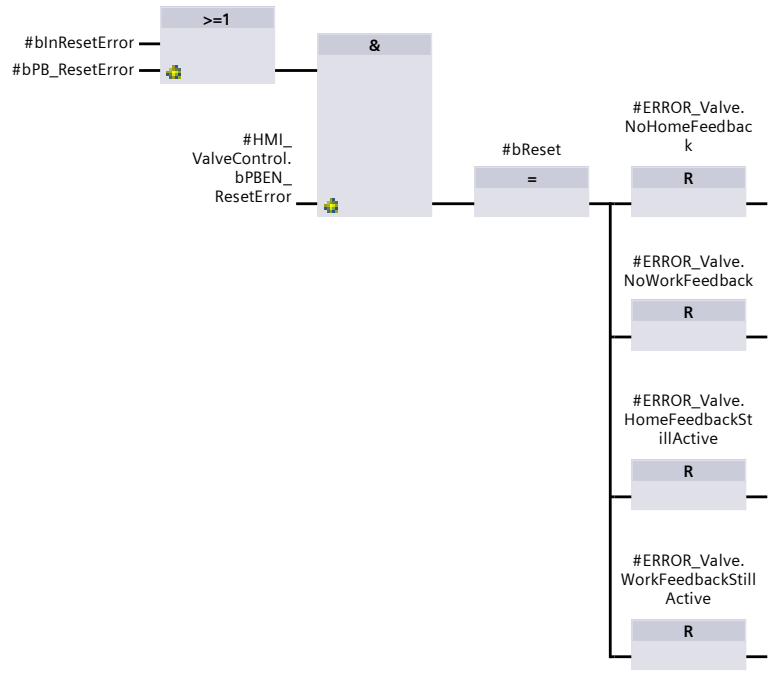


Network 4: Update the signal work bit

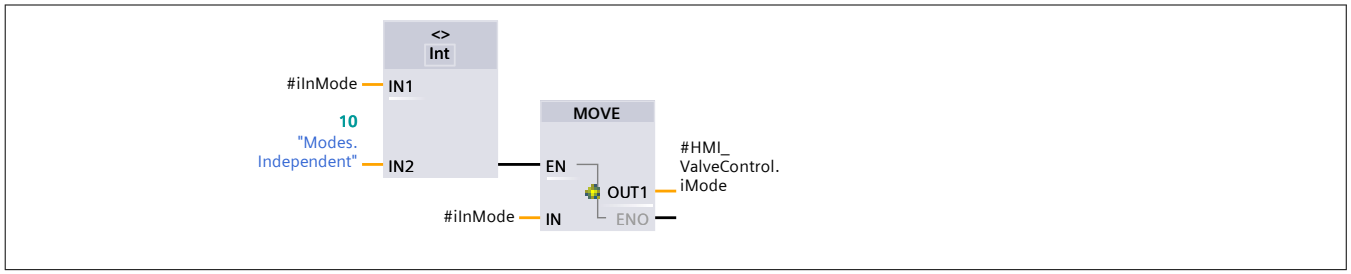


Network 5: ---------- Control Logic ----------

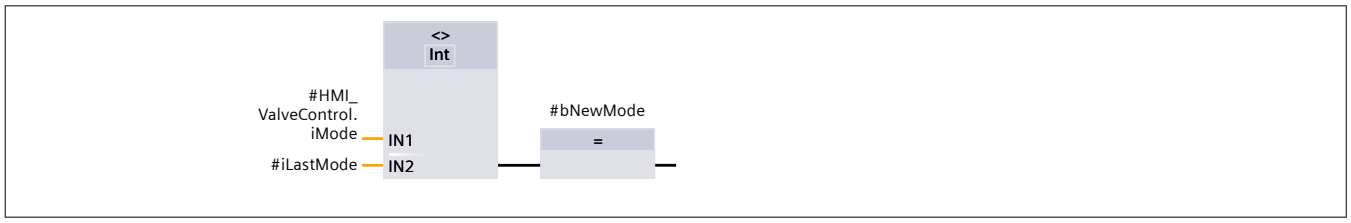
Network 6: Clear all errors



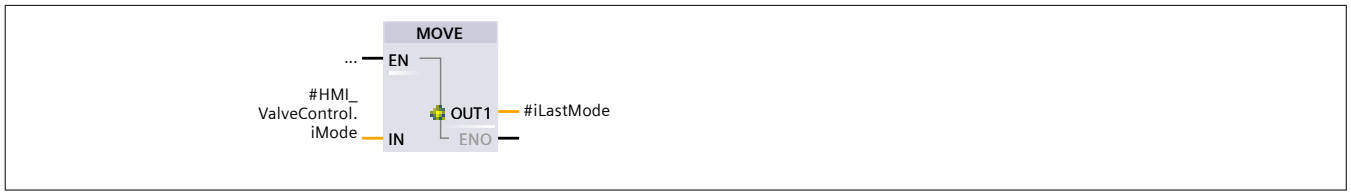
Network 7: Override HMI mode selection



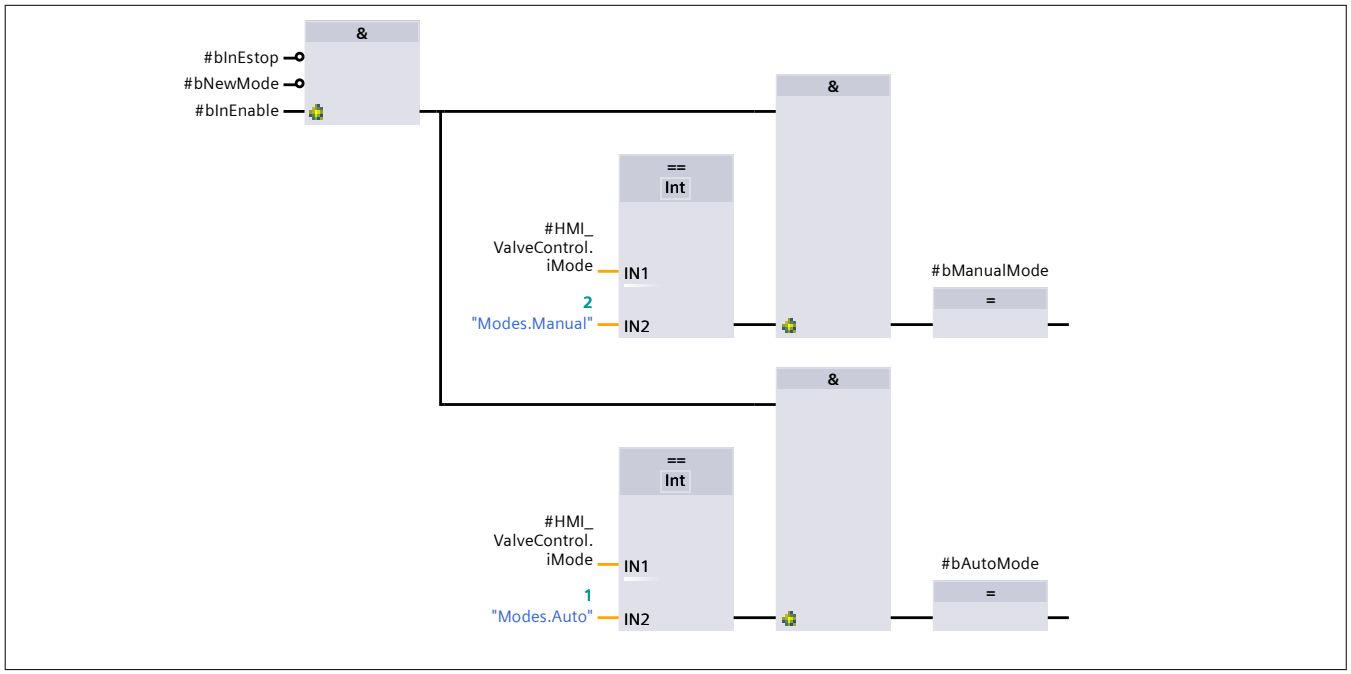
Network 8: Detect change in mode



Network 9: Keep track of last mode

