Safety PLC example

Project							
Name:	Safety PLC example	**Creation time:**	2/12/2023 7:26:13 AM	**Last change**	2/28/2023 12:53:27 PM	**Author:**	Mahmoud muhamed
Last modified by:	PLC Traning	**Version:**					
Comment:							

Operating system	
Name	**Description**
Operating system	Microsoft Windows 10 Pro
Version of the operating system	6.3.9600.0
Operating system service pack	
Version of the Internet Explorer	11.789.19041.0
Computer name	MMUHAMED-D1
User name	GULSANEGYPT\Mmuhamed
Installation path of the TIA Portal	C:\Program Files\Siemens\Automation\Portal V16

Components		
Name	**Version**	**Release**
TIA Portal Project Server V16 - TIA Portal Project Server Single SetupPackage V16.0 (MUSERVERV16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - SIMATIC S7-PLCSIM V16.0 (S7_PLCSIM_V16)	V16.0	V16.00.00.00_31.00.13.01
TIA Administrator - AWB Licensing Module V1.0 + SP2 (TIAADMIN)	V1.0 + SP2	V01.00.02.00_01.10.00.01
TIA Administrator - AWB Software Management V1.0 + SP2 (TIAADMIN)	V1.0 + SP2	V01.00.02.00_01.10.00.01
TIA Administrator - TIA UMC Agent Configurator Module V1.0 + SP2 (TIAADMIN)	V1.0 + SP2	V01.00.02.00_01.10.00.01
TIA Administrator - TIA Administrator V1.0 SP2 (TIAADMIN)	V1.0 + SP2	V01.00.02.00_01.10.00.01
Siemens Totally Integrated Automation Portal V16 - HM All Editions Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - HM NoBasic Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 0 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Multiuser Client Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Version Control Interface SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - STEP 7 Safety Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - STEP 7 Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 02 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 03 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package 04 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Support Base Package TO-01 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Support Base Package TO-02 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - Hardware Support Base Package WCF-01 V16.0 (TIAP16)	V16.0	V16.00.00.00_27.01.00.01
Siemens Totally Integrated Automation Portal V16 - TIACOMPCHECK Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Simatic Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - WinCC Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - WinCC Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Openness SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - WinCC Transfer Mandatory Single SetupPackage V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
User Management Component - UserManagementComponentx64 V2.7 (UMC64)	V2.7	V02.07.00.00_04.06.00.07
WinCC Runtime Advanced V16.0 - HMIRTM Tagging Package 01 Single SetupPackage V16.0 (HMIRTM_V11)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - Simatic Single SetupPackage 32 Bit V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
Siemens Totally Integrated Automation Portal V16 - WinCC Single SetupPackage 32 Bit V16.0 (TIAP16)	V16.0	V16.00.00.00_31.02.00.01
SIMATIC HMI License Manager Panel Plugin (x64)	16.0.0.0	V16.00.00.00_31.02.00.01
SIMATIC WinCC Runtime Advanced Driver (x64)	16.0.0.0	V16.00.00.00_31.02.00.01
ETWEventCollector	16.0.0.0	V16.00.00.00_31.02.00.01
SIMATIC NCM FWL 64	5.6.0.3	K5.6.0.3_1.1.0.2
NCM GPRS 64	01.02.00.00	V1.2.0.0_2.1.0.1
SIMATIC PLCSIM 64	16.00.00	16.00.00.00_01.00.02.01
SIMATIC Device Drivers	9.2	09.02.04.00_01.04.00.05
TelemetryConnector	1.0.2.57	V01.00.02.57_01.00.00.01
Automation Software Updater	02.05.0300	V02.05.03.00_01.01.00.29
SIEMENS OPC	3.9	03.09.10.00_01.04.00.08
SIMATIC HMI ProSave	16.0.0.0	V16.00.00.00_31.02.00.01
SIMATIC HMI Symbol Library	16.0.0.0	V16.00.00.00_31.02.00.01
SIMATIC HMI Touch Input	16.0.0.0	V16.00.00.00_31.02.00.01
SIMATIC Device Drivers WoW	29.2	29.02.04.00_01.04.00.05
SIMATIC Event Database	5.6	05.06.02.00_01.01.00.01

Totally Integrated Automation Portal

Name	Version	Release
SeCon	2.6	V02.06.01.00_01.08.00.01
WinCC Runtime Advanced Simulator	16.0.0.0	V16.00.00.00_31.02.00.01

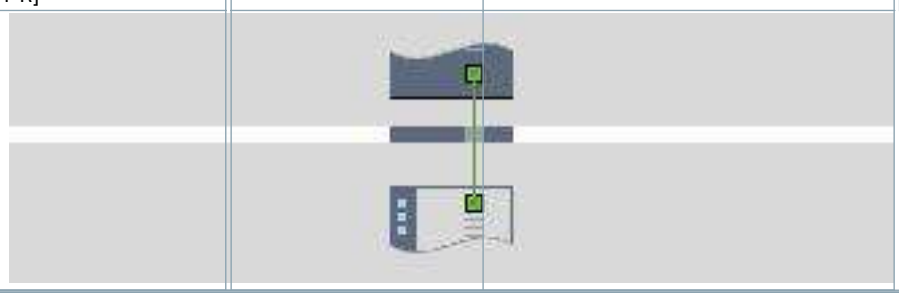
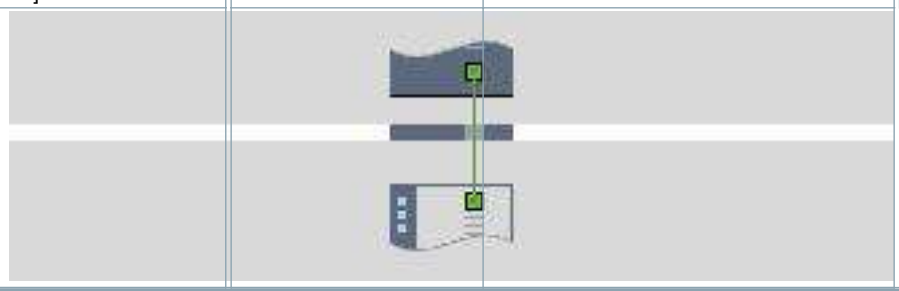
Products

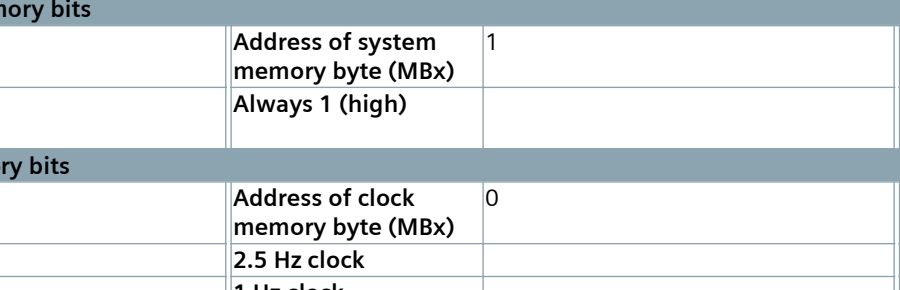
Name	Version	Release
TIA Portal Project Server	V16.0	V16.00.00.00_31.02.00.01
SIMATIC S7-PLCSIM	V16.0	V16.00.00.00_31.00.13.01
TIA Administrator	V1.0	01.00.02.00_01.10.00.01
SIMATIC STEP 7 Prof - STEP 7 Safety - WinCC Adv	V16.0	V16.00.00.00_31.02.00.01
User Management Component	V2.7	V02.07.00.00_00.00.00.00
SIMATIC WinCC Runtime Advanced Simulation	V16.0	V16.00.00.00_31.02.00.01
Automation License Manager	V6.0 + SP5 + Upd1	06.00.05.01_02.01.00.05
S7-PLCSIM	V5.4 + SP8	V05.04.08.01_01.24.00.01
SIMATIC ProSave	V16.0	V16.00.00.00_31.02.00.01
S7-PCT	V3.5 + SP1	K3.5.1.0_1.19.0.1

Safety PLC example

PLC_1 [CPU 1515TF-2 PN]

PLC_1					
General\Project information					
Name	PLC_1	**Author**	PLC Traning	**Comment**	
Rack	0	**Slot**	1		
General\Catalog information					
Short designation	CPU 1515TF-2 PN	**Description**	Fail-safe technology CPU with display; work memory 750 KB code and 3 MB data; can be used for safety applications; supports consistent safety upload; supports PROFIsafe V2; 30 ns bit operation time; 5-stage protection concept, technology functions: extended motion control, closed-loop control, counting and measuring; tracing; Runtime options; isochronous mode (central); for all PROFINET interfaces: transport protocol TCP/IP, secure Open User Communication, S7 communication, S7 routing, IP forwarding, Web server, DNS client, OPC UA: Server DA, Client DA, methods, companion specifications; 1st interface: PROFINET IO controller, supports RT/IRT, performance upgrade PROFINET V2.3, 2 ports, I-Device, MRP, MRPD, isochronous mode; 2nd interface: PROFINET IO controller, supports RT, I-Device; firmware V2.8	**Article number**	6ES7 515-2UM01-0AB0
Firmware version	V2.8				
General\Identification & Maintenance					
Plant designation		**Location identifier**		**Installation date**	2023-02-12 12:56:35.524
Additional information					
General\Checksums					
Text lists	FA 70 E8 75 1D 5A 8E 29	**Software**	BC 3B 30 88 D3 B6 6D 91		
Fail-safe\F-activation					
F-capability activated	1				
Fail-safe\F-parameters					
Central F-source address	1	**Default F-monitoring time for central F-I/O**	150ms		
Fail-safe\F-parameters\F-destination address range for PROFIsafe address type 1					
Low limit for F-destination addresses	1	**High limit for F-destination addresses**	99		
PROFINET interface [X1]\General					
Name	PROFINET interface_1	**Author**	PLC Traning	**Comment**	
PROFINET interface [X1]\F-parameters					
Default F-monitoring time for F-I/O of this interface	150ms				
PROFINET interface [X1]\Ethernet addresses\Interface networked with					
Subnet:	Not connected				
PROFINET interface [X1]\Ethernet addresses\IP protocol					
IP configuration	Set IP address in the project	**IP address:**	192.168.0.1	**Subnet mask:**	255.255.255.0
Use router	False				
PROFINET interface [X1]\Ethernet addresses\PROFINET					
PROFINET device name is set directly at the device	False	**Generate PROFINET device name automatically**	True	**PROFINET device name:**	plc_1.profinet interface_1
Converted name:	plcxb1.profinetxainterfacexb1036c	**Device number:**	0		
PROFINET interface [X1]\Time-of-day synchronization\NTP mode					
Note	Time synchronization for all PROFINET interfaces take place within the settings for time synchronization of the PROFINET interface [X1].	**Enable time synchronization via NTP server**	False		IP addresses
Server 1	0.0.0.0	**Server 2**	0.0.0.0	**Server 3**	0.0.0.0
Server 4	0.0.0.0	**Update interval**	10s		
PROFINET interface [X1]\Operating mode					
IO controller	True	**IO system**		**Device number**	0
IO device	False				
PROFINET interface [X1]\Advanced options\Interface options					
Call the user program if communication errors occur	False	**Support device replacement without exchangeable medium**	True	**Permit overwriting of device names of all assigned IO devices**	False
Limit data infeed into the network	True	**Use IEC V2.2 LLDP mode**	False	**Keep-Alive connection monitoring:**	30s
PROFINET interface [X1]\Advanced options\Real time settings\IO communication					
Send clock:	4.000ms				
PROFINET interface [X1]\Advanced options\Real time settings\Synchronization					
RT class:	RT,IRT				
PROFINET interface [X1]\Advanced options\Real time settings\Real time options					
Calculated bandwidth for cyclic IO data:	0.000ms	**Calculated bandwidth for cyclic IO data:**	0.000%		
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\General					
Name	Port_1	**Author**	PLC Traning	**Comment**	

PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET interface_1 [X1]\Port_1 [X1 P1 R]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Alternative partners**	False	**Partner port:**	Any partner
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\General					
Name	Port_2	**Author**	PLC Traning	**Comment**	
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET interface_1 [X1]\Port_2 [X1 P2 R]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Alternative partners**	False	**Partner port:**	Any partner
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X1]\Web server access					
Note	The Web server must also be activated in the properties of the PLC.	**Enable Web server via IP address of this interface**	False		
PROFINET interface [X2]\General					
Name	PROFINET interface_2	**Author**	PLC Traning	**Comment**	
PROFINET interface [X2]\F-parameters					
Default F-monitoring time for F-I/O of this interface	150ms				
PROFINET interface [X2]\Ethernet addresses\Interface networked with					
Subnet:	Not connected				
PROFINET interface [X2]\Ethernet addresses\IP protocol					
IP configuration	Set IP address in the project	**IP address:**	192.168.1.1	**Subnet mask:**	255.255.255.0
Use router	False				
PROFINET interface [X2]\Ethernet addresses\PROFINET					
PROFINET device name is set directly at the device	False	**Generate PROFINET device name automatically**	True	**PROFINET device name:**	plc_1.profinet interface_2
Converted name:	plcxb1.profinetxainterfacexb2022c	**Device number:**	0		
PROFINET interface [X2]\Time-of-day synchronization\NTP mode					
Note	Time synchronization for all PROFINET interfaces take place within the settings for time synchronization of the PROFINET interface [X1].	**Enable time synchronization via NTP server**	False		IP addresses
Server 1	0.0.0.0	**Server 2**	0.0.0.0	**Server 3**	0.0.0.0
Server 4	0.0.0.0	**Update interval**	10s		
PROFINET interface [X2]\Operating mode					
IO controller	True	**IO system**		**Device number**	0
IO device	False				
PROFINET interface [X2]\Advanced options\Interface options					
Call the user program if communication errors occur	False	**Support device replacement without exchangeable medium**	True	**Permit overwriting of device names of all assigned IO devices**	False
Limit data infeed into the network	False	**Use IEC V2.2 LLDP mode**	False	**Keep-Alive connection monitoring:**	30s
PROFINET interface [X2]\Advanced options\Real time settings\IO communication					
Send clock:	1.000ms				

