Documentation for Solution

KMWE_Cleanroom_Connect_PLC

KMWE_Cleanroom_Connect_SAFETY

Project CRC: 0xD21D

Programmer:

Print Name	Signature	Date

Customer

Print Name	Signature	Date

Date	2025-07-04
Editor	p.schippers
Plot	2025-07-04

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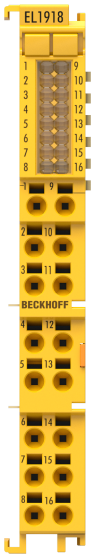
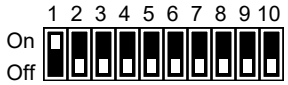
Target System



Safe Address: **1**

Switch Setting:



Platform: EL1918

Parameters

Version number: 1
Serial Number: 4574320
Type:
Product/Revision:
Auto Inc Addr:
EtherCAT Addr:
Previous Port:

Safety Project

Project CRC: 0xD21D
Safe Logic Data CRC: 0xF813
Mapping Data CRC: 0xD480
Parameter Data CRC: 0x27CE
Info Data CRC: 0x47E7

Alias Devices Overview

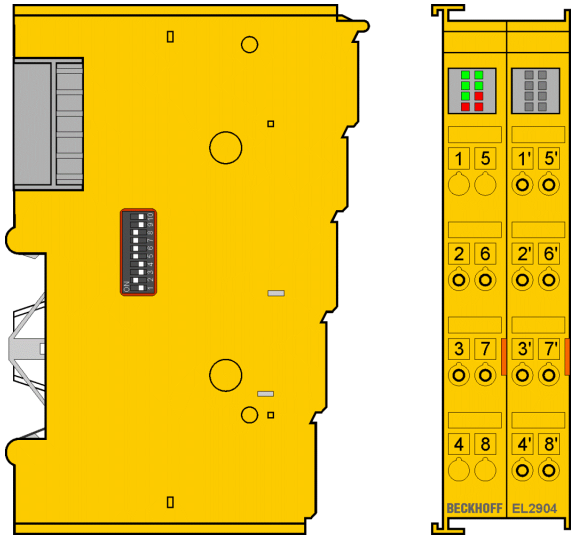
TwinSAFE Group: TwinSafeGroup1

EL2904, 4 digital outputs_1

Type: EL2904, 4 digital outputs

EtherCAT Parameter

Type: EL2904, 4 Ch. Safety Output 24V, 0.5A, TwinSAFE
Product/Revision: EL2904-0000-0019
Auto Inc Addr: 65527
EtherCAT Addr: 1010
Identification Value:
Previous Port: B1009
Physical Device:



TwinSAFE Connection Parameter

Name: **Message_22**
Conn-No: **1**
Conn-Id: **22**
FSoE Watchdog: **100**
Mode: **FSoE_master**
Connection Variables: **Connection with Acknowledgement**
(TwinSafeGroup1)
FSoE Address: 201
Switch Setting:

Safe Parameters

8000:01 Standard outputs active: FALSE (0)
8000:02 Current measurement active: FALSE (0)
8000:03 Testing of outputs active: TRUE (1)
8000:04 Error acknowledge active: TRUE (1)

EL2904, 4 digital outputs_1

Type: EL2904, 4 digital outputs

Channel	Connection Name
OutputChannel1	SQ_PalletConveyor_STO (TwinSafeGroup1)
OutputChannel2	SQ_PotGrpValves_OFF (TwinSafeGroup1)
OutputChannel3	SQ_TransportUnit_STO (TwinSafeGroup1)

AX5805, Safety Process Data 1 axis

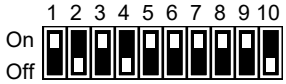
Type: AX 5805 Drive Option Card (1 axis, FW 5)

EtherCAT Parameter

Type: AX5805 (Safety Drive Option)
Product/Revision: AX5805-0000-0018
Auto Inc Addr: 65535
EtherCAT Addr: 1002
Identification Value:
Previous Port: D1001
Physical Device:

TwinSAFE Connection Parameter

Name: **Message_37**
Conn-No: **2**
Conn-Id: **37**
FSoE Watchdog: **100**
Mode: **FSoE_master**
Connection Variables: Connection Acknowledgement (TwinSafeGroup1)
FSoE Address: 501
Switch Setting:



Safe Parameters

F050:01 SubIndex 001:	0x00010317 (66327)
1A00:00 SubIndex 000:	0x13 (19)
1A00:01 SubIndex 001:	0xE6000108 (3858759944)
1A00:02 SubIndex 002:	0x66400001 (1715470337)
1A00:03 SubIndex 003:	0x66E00101 (1725956353)
1A00:04 SubIndex 004:	0x66E00201 (1725956609)
1A00:05 SubIndex 005:	0x66680101 (1718092033)
1A00:06 SubIndex 006:	0x66800101 (1719664897)
1A00:07 SubIndex 007:	0x66D00001 (1724907521)
1A00:08 SubIndex 008:	0x66D10001 (1724973057)
1A00:09 SubIndex 009:	0x66320001 (1714552833)
1A00:0A SubIndex 010:	0x00000001 (1)
1A00:0B SubIndex 011:	0x00000001 (1)
1A00:0C SubIndex 012:	0x00000001 (1)
1A00:0D SubIndex 013:	0x00000001 (1)
1A00:0E SubIndex 014:	0x00000001 (1)
1A00:0F SubIndex 015:	0x00000001 (1)

1A00:10 SubIndex 016:	0x00000001 (1)
1A00:11 SubIndex 017:	0x00000001 (1)
1A00:12 SubIndex 018:	0xE6000310 (3858760464)
1A00:13 SubIndex 019:	0xE6000210 (3858760208)
1600:00 SubIndex 000:	0x13 (19)
1600:01 SubIndex 001:	0xE7000108 (3875537160)
1600:02 SubIndex 002:	0x66400001 (1715470337)
1600:03 SubIndex 003:	0x66500101 (1716519169)
1600:04 SubIndex 004:	0x66700101 (1718616321)
1600:05 SubIndex 005:	0x66680101 (1718092033)
1600:06 SubIndex 006:	0x66800101 (1719664897)
1600:07 SubIndex 007:	0x66D00001 (1724907521)
1600:08 SubIndex 008:	0x66D10001 (1724973057)
1600:09 SubIndex 009:	0x66320001 (1714552833)
1600:0A SubIndex 010:	0x00000001 (1)
1600:0B SubIndex 011:	0x00000001 (1)
1600:0C SubIndex 012:	0x00000001 (1)
1600:0D SubIndex 013:	0x00000001 (1)
1600:0E SubIndex 014:	0x00000001 (1)
1600:0F SubIndex 015:	0x00000001 (1)
1600:10 SubIndex 016:	0x00000001 (1)
1600:11 SubIndex 017:	0x00000001 (1)
1600:12 SubIndex 018:	0xE7000310 (3875537680)
1600:13 SubIndex 019:	0xE7000210 (3875537424)
2000:00 Motor_Type:	0x0000 (0)
2001:01 SubIndex 001:	0x4D41 (19777)
2001:02 SubIndex 002:	0x3038 (12344)
2001:03 SubIndex 003:	0x3333 (13107)
2001:04 SubIndex 004:	0x302D (12333)
2001:05 SubIndex 005:	0x4845 (18501)
2001:06 SubIndex 006:	0x2D31 (11569)
2001:07 SubIndex 007:	0x3030 (12336)
2001:08 SubIndex 008:	0x3030 (12336)
2001:09 SubIndex 009:	0x0000 (0)
2001:0A SubIndex 010:	0x0000 (0)
2001:0B SubIndex 011:	0x0000 (0)
2001:0C SubIndex 012:	0x0000 (0)
2001:0D SubIndex 013:	0x0000 (0)
2001:0E SubIndex 014:	0x0000 (0)
2001:0F SubIndex 015:	0x0000 (0)
2001:10 SubIndex 016:	0x0000 (0)
2002:00 Motor_Polepairs:	0x0004 (4)
2010:00 Reference_Position_Window:	0x00000000 (0)
2011:00 Reference_Position_Inputpin:	0x00 (0)
2012:00 Reference_Position:	0x00000000 (0)
2013:00 Reference_Position_UpperLimit:	0x00000000 (0)
2014:00 Reference_Position_LowerLimit:	0x00000000 (0)
2020:00 Speed_Compare_Window:	0x000000B4 (180)
2021:00 Speed_Compare_Violationlevel:	0x00000014 (20)

2022:00 Speed_Compare_Filter:	0x0A (10)
2030:00 ESTOP_Ramp_Time:	0x0000 (0)
2040:00 Motor_Default_Data:	0x0000 (0)
2041:00 STO_Mode_Active:	TRUE (1)
2043:00 Current_Compare_Violationlevel:	0x64 (100)
2F00:00 Number_of_Axis:	0x01 (1)
2F02:00 Debug_Mode_Active:	FALSE (0)
2F03:00 Reserved:	FALSE (0)
6642:00 STO_Restart_Acknowledge_behavior:	FALSE (0)
6651:01 SubIndex 001:	0x0000 (0)
6651:02 SubIndex 002:	0x0000 (0)
6651:03 SubIndex 003:	0x0000 (0)
6651:04 SubIndex 004:	0x0000 (0)
6651:05 SubIndex 005:	0x0000 (0)
6651:06 SubIndex 006:	0x0000 (0)
6651:07 SubIndex 007:	0x0000 (0)
6651:08 SubIndex 008:	0x0000 (0)
6653:01 SubIndex 001:	0x00000000 (0)
6653:02 SubIndex 002:	0x00000000 (0)
6653:03 SubIndex 003:	0x00000000 (0)
6653:04 SubIndex 004:	0x00000000 (0)
6653:05 SubIndex 005:	0x00000000 (0)
6653:06 SubIndex 006:	0x00000000 (0)
6653:07 SubIndex 007:	0x00000000 (0)
6653:08 SubIndex 008:	0x00000000 (0)
6654:01 SubIndex 001:	0x0000 (0)
6654:02 SubIndex 002:	0x0000 (0)
6654:03 SubIndex 003:	0x0000 (0)
6654:04 SubIndex 004:	0x0000 (0)
6654:05 SubIndex 005:	0x0000 (0)
6654:06 SubIndex 006:	0x0000 (0)
6654:07 SubIndex 007:	0x0000 (0)
6654:08 SubIndex 008:	0x0000 (0)
666A:01 SubIndex 001:	0x00000000 (0)
666A:02 SubIndex 002:	0x00000000 (0)
666A:03 SubIndex 003:	0x00000000 (0)
666A:04 SubIndex 004:	0x00000000 (0)
666A:05 SubIndex 005:	0x00000000 (0)
666A:06 SubIndex 006:	0x00000000 (0)
666A:07 SubIndex 007:	0x00000000 (0)
666A:08 SubIndex 008:	0x00000000 (0)
6671:01 SubIndex 001:	0x0000 (0)
6671:02 SubIndex 002:	0x0000 (0)
6671:03 SubIndex 003:	0x0000 (0)
6671:04 SubIndex 004:	0x0000 (0)
6671:05 SubIndex 005:	0x0000 (0)
6671:06 SubIndex 006:	0x0000 (0)
6671:07 SubIndex 007:	0x0000 (0)
6671:08 SubIndex 008:	0x0000 (0)