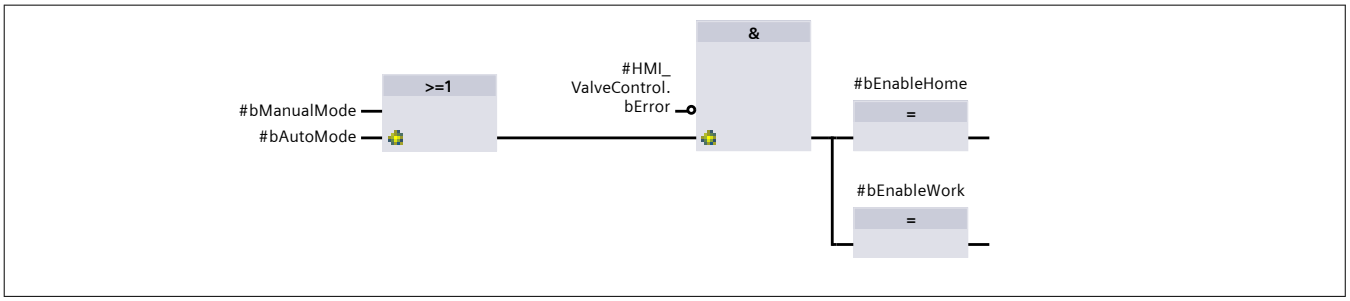


Network 10: Determine if auto or manual mode is active



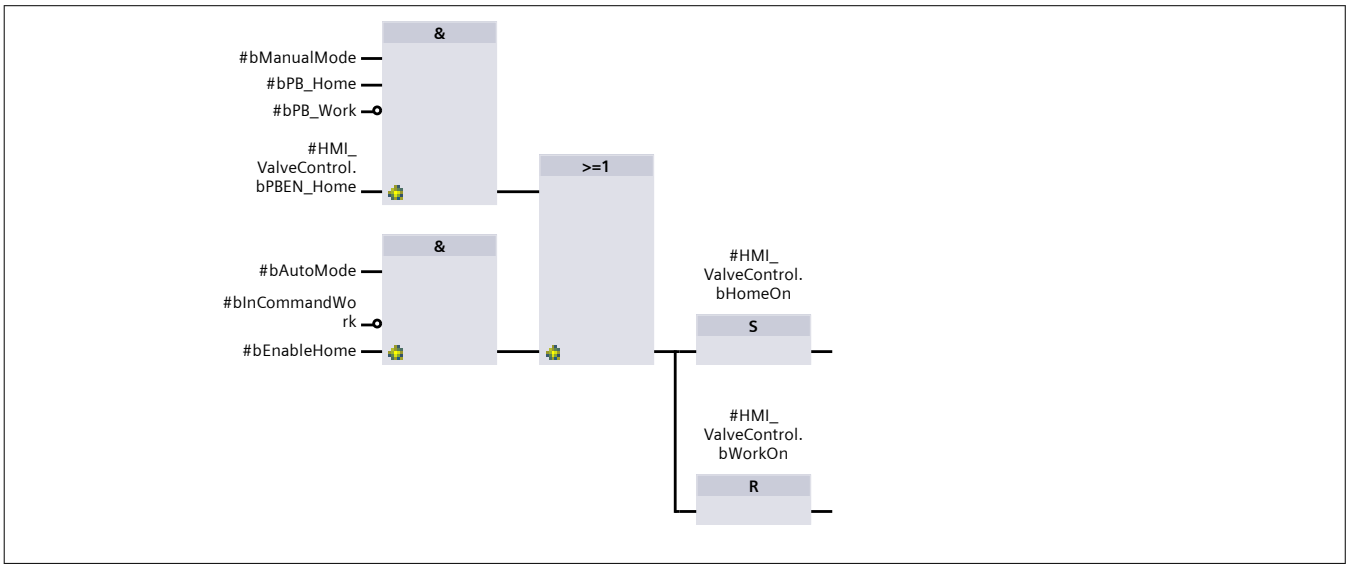
Network 11: Enable Home & Work Positions

IF manual mode AND no estop AND not a new mode AND enabled =>
--if no cylinder errors, enable move to Home and Work
--enable home and work HMI buttons only in manual mode



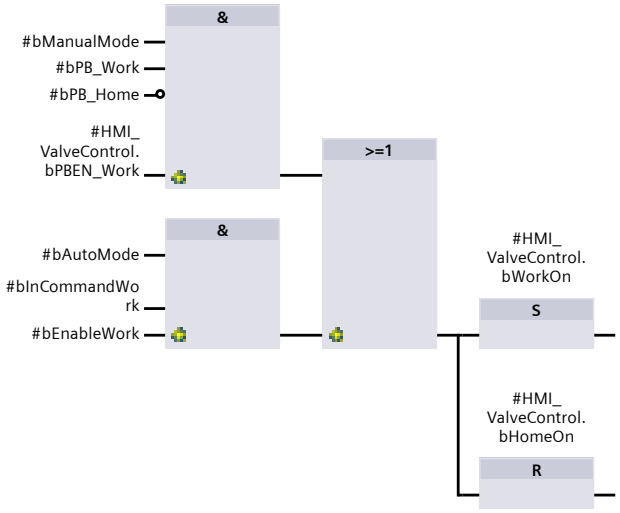
Network 12: Move to Home Position (Retracted)

IF manual mode and home button is pressed =>
--Set close cylinder



Network 13: Move to Work Position (Extended)

IF manual mode and work button button is pressed =>
--Set open cylinder

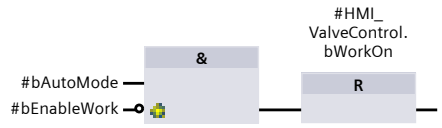


Network 14: Reset home on if not enabled

IF in auto AND home is not enabled => RESET home command

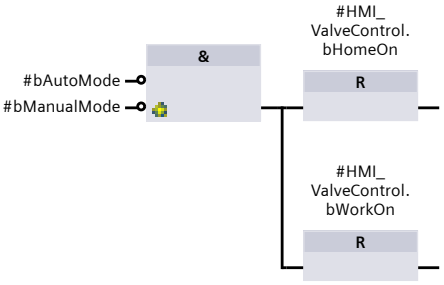
Network 15: Reset work on if not enabled