PROFINET interface [X2]\Advanced options\Real time settings\Real time options					
Calculated bandwidth for cyclic IO data:	0.000ms	**Calculated bandwidth for cyclic IO data:**	0.000%		
PROFINET interface [X2]\Advanced options\Port [X2 P1]\General					
Name	Port_1	**Author**	PLC Traning	**Comment**	
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET interface_2 [X2]\Port_1 [X2 P1]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Alternative partners**	False	**Partner port:**	Any partner
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X2]\Web server access					
Note	The Web server must also be activated in the properties of the PLC.	**Enable Web server via IP address of this interface**	False		
Startup					
Startup after POWER ON	Warm restart - Operating mode before POWER OFF	**Comparison preset to actual configuration**	Startup CPU even if mismatch	**Configuration time**	60000ms
Cycle					
Maximum cycle time	150ms			**Enable minimum cycle time for cyclic OBs**	True
Minimum cycle time	1ms				
Communication load					
Cycle load due to communication	20%				
System and clock memory\System memory bits					
Enable the use of system memory byte	False	**Address of system memory byte (MBx)**	1	**First cycle**	
Diagnostic status changed		**Always 1 (high)**		**Always 0 (low)**	
System and clock memory\Clock memory bits					
Enable the use of clock memory byte	False	**Address of clock memory byte (MBx)**	0	**10 Hz clock**	
5 Hz clock		**2.5 Hz clock**		**2 Hz clock**	
1.25 Hz clock		**1 Hz clock**		**0.625 Hz clock**	
0.5 Hz clock					
SIMATIC Memory Card\Diagnostics					
Aging of the SIMATIC memory card	False	**Threshold value**	80%		
System diagnostics\General					
Activate system diagnostics for this device	True	**Report network faults as maintenance instead of fault**	False		
PLC alarms\General					
Central alarm management in the PLC	True				
Web server\General					
Activate web server on this module	False	**Permit access only with HTTPS**	True		
Web server\Automatic update					
Enable automatic update	True	**Update interval**	0s		

Web server\User management

User name	User rights
Everybody	

Web server\User-defined web pages

Application name	HTML source path	Default HTML page	Files with dynamic content	Web DB number	Fragment DB number
		index.htm	.htm;.html	333	334

Web server\Overview of interfaces

Device	Interface	Enabled web server access
PLC_1	PROFINET interface_1	False
PLC_1	PROFINET interface_2	False

Display\General\Display standby mode					
Time to standby mode	30 minutes				
Display\General\Energy saving mode					
Time to energy saving mode	15 minutes				
Display\General\Display language					
Default language on display	English				

Display\Automatic update					
Time to update	5 seconds				
Display\Password\Display protection					
Enable write access	True	**Enable display protection**	False		
Display\User-defined logo					
User logo activated	False	**Adapt logo**	False	**Resolution**	240x260
Company logo	---				

User interface languages	
Assign project language	**User interface languages**
English (United States)	German
English (United States)	English
English (United States)	French
English (United States)	Spanish
English (United States)	Italian
English (United States)	Japanese
English (United States)	Chinese (simplified)
English (United States)	Korean
English (United States)	Russian
English (United States)	Turkish
English (United States)	Portuguese (Brazil)

Time of day\Local time					
Time zone	(UTC) Dublin, Edinburgh, Lisbon, London				
Time of day\Daylight saving time					
Activate daylight saving time	True	**Difference between standard and daylight saving time**	60 mins		
Time of day\Daylight saving time\Start of daylight saving time					
Selection of the week	Last	**Selection of the weekday**	Sunday	**of**	March
at	01:00 a.m.				
Time of day\Daylight saving time\Start of standard time					
Selection of the week	Last	**Selection of the weekday**	Sunday	**of**	October
at	02:00 a.m.				
Protection					
Level of protection	Full access with fail-safe (no protection)				
Protection\Connection mechanisms					
Permit access with PUT/GET communication from remote partner	False				
Protection\Security event					
Summarize security events in case of high message volume	True	**Length of an interval**	20	**Unit**	seconds
OPC UA\Accessibility of the server					
Activate OPC UA server	False				
System power supply\General					
General	Connection to supply voltage L+				

System power supply\Power segment overview		
Module	**Slot**	**Supply/consumption**
PLC_1	1	12.00W
F-DI 16x24V DC_1	2	-0.90W
F-DQ 8x24V DC/2A PPM_1	3	-0.80W
DI 16x24VDC BA_1	4	-1.05W
	Summary	9.25W

Advanced configuration\DNS configuration	
No DNS server address is configured.	
Advanced configuration\IP Forwarding\Configuration IPv4 Forwarding	
Enable IPv4 forwarding for interfaces of this PLC	False
Advanced configuration\Configuration control\Configuration control for central configuration	
Allow reconfiguration of device via the user program	False

Connection resources				
	Station resources - Reserved - Maximum	**Station resources - Reserved - Configured**	**Station resources - Dynamic - Configured**	**Module resources - PLC_1 [CPU 1515TF-2 PN] - Configured**
Maximum number of resources:		10	98	108
	Maximum	Configured	Configured	Configured
PG communication:	4	-	-	-
HMI communication:	4	0	0	0
S7 communication:	0	-	0	0
Open user communication:	0	-	0	0
Web communication:	2	-	-	-
OPC UA client/server communication:	0	-	-	-
Other communication:	-	-	0	0
Total resources used:		0	0	0
Available resources:		10	98	108

Overview of addresses\Overview of addresses\Overview of addresses					
Inputs	True	**Outputs**	True	**Address gaps**	False

Slot	True

Type	Addr. from	Addr. to	Module	PIP	OB	Device name	Device number	Size	Master / IO system	Rack	Slot
I	0	8	F-DI 16x24V DC_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	9 Bytes	-	0	2
O	0	4	F-DI 16x24V DC_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	5 Bytes	-	0	2
I	9	14	F-DQ 8x24V DC/2A PPM_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	6 Bytes	-	0	3
O	9	14	F-DQ 8x24V DC/2A PPM_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	6 Bytes	-	0	3
I	15	16	DI 16x24VDC BA_1	Automatic update	-	PLC_1 [CPU 1515TF-2 PN]	-	2 Bytes	-	0	4

Runtime licenses\OPC UA\Runtime licenses			
Type of required license	None	**Type of purchased license**	No license

Runtime licenses\ProDiag\Supervisions	
Number of used supervisions	0

Runtime licenses\ProDiag\Runtime licenses			
Number of required licenses	None (<= 25 supervisions)	**Used ProDiag licenses**	No license

Runtime licenses\Energy Suite\Energy objects	
Number of configured energy objects	0

Runtime licenses\Energy Suite\Runtime licenses	
Total number of licensed energy objects	0

Runtime licenses\Energy Suite\Runtime licenses\Number of purchased licenses			
License type '5 energy objects'	No license	**License type '10 energy objects'**	No license

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Safety Administration

Safety summary

General information

F-signatures	
Collective F-signature	C81C438F
Software F-signature	3305DDED
Hardware F-signature	951665A2
F-communication address signature	----
Current compilation	
Safety program state	The offline safety program is consistent.
Compilation time	2/28/2023 2:46:40 PM (UTC +2:00)
Used versions	
STEP 7	STEP 7 Professional V16
Safety	STEP 7 Safety V16
Access protection	
Safety program	The safety program is protected by password
F-CPU	Full access with fail-safe (no protection)

Notes

Location	Note	Additional info
General information	The response time of your safety function also depends on the cycle time of the F-OB and the runtime of the F-runtime group. When using distributed F-I/O modules, the response time also depends on the PROFINET/PROFIBUS parameter assignment. The configuration and parameter assignment of the standard system also has an effect on the response time of your safety function. Note that the configuration and parameter assignment of the standard system is not subject to the access protection of the safety program and does not change the F collective signature.	Note the warning "S085" in the manual and in the STEP 7 Safety online help.

Safety program settings

Safety mode can be disabled	No
Assignment of F-system block numbers	F-system managed
Safety system version	V2.3
Variable F-communication IDs enabled	No

System library elements used in safety program

Instructions (STEP 7 Safety)	
Name	**Used version**
ACK_GL	V1.3
ESTOP1	V1.6
EV1oo2DI	V1.3
SFDOOR	V1.3

Information on F-runtime group

RTG1

Fail-safe organization block	
Name	FOB_RTG1 [OB123]
Event class	Cyclic interrupt
Cycle time	100000 µs
Phase shift	0 µs
Priority	12

Main safety block	
Name	Main_Safety_RTG1 [FB1]
I-DB for main safety block	Main_Safety_RTG1_DB [DB1]

F-runtime group parameters	
Name	F-runtime group 1
Warn cycle time of the F-runtime group	110000 µs
Maximum cycle time of the F-runtime group	120000 µs
DB for F-runtime group communication	--
F-runtime group information DB	RTG1SysInfo

Pre/Post processing	
FC for pre processing	--
FC for post processing	--

F-blocks in safety program

Block name [Block number]	Function in safety program	Used and compiled in F-RTG	Signature
FOB_RTG1 [OB123]	F-OB [system-protected]	RTG1	CBC2445A
Main_Safety_RTG1 [FB1]	F-FB	RTG1	DF8A18E2
Main_Safety_RTG1_DB [DB1]	F-IDB	RTG1	080D25C1

Know-how protected F-blocks in the safety program

The safety program does not include know-how protected F-blocks.

F-compliant PLC data types in the safety program

The safety program contains no F-compliant PLC data types (UDT).

Data from the standard user program

Absolute address	Symbolic operand	F-runtime group	Block name [Block number]	Network
I15.0	"ACK"	RTG1	Main_Safety_RTG1 [FB1]	1
I15.0	"ACK"	RTG1	Main_Safety_RTG1 [FB1]	2
I15.0	"ACK"	RTG1	Main_Safety_RTG1 [FB1]	4
I15.0	"ACK"	RTG1	Main_Safety_RTG1 [FB1]	5

Parameters for safety-related CPU-CPU communications via RCVDP, SENDDP

No safety-related CPU-CPU communication via RCVDP, SENDDP is configured.

Communications via Flexible F-Link

No communications via Flexible F-Link are defined for the F-Program.

Hardware configuration of F-I/O

F-CPU information	
Short designation	CPU 1515TF-2 PN
Article number	6ES7 515-2UM01-0AB0
Firmware version	V2.8
Central F-source address	1
F-destination address range (PROFIsafe address type 1)	--
F-destination address range (PROFIsafe address type 2)	65533 .. 65534

Central periphery

Rail - Slot	Module	Start address	F-destination address	F-monitoring time	Parameter signature (w/o addresses)
Rail_0-2	6ES7 526-1BH00-0AB0 F-DI 16x24V DC_1	0	65534	150 ms	0x3C4F (15439)
Rail_0-3	6ES7 526-2BF00-0AB0 F-DQ 8x24V DC/2A PPM_1	9	65533	150 ms	0x10B5 (4277)

Safety information: C81C438F Consistent; STEP 7 Safety V16;

F-DI 16x24V DC_1 : Central I/O Rail_0, Slot 2

General parameters	
Hardware	
Name	F-DI 16x24V DC_1
Slot	2
Short designation	F-DI 16x24V DC
Article number	6ES7 526-1BH00-0AB0
Start address input	0
Start address output	0
Hardware identifier	258
F-monitoring time	150 ms
F-source address	1
F-destination address	65534
F-parameter signature (without addresses)	0x3C4F (15439)
F-parameter signature (with addresses)	0x563E (22078)
Behavior after channel fault	Passivate channel
RIOforFA-Safety	Yes
PROFIsafe mode	V2 mode
PROFIsafe protocol version	Expanded protocol (XP)
Firmware version	V1.0
Software	
F-I/O DB number	30002
F I/O DB name	F00000_F-DI16x24VDC_1
Used in F-runtime group	RTG1

Specific Parameters	
Sensor supply 0	
Supplied channels	Channels [0...3]
Short-circuit test activated	Yes
Time for short-circuit test	4.2 ms
Startup time of sensor after short-circuit test	4.2 ms
Sensor supply 1	
Supplied channels	Channels [4...7]
Short-circuit test activated	Yes
Time for short-circuit test	4.2 ms
Startup time of sensor after short-circuit test	4.2 ms
Sensor supply 2	
Supplied channels	Channels [8...11]
Short-circuit test activated	Yes
Time for short-circuit test	4.2 ms
Startup time of sensor after short-circuit test	4.2 ms
Sensor supply 3	
Supplied channels	Channels [12...15]
Short-circuit test activated	Yes
Time for short-circuit test	4.2 ms
Startup time of sensor after short-circuit test	4.2 ms
Channel 0, 8	
Sensor evaluation	1oo2 evaluation, equivalent
Discrepancy behavior	Supply value 0
Discrepancy time	5 ms
Reintegration after discrepancy error	Test 0-Signal not necessary
Channel 0	
Channel activated	Yes
Input delay	3.2 ms
Channel failure acknowledge	Manual
Pulse extension	--- sec
Chatter monitoring	No
Number of signal changes	5
Monitoring window	2 sec
Channel 8	
Channel activated	Yes
Input delay	3.2 ms
Channel failure acknowledge	Manual
Pulse extension	--- sec
Chatter monitoring	No
Number of signal changes	5
Monitoring window	2 sec
Channel 1, 9	
Sensor evaluation	1oo2 evaluation, equivalent
Discrepancy behavior	Supply value 0
Discrepancy time	5 ms
Reintegration after discrepancy error	Test 0-Signal not necessary
Channel 1	
Channel activated	Yes
Input delay	3.2 ms
Channel failure acknowledge	Manual
Pulse extension	--- sec
Chatter monitoring	No
Number of signal changes	5
Monitoring window	2 sec
Channel 9	
Channel activated	Yes
Input delay	3.2 ms
Channel failure acknowledge	Manual
Pulse extension	--- sec
Chatter monitoring	No
Number of signal changes	5
Monitoring window	2 sec
Channel 2, 10	
Sensor evaluation	1oo2 evaluation, equivalent
Discrepancy behavior	Supply value 0
Discrepancy time	5 ms
Reintegration after discrepancy error	Test 0-Signal not necessary
Channel 2	
Channel activated	Yes
Input delay	3.2 ms
Channel failure acknowledge	Manual
Pulse extension	--- sec
Chatter monitoring	No
Number of signal changes	5
Monitoring window	2 sec
Channel 10	
Channel activated	Yes

Safety information: C81C438F Consistent; STEP 7 Safety V16;

General parameters	Specific Parameters	
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 3, 11	
	Sensor evaluation	1oo1 evaluation
	Discrepancy behavior	Supply value 0
	Discrepancy time	5 ms
	Reintegration after discrepancy error	Test 0-Signal not necessary
	Channel 3	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 11	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 4, 12	
	Sensor evaluation	1oo1 evaluation
	Discrepancy behavior	Supply value 0
	Discrepancy time	5 ms
	Reintegration after discrepancy error	Test 0-Signal not necessary
	Channel 4	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 12	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 5, 13	
	Sensor evaluation	1oo2 evaluation, equivalent
	Discrepancy behavior	Supply value 0
	Discrepancy time	5 ms
	Reintegration after discrepancy error	Test 0-Signal not necessary
	Channel 5	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 13	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 6, 14	
	Sensor evaluation	1oo2 evaluation, equivalent
	Discrepancy behavior	Supply value 0
	Discrepancy time	5 ms
	Reintegration after discrepancy error	Test 0-Signal not necessary
	Channel 6	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No