6672:01 SubIndex 001:	0x0000 (0)
6672:02 SubIndex 002:	0x0000 (0)
6672:03 SubIndex 003:	0x0000 (0)
6672:04 SubIndex 004:	0x0000 (0)
6672:05 SubIndex 005:	0x0000 (0)
6672:06 SubIndex 006:	0x0000 (0)
6672:07 SubIndex 007:	0x0000 (0)
6672:08 SubIndex 008:	0x0000 (0)
6676:01 SubIndex 001:	FALSE (0)
6676:02 SubIndex 002:	FALSE (0)
6676:03 SubIndex 003:	FALSE (0)
6676:04 SubIndex 004:	FALSE (0)
6676:05 SubIndex 005:	FALSE (0)
6676:06 SubIndex 006:	FALSE (0)
6676:07 SubIndex 007:	FALSE (0)
6676:08 SubIndex 008:	FALSE (0)
6679:01 SubIndex 001:	0x00000000 (0)
6679:02 SubIndex 002:	0x00000000 (0)
6679:03 SubIndex 003:	0x00000000 (0)
6679:04 SubIndex 004:	0x00000000 (0)
6679:05 SubIndex 005:	0x00000000 (0)
6679:06 SubIndex 006:	0x00000000 (0)
6679:07 SubIndex 007:	0x00000000 (0)
6679:08 SubIndex 008:	0x00000000 (0)
6681:01 SubIndex 001:	0x0000 (0)
6681:02 SubIndex 002:	0x0000 (0)
6681:03 SubIndex 003:	0x0000 (0)
6681:04 SubIndex 004:	0x0000 (0)
6681:05 SubIndex 005:	0x0000 (0)
6681:06 SubIndex 006:	0x0000 (0)
6681:07 SubIndex 007:	0x0000 (0)
6681:08 SubIndex 008:	0x0000 (0)
6683:01 SubIndex 001:	0x00000000 (0)
6683:02 SubIndex 002:	0x00000000 (0)
6683:03 SubIndex 003:	0x00000000 (0)
6683:04 SubIndex 004:	0x00000000 (0)
6683:05 SubIndex 005:	0x00000000 (0)
6683:06 SubIndex 006:	0x00000000 (0)
6683:07 SubIndex 007:	0x00000000 (0)
6683:08 SubIndex 008:	0x00000000 (0)
6685:01 SubIndex 001:	0x00000000 (0)
6685:02 SubIndex 002:	0x00000000 (0)
6685:03 SubIndex 003:	0x00000000 (0)
6685:04 SubIndex 004:	0x00000000 (0)
6685:05 SubIndex 005:	0x00000000 (0)
6685:06 SubIndex 006:	0x00000000 (0)
6685:07 SubIndex 007:	0x00000000 (0)
6685:08 SubIndex 008:	0x00000000 (0)
6686:01 SubIndex 001:	0x0000 (0)

6686:02 SubIndex 002:	0x0000 (0)
6686:03 SubIndex 003:	0x0000 (0)
6686:04 SubIndex 004:	0x0000 (0)
6686:05 SubIndex 005:	0x0000 (0)
6686:06 SubIndex 006:	0x0000 (0)
6686:07 SubIndex 007:	0x0000 (0)
6686:08 SubIndex 008:	0x0000 (0)
668A:01 SubIndex 001:	0x66400001 (1715470337)
668A:02 SubIndex 002:	0x66400001 (1715470337)
668A:03 SubIndex 003:	0x66400001 (1715470337)
668A:04 SubIndex 004:	0x66400001 (1715470337)
668A:05 SubIndex 005:	0x66400001 (1715470337)
668A:06 SubIndex 006:	0x66400001 (1715470337)
668A:07 SubIndex 007:	0x66400001 (1715470337)
668A:08 SubIndex 008:	0x66400001 (1715470337)
6691:01 SubIndex 001:	0x0000 (0)
6691:02 SubIndex 002:	0x0000 (0)
6691:03 SubIndex 003:	0x0000 (0)
6691:04 SubIndex 004:	0x0000 (0)
6691:05 SubIndex 005:	0x0000 (0)
6691:06 SubIndex 006:	0x0000 (0)
6691:07 SubIndex 007:	0x0000 (0)
6691:08 SubIndex 008:	0x0000 (0)
6693:01 SubIndex 001:	0x00000000 (0)
6693:02 SubIndex 002:	0x00000000 (0)
6693:03 SubIndex 003:	0x00000000 (0)
6693:04 SubIndex 004:	0x00000000 (0)
6693:05 SubIndex 005:	0x00000000 (0)
6693:06 SubIndex 006:	0x00000000 (0)
6693:07 SubIndex 007:	0x00000000 (0)
6693:08 SubIndex 008:	0x00000000 (0)
6694:01 SubIndex 001:	0x0000 (0)
6694:02 SubIndex 002:	0x0000 (0)
6694:03 SubIndex 003:	0x0000 (0)
6694:04 SubIndex 004:	0x0000 (0)
6694:05 SubIndex 005:	0x0000 (0)
6694:06 SubIndex 006:	0x0000 (0)
6694:07 SubIndex 007:	0x0000 (0)
6694:08 SubIndex 008:	0x0000 (0)
6698:01 SubIndex 001:	0x66400001 (1715470337)
6698:02 SubIndex 002:	0x66400001 (1715470337)
6698:03 SubIndex 003:	0x66400001 (1715470337)
6698:04 SubIndex 004:	0x66400001 (1715470337)
6698:05 SubIndex 005:	0x66400001 (1715470337)
6698:06 SubIndex 006:	0x66400001 (1715470337)
6698:07 SubIndex 007:	0x66400001 (1715470337)
6698:08 SubIndex 008:	0x66400001 (1715470337)
66A2:01 SubIndex 001:	0x00000000 (0)
66A2:02 SubIndex 002:	0x00000000 (0)

66A2:03 SubIndex 003:	0x00000000 (0)
66A2:04 SubIndex 004:	0x00000000 (0)
66A2:05 SubIndex 005:	0x00000000 (0)
66A2:06 SubIndex 006:	0x00000000 (0)
66A2:07 SubIndex 007:	0x00000000 (0)
66A2:08 SubIndex 008:	0x00000000 (0)
66A4:01 SubIndex 001:	0x00000000 (0)
66A4:02 SubIndex 002:	0x00000000 (0)
66A4:03 SubIndex 003:	0x00000000 (0)
66A4:04 SubIndex 004:	0x00000000 (0)
66A4:05 SubIndex 005:	0x00000000 (0)
66A4:06 SubIndex 006:	0x00000000 (0)
66A4:07 SubIndex 007:	0x00000000 (0)
66A4:08 SubIndex 008:	0x00000000 (0)
66A5:01 SubIndex 001:	0x66400001 (1715470337)
66A5:02 SubIndex 002:	0x66400001 (1715470337)
66A5:03 SubIndex 003:	0x66400001 (1715470337)
66A5:04 SubIndex 004:	0x66400001 (1715470337)
66A5:05 SubIndex 005:	0x66400001 (1715470337)
66A5:06 SubIndex 006:	0x66400001 (1715470337)
66A5:07 SubIndex 007:	0x66400001 (1715470337)
66A5:08 SubIndex 008:	0x66400001 (1715470337)
66AA:00 n_pos_max_SMS 32 Bit:	0x00000000 (0)
66AC:00 n_neg_max_SMS 32 Bit:	0x00000000 (0)
66AD:00 Error Reaction SMS:	0x66400001 (1715470337)
66BA:01 SubIndex 001:	0x00000000 (0)
66BA:02 SubIndex 002:	0x00000000 (0)
66BA:03 SubIndex 003:	0x00000000 (0)
66BA:04 SubIndex 004:	0x00000000 (0)
66BA:05 SubIndex 005:	0x00000000 (0)
66BA:06 SubIndex 006:	0x00000000 (0)
66BA:07 SubIndex 007:	0x00000000 (0)
66BA:08 SubIndex 008:	0x00000000 (0)
66BC:01 SubIndex 001:	0x00000000 (0)
66BC:02 SubIndex 002:	0x00000000 (0)
66BC:03 SubIndex 003:	0x00000000 (0)
66BC:04 SubIndex 004:	0x00000000 (0)
66BC:05 SubIndex 005:	0x00000000 (0)
66BC:06 SubIndex 006:	0x00000000 (0)
66BC:07 SubIndex 007:	0x00000000 (0)
66BC:08 SubIndex 008:	0x00000000 (0)
66BD:01 SubIndex 001:	0x66400001 (1715470337)
66BD:02 SubIndex 002:	0x66400001 (1715470337)
66BD:03 SubIndex 003:	0x66400001 (1715470337)
66BD:04 SubIndex 004:	0x66400001 (1715470337)
66BD:05 SubIndex 005:	0x66400001 (1715470337)
66BD:06 SubIndex 006:	0x66400001 (1715470337)
66BD:07 SubIndex 007:	0x66400001 (1715470337)
66BD:08 SubIndex 008:	0x66400001 (1715470337)

66C2:01 SubIndex 001:	0x00000000 (0)
66C2:02 SubIndex 002:	0x00000000 (0)
66C2:03 SubIndex 003:	0x00000000 (0)
66C2:04 SubIndex 004:	0x00000000 (0)
66C2:05 SubIndex 005:	0x00000000 (0)
66C2:06 SubIndex 006:	0x00000000 (0)
66C2:07 SubIndex 007:	0x00000000 (0)
66C2:08 SubIndex 008:	0x00000000 (0)
66C4:01 SubIndex 001:	0x00000000 (0)
66C4:02 SubIndex 002:	0x00000000 (0)
66C4:03 SubIndex 003:	0x00000000 (0)
66C4:04 SubIndex 004:	0x00000000 (0)
66C4:05 SubIndex 005:	0x00000000 (0)
66C4:06 SubIndex 006:	0x00000000 (0)
66C4:07 SubIndex 007:	0x00000000 (0)
66C4:08 SubIndex 008:	0x00000000 (0)
66C5:01 SubIndex 001:	0x66400001 (1715470337)
66C5:02 SubIndex 002:	0x66400001 (1715470337)
66C5:03 SubIndex 003:	0x66400001 (1715470337)
66C5:04 SubIndex 004:	0x66400001 (1715470337)
66C5:05 SubIndex 005:	0x66400001 (1715470337)
66C5:06 SubIndex 006:	0x66400001 (1715470337)
66C5:07 SubIndex 007:	0x66400001 (1715470337)
66C5:08 SubIndex 008:	0x66400001 (1715470337)
66CA:00 a_pos_max_SMA 32 Bit:	0x00000000 (0)
66CC:00 a_neg_max_SMA 32 Bit:	0x00000000 (0)
66CD:00 Error Reaction SMA:	0x66400001 (1715470337)
66D3:00 s_Zero_SDI 32 Bit:	0x00000000 (0)
66E2:01 SubIndex 001:	0x00000000 (0)
66E2:02 SubIndex 002:	0x00000000 (0)
66E2:03 SubIndex 003:	0x00000000 (0)
66E2:04 SubIndex 004:	0x00000000 (0)
66E2:05 SubIndex 005:	0x00000000 (0)
66E2:06 SubIndex 006:	0x00000000 (0)
66E2:07 SubIndex 007:	0x00000000 (0)
66E2:08 SubIndex 008:	0x00000000 (0)
66E4:01 SubIndex 001:	0x00000000 (0)
66E4:02 SubIndex 002:	0x00000000 (0)
66E4:03 SubIndex 003:	0x00000000 (0)
66E4:04 SubIndex 004:	0x00000000 (0)
66E4:05 SubIndex 005:	0x00000000 (0)
66E4:06 SubIndex 006:	0x00000000 (0)
66E4:07 SubIndex 007:	0x00000000 (0)
66E4:08 SubIndex 008:	0x00000000 (0)
66EA:01 SubIndex 001:	0x00000000 (0)
66EA:02 SubIndex 002:	0x00000000 (0)
66EA:03 SubIndex 003:	0x00000000 (0)
66EA:04 SubIndex 004:	0x00000000 (0)
66EA:05 SubIndex 005:	0x00000000 (0)