IF in auto AND work is not enabled => RESET work command



Network 16: Reset both home and work if not in auto or manual

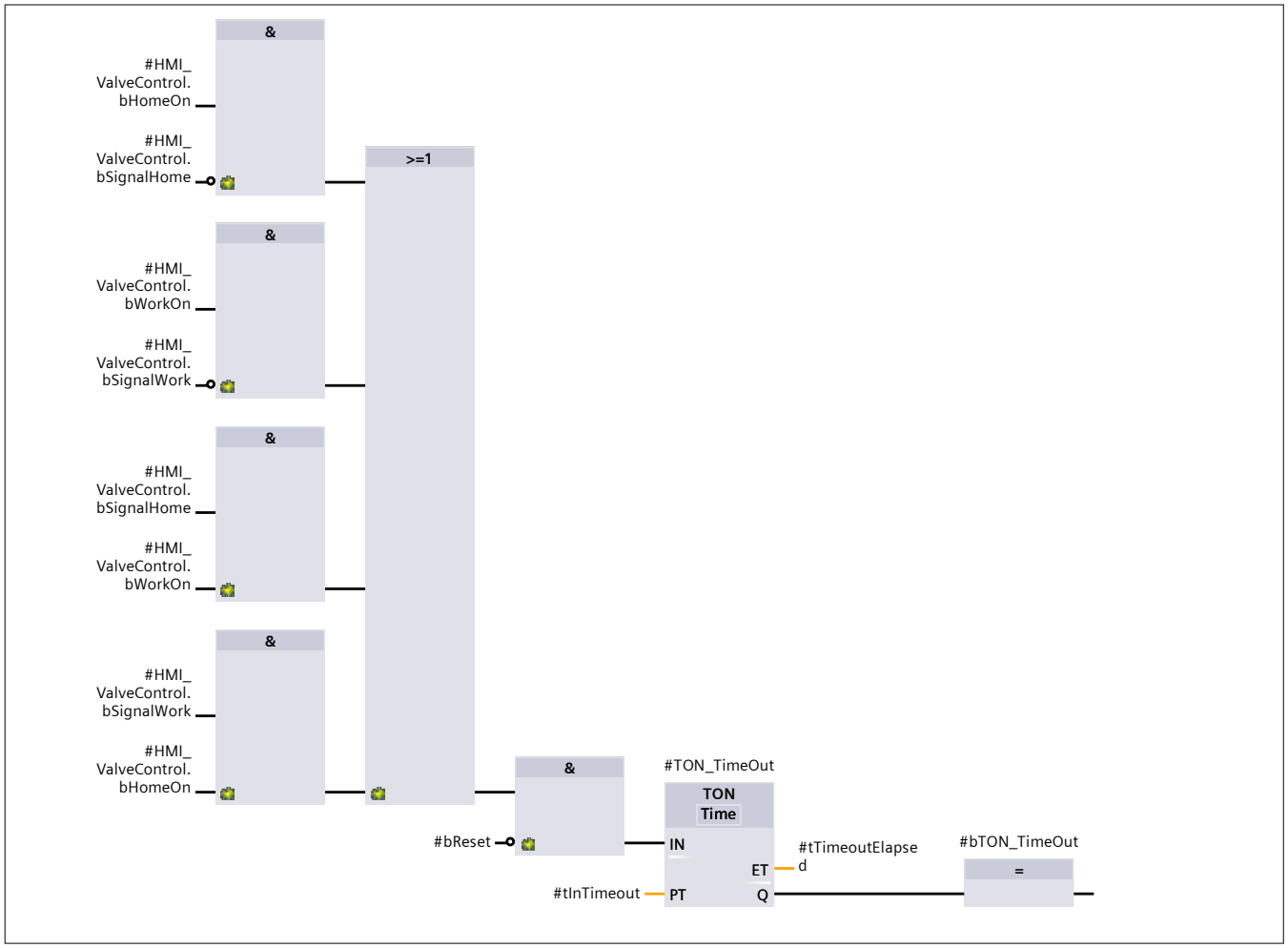
IF not in auto AND not in manual => RESET home and work commands



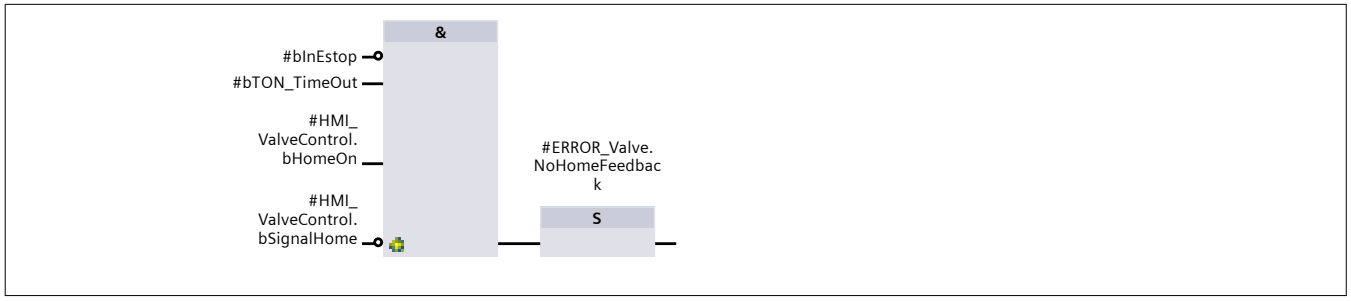
Network 17: ---------- Errors ----------