General parameters	Specific Parameters	
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 14	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 7, 15	
	Sensor evaluation	1oo2 evaluation, equivalent
	Discrepancy behavior	Supply value 0
	Discrepancy time	5 ms
	Reintegration after discrepancy error	Test 0-Signal not necessary
	Channel 7	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec
	Channel 15	
	Channel activated	Yes
	Input delay	3.2 ms
	Channel failure acknowledge	Manual
	Pulse extension	--- sec
	Chatter monitoring	No
	Number of signal changes	5
	Monitoring window	2 sec

F-DQ 8x24V DC/2A PPM_1 : Central I/O Rail_0, Slot 3

General parameters

Hardware	
Name	F-DQ 8x24V DC/2A PPM_1
Slot	3
Short designation	F-DQ 8x24V DC/2A PPM
Article number	6ES7 526-2BF00-0AB0
Start address input	9
Start address output	9
Hardware identifier	259
F-monitoring time	150 ms
F-source address	1
F-destination address	65533
F-parameter signature (without addresses)	0x10B5 (4277)
F-parameter signature (with addresses)	0x4A58 (19032)
Behavior after channel fault	Passivate channel
RIOforFA-Safety	Yes
PROFIsafe mode	V2 mode
PROFIsafe protocol version	Expanded protocol (XP)
Firmware version	V1.0
Software	
F-I/O DB number	30003
F I/O DB name	F00009_F-DQ8x24VDC/2APPM_1
Used in F-runtime group	RTG1

Specific Parameters

Maximum test period	1000 sec
Operating mode of the output	PM-switching mode
Channel 0	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 1	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 2	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 3	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 4	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 5	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 6	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No
Channel 7	
Channel activated	Yes
Channel failure acknowledge	Manual
Max. readback time dark test	1.0 ms
Disable dark test for 48 hours	No
Max. readback time switch on test	0.8 ms
Activated light test	No
Wire break	No

Supplementary information

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Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Safety Administration / Fail-safe user blocks

Main_Safety_RTG1

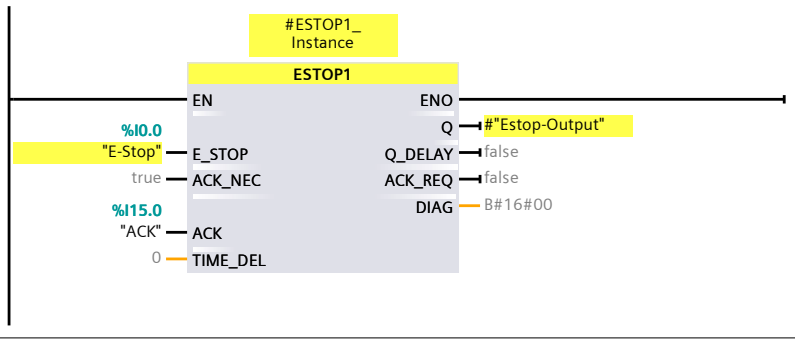
Main_Safety_RTG1 Properties							
General							
Name	Main_Safety_RTG1	**Number**	1	**Type**	FB	**Language**	LAD
Numbering	Manual						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

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									
ESTOP1_Instance	ESTOP1			True	True	True	True		
Input									
E_STOP	Bool	false	Non-retain	True	True	True	False		Emercency STOP
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment necessary
ACK	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment
TIME_DEL	Time	0	Non-retain	True	True	True	False		Time delay
Output									
Q	Bool	false	Non-retain	True	True	True	False		1=Enable
Q_DELAY	Bool	false	Non-retain	True	True	True	False		Enable is OFF delayed
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgment request
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									
Estop-Output	Bool	false	Non-retain	True	True	True	True		
SFDOOR_Instance	SFDOOR			True	True	True	True		
Input									
IN1	Bool	false	Non-retain	True	True	True	False		Input 1
IN2	Bool	false	Non-retain	True	True	True	False		Input 2
QBAD_IN1	Bool	false	Non-retain	True	True	True	False		QBAD signal of FI/O/channel of input IN1
QBAD_IN2	Bool	false	Non-retain	True	True	True	False		QBAD signal of FI/O/channel of input IN2
OPEN_NEC	Bool	true	Non-retain	True	True	True	False		1=open necessary at startup
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=acknowledgment necessary
ACK	Bool	false	Non-retain	True	True	True	False		Acknowledgment
Output									
Q	Bool	false	Non-retain	True	True	True	False		1=Enable, safety door closed
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgement request
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									
SafetyDoorOutput	Bool	false	Non-retain	True	True	True	True		
EV1oo2DI_Instance	EV1oo2DI			True	True	True	True		
Input									
IN1	Bool	false	Non-retain	True	True	True	False		Sensor 1
IN2	Bool	false	Non-retain	True	True	True	False		Sensor 2
DISCTIME	Time	T#0MS	Non-retain	True	True	True	False		Discrepancy time (0 to 60s)
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment necessary for discrepancy error
ACK	Bool	false	Non-retain	True	True	True	False		Acknowledgment of discrepancy error
Output									
Q	Bool	false	Non-retain	True	True	True	False		Output
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgment request
DISC_FLT	Bool	false	Non-retain	True	True	True	False		1=discrepancy error
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									
SensorsEvaluationOutput	Bool	false	Non-retain	True	True	True	True		
ACK_GL_Instance	ACK_GL			True	True	True	True		
Input									

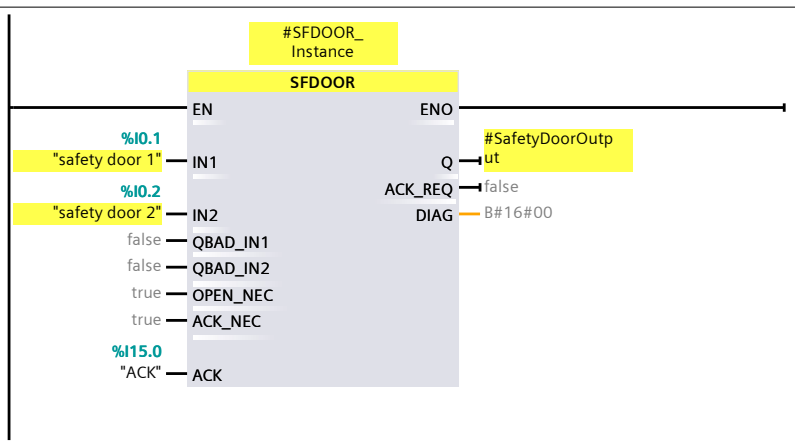
Safety information: C81C438F Consistent; STEP 7 Safety V16;

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_GLOB	Bool	false	Non-retain	True	True	True	False		1=acknowledgment for reintegration
Output									
InOut									
Static									
Temp									
Constant									

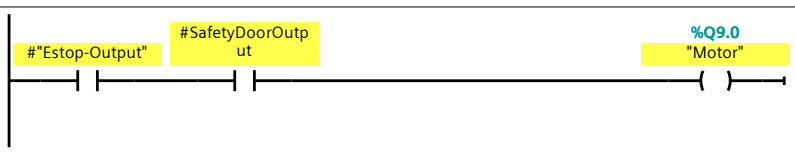
Network 1:



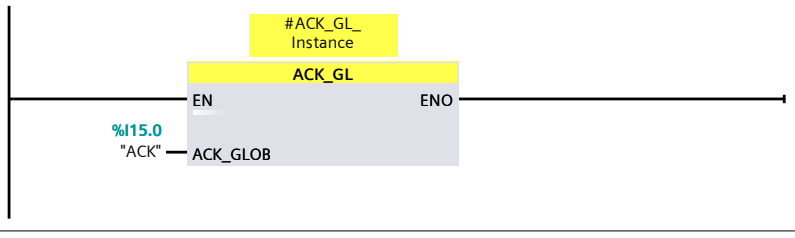
Network 2:



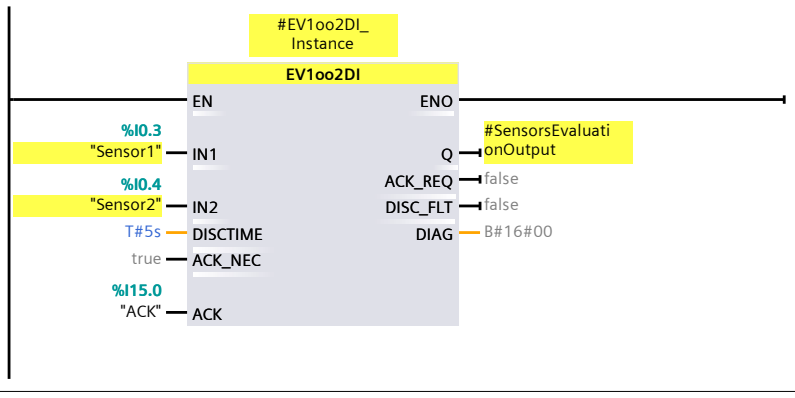
Network 3:



Network 4:



Network 5:



Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Safety Administration / Fail-safe user blocks

Main_Safety_RTG1_DB

Main_Safety_RTG1_DB Properties							
General							
Name	Main_Safety_RTG1_DB	**Number**	1	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	FUSI				

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									
ESTOP1_Instance	ESTOP1		False	True	True	True	True		
Input									
E_STOP	Bool	false	False	True	True	True	False		Emercency STOP
ACK_NEC	Bool	true	False	True	True	True	False		1=Acknowledgment necessary
ACK	Bool	false	False	True	True	True	False		1=Acknowledgment
TIME_DEL	Time	0	False	True	True	True	False		Time delay
Output									
Q	Bool	false	False	True	True	True	False		1=Enable
Q_DELAY	Bool	false	False	True	True	True	False		Enable is OFF delayed
ACK_REQ	Bool	false	False	True	True	True	False		1=acknowledgment request
DIAG	Byte	B#16#00	False	True	True	True	False		Service information
InOut									
Static									
Estop-Output	Bool	false	False	True	True	True	True		
SFDOOR_Instance	SFDOOR		False	True	True	True	True		
Input									
IN1	Bool	false	False	True	True	True	False		Input 1
IN2	Bool	false	False	True	True	True	False		Input 2
QBAD_IN1	Bool	false	False	True	True	True	False		QBAD signal of FI/O/channel of input IN1
QBAD_IN2	Bool	false	False	True	True	True	False		QBAD signal of FI/O/channel of input IN2
OPEN_NEC	Bool	true	False	True	True	True	False		1=open necessary at startup
ACK_NEC	Bool	true	False	True	True	True	False		1=acknowledgment necessary
ACK	Bool	false	False	True	True	True	False		Acknowledgment
Output									
Q	Bool	false	False	True	True	True	False		1=Enable, safety door closed
ACK_REQ	Bool	false	False	True	True	True	False		1=acknowledgement request
DIAG	Byte	B#16#00	False	True	True	True	False		Service information
InOut									
Static									
SafetyDoorOutput	Bool	false	False	True	True	True	True		
EV1oo2DI_Instance	EV1oo2DI		False	True	True	True	True		
Input									
IN1	Bool	false	False	True	True	True	False		Sensor 1
IN2	Bool	false	False	True	True	True	False		Sensor 2
DISCTIME	Time	T#0MS	False	True	True	True	False		Discrepancy time (0 to 60s)
ACK_NEC	Bool	true	False	True	True	True	False		1=Acknowledgment necessary for discrepancy error
ACK	Bool	false	False	True	True	True	False		Acknowledgment of discrepancy error
Output									
Q	Bool	false	False	True	True	True	False		Output
ACK_REQ	Bool	false	False	True	True	True	False		1=acknowledgment request
DISC_FLT	Bool	false	False	True	True	True	False		1=discrepancy error
DIAG	Byte	B#16#00	False	True	True	True	False		Service information
InOut									
Static									
SensorsEvaluationOutput	Bool	false	False	True	True	True	True		
ACK_GL_Instance	ACK_GL		False	True	True	True	True		
Input									
ACK_GLOB	Bool	false	False	True	True	True	False		1=acknowledgment for reintegration
Output									
InOut									

Safety information: C81C438F Consistent; STEP 7 Safety V16;

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									

Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN]

Software units

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks

Main [OB1]

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

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

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks

FOB_RTG1 [OB123]

FOB_RTG1 Properties							
General							
Name	FOB_RTG1	**Number**	123	**Type**	OB	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
▼ Input			
Initial_Call	Bool		Initial call of this OB
Event_Count	Int		Events discarded

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks

Main_Safety_RTG1 [FB1]

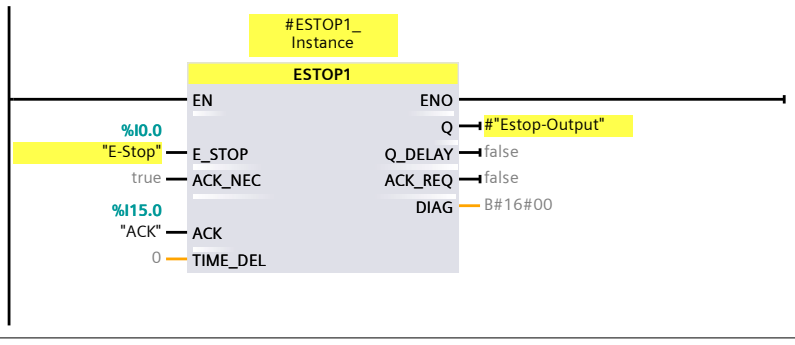
Main_Safety_RTG1 Properties							
General							
Name	Main_Safety_RTG1	**Number**	1	**Type**	FB	**Language**	LAD
Numbering	Manual						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