66EA:06 SubIndex 006:	0x00000000 (0)
66EA:07 SubIndex 007:	0x00000000 (0)
66EA:08 SubIndex 008:	0x00000000 (0)
66EC:01 SubIndex 001:	0x00000000 (0)
66EC:02 SubIndex 002:	0x00000000 (0)
66EC:03 SubIndex 003:	0x00000000 (0)
66EC:04 SubIndex 004:	0x00000000 (0)
66EC:05 SubIndex 005:	0x00000000 (0)
66EC:06 SubIndex 006:	0x00000000 (0)
66EC:07 SubIndex 007:	0x00000000 (0)
66EC:08 SubIndex 008:	0x00000000 (0)

AX5805, Safety Process Data 1 axis

Type: AX 5805 Drive Option Card (1 axis, FW 5)

Channel	Connection Name
Axis 1 Error	SI_ScissorLift_Err (TwinSafeGroup1)
Axis 1 Error_Ack	ScissorLIft_ErrAck (TwinSafeGroup1)
Axis 1 STO	SQ_ScissorLift_STO (TwinSafeGroup1)
Axis 1 STO	SI_FbScissorLift_STO (TwinSafeGroup1)

EL1918, 8 digital inputs_1 (Local)

Type: 0x0110077E - FSOE (FSOE) (Local)

Safe Parameters

8000:01 ModuloDiagTestPulse: 0x00 (0)
8000:02 MultiplierDiagTestPulse: 0x01 (1)
8000:04 Diag TestPulse active: TRUE (1)
8000:05 Module Fault Link active: TRUE (1)
8001:01 InputFilterTime: 0x000A (10)
8001:02 DiagTestPulseFilterTime: 0x0002 (2)
8010:01 ModuloDiagTestPulse: 0x00 (0)
8010:02 MultiplierDiagTestPulse: 0x01 (1)
8010:04 Diag TestPulse active: TRUE (1)
8010:05 Module Fault Link active: TRUE (1)
8011:01 InputFilterTime: 0x000A (10)
8011:02 DiagTestPulseFilterTime: 0x0002 (2)
8020:01 ModuloDiagTestPulse: 0x00 (0)
8020:02 MultiplierDiagTestPulse: 0x01 (1)
8020:04 Diag TestPulse active: TRUE (1)
8020:05 Module Fault Link active: TRUE (1)
8021:01 InputFilterTime: 0x000A (10)
8021:02 DiagTestPulseFilterTime: 0x0002 (2)
8030:01 ModuloDiagTestPulse: 0x00 (0)
8030:02 MultiplierDiagTestPulse: 0x01 (1)
8030:04 Diag TestPulse active: TRUE (1)
8030:05 Module Fault Link active: TRUE (1)
8031:01 InputFilterTime: 0x000A (10)
8031:02 DiagTestPulseFilterTime: 0x0002 (2)
8040:01 ModuloDiagTestPulse: 0x00 (0)
8040:02 MultiplierDiagTestPulse: 0x01 (1)
8040:04 Diag TestPulse active: TRUE (1)
8040:05 Module Fault Link active: TRUE (1)
8041:01 InputFilterTime: 0x000A (10)
8041:02 DiagTestPulseFilterTime: 0x0002 (2)
8050:01 ModuloDiagTestPulse: 0x00 (0)
8050:02 MultiplierDiagTestPulse: 0x01 (1)
8050:04 Diag TestPulse active: TRUE (1)
8050:05 Module Fault Link active: TRUE (1)
8051:01 InputFilterTime: 0x000A (10)
8051:02 DiagTestPulseFilterTime: 0x0002 (2)

8060:01 ModuloDiagTestPulse:	0x00 (0)
8060:02 MultiplierDiagTestPulse:	0x01 (1)
8060:04 Diag TestPulse active:	TRUE (1)
8060:05 Module Fault Link active:	TRUE (1)
8061:01 InputFilterTime:	0x000A (10)
8061:02 DiagTestPulseFilterTime:	0x0002 (2)
8070:01 ModuloDiagTestPulse:	0x00 (0)
8070:02 MultiplierDiagTestPulse:	0x01 (1)
8070:04 Diag TestPulse active:	TRUE (1)
8070:05 Module Fault Link active:	TRUE (1)
8071:01 InputFilterTime:	0x000A (10)
8071:02 DiagTestPulseFilterTime:	0x0002 (2)

EL1918, 8 digital inputs_1 (Local)

Type: 0x0110077E - FSOE (FSOE) (Local)

Channel	Connection Name
FSIN Module 1.Input	SI_EStopBtnInfeed_Ch1 (TwinSafeGroup1)
FSIN Module 2.Input	SI_EStopBtnInfeed_Ch2 (TwinSafeGroup1)
FSIN Module 3.Input	SI_EStopBbtnCleanroom_Ch1 (TwinSafeGroup1)
FSIN Module 4.Input	SI_EStopBtnCleanroom_Ch2 (TwinSafeGroup1)
FSIN Module 5.Input	SI_FbPalletConveyor_STO (TwinSafeGroup1)
FSIN Module 6.Input	SI_FbPotGrpValves_OFF (TwinSafeGroup1)
FSIN Module 7.Input	SI_DoorGuardCleanroom_Ch1 (TwinSafeGroup1)
FSIN Module 8.Input	SI_DoorGuardCleanroom_Ch2 (TwinSafeGroup1)

Internal Process Image InfoData Table

Inputs

Name	Type	Size	Position
FSIN Module 1.Input	BIT	0.1	0.0
FSIN Module 1.Module Fault	BIT	0.1	0.1
FSIN Module 2.Input	BIT	0.1	0.2
FSIN Module 2.Module Fault	BIT	0.1	0.3
FSIN Module 3.Input	BIT	0.1	0.4
FSIN Module 3.Module Fault	BIT	0.1	0.5
FSIN Module 4.Input	BIT	0.1	0.6
FSIN Module 4.Module Fault	BIT	0.1	0.7
FSIN Module 5.Input	BIT	0.1	1.0
FSIN Module 5.Module Fault	BIT	0.1	1.1
FSIN Module 6.Input	BIT	0.1	1.2
FSIN Module 6.Module Fault	BIT	0.1	1.3
FSIN Module 7.Input	BIT	0.1	1.4
FSIN Module 7.Module Fault	BIT	0.1	1.5
FSIN Module 8.Input	BIT	0.1	1.6
FSIN Module 8.Module Fault	BIT	0.1	1.7

Internal Process Image InfoData Table

Outputs

Name	Type	Size	Position
FSIN Module 1.ErrAck	BIT	0.1	0.0
FSIN Module 2.ErrAck	BIT	0.1	0.1
FSIN Module 3.ErrAck	BIT	0.1	0.2
FSIN Module 4.ErrAck	BIT	0.1	0.3
FSIN Module 5.ErrAck	BIT	0.1	0.4
FSIN Module 6.ErrAck	BIT	0.1	0.5
FSIN Module 7.ErrAck	BIT	0.1	0.6
FSIN Module 8.ErrAck	BIT	0.1	0.7

Standard Alias Devices Table

Alias Device	From	to
ErrorAcknowledgement	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Outputs^GVL_Modules.g_emUtilities.Q_bCmdErrAck (Type: BIT)	GroupPort_ErrAck (TwinSafeGroup1)
FB_Err	FB_Err (TwinSafeGroup1)	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Inputs^GVL_Modules.g_emUtilities.s_diSafetyFbErr.I_bStaInput (Type: BIT)
FbTransportUnit_STO	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Outputs^GVL_Modules.g_emLiftingTransport.Q_bDriveStateSTO (Type: BIT)	SI_FbTransportUnit_STO (TwinSafeGroup1)
RestartSafety	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Outputs^GVL_Modules.g_emUtilities.Q_bCmdRestartSafety (Type: BIT)	Restart (TwinSafeGroup1)
Run	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Outputs^GVL_Modules.g_emUtilities.Q_bCmdRun (Type: BIT)	GroupPort_RunStop (TwinSafeGroup1)

Standard Alias Devices Table

Alias Device	From	to
SafetyOK	AllEStops_OK (TwinSafeGroup1)	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Inputs^GVL_Modules.g_emUtilities.s_diSafetyOk.I_bStaInput (Type: BIT)
ScissorLift_EnableNC	Q_ScissorLift_EnableNC (TwinSafeGroup1)	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Inputs^GVL_Modules.g_emLiftingTransport.s_cmLift.I_bEnable (Type: BIT)
TransportUnit_EnableNC	Q_TransportUnit_EnableNC (TwinSafeGroup1)	TIPC^CleanroomConnect^CleanroomConnect Instance^PlcTask Inputs^GVL_Modules.g_emLiftingTransport.s_cmTransport.I_bEnable (Type: BIT)

Variables Overview

TwinSAFE Group: TwinSafeGroup1

Local Variables Table

Variable	Assignment	Usages
GroupPort_ErrAck	ErrorAcknowledgement.In (TwinSafeGroup1)	TwinSafeGroup1.Err Ack (GroupPort) TwinSafeGroup1.Safety_Outputs.FBAnd2.AndIn1
GroupPort_RunStop	Run.In (TwinSafeGroup1)	TwinSafeGroup1.Run/Stop (GroupPort)
Restart	RestartSafety.In (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBAnd5.AndIn1
SI_EStopBtnInfeed_Ch1	EL1918, 8 digital inputs_1.FSIN Module 1.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn1
SI_EStopBtnInfeed_Ch2	EL1918, 8 digital inputs_1.FSIN Module 2.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn2
SI_EStopBbtnCleanroom_Ch1	EL1918, 8 digital inputs_1.FSIN Module 3.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn3
SI_EStopBtnCleanroom_Ch2	EL1918, 8 digital inputs_1.FSIN Module 4.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn4
AllEStops_OK	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopOut	SafetyOK.Out (TwinSafeGroup1) TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn1 TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn2 TwinSafeGroup1.Safety_Outputs.FBAnd4.AndIn1 TwinSafeGroup1.General_Monitoring.FBEdm4.Mon1
SI_FbPotGrpValves_OFF	EL1918, 8 digital inputs_1.FSIN Module 6.Input (TwinSafeGroup1)	TwinSafeGroup1.General_Monitoring.FBAnd6.AndIn2 TwinSafeGroup1.General_EStops.FBAnd1.AndIn4