Network 18: Timeout timer

Time delay for errors

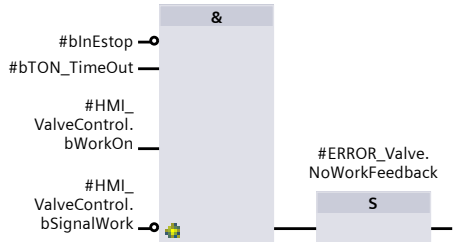


Network 19: Error: Home position feedback not active



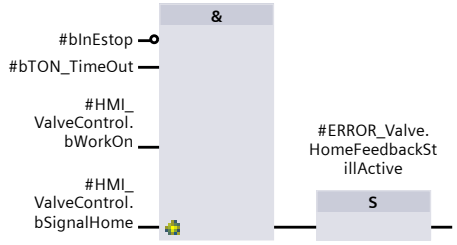
Network 20: Error: Work position feedback not active

Not reach work position



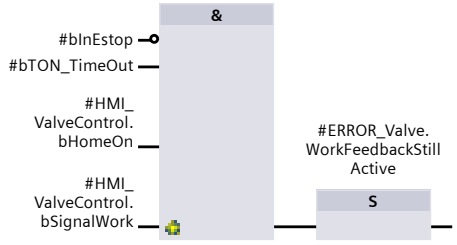
Network 21: Error: Home position feedback still active

Home position still active



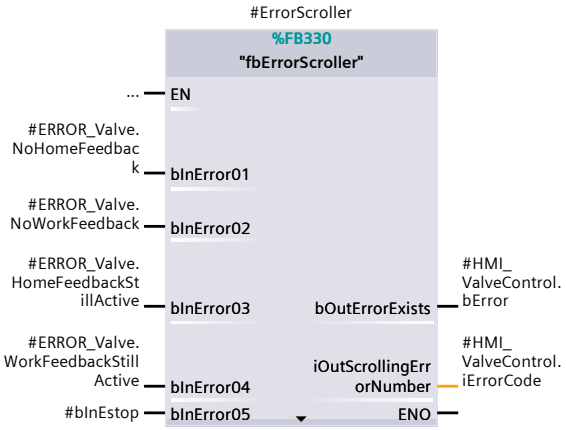
Network 22: Error: Work position feedback still active