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									
ESTOP1_Instance	ESTOP1			True	True	True	True		
Input									
E_STOP	Bool	false	Non-retain	True	True	True	False		Emercency STOP
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment necessary
ACK	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment
TIME_DEL	Time	0	Non-retain	True	True	True	False		Time delay
Output									
Q	Bool	false	Non-retain	True	True	True	False		1=Enable
Q_DELAY	Bool	false	Non-retain	True	True	True	False		Enable is OFF delayed
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgment request
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									
Estop-Output	Bool	false	Non-retain	True	True	True	True		
SFDOOR_Instance	SFDOOR			True	True	True	True		
Input									
IN1	Bool	false	Non-retain	True	True	True	False		Input 1
IN2	Bool	false	Non-retain	True	True	True	False		Input 2
QBAD_IN1	Bool	false	Non-retain	True	True	True	False		QBAD signal of FI/O/channel of input IN1
QBAD_IN2	Bool	false	Non-retain	True	True	True	False		QBAD signal of FI/O/channel of input IN2
OPEN_NEC	Bool	true	Non-retain	True	True	True	False		1=open necessary at startup
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=acknowledgment necessary
ACK	Bool	false	Non-retain	True	True	True	False		Acknowledgment
Output									
Q	Bool	false	Non-retain	True	True	True	False		1=Enable, safety door closed
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgement request
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									
SafetyDoorOutput	Bool	false	Non-retain	True	True	True	True		
EV1oo2DI_Instance	EV1oo2DI			True	True	True	True		
Input									
IN1	Bool	false	Non-retain	True	True	True	False		Sensor 1
IN2	Bool	false	Non-retain	True	True	True	False		Sensor 2
DISCTIME	Time	T#0MS	Non-retain	True	True	True	False		Discrepancy time (0 to 60s)
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment necessary for discrepancy error
ACK	Bool	false	Non-retain	True	True	True	False		Acknowledgment of discrepancy error
Output									
Q	Bool	false	Non-retain	True	True	True	False		Output
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgment request
DISC_FLT	Bool	false	Non-retain	True	True	True	False		1=discrepancy error
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									
SensorsEvaluationOutput	Bool	false	Non-retain	True	True	True	True		
ACK_GL_Instance	ACK_GL			True	True	True	True		
Input									

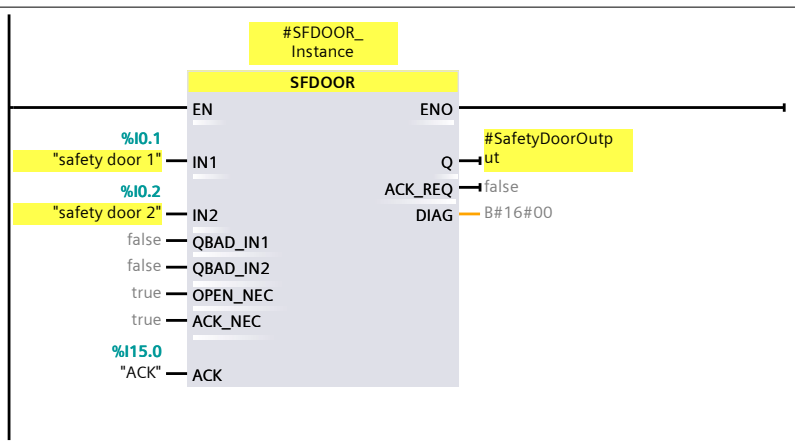
Safety information: C81C438F Consistent; STEP 7 Safety V16;

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_GLOB	Bool	false	Non-retain	True	True	True	False		1=acknowledgment for reintegration
Output									
InOut									
Static									
Temp									
Constant									

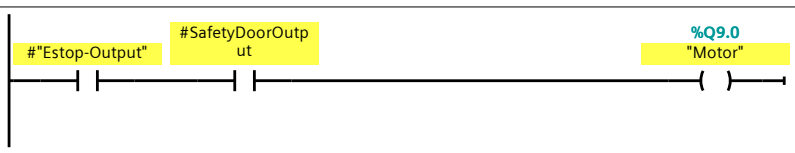
Network 1:



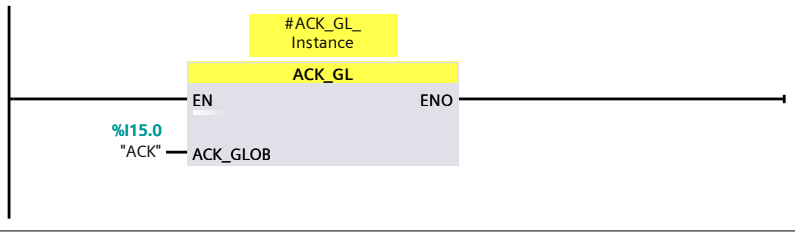
Network 2:



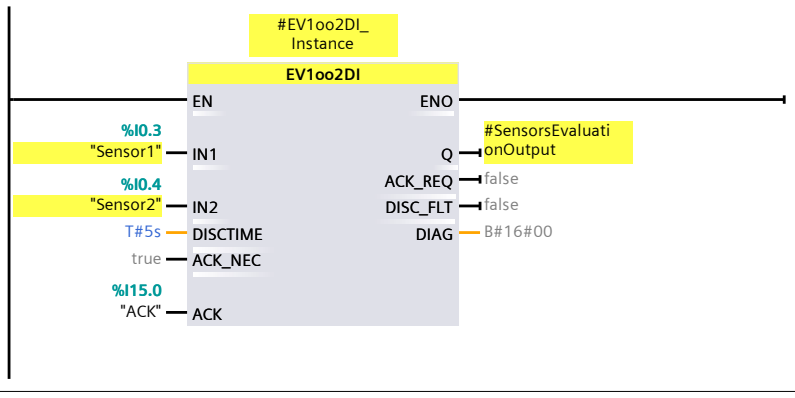
Network 3:



Network 4:



Network 5:



Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks

Main_Safety_RTG1_DB [DB1]

Main_Safety_RTG1_DB Properties							
General							
Name	Main_Safety_RTG1_DB	**Number**	1	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	FUSI				

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									
ESTOP1_Instance	ESTOP1		False	True	True	True	True		
Input									
E_STOP	Bool	false	False	True	True	True	False		Emercency STOP
ACK_NEC	Bool	true	False	True	True	True	False		1=Acknowledgment necessary
ACK	Bool	false	False	True	True	True	False		1=Acknowledgment
TIME_DEL	Time	0	False	True	True	True	False		Time delay
Output									
Q	Bool	false	False	True	True	True	False		1=Enable
Q_DELAY	Bool	false	False	True	True	True	False		Enable is OFF delayed
ACK_REQ	Bool	false	False	True	True	True	False		1=acknowledgment request
DIAG	Byte	B#16#00	False	True	True	True	False		Service information
InOut									
Static									
Estop-Output	Bool	false	False	True	True	True	True		
SFDOOR_Instance	SFDOOR		False	True	True	True	True		
Input									
IN1	Bool	false	False	True	True	True	False		Input 1
IN2	Bool	false	False	True	True	True	False		Input 2
QBAD_IN1	Bool	false	False	True	True	True	False		QBAD signal of FI/O/channel of input IN1
QBAD_IN2	Bool	false	False	True	True	True	False		QBAD signal of FI/O/channel of input IN2
OPEN_NEC	Bool	true	False	True	True	True	False		1=open necessary at startup
ACK_NEC	Bool	true	False	True	True	True	False		1=acknowledgment necessary
ACK	Bool	false	False	True	True	True	False		Acknowledgment
Output									
Q	Bool	false	False	True	True	True	False		1=Enable, safety door closed
ACK_REQ	Bool	false	False	True	True	True	False		1=acknowledgement request
DIAG	Byte	B#16#00	False	True	True	True	False		Service information
InOut									
Static									
SafetyDoorOutput	Bool	false	False	True	True	True	True		
EV1oo2DI_Instance	EV1oo2DI		False	True	True	True	True		
Input									
IN1	Bool	false	False	True	True	True	False		Sensor 1
IN2	Bool	false	False	True	True	True	False		Sensor 2
DISCTIME	Time	T#0MS	False	True	True	True	False		Discrepancy time (0 to 60s)
ACK_NEC	Bool	true	False	True	True	True	False		1=Acknowledgment necessary for discrepancy error
ACK	Bool	false	False	True	True	True	False		Acknowledgment of discrepancy error
Output									
Q	Bool	false	False	True	True	True	False		Output
ACK_REQ	Bool	false	False	True	True	True	False		1=acknowledgment request
DISC_FLT	Bool	false	False	True	True	True	False		1=discrepancy error
DIAG	Byte	B#16#00	False	True	True	True	False		Service information
InOut									
Static									
SensorsEvaluationOutput	Bool	false	False	True	True	True	True		
ACK_GL_Instance	ACK_GL		False	True	True	True	True		
Input									
ACK_GLOB	Bool	false	False	True	True	True	False		1=acknowledgment for reintegration
Output									
InOut									

Safety information: C81C438F Consistent; STEP 7 Safety V16;

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									

Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

RTG1SysInfo [DB30000]

RTG1SysInfo Properties							
General							
Name	RTG1SysInfo	**Number**	30000	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	2.2	**User-defined ID**	F_CTRL_1				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Input									
▼ Output									
MODE	Bool	false	False	True	True	True	False		1 = deactivated safety mode
▼ F_SYSINFO	F_SYSINFO		False	True	True	True	False		F-Runtime group information
MODE	Bool	false	False	True	True	True	False		1 = deactivated safety mode
TCYC_CURR	DInt	0	False	True	True	True	False		current cycle time of the F-Runtime group in ms
TCYC_LONG	DInt	0	False	True	True	True	False		longest cycle time of the F-Runtime group in ms
TRTG_CURR	DInt	0	False	True	True	True	False		current runtime of the F-Runtime group in ms
TRTG_LONG	DInt	0	False	True	True	True	False		longest runtime of the F-Runtime group in ms
T1RTG_CURR	DInt	0	False	True	True	True	False		current runtime in ms for further use
T1RTG_LONG	DInt	0	False	True	True	True	False		longest runtime in ms for further use
F_PROG_SIG	DWord	DW#16#C81C438F	False	True	True	True	False		Collective F-signature of the safety program
▼ F_PROG_DAT	DTL	DTL#2023-2-28-12:46:40.561777000	False	True	True	True	False		Compilation date of the safety pro-gram
YEAR	UInt	2023	False	True	True	True	False		
MONTH	USInt	2	False	True	True	True	False		
DAY	USInt	28	False	True	True	True	False		
WEEKDAY	USInt	3	False	True	True	True	False		
HOUR	USInt	12	False	True	True	True	False		
MINUTE	USInt	46	False	True	True	True	False		
SECOND	USInt	40	False	True	True	True	False		
NANOSECOND	UDInt	561777000	False	True	True	True	False		
F_RTG_SIG	DWord	DW#16#E15B157B	False	True	True	True	False		Collective F-signature of the F-Run-time group
▼ F_RTG_DAT	DTL	DTL#2023-2-28-12:46:40.561777000	False	True	True	True	False		Compilation date of the F-Runtime group
YEAR	UInt	2023	False	True	True	True	False		
MONTH	USInt	2	False	True	True	True	False		
DAY	USInt	28	False	True	True	True	False		
WEEKDAY	USInt	3	False	True	True	True	False		
HOUR	USInt	12	False	True	True	True	False		
MINUTE	USInt	46	False	True	True	True	False		
SECOND	USInt	40	False	True	True	True	False		
NANOSECOND	UDInt	561777000	False	True	True	True	False		
VERS_S7SAF	DWord	DW#16#16000000	False	True	True	True	False		Version label of STEP 7 Safety
InOut									
Static									

Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

F_SystemInfo_DB [DB30001]

F_SystemInfo_DB Properties							
General							
Name	F_SystemInfo_DB	**Number**	30001	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Static									
FCCValue	DWord	16#0	False	True	True	True	False		

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

F_ESTOP1 [FB215]

F_ESTOP1 Properties							
General							
Name	F_ESTOP1	**Number**	215	**Type**	FB	**Language**	FBD
Numbering	Automatic						
Information							
Title	F_: Emergency STOP up to stop category 1	**Author**	Safety	**Comment**		**Family**	F_FUNC
Version	1.1	**User-defined ID**	F_ESTOP1				

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
E_STOP	Bool	false	Non-retain	True	True	True	False		Emercency STOP
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment neces-sary
ACK	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment
TIME_DEL	Time	0	Non-retain	True	True	True	False		Time delay
▼ Output									
Q	Bool	false	Non-retain	True	True	True	False		1=Enable
Q_DELAY	Bool	false	Non-retain	True	True	True	False		Enable is OFF delayed
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgment request
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

F_SFDOOR [FB217]

F_SFDOOR Properties							
General							
Name	F_SFDOOR	**Number**	217	**Type**	FB	**Language**	FBD
Numbering	Automatic						
Information							
Title	F_: Safety door monitoring	**Author**	Safety	**Comment**		**Family**	F_FUNC
Version	1.0	**User-defined ID**	F_SFDOOR				

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									
IN1	Bool	false	Non-retain	True	True	True	False		Input 1
IN2	Bool	false	Non-retain	True	True	True	False		Input 2
QBAD_IN1	Bool	false	Non-retain	True	True	True	False		QBAD signal of FI/O/channel of input IN1
QBAD_IN2	Bool	false	Non-retain	True	True	True	False		QBAD signal of FI/O/channel of input IN2
OPEN_NEC	Bool	true	Non-retain	True	True	True	False		1=open necessary at startup
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=acknowledgment necessary
ACK	Bool	false	Non-retain	True	True	True	False		Acknowledgment
▼ Output									
Q	Bool	false	Non-retain	True	True	True	False		1=Enable, safety door closed
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgement request
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

F_1oo2DI [FB190]

F_1oo2DI Properties							
General							
Name	F_1oo2DI	**Number**	190	**Type**	FB	**Language**	FBD
Numbering	Automatic						
Information							
Title	F_: 1oo2 evaluation with discrepancy analysis	**Author**	Safety	**Comment**		**Family**	F_FUNC
Version	1.0	**User-defined ID**	F_1oo2DI				

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									
IN1	Bool	false	Non-retain	True	True	True	False		Sensor 1
IN2	Bool	false	Non-retain	True	True	True	False		Sensor 2
DISCTIME	Time	T#0MS	Non-retain	True	True	True	False		Discrepancy time (0 to 60s)
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment necessary for discrepancy error
ACK	Bool	false	Non-retain	True	True	True	False		Acknowledgment of discrepancy error
▼ Output									
Q	Bool	false	Non-retain	True	True	True	False		Output
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=acknowledgment request
DISC_FLT	Bool	false	Non-retain	True	True	True	False		1=discrepancy error
DIAG	Byte	B#16#00	Non-retain	True	True	True	False		Service information
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

F_ACK_GL [FB219]

F_ACK_GL Properties							
General							
Name	F_ACK_GL	**Number**	219	**Type**	FB	**Language**	FBD
Numbering	Automatic						
Information							
Title	F_: Global acknowledge-ment of all F-I/Os in an F-Runtime group	**Author**	Safety	**Comment**		**Family**	F_FUNC
Version	1.0	**User-defined ID**	F_ACK_GL				

Name	Data type	Default value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
▼ Input									
ACK_GLOB	Bool	false	Non-retain	True	True	True	False		1=acknowledgment for rein-tegration
Output									
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_CTRL_1 [FB32767]

F_CTRL_1 Properties							
General							
Name	F_CTRL_1	**Number**	32767	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Cycle Control and Mode	**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	2.2	**User-defined ID**	F_CTRL_1				