Local Variables Table

Variable	Assignment	Usages
SI_FbPalletConveyor_STO	EL1918, 8 digital inputs_1.FSIN Module 5.Input (TwinSafeGroup1)	TwinSafeGroup1.General_Monitoring.FBAnd6.AndIn1 TwinSafeGroup1.General_EStops.FBAnd1.AndIn3
SQ_PotGrpValves_OFF	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut2	EL2904, 4 digital outputs_1.OutputChannel2 (TwinSafeGroup1)
SQ_PalletConveyor_STO	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut1	EL2904, 4 digital outputs_1.OutputChannel1 (TwinSafeGroup1)
SQ_ScissorLift_STO	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut5	TwinSafeGroup1.Axis_ScissorLift_Monitoring.FBEdm3.Mon1 AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1)
SQ_TransportUnit_STO	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut6	EL2904, 4 digital outputs_1.OutputChannel3 (TwinSafeGroup1) TwinSafeGroup1.Axis_TransportUnit_Monitoring.FBEdm2.Mo-n1
ScissorLIft_ErrAck	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut8	AX5805, Safety Process Data 1 axis.Axis 1 Error_Ack (TwinSafeGroup1)
FB_Err	TwinSafeGroup1.FB Err (GroupPort)	FB_Err.Out (TwinSafeGroup1)
Q_ScissorLift_EnableNC	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut3	ScissorLift_EnableNC.Out (TwinSafeGroup1)
Q_TransportUnit_EnableNC	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut4	TransportUnit_EnableNC.Out (TwinSafeGroup1)
AllEStopsDel_OK	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-	TwinSafeGroup1.Safety_Outputs.FBAnd3.AndIn1

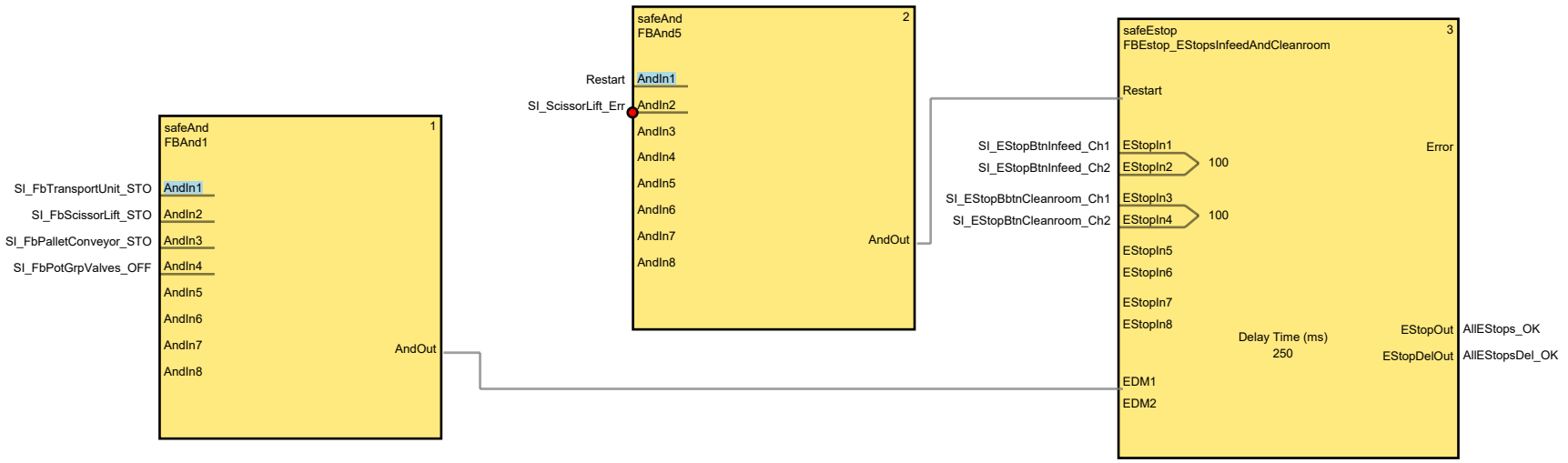
Local Variables Table

Variable	Assignment	Usages
	Cleanroom.EStopDelOut	
SI_DoorGuardCleanroom_Ch1	EL1918, 8 digital inputs_1.FSIN Module 7.Input (TwinSafeGroup1)	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonIn1
SI_DoorGuardCleanroom_Ch2	EL1918, 8 digital inputs_1.FSIN Module 8.Input (TwinSafeGroup1)	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonIn2
CleanroomDoor_OK	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonOut	TwinSafeGroup1.Safety_Outputs.FBAnd4.AndIn2
CleanroomDoorDel_OK	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonDelOut	TwinSafeGroup1.Safety_Outputs.FBAnd3.AndIn2
SI_FbTransportUnit_STO	FbTransportUnit_STO.In (TwinSafeGroup1)	TwinSafeGroup1.Axis_TransportUnit_Monitoring.FBEdm2.Mon2 TwinSafeGroup1.General_EStops.FBAnd1.AndIn1 TwinSafeGroup1.Cleanroom_Door_Guard.FBAnd7.AndIn1
SI_FbScissorLift_STO	AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1)	TwinSafeGroup1.Axis_ScissorLift_Monitoring.FBEdm3.Mon2 TwinSafeGroup1.General_EStops.FBAnd1.AndIn2 TwinSafeGroup1.Cleanroom_Door_Guard.FBAnd7.AndIn2
SI_ScissorLift_Err	AX5805, Safety Process Data 1 axis.Axis 1 Error (TwinSafeGroup1)	TwinSafeGroup1.Safety_Outputs.FBAnd2.AndIn2 TwinSafeGroup1.General_EStops.FBAnd5.AndIn2

FunctionBlocks Overview

TwinSAFE Group: TwinSafeGroup1

General_EStops



Cleanroom_Door_Guard

Safety_Outputs

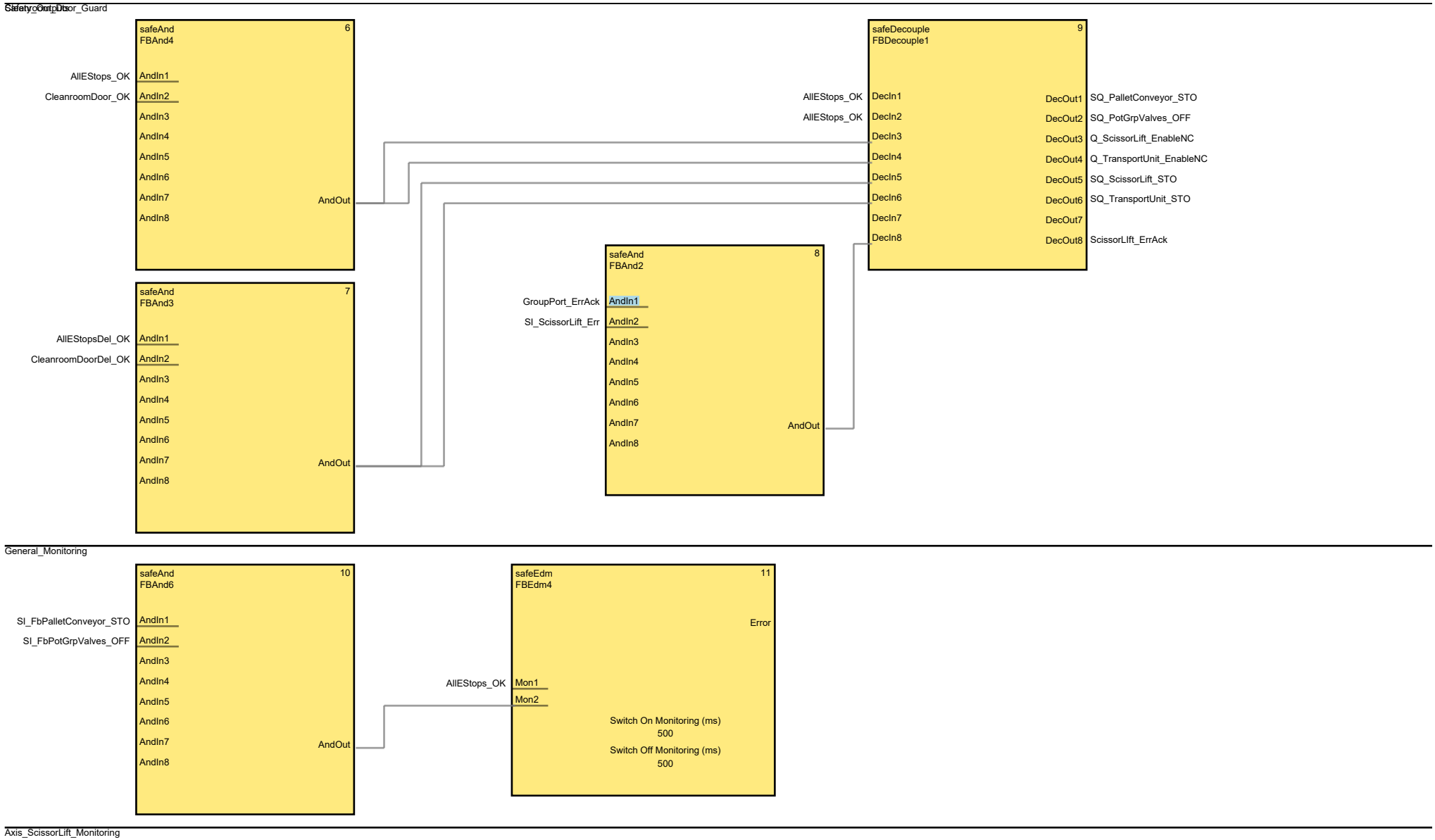
TwinSAFE Group: TwinSafeGroup1

General_EStops

Cleanroom_Door_Guard

Safety_Outputs

TwinSAFE Group: TwinSafeGroup1



Date	2025-07-04	BECKHOFF	TwinSAFE Group: TwinSafeGroup1	
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TwinSAFE Group: TwinSafeGroup1

Safety_Output_Door_Guard

General_Monitoring

Axis_ScissorLift_Monitoring

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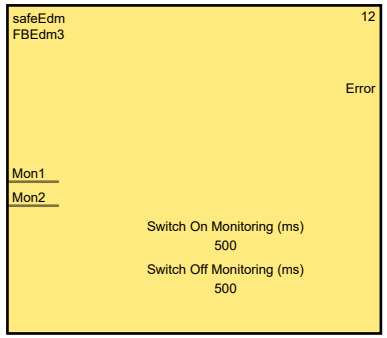
Editor	p.schippers			
Plot	2025-07-04	Beckhoff Automation GmbH & Co. KG		Page: 33