Work position still active



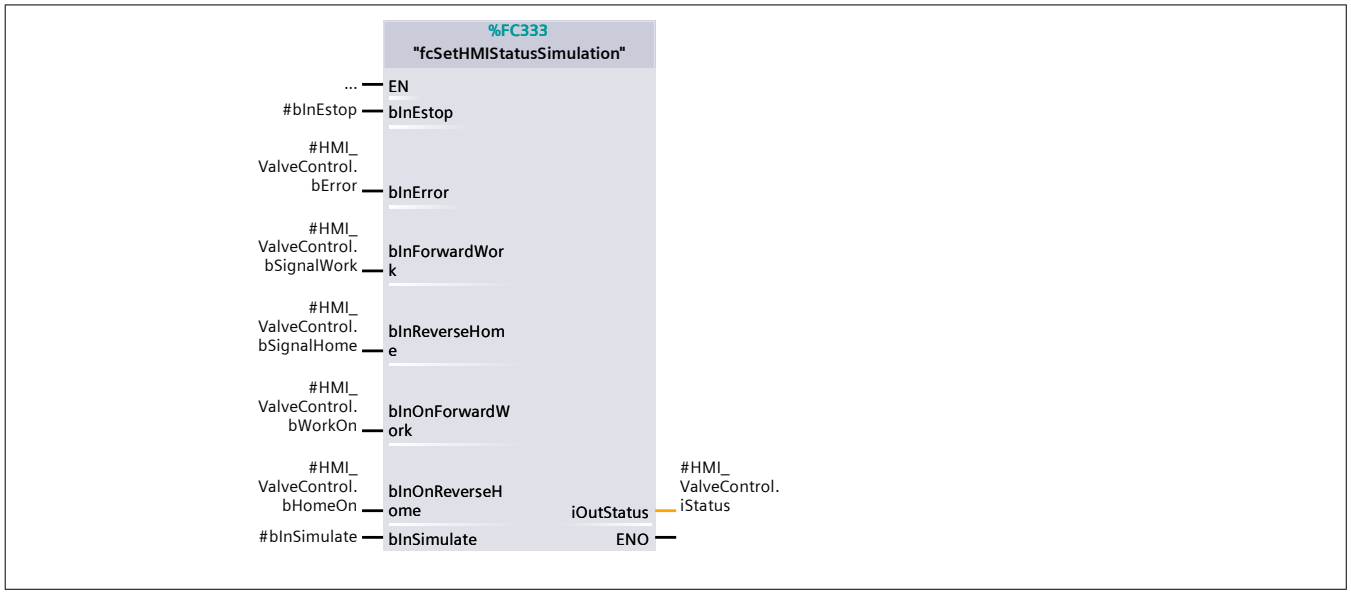
Network 23: Error scroller

Call the Error-Scroller which cyles through all possible errors and checks their state for display on the HMI