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									
MODE	Bool	false	Non-retain	True	True	True	False		1 = deactivated safety mode
▼ F_SYSINFO	F_SYSINFO		Non-retain	True	True	True	False		F-Runtime group information
MODE	Bool	false	Non-retain	True	True	True	False		1 = deactivated safety mode
TCYC_CURR	DInt	0	Non-retain	True	True	True	False		current cycle time of the F-Runtime group in ms
TCYC_LONG	DInt	0	Non-retain	True	True	True	False		longest cycle time of the F-Runtime group in ms
TRTG_CURR	DInt	0	Non-retain	True	True	True	False		current runtime of the F-Runtime group in ms
TRTG_LONG	DInt	0	Non-retain	True	True	True	False		longest runtime of the F-Runtime group in ms
T1RTG_CURR	DInt	0	Non-retain	True	True	True	False		current runtime in ms for further use
T1RTG_LONG	DInt	0	Non-retain	True	True	True	False		longest runtime in ms for further use
F_PROG_SIG	DWord	16#0	Non-retain	True	True	True	False		Collective F-signature of the safety program
▼ F_PROG_DAT	DTL	DTL#1970-01-01-00:00:00	Non-retain	True	True	True	False		Compilation date of the safety program
YEAR	UInt	1970	Non-retain	True	True	True	False		
MONTH	USInt	1	Non-retain	True	True	True	False		
DAY	USInt	1	Non-retain	True	True	True	False		
WEEKDAY	USInt	5	Non-retain	True	True	True	False		
HOUR	USInt	0	Non-retain	True	True	True	False		
MINUTE	USInt	0	Non-retain	True	True	True	False		
SECOND	USInt	0	Non-retain	True	True	True	False		
NANOSECOND	UDInt	0	Non-retain	True	True	True	False		
F_RTG_SIG	DWord	16#0	Non-retain	True	True	True	False		Collective F-signature of the F-Runtime group
▼ F_RTG_DAT	DTL	DTL#1970-01-01-00:00:00	Non-retain	True	True	True	False		Compilation date of the F-Runtime group
YEAR	UInt	1970	Non-retain	True	True	True	False		
MONTH	USInt	1	Non-retain	True	True	True	False		
DAY	USInt	1	Non-retain	True	True	True	False		
WEEKDAY	USInt	5	Non-retain	True	True	True	False		
HOUR	USInt	0	Non-retain	True	True	True	False		
MINUTE	USInt	0	Non-retain	True	True	True	False		
SECOND	USInt	0	Non-retain	True	True	True	False		
NANOSECOND	UDInt	0	Non-retain	True	True	True	False		
VERS_S7SAF	DWord	16#0	Non-retain	True	True	True	False		Version label of STEP 7 Safety
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]

F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 Properties							
General							
Name	F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23	**Number**	32768	**Type**	FB	**Language**	SCL
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									
PASS_ON	Bool	false	Non-retain	True	True	True	False		1=Enable passivation
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment for reintegration required
ACK_REI	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment for reintegration
IPAR_EN	Bool	false	Non-retain	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DISABLE	Bool	false	Non-retain	True	True	True	False		1=Disables F-I/O
▼ Output									
PASS_OUT	Bool	true	Non-retain	True	True	True	False		Passivation output
QBAD	Bool	true	Non-retain	True	True	True	False		1=Fail-safe values are output
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment requirement for reintegration
IPAR_OK	Bool	false	Non-retain	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DIAG	Byte	16#0	Non-retain	True	True	True	False		Non-fail-safe service information
DISABLED	Bool	false	Non-retain	True	True	True	False		1=F-I/O disabled
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]

F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 Properties							
General							
Name	F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23	**Number**	32769	**Type**	FB	**Language**	SCL
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									
PASS_ON	Bool	false	Non-retain	True	True	True	False		1=Enable passivation
ACK_NEC	Bool	true	Non-retain	True	True	True	False		1=Acknowledgment for reintegration required
ACK_REI	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment for reintegration
IPAR_EN	Bool	false	Non-retain	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DISABLE	Bool	false	Non-retain	True	True	True	False		1=Disables F-I/O
▼ Output									
PASS_OUT	Bool	true	Non-retain	True	True	True	False		Passivation output
QBAD	Bool	true	Non-retain	True	True	True	False		1=Fail-safe values are output
ACK_REQ	Bool	false	Non-retain	True	True	True	False		1=Acknowledgment requirement for reintegration
IPAR_OK	Bool	false	Non-retain	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DIAG	Byte	16#0	Non-retain	True	True	True	False		Non-fail-safe service information
DISABLED	Bool	false	Non-retain	True	True	True	False		1=F-I/O disabled
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_PS_SEEDPASS_RCV [FB32770]

F_PS_SEEDPASS_RCV Properties							
General							
Name	F_PS_SEEDPASS_RCV	**Number**	32770	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Module Driver Block Receive PROFIsafe V2 + Protocolextension up to 13 Bytes	**Author**	SafeSys	**Comment**		**Family**	F_DRIVER
Version	2.1	**User-defined ID**	F_SEPA_R				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_PS_SEEDPASS_SEND [FB32771]

F_PS_SEEDPASS_SEND Properties							
General							
Name	F_PS_SEEDPASS_SEND	**Number**	32771	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Module Driver Block Send PROFIsafe V2 + Protocolextension up to 13 Bytes	**Author**	SafeSys	**Comment**		**Family**	F_DRIVER
Version	2.0	**User-defined ID**	F_SEPA_S				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_8BOOL_INPUT_NC [FB32773]

F_8BOOL_INPUT_NC Properties							
General							
Name	F_8BOOL_INPUT_NC	**Number**	32773	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Channel Driver Block 8 BOOL Input not channel granular	**Author**	SafeSys	**Comment**		**Family**	F_DRIVER
Version	2.0	**User-defined ID**	F_8BINNC				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_8BOOL_OUTPUT_NC [FB32772]

F_8BOOL_OUTPUT_NC Properties							
General							
Name	F_8BOOL_OUTPUT_NC	**Number**	32772	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Channel Driver Block 8 BOOL Output not channel granular	**Author**	SafeSys	**Comment**		**Family**	F_DRIVER
Version	2.0	**User-defined ID**	F_8BOUNC				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FGESTOP1 [FB32774]

FGESTOP1 Properties							
General							
Name	FGESTOP1	**Number**	32774	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**	Safety	**Comment**		**Family**	F_IMAGE
Version	1.0	**User-defined ID**	FGESTOP1				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FB1_C [FB32775]

FB1_C Properties							
General							
Name	FB1_C	**Number**	32775	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	FCOB				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

DB1_C [DB30004]

DB1_C Properties							
General							
Name	DB1_C	**Number**	30004	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	FCDI				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Input									
Output									
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_CTRL_D [FB32776]

F_CTRL_D Properties							
General							
Name	F_CTRL_D	**Number**	32776	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: cyclic calculation of D-signature	**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	1.2	**User-defined ID**	F_CTRL_D				

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									
InD	LInt	0	Non-retain	False	False	False	False		
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FB32776_IDB_C [DB30005]

FB32776_IDB_C Properties							
General							
Name	FB32776_IDB_C	**Number**	30005	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	1.2	**User-defined ID**	F_CTRL_D				

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									
InD	LInt	0	False	False	False	False	False		
InOut									
Static									

Safety information: C81C438F Consistent; STEP 7 Safety V16;

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_CTRL_2 [FB32777]

F_CTRL_2 Properties							
General							
Name	F_CTRL_2	**Number**	32777	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Test Block and Programme Run Control	**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	1.2	**User-defined ID**	F_CTRL_2				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FB32777_IDB_C [DB30006]

FB32777_IDB_C Properties							
General							
Name	FB32777_IDB_C	**Number**	30006	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	1.2	**User-defined ID**	F_CTRL_2				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Input									
Output									
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_ET_LI [FB32778]

F_ET_LI Properties							
General							
Name	F_ET_LI	**Number**	32778	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Calculation of Elapsed Time	**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	2.0	**User-defined ID**	F_ET_LI				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FB32778_IDB_C [DB30007]

FB32778_IDB_C Properties							
General							
Name	FB32778_IDB_C	**Number**	30007	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	2.0	**User-defined ID**	F_ET_LI				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Input									
Output									
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_CTRL_RT [FB32779]

F_CTRL_RT Properties							
General							
Name	F_CTRL_RT	**Number**	32779	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Measurement of current and longest runtime	**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	1.0	**User-defined ID**	F_CTRLRT				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FB32779_IDB_C [DB30008]

FB32779_IDB_C Properties							
General							
Name	FB32779_IDB_C	**Number**	30008	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**	SafeSys	**Comment**		**Family**	F_CTRL
Version	1.0	**User-defined ID**	F_CTRLRT				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Input									
Output									
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FOB_GLOBAL_1 [FC32767]

FOB_GLOBAL_1 Properties							
General							
Name	FOB_GLOBAL_1	**Number**	32767	**Type**	FC	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
▼ Return			
FOB_GLOBAL_1	Void		

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

F_JL_CORR [FC32768]

F_JL_CORR Properties							
General							
Name	F_JL_CORR	**Number**	32768	**Type**	FC	**Language**	SCL
Numbering	Automatic						
Information							
Title	F_: Jmp label / Loop - global correction implementation	**Author**	SafeSys	**Comment**		**Family**	F_SYSINS
Version	1.0	**User-defined ID**	F_JLCORR				

Name	Data type	Default value	Comment
▼ Input			
dnDB_NR_GCTX	DInt		
dnBIT_OFFSET_GCTX	DInt		
dnDB_LEN_GCTX	DInt		
lnD_CORR	LInt		
Output			
InOut			
▼ Return			
Ret_Val	Void		

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FOB_RTG1_GCTX_DB [DB30009]

FOB_RTG1_GCTX_DB Properties							
General							
Name	FOB_RTG1_GCTX_DB	**Number**	30009	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FB1_C_GCTX_DB [DB30010]

FB1_C_GCTX_DB Properties							
General							
Name	FB1_C_GCTX_DB	**Number**	30010	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FGESTOP1_GCTX_DB [DB30011]

FGESTOP1_GCTX_DB Properties							
General							
Name	FGESTOP1_GCTX_DB	**Number**	30011	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

SPLIT_FOB_1_1 [FC32769]

SPLIT_FOB_1_1 Properties							
General							
Name	SPLIT_FOB_1_1	**Number**	32769	**Type**	FC	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**					

Name	Data type	Default value	Comment
Input			
Output			
InOut			
▼ Return			
SPLIT_FOB_1_1	Void		

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FGSFDOOR [FB32780]

FGSFDOOR Properties							
General							
Name	FGSFDOOR	**Number**	32780	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**	Safety	**Comment**		**Family**	F_IMAGE
Version	1.0	**User-defined ID**	FGSFDOOR				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FGSFDOOR_GCTX_DB [DB30012]

FGSFDOOR_GCTX_DB Properties							
General							
Name	FGSFDOOR_GCTX_DB	**Number**	30012	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FG1oo2DI [FB32783]

FG1oo2DI Properties							
General							
Name	FG1oo2DI	**Number**	32783	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**	Safety	**Comment**		**Family**	F_IMAGE
Version	1.0	**User-defined ID**	FG1oo2DI				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FG1oo2DI_GCTX_DB [DB30015]

FG1oo2DI_GCTX_DB Properties							
General							
Name	FG1oo2DI_GCTX_DB	**Number**	30015	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FGACK_GL [FB32781]

FGACK_GL Properties							
General							
Name	FGACK_GL	**Number**	32781	**Type**	FB	**Language**	SCL
Numbering	Automatic						
Information							
Title		**Author**	Safety	**Comment**		**Family**	F_IMAGE
Version	1.0	**User-defined ID**	FGACK_GL				

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									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / Compiler blocks

FGACK_GL_GCTX_DB [DB30013]

FGACK_GL_GCTX_DB Properties							
General							
Name	FGACK_GL_GCTX_DB	**Number**	30013	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	F_GLOBDB				

Name	Data type	Start value	Retain	Accessible from HMI/OPC UA/Web API	Writ-able from HMI/ OPC UA/ Web API	Visible in HMI engi-neering	Setpoint	Supervi-sion	Comment
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / F-I/O data blocks

F00000_F-DI16x24VDC_1 [DB30002]

F00000_F-DI16x24VDC_1 Properties							
General							
Name	F00000_F-DI16x24VDC_1	**Number**	30002	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	FDRI				

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									
PASS_ON	Bool	false	False	True	True	True	False		1=Enable passivation
ACK_NEC	Bool	true	False	True	True	True	False		1=Acknowledgment for reintegration required
ACK_REI	Bool	false	False	True	True	True	False		1=Acknowledgment for reintegration
IPAR_EN	Bool	false	False	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DISABLE	Bool	false	False	True	True	True	False		1=Disables F-I/O
▼ Output									
PASS_OUT	Bool	true	False	True	True	True	False		Passivation output
QBAD	Bool	true	False	True	True	True	False		1=Fail-safe values are output
ACK_REQ	Bool	false	False	True	True	True	False		1=Acknowledgment requirement for reintegration
IPAR_OK	Bool	false	False	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DIAG	Byte	16#0	False	True	True	True	False		Non-fail-safe service information
DISABLED	Bool	false	False	True	True	True	False		1=F-I/O disabled
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety / F-I/O data blocks

F00009_F-DQ8x24VDC/2APPM_1 [DB30003]

F00009_F-DQ8x24VDC/2APPM_1 Properties							
General							
Name	F00009_F-DQ8x24VDC/2APPM_1	**Number**	30003	**Type**	DB	**Language**	DB
Numbering	Automatic						
Information							
Title		**Author**		**Comment**		**Family**	
Version	0.1	**User-defined ID**	FDRI				

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									
PASS_ON	Bool	false	False	True	True	True	False		1=Enable passivation
ACK_NEC	Bool	true	False	True	True	True	False		1=Acknowledgment for reintegration required
ACK_REI	Bool	false	False	True	True	True	False		1=Acknowledgment for reintegration
IPAR_EN	Bool	false	False	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DISABLE	Bool	false	False	True	True	True	False		1=Disables F-I/O
▼ Output									
PASS_OUT	Bool	true	False	True	True	True	False		Passivation output
QBAD	Bool	true	False	True	True	True	False		1=Fail-safe values are output
ACK_REQ	Bool	false	False	True	True	True	False		1=Acknowledgment requirement for reintegration
IPAR_OK	Bool	false	False	True	True	True	False		Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication
DIAG	Byte	16#0	False	True	True	True	False		Non-fail-safe service information
DISABLED	Bool	false	False	True	True	True	False		1=F-I/O disabled
InOut									
Static									