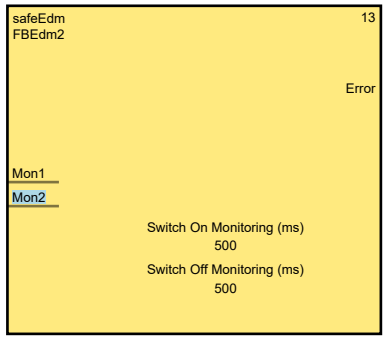
TwinSAFE Group: TwinSafeGroup1

General_Monitoring

Axis_ScissorLift_Monitoring



Axis_TransportUnit_Monitoring



TwinSAFE Group: TwinSafeGroup1

General_Monitoring

Axis_ScissorLift_Monitoring

Axis_TransportUnit_Monitoring

TwinSAFE Group: TwinSafeGroup1

Info Data

Map Diag: False

Map State: False

Customization Settings

Passivation Allowed: False

Permanent Deactivation Allowed: False

Temporary Deactivation Allowed: False

Timeout passivation Allowed (ms): 10000

Customizing Settings:

Failsafe Settings

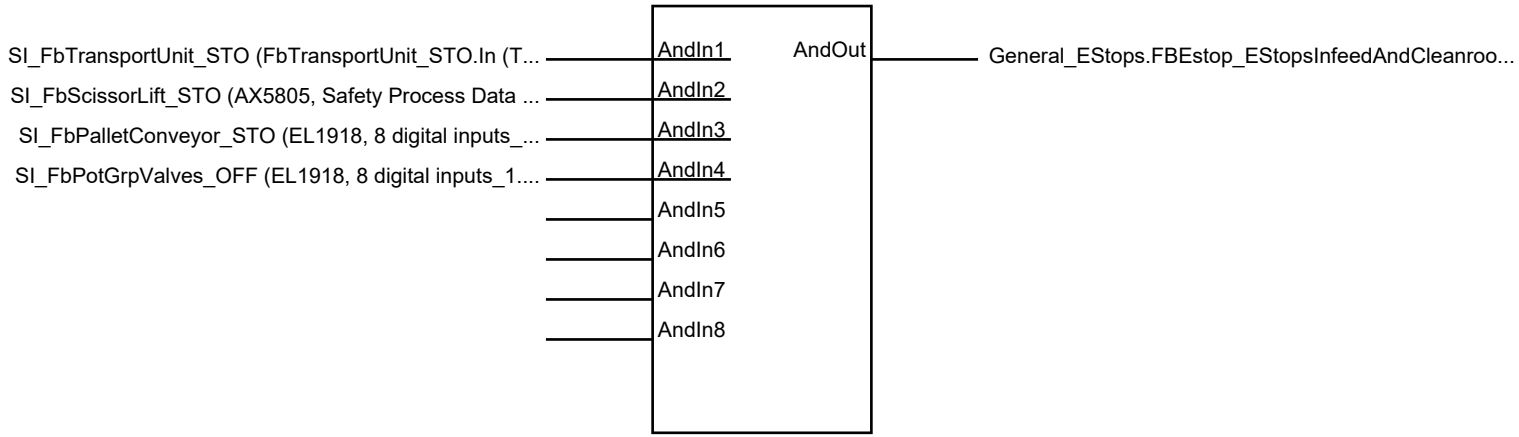
Analog FB Output Failsafe Values: Zero

Startup Settings

Verify Analog FB Inputs at Group Startup: False

Network: General_EStops

FBAnd1



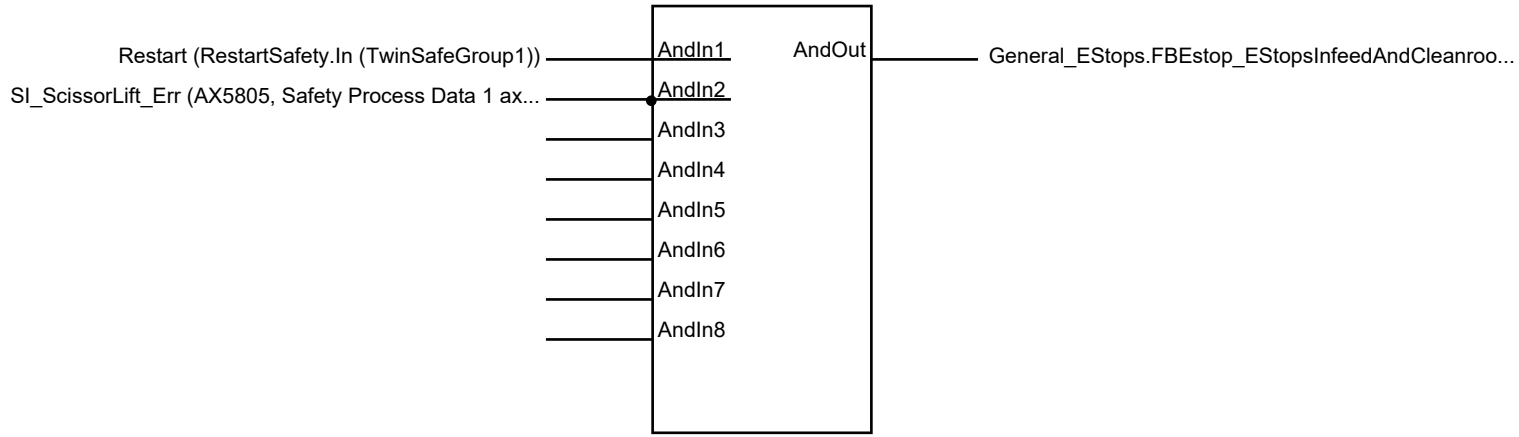
Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 1

FBAnd1

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	SI_FbTransportUnit_STO (FbTransportUnit_STO.In (TwinSafeGroup1))
InPort: AndIn2	SI_FbScissorLift_STO (AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1))
InPort: AndIn3	SI_FbPalletConveyor_STO (EL1918, 8 digital inputs_1.FSIN Module 5.Input (TwinSafeGroup1))
InPort: AndIn4	SI_FbPotGrpValves_OFF (EL1918, 8 digital inputs_1.FSIN Module 6.Input (TwinSafeGroup1))
OutPort: AndOut	General_EStops.FBEstop_EStopsInfeedAndCleanroom.EDM1 (TwinSafeGroup1)

FBAnd5



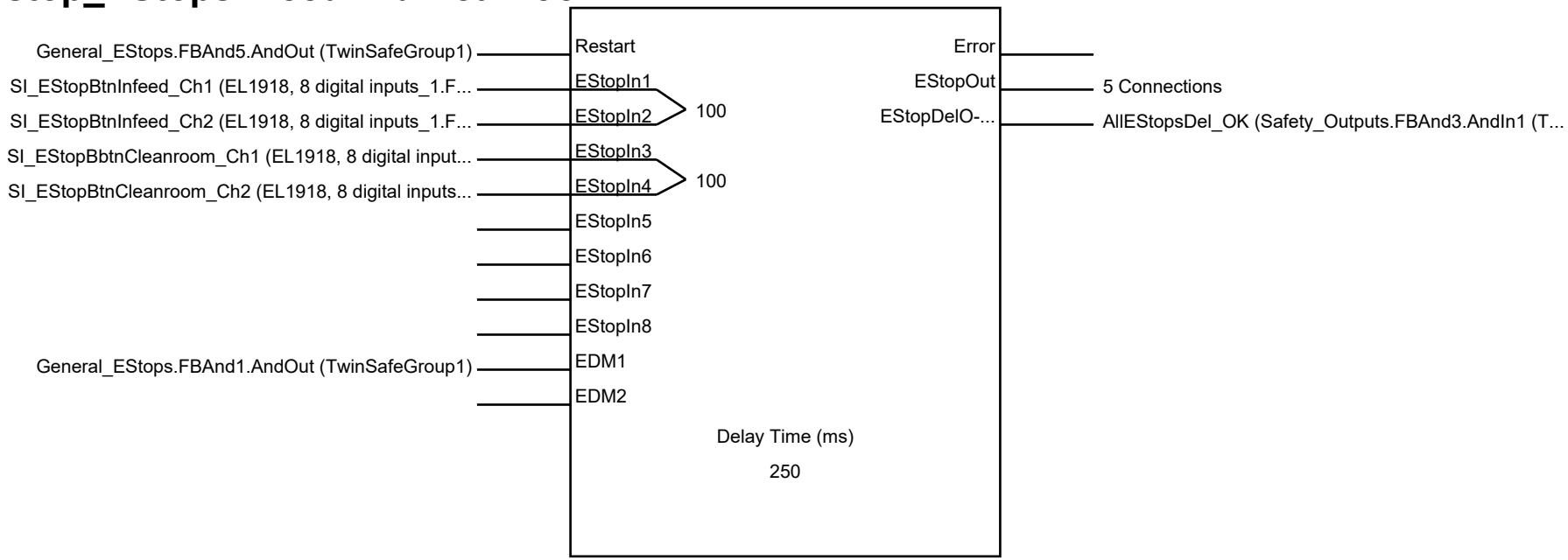
Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 2

FBAnd5

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	Restart (RestartSafety.In (TwinSafeGroup1))
InPort: AndIn2	SI_ScissorLift_Err (AX5805, Safety Process Data 1 axis.Axis 1 Error (TwinSafeGroup1))
OutPort: AndOut	General_EStops.FBEstop_EStopsInfeedAndCleanroom.Restart (TwinSafeGroup1)

