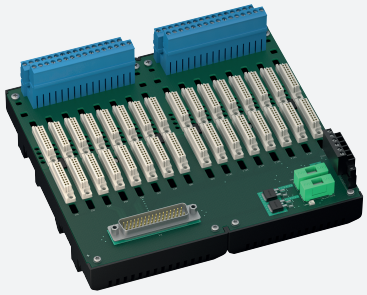


Termination Board

HiCTB16-TRX-RAC-PL-IO16

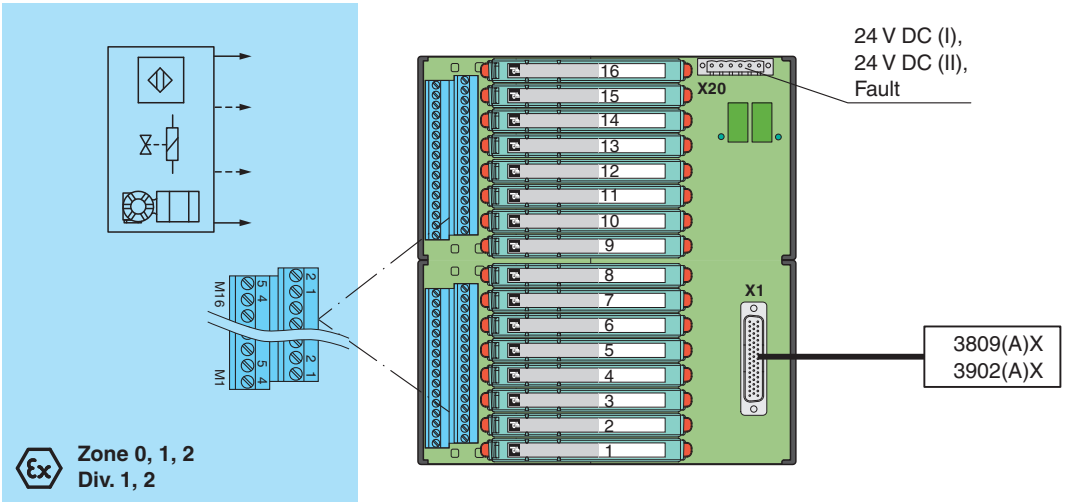
- System board for Schneider Electric, Tricon CX series by Triconex
- TAN48 approval
- For 16-channel universal I/O card 3902(A)X and AO card 3809(A)X
- For 16 modules
- Supported signal types: DI/DO/AI/TI/AO/UIO
- 24 V DC supply
- Hazardous area: pluggable screw terminals, blue
- Non-hazardous area: Sub-D connector (male), 50-pin
- Up to SIL 3 acc. to IEC/EN 61508

SIL 3

Function

The function of the termination board and the system connector pin assignment is exactly fitted to the requirements of the Triconex Tricon CX system.
The signal is output to the safety instrumented system via the system connector.
Information about missing supply voltage of the isolated barriers is available for the system at the volt-free transistor output.
Wiring faults from the field side will be reported via the volt-free transistor output, if this function is supported by the isolators.
The termination board has a robust glass fiber reinforced plastic housing.
The termination board is mounted in the switch cabinet on a 35 mm DIN mounting rail according to EN 60175.

Connection



Technical Data

Functional safety related parameters		
Safety Integrity Level (SIL)		SIL 3
Systematic capability (SC)		SC 3
Supply		
Connection		X20: terminals 3, 5(+); 4, 6(-)
Nominal voltage		24 V DC , in consideration of rated voltage of used isolators
Voltage drop		0.9 V , voltage drop across the series diode on the termination board must be considered
Ripple		≤ 10 %
Fusing		4 A , in each case for 16 modules

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Technical Data

Power dissipation		≤ 500 mW , without modules
Reverse polarity protection		yes
Redundancy		
Supply		Redundancy available. The supply for the isolators is decoupled, monitored and fused.
Fault indication output		
Connection		X20: terminals 1(+), 2(-)
Output type		volt-free transistor output , not short-circuit protected , not overload protected
Rated voltage	U_r	30 V DC
Rated current	I_r	100 mA
Signal level		no fault: (external voltage) - 1 V max. for 100 mA (T_{amb} = 25 °C (77 °F)) power supply fault/module fault: blocked output (off-state current ≤ 10 µA)
Indicators/settings		
Display elements		LED PWR1 (termination board power supply), green LED LED PWR2 (termination board power supply), green LED
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		EN IEC 61326-3-2:2018 , NE 21:2017 For further information see system description.
Degree of protection		IEC 60529:2001
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		
Field side		explosion hazardous area: pluggable screw terminals , blue
Control side		non-explosion hazardous area: 50-pin Sub-D connector
Supply		pluggable screw terminals , black
Fault output		pluggable screw terminals , black
Core cross section		screw terminals 0.25 ... 2.5 mm² (24 ... 12 AWG)
Material		housing: polycarbonate, 10 % glass fiber reinforced
Mass		approx. 745 g
Dimensions		216 x 200 x 163 mm (8.5 x 7.9 x 6.42 inch) (W x H x D) , depth including module assembly
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
EU-type examination certificate		CESI 06 ATEX 022
Marking		⟨Ex⟩ II (1)G [Ex ia Ga] IIC ⟨Ex⟩ II (1)D [Ex ia Da] IIIC ⟨Ex⟩ I (M1) [Ex ia Ma] I
Non-hazardous area		
Maximum safe voltage		250 V (Attention! U_m is no rated voltage.)
Galvanic isolation		
Field circuit/control circuit		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 50303:2000
International approvals		
UL approval		E106378
Control drawing		116-0327
IECEx approval		
IECEx certificate		IECEx CES 06.0003
IECEx marking		[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I