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Program blocks / System blocks / STEP 7 Safety

F-communication DBs

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN]

Technology objects

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN]

PLC tags

PLC tags						
Icon	Name	Data type	Address	Visible in HMI engineering	Accessible from HMI/OPC UA/Web API	Comment
	ACK	Bool	%I15.0	True	True	
	EnergizePowerContacor	Bool	%Q9.1	True	True	
	E-Stop	Bool	%I0.0	True	True	
	Motor	Bool	%Q9.0	True	True	
	Piece Presence	Bool	%I15.1	True	True	
	RunMotor	Bool	%I15.2	True	True	
	safety door 1	Bool	%I0.1	True	True	
	safety door 2	Bool	%I0.2	True	True	
	Sensor1	Bool	%I0.3	True	True	
	Sensor2	Bool	%I0.4	True	True	

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / PLC tags

Default tag table [63]

PLC tags						
Icon	Name	Data type	Address	Visible in HMI engineering	Accessible from HMI/OPC UA/Web API	Comment
	ACK	Bool	%I15.0	True	True	
	EnergizePowerContacor	Bool	%Q9.1	True	True	
	E-Stop	Bool	%I0.0	True	True	
	Motor	Bool	%Q9.0	True	True	
	Piece Presence	Bool	%I15.1	True	True	
	RunMotor	Bool	%I15.2	True	True	
	safety door 1	Bool	%I0.1	True	True	
	safety door 2	Bool	%I0.2	True	True	
	Sensor1	Bool	%I0.3	True	True	
	Sensor2	Bool	%I0.4	True	True	

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / PLC data types / System data types

F_SYSINFO

F_SYSINFO Properties							
General							
Name	F_SYSINFO	**Number**	34	**Type**	UDT	**Language**	
Numbering							
Information							
Title	F_: F_SYSINFO	**Author**		**Comment**		**Family**	
Version		**User-defined ID**					

Name	Data type	Default value	Accessible from HMI/OPC UA/Web API	Writable from HMI/OPC UA/Web API	Visible in HMI engineering	Setpoint	Comment
MODE	Bool	false	True	True	True	False	1 = deactivated safety mode
TCYC_CURR	DInt	0	True	True	True	False	current cycle time of the F-Runtime group in ms
TCYC_LONG	DInt	0	True	True	True	False	longest cycle time of the F-Runtime group in ms
TRTG_CURR	DInt	0	True	True	True	False	current runtime of the F-Runtime group in ms
TRTG_LONG	DInt	0	True	True	True	False	longest runtime of the F-Runtime group in ms
T1RTG_CURR	DInt	0	True	True	True	False	current runtime in ms for further use
T1RTG_LONG	DInt	0	True	True	True	False	longest runtime in ms for further use
F_PROG_SIG	DWord	16#0	True	True	True	False	Collective F-signature of the safety program
▼ F_PROG_DAT	DTL	DTL#1970-01-01-00:00:00	True	True	True	False	Compilation date of the safety program
YEAR	UInt	1970	True	True	True	False	
MONTH	USInt	1	True	True	True	False	
DAY	USInt	1	True	True	True	False	
WEEKDAY	USInt	5	True	True	True	False	
HOUR	USInt	0	True	True	True	False	
MINUTE	USInt	0	True	True	True	False	
SECOND	USInt	0	True	True	True	False	
NANOSECOND	UDInt	0	True	True	True	False	
F_RTG_SIG	DWord	16#0	True	True	True	False	Collective F-signature of the F-Runtime group
▼ F_RTG_DAT	DTL	DTL#1970-01-01-00:00:00	True	True	True	False	Compilation date of the F-Runtime group
YEAR	UInt	1970	True	True	True	False	
MONTH	USInt	1	True	True	True	False	
DAY	USInt	1	True	True	True	False	
WEEKDAY	USInt	5	True	True	True	False	
HOUR	USInt	0	True	True	True	False	
MINUTE	USInt	0	True	True	True	False	
SECOND	USInt	0	True	True	True	False	
NANOSECOND	UDInt	0	True	True	True	False	
VERS_S7SAF	DWord	16#0	True	True	True	False	Version label of STEP 7 Safety

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Watch and force tables

Force table

Name	Address	Display format	Force value	Comment

Safety PLC example / PLC_1 [CPU 1515TF-2 PN]

Traces

Name

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Traces

Measurements

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Traces

Combined measurements

Name

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / OPC UA communication

Server interfaces

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / OPC UA communication

Client interfaces

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / PLC supervisions & alarms

Supervisions

This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / PLC supervisions & alarms

PLC alarms

PLC alarms
No entries

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / PLC supervisions & alarms

System alarms

System alarms			
Name	SDIAG_ALCAT_SUBMODUL_MSG_0002	**Type**	PLC alarm
ID	1	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_MODUL_MSG_0003	**Type**	PLC alarm
ID	2	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_RACK_MSG_0004	**Type**	PLC alarm
ID	3	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_DEVICE_MSG_0005	**Type**	PLC alarm
ID	4	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_IOSYSTEM_MSG_0006	**Type**	PLC alarm
ID	5	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#276K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_OST_MSG_000D	**Type**	PLC alarm
ID	6	**Location**	PLC_1
Alarm text	CPU status message: @1W%t#7W@ @5W%t#7W@ @6W %t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W %t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	

Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_INFO_MSG_000F	**Type**	PLC alarm
ID	7	**Location**	PLC_1
Alarm text	CPU info: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W %t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_ERR_MSG_0010	**Type**	PLC alarm
ID	8	**Location**	PLC_1
Alarm text	CPU error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W %t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_MD_MSG_0011	**Type**	PLC alarm
ID	9	**Location**	PLC_1
Alarm text	CPU maintenance demanded: @1W%t#7W@ @6W %t#257K@ / @5W%t#7W@ @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_MR_MSG1_0012	**Type**	PLC alarm
ID	10	**Location**	PLC_1
Alarm text	CPU maintenance required: @1W%t#7W@ @6W %t#257K@ / @5W%t#7W@ @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_TMPERR_MSG_0013	**Type**	PLC alarm
ID	11	**Location**	PLC_1
Alarm text	Temporary CPU error: @1W%t#7W@ @5W%t#7W@ @6W %t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W %t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CH_ERR_MSG_0015	**Type**	PLC alarm
ID	12	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ on @8W%t#280K@ @6W %t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	

Name	SDIAG_ALCAT_ECH_ERR_MSG_0016	**Type**	PLC alarm
ID	13	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CH_MD_MSG_0018	**Type**	PLC alarm
ID	14	**Location**	PLC_1
Alarm text	Maintenance demanded:@1W%t#7W@ on @8W %t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ECH_MD_MSG_0019	**Type**	PLC alarm
ID	15	**Location**	PLC_1
Alarm text	Maintenance demanded:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CH_MR_MSG_001B	**Type**	PLC alarm
ID	16	**Location**	PLC_1
Alarm text	Maintenance required:@1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ECH_MR_MSG_001C	**Type**	PLC alarm
ID	17	**Location**	PLC_1
Alarm text	Maintenance required:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUB_ERR_MSG_001E	**Type**	PLC alarm
ID	18	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	

Name	SDIAG_ALCAT_ESUB_ERR_MSG_001F	**Type**	PLC alarm
ID	19	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUB_MD_MSG_0021	**Type**	PLC alarm
ID	20	**Location**	PLC_1
Alarm text	Maintenance demanded: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ESUB_MD_MSG_0022	**Type**	PLC alarm
ID	21	**Location**	PLC_1
Alarm text	Maintenance demanded: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUB_MR_MSG_0024	**Type**	PLC alarm
ID	22	**Location**	PLC_1
Alarm text	Maintenance required: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ESUB_MR_MSG_0025	**Type**	PLC alarm
ID	23	**Location**	PLC_1
Alarm text	Maintenance required: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CONFIG_INFO_0028	**Type**	PLC alarm
ID	24	**Location**	PLC_1
Alarm text	Info: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CONFIG_REPORT_0029	**Type**	PLC alarm
ID	25	**Location**	PLC_1

Alarm text	Info: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SECU_EV_MSG_005E	**Type**	PLC alarm
ID	26	**Location**	PLC_1
Alarm text	Security event: @1W%t#7W@ @5W%t#7W@ @6W %t#258K@ @6W%t#262K@ @6W%t#263K@ @8W %t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	Security
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SECU_EV_INFO_005F	**Type**	PLC alarm
ID	27	**Location**	PLC_1
Alarm text	Security information: @1W%t#7W@ @5W%t#7W@ @6W %t#258K@ @6W%t#262K@ @6W%t#263K@ @8W %t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	Security
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_USER_MSG_0080	**Type**	PLC alarm
ID	28	**Location**	PLC_1
Alarm text	User message: @1W%t#2W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_PLC_MSG_00FF	**Type**	PLC alarm
ID	29	**Location**	PLC_1
Alarm text	PLC notification: @1W%t#7W@ @5W%t#7W@ @6W %t#256K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	True	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUBMODUL_MSG_0102	**Type**	PLC alarm
ID	30	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_MODUL_MSG_0103	**Type**	PLC alarm
ID	31	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0

Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_RACK_MSG_0104	**Type**	PLC alarm
ID	32	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_DEVICE_MSG_0105	**Type**	PLC alarm
ID	33	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_IOSYSTEM_MSG_0106	**Type**	PLC alarm
ID	34	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @5W%t#7W@ @6W%t#276K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_OST_MSG_010D	**Type**	PLC alarm
ID	35	**Location**	PLC_1
Alarm text	CPU status message: @1W%t#7W@ @5W%t#7W@ @6W %t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W %t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_ERR_MSG_0110	**Type**	PLC alarm
ID	36	**Location**	PLC_1
Alarm text	CPU error: @1W%t#7W@ @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@ @6W%t#262K@ @6W%t#263K@ @8W %t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_MD_MSG_0111	**Type**	PLC alarm
ID	37	**Location**	PLC_1
Alarm text	CPU maintenance demanded: @1W%t#7W@ @6W %t#257K@ / @5W%t#7W@ @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	

Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CPU_MR_MSG1_0112	**Type**	PLC alarm
ID	38	**Location**	PLC_1
Alarm text	CPU maintenance required: @1W%t#7W@ @6W %t#257K@ / @5W%t#7W@ @6W%t#258K@ @6W %t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CH_ERR_MSG_0115	**Type**	PLC alarm
ID	39	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ on @8W%t#280K@ @6W %t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ECH_ERR_MSG_0116	**Type**	PLC alarm
ID	40	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CH_MD_MSG_0118	**Type**	PLC alarm
ID	41	**Location**	PLC_1
Alarm text	Maintenance demanded:@1W%t#7W@ on @8W %t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ECH_MD_MSG_0119	**Type**	PLC alarm
ID	42	**Location**	PLC_1
Alarm text	Maintenance demanded:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CH_MR_MSG_011B	**Type**	PLC alarm
ID	43	**Location**	PLC_1
Alarm text	Maintenance required:@1W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	

Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ECH_MR_MSG_011C	**Type**	PLC alarm
ID	44	**Location**	PLC_1
Alarm text	Maintenance required:@1W%t#7W@ - @5W%t#7W@ on @8W%t#280K@ @6W%t#257K@ / @6W%t#258K@.@6W %t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUB_ERR_MSG_011E	**Type**	PLC alarm
ID	45	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ @6W%t#257K@ / @6W %t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ESUB_ERR_MSG_011F	**Type**	PLC alarm
ID	46	**Location**	PLC_1
Alarm text	Error: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUB_MD_MSG_0121	**Type**	PLC alarm
ID	47	**Location**	PLC_1
Alarm text	Maintenance demanded: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ESUB_MD_MSG_0122	**Type**	PLC alarm
ID	48	**Location**	PLC_1
Alarm text	Maintenance demanded: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W %t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_SUB_MR_MSG_0124	**Type**	PLC alarm
ID	49	**Location**	PLC_1
Alarm text	Maintenance required: @1W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W %t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W %t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	

Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_ESUB_MR_MSG_0125	**Type**	PLC alarm
ID	50	**Location**	PLC_1
Alarm text	Maintenance required: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ / @6W%t#258K@.@6W%t#259K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_CONFIG_INFO_0128	**Type**	PLC alarm
ID	51	**Location**	PLC_1
Alarm text	Info: @1W%t#7W@ - @5W%t#7W@ @6W%t#257K@ @6W%t#262K@ @6W%t#263K@ @8W%t#7W@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	
Name	SDIAG_ALCAT_PLC_MSG_01FF	**Type**	PLC alarm
ID	52	**Location**	PLC_1
Alarm text	PLC notification: @1W%t#7W@ @5W%t#7W@ @6W%t#256K@ @6W%t#262K@ @6W%t#263K@	**Info text**	Short name: @6W%t#260K@ Order number: @6W%t#265K@
Alarm class	No Acknowledgement	**Acknowledgment**	False
Information only	False	**Priority**	0
Report	False	**Created by**	System diagnostics
Date created	2/16/2023 11:30 AM	**Last change**	2/16/2023 11:30 AM
Group ID	0	**Additional text 1**	PLC_1
Additional text 2		**Additional text 3**	
Additional text 4		**Additional text 5**	
Additional text 6		**Additional text 7**	
Additional text 8		**Additional text 9**	

Safety PLC example / PLC_1 [CPU 1515TF-2 PN]

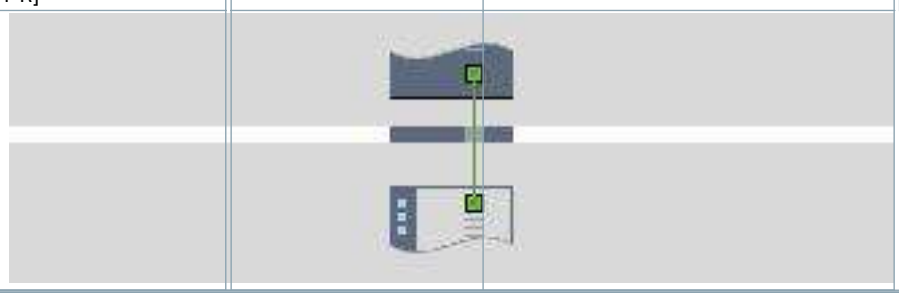
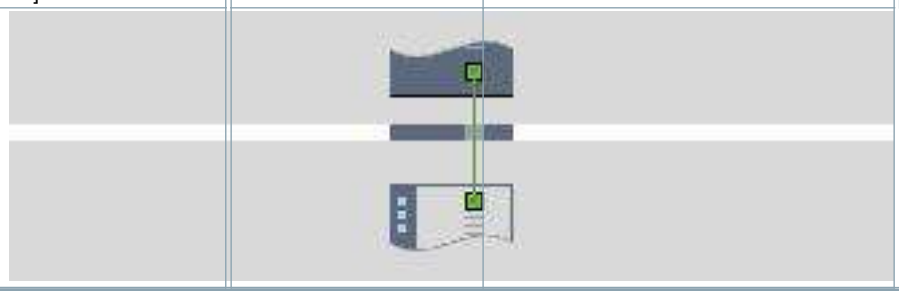
PLC alarm text lists

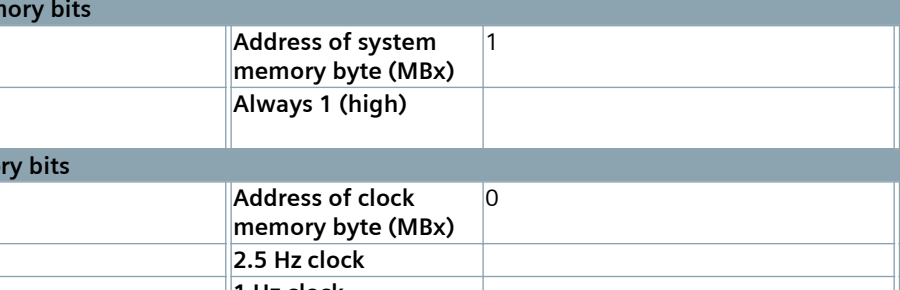
This folder is empty.