FBEstop_EStopsInfeedAndCleanroom



Type: safeEstop
Map State: False
Map Diag: False
Order of Execution: 3

Safe Input After Disc Error: False
Delay Time (ms): 250

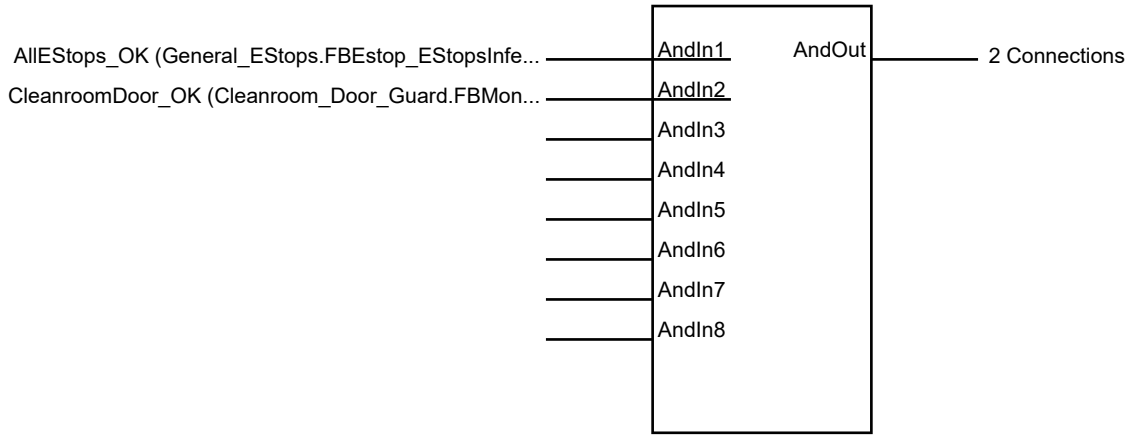
FBEstop_EStopsInfeedAndCleanroom

Type: safeEstop

FunctionBlockPort	Connection Name
InPort: Restart	General_EStops.FBAnd5.AndOut (TwinSafeGroup1)
InPort: EStopIn1	SI_EStopBtnInfeed_Ch1 (EL1918, 8 digital inputs_1.FSIN Module 1.Input (TwinSafeGroup1))
InPort: EStopIn2	SI_EStopBtnInfeed_Ch2 (EL1918, 8 digital inputs_1.FSIN Module 2.Input (TwinSafeGroup1))
InPort: EStopIn3	SI_EStopBbtnCleanroom_Ch1 (EL1918, 8 digital inputs_1.FSIN Module 3.Input (TwinSafeGroup1))
InPort: EStopIn4	SI_EStopBtnCleanroom_Ch2 (EL1918, 8 digital inputs_1.FSIN Module 4.Input (TwinSafeGroup1))
InPort: EDM1	General_EStops.FBAnd1.AndOut (TwinSafeGroup1)
OutPort: EStopOut	AllEStops_OK (SafetyOK.Out (TwinSafeGroup1)) AllEStops_OK (Safety_Outputs.FBDecouple1.DecIn1 (TwinSafeGroup1)) AllEStops_OK (Safety_Outputs.FBDecouple1.DecIn2 (TwinSafeGroup1)) AllEStops_OK (Safety_Outputs.FBAnd4.AndIn1 (TwinSafeGroup1)) AllEStops_OK (General_Monitoring.FBEdm4.Mon1 (TwinSafeGroup1))
OutPort: EStopDelOut	AllEStopsDel_OK (Safety_Outputs.FBAnd3.AndIn1 (TwinSafeGroup1))

Network: Safety_Outputs

FBAnd4



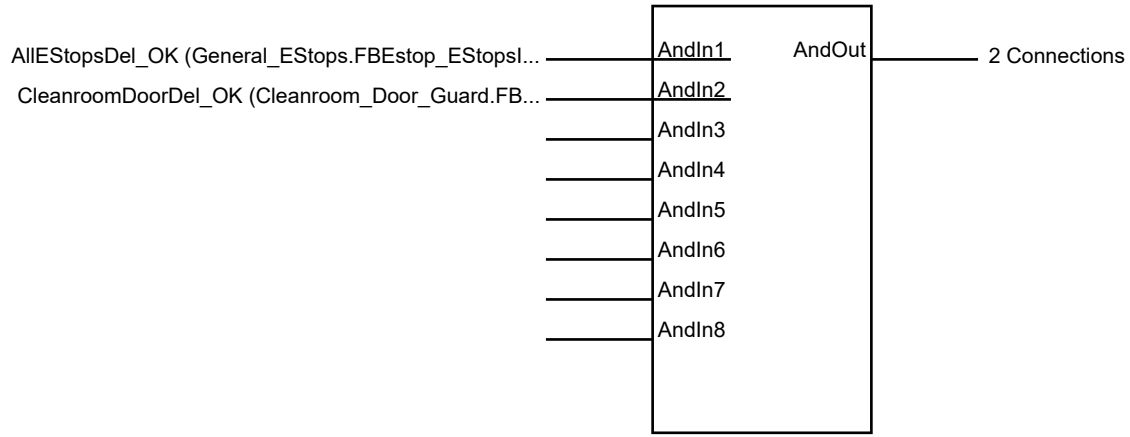
Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 6

FBAnd4

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	AllEStops_OK (General_EStops.FBEstop_EStopsInfeedAndCleanroom.EStopOut (TwinSafeGroup1))
InPort: AndIn2	CleanroomDoor_OK (Cleanroom_Door_Guard.FBMon2.MonOut (TwinSafeGroup1))
OutPort: AndOut	Safety_Outputs.FBDecouple1.DecIn3 (TwinSafeGroup1) Safety_Outputs.FBDecouple1.DecIn4 (TwinSafeGroup1)

FBAnd3



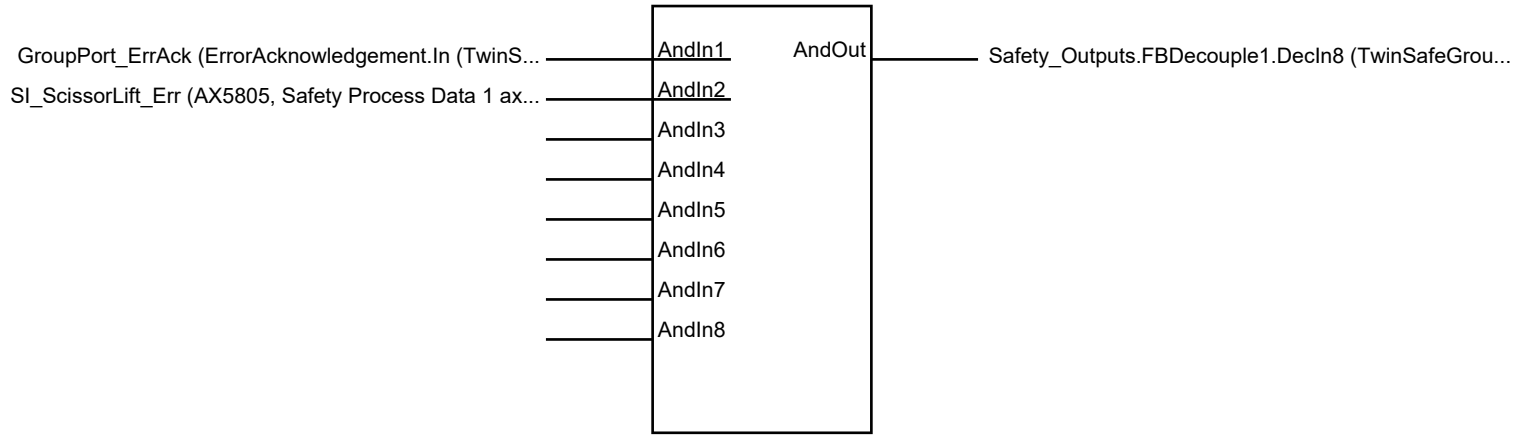
Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 7

FBAnd3

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	AllEStopsDel_OK (General_EStops.FBEstop_EStopsInfeedAndCleanroom.EStopDelOut (TwinSafeGroup1))
InPort: AndIn2	CleanroomDoorDel_OK (Cleanroom_Door_Guard.FBMon2.MonDelOut (TwinSafeGroup1))
OutPort: AndOut	Safety_Outputs.FBDecouple1.DecIn5 (TwinSafeGroup1) Safety_Outputs.FBDecouple1.DecIn6 (TwinSafeGroup1)

FBAnd2



Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 8

Date	2025-07-04	BECKHOFF	FBAnd2	
Editor	p.schippers			
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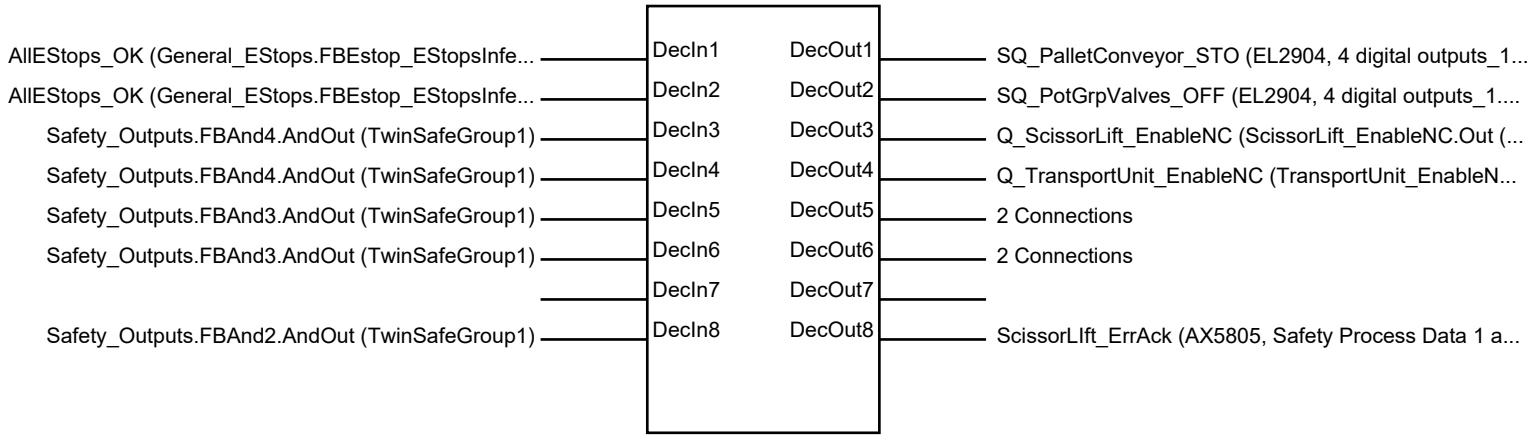
FBAnd2

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	GroupPort_ErrAck (ErrorAcknowledgement.In (TwinSafeGroup1))
InPort: AndIn2	SI_ScissorLift_Err (AX5805, Safety Process Data 1 axis.Axis 1 Error (TwinSafeGroup1))
OutPort: AndOut	Safety_Outputs.FBDecouple1.DecIn8 (TwinSafeGroup1)