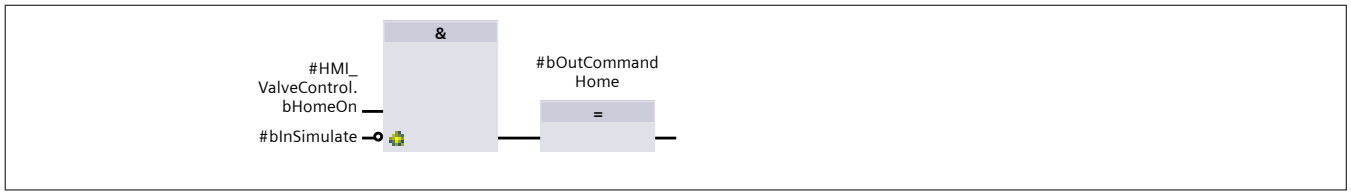
Network 24: Interlock

Network 25: Set HMI status

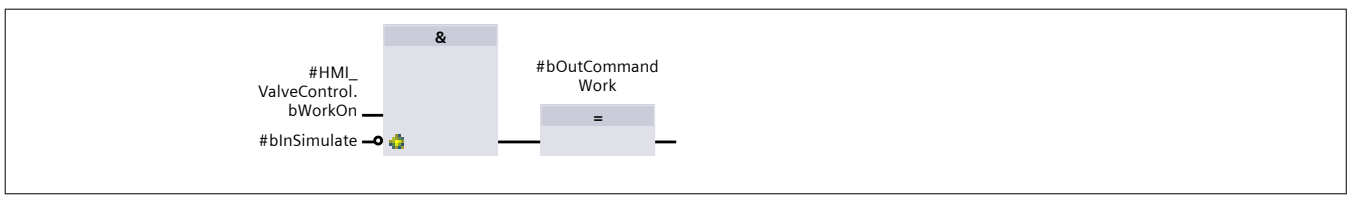


Network 26: ---------- Outputs ----------

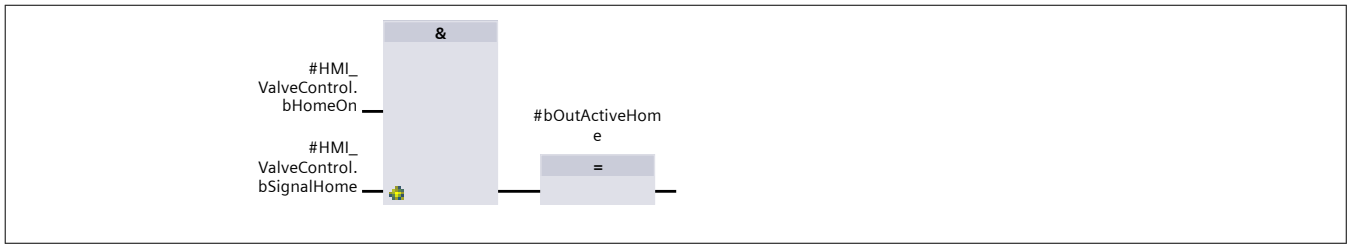
Network 27: Output: Home Command



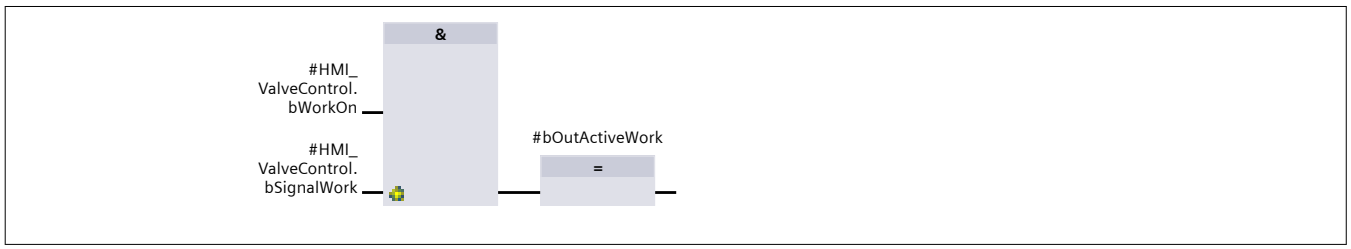
Network 28: Output: Work Command



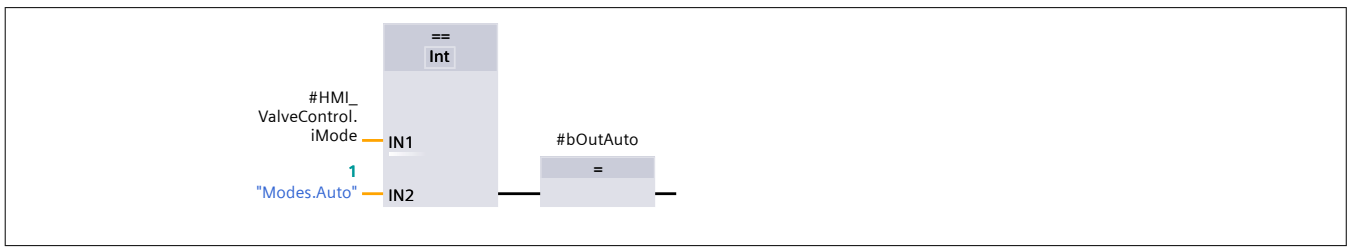
Network 29: Output: Home Active



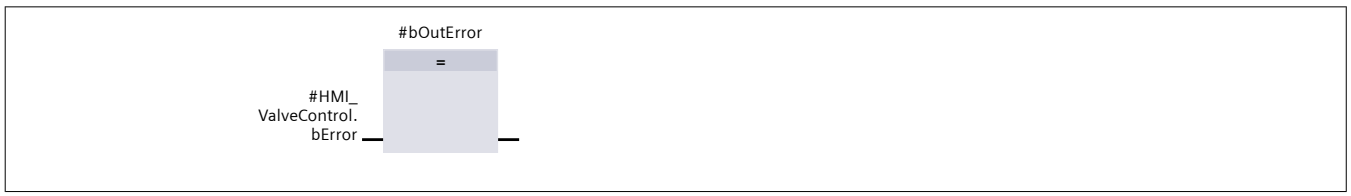
Network 30: Output: Work Active



Network 31: Output: Auto



Network 32: Output: Error



Network 33: Set ENO

Open Library V15 / Process

fbStepSequencer [FB185] [fbStepSequencer V 3.0.1]

fbStepSequencer Properties					
General					
Name	fbStepSequencer	**Number**	185	**Type**	FB
Language	SCL	**Numbering**	Manual		
Information					
Title	Step sequence controller	**Author**	Boris	**Comment**	Modified by Ken Brey 2010-08-25 KLB. Added Initialization inputs and logic. Modified by Ken Brey 2006-08-08 Removed initialization of inputs. Initializing inputs doesn't do anything. The input value if un-wired will be the last value set for that input in a different call. The initialized value in the declaration section does not set it back to default if unwired. Allways supply values for all inputs. Modified by Tim Jager 2005-12-13 no block Id in error message Modified by Boris: branched -> simplified version, no errors, no timeout; still have to use static memory for TON/CurStep (might be fixed later using in/out structure) Modified by Nick Shea: 2012-03-30 Re-instated step mode
Family		**Version**	4.0	**User-defined ID**	

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Supervision	Comment
▼ Input									
iInStep	Int	0	Non-retain	False	False	False	False		Constant: current step required for the FB to run

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Set-point	Supervision	Comment
iInNextStep	Int	0	Non-retain	False	False	False	False		Next step to go to if step is done
bInStepDone	Bool	false	Non-retain	False	False	False	False		if step done logic is true, then we move from IN_STEP to NEXT_STEP
tInStepDelay	Time	T#0ms	Non-retain	False	False	False	False		After the step done input is true, we wait for x seconds before moving to next
bInStepMode	Bool	false	Non-retain	False	False	False	False		Pause sequence at completion of current step
bInStepAdvance	Bool	false	Non-retain	False	False	False	False		If paused, trigger next step
bInit	Bool	false	Non-retain	False	False	False	False		
iInitStep	Int	0	Non-retain	False	False	False	False		
▼ Output									
bOutEnterEvent	Bool	false	Non-retain	False	False	False	False		
bOutExitEvent	Bool	false	Non-retain	False	False	False	False		
bOutPaused	Bool	false	Non-retain	False	False	False	False		Sequence is currently paused.
iOutCurrentStep	Int	0	Non-retain	False	False	False	False		output current step
InOut									
▼ Static									
▼ TON_StepDelay	TON_TIME		Non-retain	False	False	False	True		used to delay moving to the next step.
PT	Time	T#0ms	Non-retain	False	False	False	False		
ET	Time	T#0ms	Non-retain	False	False	False	False		
IN	Bool	false	Non-retain	False	False	False	False		
Q	Bool	false	Non-retain	False	False	False	False		
iCurrentStep	Int	0	Non-retain	False	False	False	False		Current step of the sequencer
bAlreadyInThisStep	Bool	false	Non-retain	False	False	False	False		
▼ Temp									
bNoStepDelay	Bool								step delay disabled