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Local modules

PLC_1 [CPU 1515TF-2 PN]

PLC_1					
General\Project information					
Name	PLC_1	**Author**	PLC Traning	**Comment**	
Rack	0	**Slot**	1		
General\Catalog information					
Short designation	CPU 1515TF-2 PN	**Description**	Fail-safe technology CPU with display; work memory 750 KB code and 3 MB data; can be used for safety applications; supports consistent safety upload; supports PROFIsafe V2; 30 ns bit operation time; 5-stage protection concept, technology functions: extended motion control, closed-loop control, counting and measuring; tracing; Runtime options; isochronous mode (central); for all PROFINET interfaces: transport protocol TCP/IP, secure Open User Communication, S7 communication, S7 routing, IP forwarding, Web server, DNS client, OPC UA: Server DA, Client DA, methods, companion specifications; 1st interface: PROFINET IO controller, supports RT/IRT, performance upgrade PROFINET V2.3, 2 ports, I-Device, MRP, MRPD, isochronous mode; 2nd interface: PROFINET IO controller, supports RT, I-Device; firmware V2.8	**Article number**	6ES7 515-2UM01-0AB0
Firmware version	V2.8				
General\Identification & Maintenance					
Plant designation		**Location identifier**		**Installation date**	2023-02-12 12:56:35.524
Additional information					
General\Checksums					
Text lists	FA 70 E8 75 1D 5A 8E 29	**Software**	BC 3B 30 88 D3 B6 6D 91		
Fail-safe\F-activation					
F-capability activated	1				
Fail-safe\F-parameters					
Central F-source address	1	**Default F-monitoring time for central F-I/O**	150ms		
Fail-safe\F-parameters\F-destination address range for PROFIsafe address type 1					
Low limit for F-destination addresses	1	**High limit for F-destination addresses**	99		
PROFINET interface [X1]\General					
Name	PROFINET interface_1	**Author**	PLC Traning	**Comment**	
PROFINET interface [X1]\F-parameters					
Default F-monitoring time for F-I/O of this interface	150ms				
PROFINET interface [X1]\Ethernet addresses\Interface networked with					
Subnet:	Not connected				
PROFINET interface [X1]\Ethernet addresses\IP protocol					
IP configuration	Set IP address in the project	**IP address:**	192.168.0.1	**Subnet mask:**	255.255.255.0
Use router	False				
PROFINET interface [X1]\Ethernet addresses\PROFINET					
PROFINET device name is set directly at the device	False	**Generate PROFINET device name automatically**	True	**PROFINET device name:**	plc_1.profinet interface_1
Converted name:	plcxb1.profinetxainterfacexb1036c	**Device number:**	0		
PROFINET interface [X1]\Time-of-day synchronization\NTP mode					
Note	Time synchronization for all PROFINET interfaces take place within the settings for time synchronization of the PROFINET interface [X1].	**Enable time synchronization via NTP server**	False		IP addresses
Server 1	0.0.0.0	**Server 2**	0.0.0.0	**Server 3**	0.0.0.0
Server 4	0.0.0.0	**Update interval**	10s		
PROFINET interface [X1]\Operating mode					
IO controller	True	**IO system**		**Device number**	0
IO device	False				
PROFINET interface [X1]\Advanced options\Interface options					
Call the user program if communication errors occur	False	**Support device replacement without exchangeable medium**	True	**Permit overwriting of device names of all assigned IO devices**	False
Limit data infeed into the network	True	**Use IEC V2.2 LLDP mode**	False	**Keep-Alive connection monitoring:**	30s
PROFINET interface [X1]\Advanced options\Real time settings\IO communication					
Send clock:	4.000ms				
PROFINET interface [X1]\Advanced options\Real time settings\Synchronization					
RT class:	RT,IRT				
PROFINET interface [X1]\Advanced options\Real time settings\Real time options					
Calculated bandwidth for cyclic IO data:	0.000ms	**Calculated bandwidth for cyclic IO data:**	0.000%		
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\General					
Name	Port_1	**Author**	PLC Traning	**Comment**	

PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET interface_1 [X1]\Port_1 [X1 P1 R]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Alternative partners**	False	**Partner port:**	Any partner
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X1]\Advanced options\Port [X1 P1 R]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\General					
Name	Port_2	**Author**	PLC Traning	**Comment**	
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET interface_1 [X1]\Port_2 [X1 P2 R]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Alternative partners**	False	**Partner port:**	Any partner
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X1]\Advanced options\Port [X1 P2 R]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X1]\Web server access					
Note	The Web server must also be activated in the properties of the PLC.	**Enable Web server via IP address of this interface**	False		
PROFINET interface [X2]\General					
Name	PROFINET interface_2	**Author**	PLC Traning	**Comment**	
PROFINET interface [X2]\F-parameters					
Default F-monitoring time for F-I/O of this interface	150ms				
PROFINET interface [X2]\Ethernet addresses\Interface networked with					
Subnet:	Not connected				
PROFINET interface [X2]\Ethernet addresses\IP protocol					
IP configuration	Set IP address in the project	**IP address:**	192.168.1.1	**Subnet mask:**	255.255.255.0
Use router	False				
PROFINET interface [X2]\Ethernet addresses\PROFINET					
PROFINET device name is set directly at the device	False	**Generate PROFINET device name automatically**	True	**PROFINET device name:**	plc_1.profinet interface_2
Converted name:	plcxb1.profinetxainterfacexb2022c	**Device number:**	0		
PROFINET interface [X2]\Time-of-day synchronization\NTP mode					
Note	Time synchronization for all PROFINET interfaces take place within the settings for time synchronization of the PROFINET interface [X1].	**Enable time synchronization via NTP server**	False		IP addresses
Server 1	0.0.0.0	**Server 2**	0.0.0.0	**Server 3**	0.0.0.0
Server 4	0.0.0.0	**Update interval**	10s		
PROFINET interface [X2]\Operating mode					
IO controller	True	**IO system**		**Device number**	0
IO device	False				
PROFINET interface [X2]\Advanced options\Interface options					
Call the user program if communication errors occur	False	**Support device replacement without exchangeable medium**	True	**Permit overwriting of device names of all assigned IO devices**	False
Limit data infeed into the network	False	**Use IEC V2.2 LLDP mode**	False	**Keep-Alive connection monitoring:**	30s
PROFINET interface [X2]\Advanced options\Real time settings\IO communication					
Send clock:	1.000ms				

PROFINET interface [X2]\Advanced options\Real time settings\Real time options					
Calculated bandwidth for cyclic IO data:	0.000ms	**Calculated bandwidth for cyclic IO data:**	0.000%		
PROFINET interface [X2]\Advanced options\Port [X2 P1]\General					
Name	Port_1	**Author**	PLC Traning	**Comment**	
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port interconnection\Local port:					
Local port:	PLC_1\PROFINET interface_2 [X2]\Port_1 [X2 P1]	**Medium:**	Copper	**Cable name:**	---
					
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port interconnection\Partner port:					
	Monitoring of partner port is not possible	**Alternative partners**	False	**Partner port:**	Any partner
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port options\Activate					
Activate this port for use	True				
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port options\Connection					
Transmission rate / duplex:	Automatic	**Monitor**	False	**Enable autonegotiation**	True
PROFINET interface [X2]\Advanced options\Port [X2 P1]\Port options\Boundaries					
End of detection of accessible devices	False	**End of topology discovery**	False	**End of the sync domain**	False
PROFINET interface [X2]\Web server access					
Note	The Web server must also be activated in the properties of the PLC.	**Enable Web server via IP address of this interface**	False		
Startup					
Startup after POWER ON	Warm restart - Operating mode before POWER OFF	**Comparison preset to actual configuration**	Startup CPU even if mismatch	**Configuration time**	60000ms
Cycle					
Maximum cycle time	150ms			**Enable minimum cycle time for cyclic OBs**	True
Minimum cycle time	1ms				
Communication load					
Cycle load due to communication	20%				
System and clock memory\System memory bits					
Enable the use of system memory byte	False	**Address of system memory byte (MBx)**	1	**First cycle**	
Diagnostic status changed		**Always 1 (high)**		**Always 0 (low)**	
System and clock memory\Clock memory bits					
Enable the use of clock memory byte	False	**Address of clock memory byte (MBx)**	0	**10 Hz clock**	
5 Hz clock		**2.5 Hz clock**		**2 Hz clock**	
1.25 Hz clock		**1 Hz clock**		**0.625 Hz clock**	
0.5 Hz clock					
SIMATIC Memory Card\Diagnostics					
Aging of the SIMATIC memory card	False	**Threshold value**	80%		
System diagnostics\General					
Activate system diagnostics for this device	True	**Report network faults as maintenance instead of fault**	False		
PLC alarms\General					
Central alarm management in the PLC	True				
Web server\General					
Activate web server on this module	False	**Permit access only with HTTPS**	True		
Web server\Automatic update					
Enable automatic update	True	**Update interval**	0s		

Web server\User management

User name	User rights
Everybody	

Web server\User-defined web pages

Application name	HTML source path	Default HTML page	Files with dynamic content	Web DB number	Fragment DB number
		index.htm	.htm;.html	333	334

Web server\Overview of interfaces

Device	Interface	Enabled web server access
PLC_1	PROFINET interface_1	False
PLC_1	PROFINET interface_2	False

Display\General\Display standby mode					
Time to standby mode	30 minutes				
Display\General\Energy saving mode					
Time to energy saving mode	15 minutes				
Display\General\Display language					
Default language on display	English				

Display\Automatic update					
Time to update	5 seconds				
Display\Password\Display protection					
Enable write access	True	**Enable display protection**	False		
Display\User-defined logo					
User logo activated	False	**Adapt logo**	False	**Resolution**	240x260
Company logo	---				

User interface languages	
Assign project language	**User interface languages**
English (United States)	German
English (United States)	English
English (United States)	French
English (United States)	Spanish
English (United States)	Italian
English (United States)	Japanese
English (United States)	Chinese (simplified)
English (United States)	Korean
English (United States)	Russian
English (United States)	Turkish
English (United States)	Portuguese (Brazil)

Time of day\Local time					
Time zone	(UTC) Dublin, Edinburgh, Lisbon, London				
Time of day\Daylight saving time					
Activate daylight saving time	True	**Difference between standard and daylight saving time**	60 mins		
Time of day\Daylight saving time\Start of daylight saving time					
Selection of the week	Last	**Selection of the weekday**	Sunday	**of**	March
at	01:00 a.m.				
Time of day\Daylight saving time\Start of standard time					
Selection of the week	Last	**Selection of the weekday**	Sunday	**of**	October
at	02:00 a.m.				
Protection					
Level of protection	Full access with fail-safe (no protection)				
Protection\Connection mechanisms					
Permit access with PUT/GET communication from remote partner	False				
Protection\Security event					
Summarize security events in case of high message volume	True	**Length of an interval**	20	**Unit**	seconds
OPC UA\Accessibility of the server					
Activate OPC UA server	False				
System power supply\General					
General	Connection to supply voltage L+				

System power supply\Power segment overview		
Module	**Slot**	**Supply/consumption**
PLC_1	1	12.00W
F-DI 16x24V DC_1	2	-0.90W
F-DQ 8x24V DC/2A PPM_1	3	-0.80W
DI 16x24VDC BA_1	4	-1.05W
	Summary	9.25W

Advanced configuration\DNS configuration	
No DNS server address is configured.	
Advanced configuration\IP Forwarding\Configuration IPv4 Forwarding	
Enable IPv4 forwarding for interfaces of this PLC	False
Advanced configuration\Configuration control\Configuration control for central configuration	
Allow reconfiguration of device via the user program	False

Connection resources				
	Station resources - Reserved - Maximum	**Station resources - Reserved - Configured**	**Station resources - Dynamic - Configured**	**Module resources - PLC_1 [CPU 1515TF-2 PN] - Configured**
Maximum number of resources:		10	98	108
	Maximum	Configured	Configured	Configured
PG communication:	4	-	-	-
HMI communication:	4	0	0	0
S7 communication:	0	-	0	0
Open user communication:	0	-	0	0
Web communication:	2	-	-	-
OPC UA client/server communication:	0	-	-	-
Other communication:	-	-	0	0
Total resources used:		0	0	0
Available resources:		10	98	108

Overview of addresses\Overview of addresses\Overview of addresses					
Inputs	True	**Outputs**	True	**Address gaps**	False

Slot	True

Type	Addr. from	Addr. to	Module	PIP	OB	Device name	Device number	Size	Master / IO system	Rack	Slot
I	0	8	F-DI 16x24V DC_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	9 Bytes	-	0	2
O	0	4	F-DI 16x24V DC_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	5 Bytes	-	0	2
I	9	14	F-DQ 8x24V DC/2A PPM_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	6 Bytes	-	0	3
O	9	14	F-DQ 8x24V DC/2A PPM_1	-	-	PLC_1 [CPU 1515TF-2 PN]	-	6 Bytes	-	0	3
I	15	16	DI 16x24VDC BA_1	Automatic update	-	PLC_1 [CPU 1515TF-2 PN]	-	2 Bytes	-	0	4

Runtime licenses\OPC UA\Runtime licenses			
Type of required license	None	**Type of purchased license**	No license

Runtime licenses\ProDiag\Supervisions	
Number of used supervisions	0

Runtime licenses\ProDiag\Runtime licenses			
Number of required licenses	None (<= 25 supervisions)	**Used ProDiag licenses**	No license