FBDecouple1



Type: safeDecouple
Map State: False
Map Diag: False
Order of Execution: 9

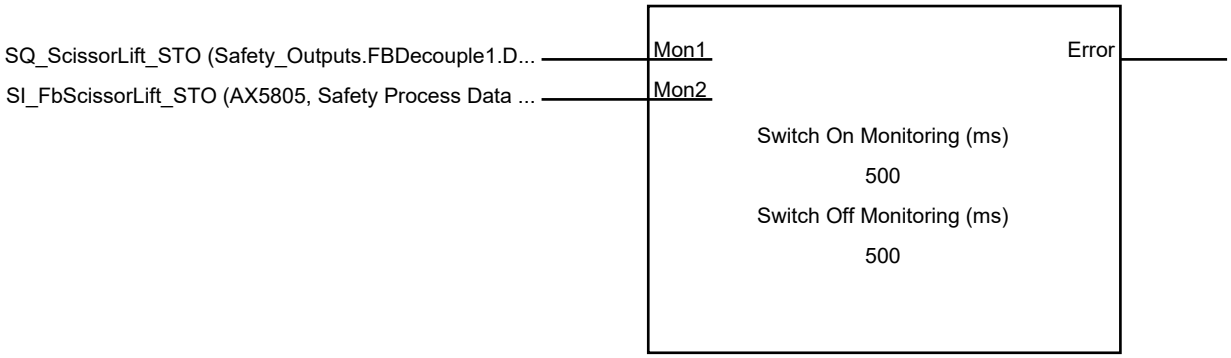
FBDecouple1

Type: safeDecouple

FunctionBlockPort	Connection Name
InPort: DecIn1	AllEStops_OK (General_EStops.FBEstop_EStopsInfeedAndCleanroom.EStopOut (TwinSafeGroup1))
InPort: DecIn2	AllEStops_OK (General_EStops.FBEstop_EStopsInfeedAndCleanroom.EStopOut (TwinSafeGroup1))
InPort: DecIn3	Safety_Outputs.FBAnd4.AndOut (TwinSafeGroup1)
InPort: DecIn4	Safety_Outputs.FBAnd4.AndOut (TwinSafeGroup1)
InPort: DecIn5	Safety_Outputs.FBAnd3.AndOut (TwinSafeGroup1)
InPort: DecIn6	Safety_Outputs.FBAnd3.AndOut (TwinSafeGroup1)
InPort: DecIn8	Safety_Outputs.FBAnd2.AndOut (TwinSafeGroup1)
OutPort: DecOut1	SQ_PalletConveyor_STO (EL2904, 4 digital outputs_1.OutputChannel1 (TwinSafeGroup1))
OutPort: DecOut2	SQ_PotGrpValves_OFF (EL2904, 4 digital outputs_1.OutputChannel2 (TwinSafeGroup1))
OutPort: DecOut3	Q_ScissorLift_EnableNC (ScissorLift_EnableNC.Out (TwinSafeGroup1))
OutPort: DecOut4	Q_TransportUnit_EnableNC (TransportUnit_EnableNC.Out (TwinSafeGroup1))
OutPort: DecOut5	SQ_ScissorLift_STO (AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1)) SQ_ScissorLift_STO (Axis_ScissorLift_Monitoring.FBEdm3.Mon1 (TwinSafeGroup1))
OutPort: DecOut6	SQ_TransportUnit_STO (EL2904, 4 digital outputs_1.OutputChannel3 (TwinSafeGroup1)) SQ_TransportUnit_STO (Axis_TransportUnit_Monitoring.FBEdm2.Mon1 (TwinSafeGroup1))
OutPort: DecOut8	ScissorLIft_ErrAck (AX5805, Safety Process Data 1 axis.Axis 1 Error_Ack (TwinSafeGroup1))

Network: Axis_ScissorLift_Monitoring

FBEdm3



Type: safeEdm
Map State: False
Map Diag: False
Order of Execution: 12

Switch On Monitoring (ms): 500
Switch Off Monitoring (ms): 500

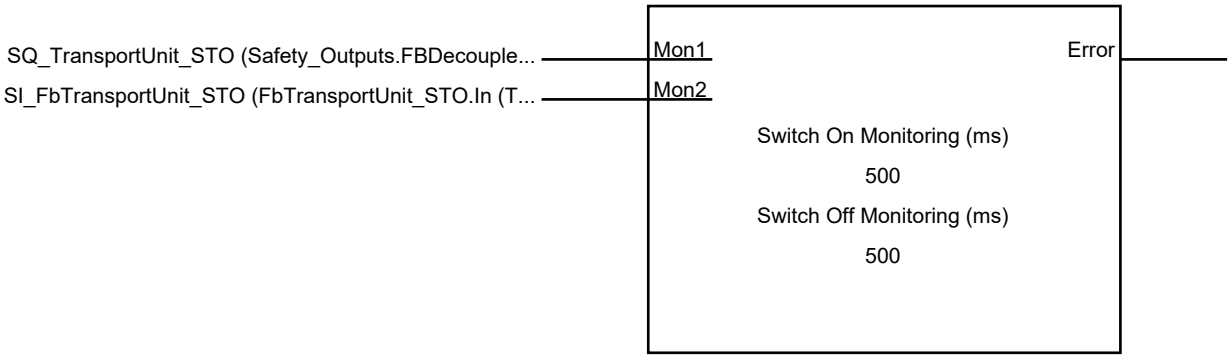
FBEdm3

Type: safeEdm

FunctionBlockPort	Connection Name
InPort: Mon1	SQ_ScissorLift_STO (Safety_Outputs.FBDecouple1.DecOut5 (TwinSafeGroup1))
InPort: Mon2	SI_FbScissorLift_STO (AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1))

Network: Axis_TransportUnit_Monitoring

FBEdm2



Type: safeEdm
Map State: False
Map Diag: False
Order of Execution: 13

Switch On Monitoring (ms): 500
Switch Off Monitoring (ms): 500

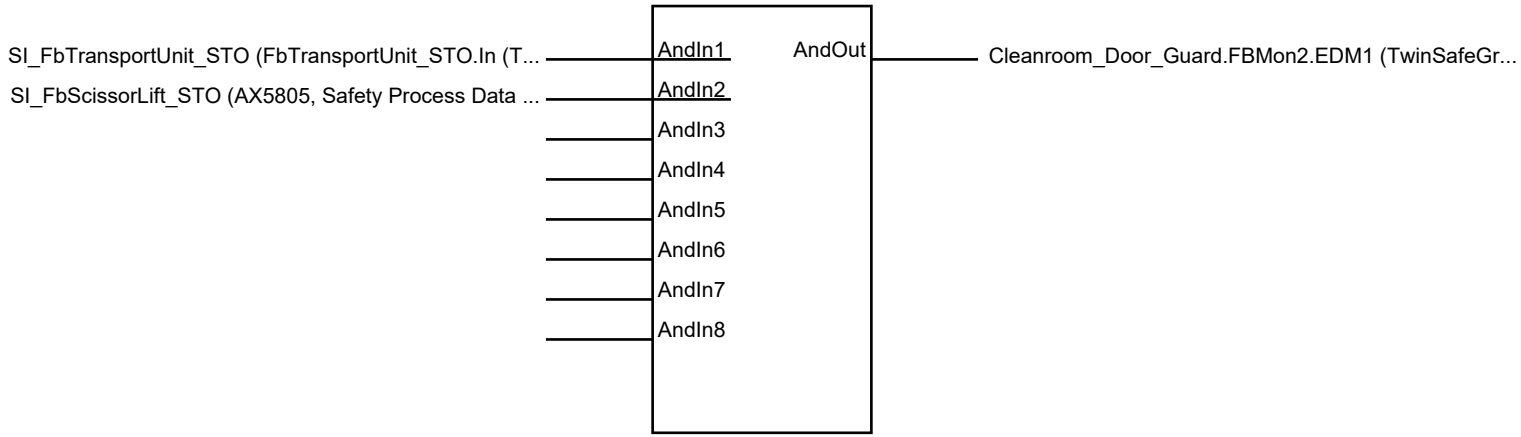
FBEdm2

Type: safeEdm

FunctionBlockPort	Connection Name
InPort: Mon1	SQ_TransportUnit_STO (Safety_Outputs.FBDecouple1.DecOut6 (TwinSafeGroup1))
InPort: Mon2	SI_FbTransportUnit_STO (FbTransportUnit_STO.In (TwinSafeGroup1))

Network: Cleanroom_Door_Guard

FBAnd7



Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 4

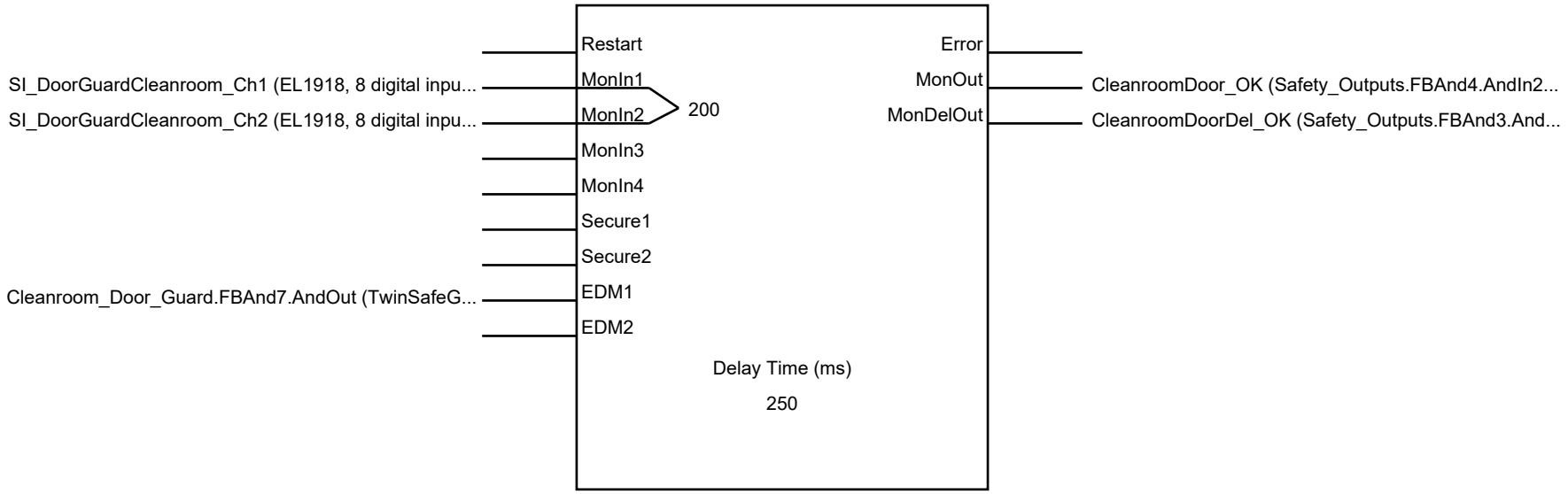
Date	2025-07-04	BECKHOFF	FBAnd7	
Editor	p.schippers			
Plot	2025-07-04	Beckhoff Automation GmbH & Co. KG	TwinSAFE Group: TwinSafeGroup1; Network: Cleanroom_Door_Guard	Page: 60

FBAnd7

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	SI_FbTransportUnit_STO (FbTransportUnit_STO.In (TwinSafeGroup1))
InPort: AndIn2	SI_FbScissorLift_STO (AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1))
OutPort: AndOut	Cleanroom_Door_Guard.FBMon2.EDM1 (TwinSafeGroup1)

FBMon2



Type: safeMon
Map State: False
Map Diag: False
Order of Execution: 5

Manual Function Test: False
Safe Input After Disc Error: False
Delay Time (ms): 250