Name	Data type	Default value	Retain	Acces-sible from HMI/OPC UA/Web API	Wri ta-ble fro m HM I/O PC UA/ We b API	Visible in HMI engi-neer-ing	Set-point	Super-vision	Comment
Constant									

```
0001
0002
0003 //
     ************************************************************************
     ***********
0004 // INSTRUCTION SECTION
0005 ENO:=false; //init variables
0006 #bOutExitEvent :=false;
0007 #bOutEnterEvent:=false;
0008
0009 IF (#iInStep=#iCurrentStep) THEN
0010   IF NOT #bAlreadyInThisStep THEN
0011     #bOutEnterEvent:=true;
0012     #bAlreadyInThisStep:=true;
0013   END_IF;
0014   IF #bInStepDone THEN
0015     //Run Step done Timer
0016     #TON_StepDelay(IN:=(TRUE),PT:=#tInStepDelay);
0017
0018     //check if we are using a step delay
0019     #bNoStepDelay:= (#tInStepDelay<=T#0MS);
0020
0021     //We can move to the next step if (STEP_DONE and StepDelay timer complete)
0022     // AND
0023     //(we are in step mode and the step advance is true, or if we are not in
     step mode
0024     // AND
0025     //It is not the first scan of this step
0026     IF ((#TON_StepDelay.Q OR #bNoStepDelay) AND (NOT #bInStepMode OR (#bIn-
     StepMode AND #bInStepAdvance)) AND NOT #bOutEnterEvent) THEN
0027       #iCurrentStep   := #iInNextStep;   //move to next step
0028       //Reset Step done Timer
0029       #TON_StepDelay(IN:=(false),PT:=#tInStepDelay);
0030       #bOutExitEvent:=true;
0031       #bAlreadyInThisStep:=false;
0032     END_IF;
0033   END_IF;
0034   #bOutPaused := #bInStepDone AND (#TON_StepDelay.Q OR #bNoStepDelay) AND
     (#bInStepMode AND NOT #bInStepAdvance);
0035   //Only set this if we are ok and in the right step
0036   ENO:= true;
0037 END_IF;
0038 IF (#bInit) THEN
0039   #iCurrentStep := #iInitStep;
0040   #bInit:=false;  //Clear so that if it is unwired on the next call, it is
     not run.
0041   #bAlreadyInThisStep:=false;
```

```
0042 END_IF;
0043
0044 //Set output variables
0045 #iOutCurrentStep := #iCurrentStep;
0046 #tInStepDelay := T#0MS;
0047
```

Symbol	Address	Type	Comment
#bAlreadyInThisStep		Bool	
#bInit		Bool	
#bInStepAdvance		Bool	If paused, trigger next step
#bInStepDone		Bool	if step done logic is true, then we move from IN_STEP to NEXT_STEP
#bInStepMode		Bool	Pause sequence at completion of current step
#bNoStepDelay		Bool	step delay disabled
#bOutEnterEvent		Bool	
#bOutExitEvent		Bool	
#bOutPaused		Bool	Sequence is currently paused.
#iCurrentStep		Int	Current step of the sequencer
#iInitStep		Int	
#iInNextStep		Int	Next step to go to if step is done
#iInStep		Int	Constant: current step required for the FB to run
#iOutCurrentStep		Int	output current step
#tInStepDelay		Time	After the step done input is true, we wait for x seconds before moving to next
#TON_StepDelay		IEC_Timer	used to delay moving to the next step.
#TON_StepDelay.Q		Bool	

Open Library V15 / Process

fcStepChooser [FC185] [fcStepChooser V 3.0.1]

fcStepChooser Properties					
General					
Name	fcStepChooser	**Number**	185	**Type**	FC
Language	SCL	**Numbering**	Manual		
Information					
Title		**Author**		**Comment**	
Family		**Version**	0.0	**User-defined ID**	

Name	Data type	Default value	Comment
▼ Input			
bCondition	Bool		
iTrueStep	Int		
iFalseStep	Int		
Output			
InOut			
▼ Temp			
iResult	Int		
Constant			
▼ Return			
fcStepChooser	Int		

```
0001
0002    IF #bCondition THEN
0003      #iResult:=#iTrueStep;
0004    ELSE
0005      #iResult:=#iFalseStep;
0006    END_IF;
0007    ENO:=true;
0008    #fcStepChooser:=#iResult;
0009
```

Symbol	Address	Type	Comment
#bCondition		Bool	
#fcStepChooser		Int	
#iFalseStep		Int	
#iResult		Int	
#iTrueStep		Int	