Runtime licenses\Energy Suite\Energy objects	
Number of configured energy objects	0

Runtime licenses\Energy Suite\Runtime licenses	
Total number of licensed energy objects	0

Runtime licenses\Energy Suite\Runtime licenses\Number of purchased licenses			
License type '5 energy objects'	No license	**License type '10 energy objects'**	No license

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Local modules

F-DI 16x24V DC_1

F-DI 16x24V DC_1					
General\Project information					
Name	F-DI 16x24V DC_1	**Author**	PLC Traning	**Comment**	
Rack	0	**Slot**	2		
General\Catalog information					
Short designation	F-DI 16x24V DC	**Description**	Digital input module DI 16x24VDC, PROFIsafe V2, fail-safe	**Article number**	6ES7 526-1BH00-0AB0
Firmware version	V1.0				
General\Identification & Maintenance					
Plant designation		**Location identifier**		**Installation date**	2023-02-16 08:18:38.432
Additional information					
Module parameters\General\Startup					
Comparison preset to actual module	From CPU				
Inputs 0 - 15\General					
Name	F-DI 16x24V DC_1	**Comment**			
Inputs 0 - 15\F-parameters					
Manual assignment of F-monitoring time	False	**F-monitoring time**	150ms	**F-source address**	1
F-destination address	65534	**F-parameter signature (with addresses)**	22078	**F-parameter signature (without addresses)**	15439
Behavior after channel fault	Passivate channel	**Reintegration after channel fault**	All channels manually	**RIOforFA safety**	Yes
PROFIsafe mode	V2 mode	**PROFIsafe protocol version**	Expanded protocol (XP)	**F-I/O DB manual number assignment**	Automatic
F-I/O DB-number	30002	**F-I/O DB-name**	F00000_F-DI16x24VDC_1		
Inputs 0 - 15\Inputs\Sensor supply\Sensor supply 0					
Supplied channels	Channels [0...3]	**Short-circuit test activated**	Yes	**Time for short-circuit test**	4.2ms
Startup time of sensor after short-circuit test	4.2ms				
Inputs 0 - 15\Inputs\Sensor supply\Sensor supply 1					
Supplied channels	Channels [4...7]	**Short-circuit test activated**	Yes	**Time for short-circuit test**	4.2ms
Startup time of sensor after short-circuit test	4.2ms				
Inputs 0 - 15\Inputs\Sensor supply\Sensor supply 2					
Supplied channels	Channels [8...11]	**Short-circuit test activated**	Yes	**Time for short-circuit test**	4.2ms
Startup time of sensor after short-circuit test	4.2ms				
Inputs 0 - 15\Inputs\Sensor supply\Sensor supply 3					
Supplied channels	Channels [12...15]	**Short-circuit test activated**	Yes	**Time for short-circuit test**	4.2ms
Startup time of sensor after short-circuit test	4.2ms				
Inputs 0 - 15\Inputs\Channel parameters\Channel 0, 8					
Sensor evaluation	1oo2 evaluation, equivalent	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 0, 8\Channel 0\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 0, 8\Channel 0\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 0, 8\Channel 8\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 0, 8\Channel 8\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 1, 9					
Sensor evaluation	1oo2 evaluation, equivalent	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 1, 9\Channel 1\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 1, 9\Channel 1\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec

Inputs 0 - 15\Inputs\Channel parameters\Channel 1, 9\Channel 9\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 1, 9\Channel 9\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 2, 10					
Sensor evaluation	1oo2 evaluation, equivalent	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 2, 10\Channel 2\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 2, 10\Channel 2\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 2, 10\Channel 10\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 2, 10\Channel 10\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 3, 11					
Sensor evaluation	1oo1 evaluation	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 3, 11\Channel 3\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 3, 11\Channel 3\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 3, 11\Channel 11\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 3, 11\Channel 11\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 4, 12					
Sensor evaluation	1oo1 evaluation	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 4, 12\Channel 4\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 4, 12\Channel 4\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 4, 12\Channel 12\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 4, 12\Channel 12\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 5, 13					
Sensor evaluation	1oo2 evaluation, equivalent	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 5, 13\Channel 5\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 5, 13\Channel 5\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 5, 13\Channel 13\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 5, 13\Channel 13\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 6, 14					
Sensor evaluation	1oo2 evaluation, equivalent	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				

Inputs 0 - 15\Inputs\Channel parameters\Channel 6, 14\Channel 6\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 6, 14\Channel 6\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 6, 14\Channel 14\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 6, 14\Channel 14\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 7, 15					
Sensor evaluation	1oo2 evaluation, equivalent	**Discrepancy behavior**	Supply value 0	**Discrepancy time**	5ms
Reintegration after discrepancy error	Test 0-Signal not necessary				
Inputs 0 - 15\Inputs\Channel parameters\Channel 7, 15\Channel 7\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 7, 15\Channel 7\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\Inputs\Channel parameters\Channel 7, 15\Channel 15\Input parameters					
Channel activated	Yes	**Input delay**	3.2ms	**Channel failure acknowledge**	Manual
Pulse extension	---sec				
Inputs 0 - 15\Inputs\Channel parameters\Channel 7, 15\Channel 15\Chatter monitoring					
Chatter monitoring	No	**Number of signal changes**	5	**Monitoring window**	2sec
Inputs 0 - 15\I/O addresses\Input addresses					
Start address	0.0	**End address**	8.7	**Organization block**	33024
Process image	33024				
Inputs 0 - 15\I/O addresses\Output addresses					
Start address	0.0	**End address**	4.7	**Organization block**	33024
Process image	33024				

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Local modules

F-DQ 8x24V DC/2A PPM_1

F-DQ 8x24V DC/2A PPM_1					
General\Project information					
Name	F-DQ 8x24V DC/2A PPM_1	**Author**	PLC Traning	**Comment**	
Rack	0	**Slot**	3		
General\Catalog information					
Short designation	F-DQ 8x24V DC/2A PPM	**Description**	Digital output module DQ 8x24VDC/2A PPM, PROFIsafe V2, fail-safe	**Article number**	6ES7 526-2BF00-0AB0
Firmware version	V1.0				
General\Identification & Maintenance					
Plant designation		**Location identifier**		**Installation date**	2023-02-16 08:56:43.377
Additional information					
Module parameters\General\Startup					
Comparison preset to actual module	From CPU				
Outputs 0 - 7\General					
Name	F-DQ 8x24V DC/2A PPM_1	**Comment**			
Outputs 0 - 7\F-parameters					
Manual assignment of F-monitoring time	False	**F-monitoring time**	150ms	**F-source address**	1
F-destination address	65533	**F-parameter signature (with addresses)**	19032	**F-parameter signature (without addresses)**	4277
Behavior after channel fault	Passivate channel	**Reintegration after channel fault**	All channels manually	**RIOforFA safety**	Yes
PROFIsafe mode	V2 mode	**PROFIsafe protocol version**	Expanded protocol (XP)	**F-I/O DB manual number assignment**	Automatic
F-I/O DB-number	30003	**F-I/O DB-name**	F00009_F-DQ8x24VDC/2APPM_1		
Outputs 0 - 7\Outputs\Operating mode					
Maximum test period	1000sec	**Operating mode of the output**	PM-switching mode		
Outputs 0 - 7\Outputs\Channel 0\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 0\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 0\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 1\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 1\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 1\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 2\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 2\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 2\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 3\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 3\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 3\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 4\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 4\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 4\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 5\Diagnostics					
Wire break	No				

Outputs 0 - 7\Outputs\Channel 5\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 5\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 6\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 6\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 6\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\Outputs\Channel 7\Diagnostics					
Wire break	No				
Outputs 0 - 7\Outputs\Channel 7\Output parameters					
Channel activated	Yes	**Channel failure acknowledge**	Manual		
Outputs 0 - 7\Outputs\Channel 7\Monitoring parameters					
Max. readback time dark test	1.0ms	**Disable dark test for 48 hours**	No	**Max. readback time switch on test**	0.8ms
Activated light test	No				
Outputs 0 - 7\I/O addresses\Input addresses					
Start address	9.0	**End address**	14.7	**Organization block**	33024
Process image	33024				
Outputs 0 - 7\I/O addresses\Output addresses					
Start address	9.0	**End address**	14.7	**Organization block**	33024
Process image	33024				

Safety PLC example / PLC_1 [CPU 1515TF-2 PN] / Local modules

DI 16x24VDC BA_1

DI 16x24VDC BA_1					
General\Project information					
Name	DI 16x24VDC BA_1	**Author**	PLC Traning	**Comment**	
Rack	0	**Slot**	4		
General\Catalog information					
Short designation	DI 16x24VDC BA	**Description**	Digital input module DI16 x 24VDC; grouping 16; input delay 3.2ms; input type 3 (IEC 61131)	**Article number**	6ES7 521-1BH10-0AA0
Firmware version	V1.1				
General\Identification & Maintenance					
Plant designation		**Location identifier**		**Installation date**	2023-02-16 09:35:21.656
Additional informa-tion					
Module parameters\General\Startup					
Comparison preset to actual module	From CPU				
Module parameters\DI Configuration\Configuration of submodules					
Module distribution	None				
Module parameters\DI Configuration\Value status (Quality Information)					
Value status	False				
Module parameters\DI Configuration\Copy of module for Shared Device (MSI)					
Copy of module:	None				
Input 0 - 15\General					
Name	DI 16x24VDC BA_1	**Comment**			
Input 0 - 15\Inputs\General\Module failure					
Input values with module failure	Input value 0				
Input 0 - 15\I/O addresses\Input addresses					
Start address	15.0	**End address**	16.7	**Organization block**	0
Process image	0				

Safety PLC example

Ungrouped devices

This folder is empty.

Safety PLC example

Security settings

This folder is empty.

Safety PLC example / Cross-device functions / Project traces

Measurements

This folder is empty.

Safety PLC example / Common data

Alarm classes

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

Safety PLC example / Common data / Logs

F-change history PLC_1 2023-02-12 15:00:10

F-change history PLC_1 2023-02-12 15:00:10				
!	Message	Date	Time	User
	F-activation for the CPU PLC_1 was disabled	2/12/2023	3:00:10 PM	DESKTOP-O4DT62G\PLC Tran-ing
	F-activation for the CPU PLC_1 was disabled	2/12/2023	3:00:10 PM	DESKTOP-O4DT62G\PLC Tran-ing
	F-activation for the CPU PLC_1 was enabled	2/12/2023	3:00:12 PM	DESKTOP-O4DT62G\PLC Tran-ing
	F-activation for the CPU PLC_1 was enabled	2/12/2023	3:00:12 PM	DESKTOP-O4DT62G\PLC Tran-ing

Safety PLC example / Languages & resources

Project languages

Languages
Reference language
English (United States)

Editing language
English (United States)

Other project languages
Empty

Safety PLC example / Languages & resources / Project texts

Project texts

Project texts		
English (United States)	**Category**	**Reference**
	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\FGESTOP1 [FB32774]\Block comment
	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\FGSFDOOR [FB32780]\Block comment
	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\FG1oo2DI [FB32783]\Block comment
	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\FGACK_GL [FB32781]\Block comment
"Main Program Sweep (Cycle)"	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\Main [OB1]\Block title
1=Acknowledgment for reintegration	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\ACK_REI
1=Acknowledgment for reintegration	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\ACK_REI
1=Acknowledgment for reintegration required	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\ACK_NEC
1=Acknowledgment for reintegration required	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\ACK_NEC
1=Acknowledgment requirement for reintegration	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\ACK_REQ
1=Acknowledgment requirement for reintegration	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\ACK_REQ
1=Disables F-I/O	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\DISABLE
1=Disables F-I/O	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\DISABLE
1=Enable passivation	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\PASS_ON
1=Enable passivation	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\PASS_ON
1=Fail-safe values are output	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\QBAD
1=Fail-safe values are output	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\QBAD
1=F-I/O disabled	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\DISABLED
1=F-I/O disabled	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\DISABLED
A	Alarm class text	Safety PLC example\Acknowledgement\AlarmClassData_IDisplayNaming_DisplayName
A	Alarm class text	Safety PLC example\Acknowledgement\ShortName
F_: 1oo2 evaluation with discrepancy analysis	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \F_1oo2DI [FB190]\Block title
F_: Calculation of Elapsed Time	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_ET_LI [FB32778]\Block title
F_: Channel Driver Block 8 BOOL Input not channel granular	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_8BOOL_INPUT_NC [FB32773]\Block title
F_: Channel Driver Block 8 BOOL Output not channel granular	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_8BOOL_OUTPUT_NC [FB32772]\Block title
F_: Cycle Control and Mode	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_CTRL_1 [FB32767]\Block title
F_: cyclic calculation of D-signature	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_CTRL_D [FB32776]\Block title
F_: Emergency STOP up to stop category 1	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \F_ESTOP1 [FB215]\Block title
F_: F_SYSINFO	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\PLC data types\System data types\F_SYSINFO\Title of the PLC data type
F_: Global acknowledgement of all F-I/Os in an F-Runtime group	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \F_ACK_GL [FB219]\Block title
F_: Jmp label / Loop - global correction implementation	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_JL_CORR [FC32768]\Block title
F_: Measurement of current and longest runtime	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_CTRL_RT [FB32779]\Block title
F_: Module Driver Block Receive PROFIsafe V2 + Protocolextension up to 13 Bytes	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_SEEDPASS_RCV [FB32770]\Block title
F_: Module Driver Block Send PROFIsafe V2 + Protocolextension up to 13 Bytes	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_SEEDPASS_SEND [FB32771]\Block title
F_: Safety door monitoring	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \F_SFDOOR [FB217]\Block title
F_: Test Block and Programme Run Control	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_CTRL_2 [FB32777]\Block title
NA	Alarm class text	Safety PLC example\No Acknowledgement\AlarmClassData_IDisplayNaming_DisplayName
NA	Alarm class text	Safety PLC example\No Acknowledgement\ShortName
Non-fail-safe service information	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\DIAG
Non-fail-safe service information	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\DIAG
Passivation output	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\PASS_OUT
Passivation output	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\PASS_OUT
Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\IPAR_OK

English (United States)	Category	Reference
Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_IN_2_0_0_0_0_0_0_2_1_0_1_23 [FB32768]\IPAR_EN
Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\IPAR_EN
Tag for parameter reassignment of fail-safe DP standard slaves/IO standard devices or for enabling HART communication	Block comment	Safety PLC example\PLC_1 [CPU 1515TF-2 PN]\Program blocks\System blocks\STEP 7 Safety \Compiler blocks\F_PS_OUT_1_0_0_0_0_0_1_2_1_0_1_23 [FB32769]\IPAR_OK