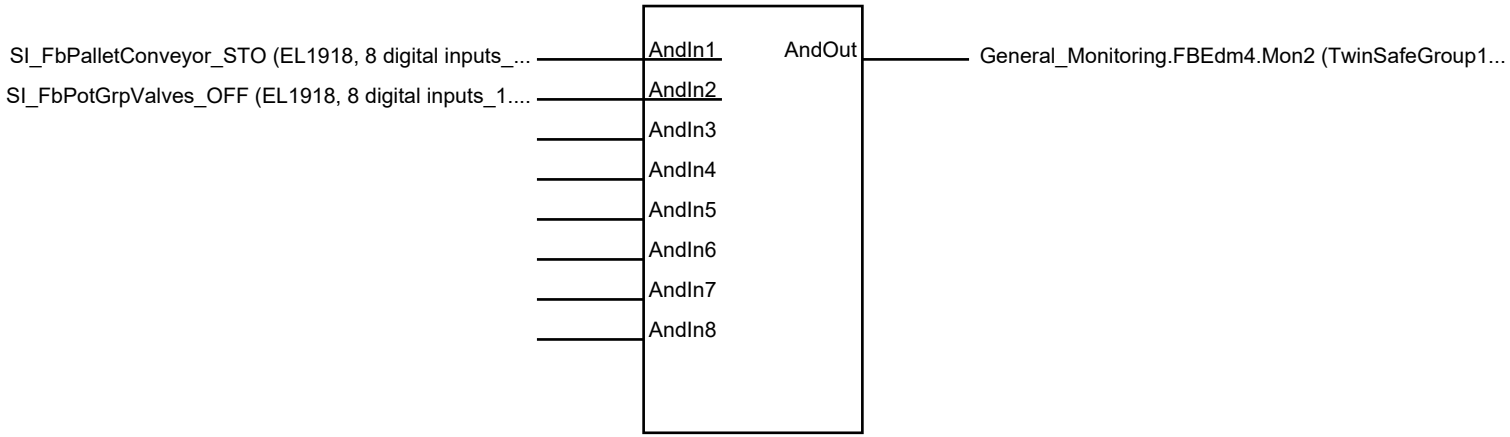
FBMon2

Type: safeMon

FunctionBlockPort	Connection Name
InPort: MonIn1	SI_DoorGuardCleanroom_Ch1 (EL1918, 8 digital inputs_1.FSIN Module 7.Input (TwinSafeGroup1))
InPort: MonIn2	SI_DoorGuardCleanroom_Ch2 (EL1918, 8 digital inputs_1.FSIN Module 8.Input (TwinSafeGroup1))
InPort: EDM1	Cleanroom_Door_Guard.FBAnd7.AndOut (TwinSafeGroup1)
OutPort: MonOut	CleanroomDoor_OK (Safety_Outputs.FBAnd4.AndIn2 (TwinSafeGroup1))
OutPort: MonDelOut	CleanroomDoorDel_OK (Safety_Outputs.FBAnd3.AndIn2 (TwinSafeGroup1))

Network: General_Monitoring

FBAnd6



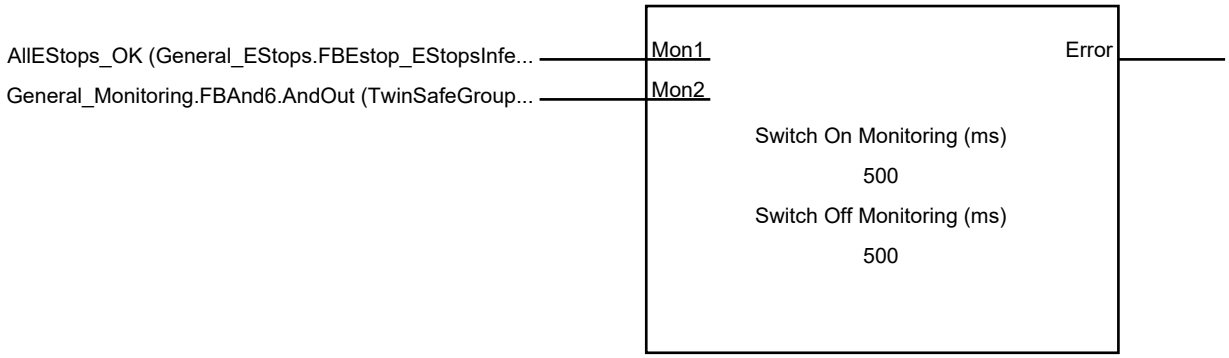
Type: safeAnd
Map State: False
Map Diag: False
Order of Execution: 10

FBAnd6

Type: safeAnd

FunctionBlockPort	Connection Name
InPort: AndIn1	SI_FbPalletConveyor_STO (EL1918, 8 digital inputs_1.FSIN Module 5.Input (TwinSafeGroup1))
InPort: AndIn2	SI_FbPotGrpValves_OFF (EL1918, 8 digital inputs_1.FSIN Module 6.Input (TwinSafeGroup1))
OutPort: AndOut	General_Monitoring.FBEdm4.Mon2 (TwinSafeGroup1)

FBEdm4



Type: safeEdm
Map State: False
Map Diag: False
Order of Execution: 11

Switch On Monitoring (ms): 500
Switch Off Monitoring (ms): 500

FBEdm4

Type: safeEdm

FunctionBlockPort	Connection Name
InPort: Mon1	AllEStops_OK (General_EStops.FBEstop_EStopsInfeedAndCleanroom.EStopOut (TwinSafeGroup1))
InPort: Mon2	General_Monitoring.FBAnd6.AndOut (TwinSafeGroup1)

Reference Links Table: TwinSafeGroup1

Variable	Assignment	Usages
GroupPort_ErrAck (Local Variable)	ErrorAcknowledgement.In (TwinSafeGroup1)	TwinSafeGroup1.Err Ack TwinSafeGroup1.Safety_Outputs.FBAnd2.AndIn1
GroupPort_RunStop (Local Variable)	Run.In (TwinSafeGroup1)	TwinSafeGroup1.Run/Stop
Restart (Local Variable)	RestartSafety.In (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBAnd5.AndIn1
SI_EStopBtnInfeed_Ch1 (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 1.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn1
SI_EStopBtnInfeed_Ch2 (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 2.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn2
SI_EStopBbtnCleanroom_Ch1 (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 3.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn3
SI_EStopBtnCleanroom_Ch2 (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 4.Input (TwinSafeGroup1)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopIn4
AllEStops_OK (Local Variable)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopOut	SafetyOK.Out (TwinSafeGroup1) TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn1 TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn2 TwinSafeGroup1.Safety_Outputs.FBAnd4.AndIn1 TwinSafeGroup1.General_Monitoring.FBEdm4.Mon1
SI_FbPotGrpValves_OFF (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 6.Input (TwinSafeGroup1)	TwinSafeGroup1.General_Monitoring.FBAnd6.AndIn2 TwinSafeGroup1.General_EStops.FBAnd1.AndIn4

Reference Links Table: TwinSafeGroup1

Variable	Assignment	Usages
SI_FbPalletConveyor_STO (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 5.Input (TwinSafeGroup1)	TwinSafeGroup1.General_Monitoring.FBAnd6.AndIn1 TwinSafeGroup1.General_EStops.FBAnd1.AndIn3
SQ_PotGrpValves_OFF (Local Variable)	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut2	EL2904, 4 digital outputs_1.OutputChannel2 (TwinSafeGroup1)
SQ_PalletConveyor_STO (Local Variable)	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut1	EL2904, 4 digital outputs_1.OutputChannel1 (TwinSafeGroup1)
SQ_ScissorLift_STO (Local Variable)	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut5	TwinSafeGroup1.Axis_ScissorLift_Monitoring.FBEdm3.Mon1 AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1)
SQ_TransportUnit_STO (Local Variable)	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut6	EL2904, 4 digital outputs_1.OutputChannel3 (TwinSafeGroup1) TwinSafeGroup1.Axis_TransportUnit_Monitoring.FBEdm2.Mo-n1
ScissorLIft_ErrAck (Local Variable)	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut8	AX5805, Safety Process Data 1 axis.Axis 1 Error_Ack (TwinSafeGroup1)
FB_Err (Local Variable)	TwinSafeGroup1.FB Err	FB_Err.Out (TwinSafeGroup1)
Q_ScissorLift_EnableNC (Local Variable)	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut3	ScissorLift_EnableNC.Out (TwinSafeGroup1)
Q_TransportUnit_EnableNC (Local	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecOut4	TransportUnit_EnableNC.Out (TwinSafeGroup1)

Reference Links Table: TwinSafeGroup1

Variable	Assignment	Usages
Variable)		
AllEStopsDel_OK (Local Variable)	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EStopDelOut	TwinSafeGroup1.Safety_Outputs.FBAnd3.AndIn1
SI_DoorGuardCleanroom_Ch1 (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 7.Input (TwinSafeGroup1)	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonIn1
SI_DoorGuardCleanroom_Ch2 (Local Variable)	EL1918, 8 digital inputs_1.FSIN Module 8.Input (TwinSafeGroup1)	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonIn2
CleanroomDoor_OK (Local Variable)	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonOut	TwinSafeGroup1.Safety_Outputs.FBAnd4.AndIn2
CleanroomDoorDel_OK (Local Variable)	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.MonDelO-ut	TwinSafeGroup1.Safety_Outputs.FBAnd3.AndIn2
SI_FbTransportUnit_STO (Local Variable)	FbTransportUnit_STO.In (TwinSafeGroup1)	TwinSafeGroup1.Axis_TransportUnit_Monitoring.FBEdm2.Mo-n2 TwinSafeGroup1.General_EStops.FBAnd1.AndIn1 TwinSafeGroup1.Cleanroom_Door_Guard.FBAnd7.AndIn1
SI_FbScissorLift_STO (Local Variable)	AX5805, Safety Process Data 1 axis.Axis 1 STO (TwinSafeGroup1)	TwinSafeGroup1.Axis_ScissorLift_Monitoring.FBEdm3.Mon2 TwinSafeGroup1.General_EStops.FBAnd1.AndIn2 TwinSafeGroup1.Cleanroom_Door_Guard.FBAnd7.AndIn2
SI_ScissorLift_Err (Local Variable)	AX5805, Safety Process Data 1 axis.Axis 1 Error (TwinSafeGroup1)	TwinSafeGroup1.Safety_Outputs.FBAnd2.AndIn2 TwinSafeGroup1.General_EStops.FBAnd5.AndIn2

Reference Links Table: TwinSafeGroup1

Variable	Assignment	Usages
Wired Link	TwinSafeGroup1.General_EStops.FBAnd5.AndOut	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.Restart
Wired Link	TwinSafeGroup1.General_EStops.FBAnd1.AndOut	TwinSafeGroup1.General_EStops.FBEstop_EStopsInfeedAnd-Cleanroom.EDM1
Wired Link	TwinSafeGroup1.Safety_Outputs.FBAnd4.AndOut	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn3
Wired Link	TwinSafeGroup1.Safety_Outputs.FBAnd4.AndOut	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn4
Wired Link	TwinSafeGroup1.Safety_Outputs.FBAnd3.AndOut	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn5
Wired Link	TwinSafeGroup1.Safety_Outputs.FBAnd3.AndOut	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn6
Wired Link	TwinSafeGroup1.Safety_Outputs.FBAnd2.AndOut	TwinSafeGroup1.Safety_Outputs.FBDecouple1.DecIn8
Wired Link	TwinSafeGroup1.Cleanroom_Door_Guard.FBAnd7.AndOut	TwinSafeGroup1.Cleanroom_Door_Guard.FBMon2.EDM1
Wired Link	TwinSafeGroup1.General_Monitoring.FBAnd6.AndOut	TwinSafeGroup1.General_Monitoring.FBEdm4.Mon2

Comment: TwinSafeGroup1

Component	Comment/Notes
FB:FBEstop_EStopsInfeedAndCleanroo-m	EStop groups Infeed and Cleanroom