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PEPPERL+FUCHS

Technical Data

General information		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

Accessories

	**H-CJC-Pt100**	Resistance thermometer for cold junction compensation for H-System termination boards
	**HiALC-HiCTB-SET-108**	Label carrier for HiC termination boards

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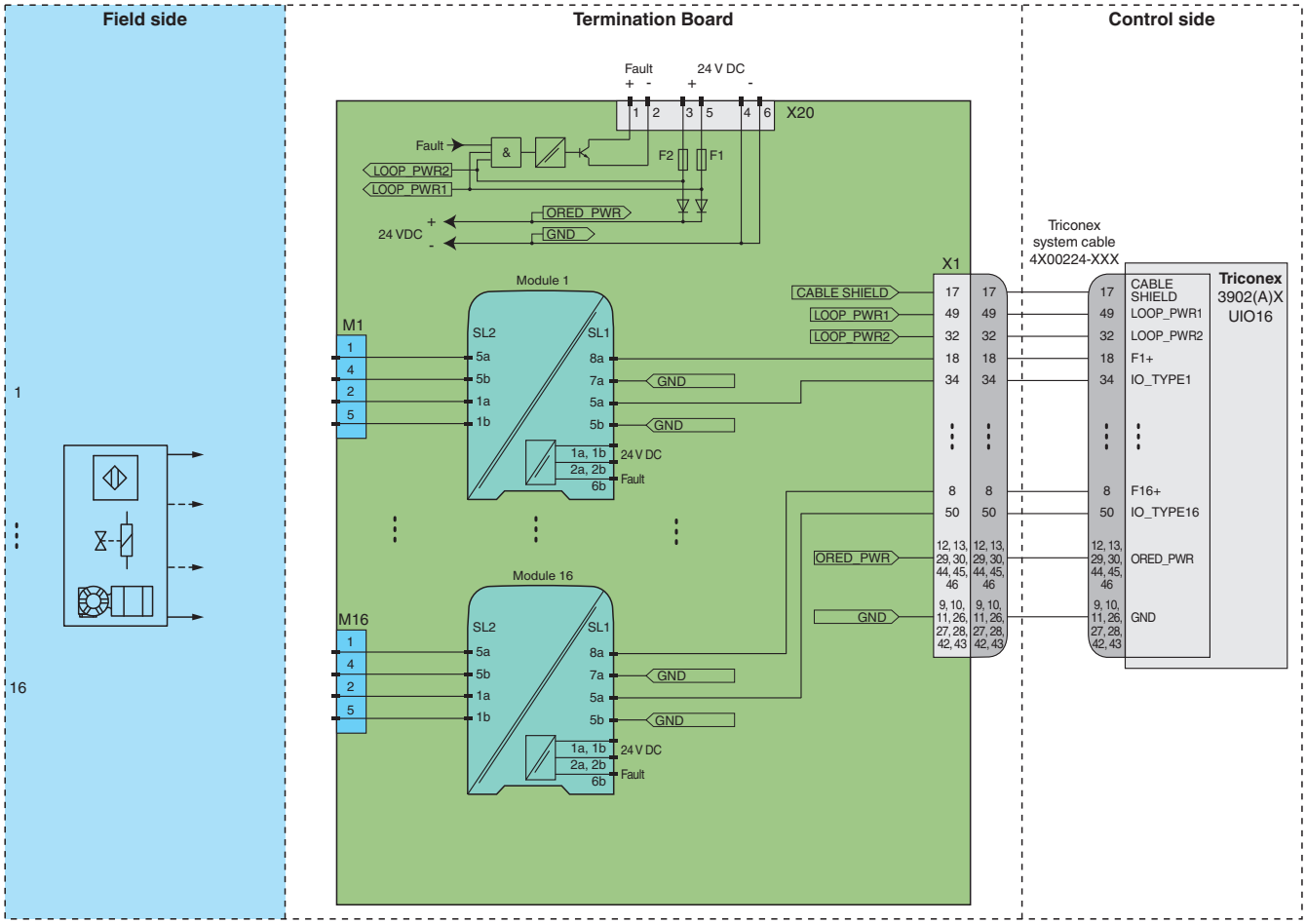
Application

Typical circuit for 16-channel universal I/O card 3902(A)X



Module switch settings

Type (DI)	DIP switch	Position
HiC2821, HiC2841 • Mode of operation: open – energized close – de-energized • Input line fault detection: enabled	S1	I
	S2	I
	S3	no function
	S4	no function
HiC2831R4 • Mode of operation: inverted • Input line fault detection: enabled	S1	I
	S2	I
	S3	no function
	S4	no function
HiC2853R4	not available	

Type (DO)	DIP switch	Position
HiC2883 • Line fault detection enabled	S1	I
	S2	freely selectable
	S3	freely selectable
	S4	no function
HiC2871A, HiC5861, HiC5863	not available	
HiC2873 • Loop powered • Control input: without function • Line fault detection disabled • Filter enabled	S1	OFF
	S2	ON
	S3	ON
	S4	ON
	S5	OFF
	S6	ON
	S7	OFF
	S8	OFF

Type (AI)	DIP switch	Position
HiC2025, HiC2025A HiC2025ES, HiC2025Y1 (source 4 mA ... 20 mA)	S1	OFF
	S2	OFF
	S3	ON
	S4	OFF

Type (AO)	
HiC2031, HiC2031ES	not available

Type (TI)	DIP switch	Position
HiC2081 (source)	S1	I

Type (UIO)	
HiC2441	not available

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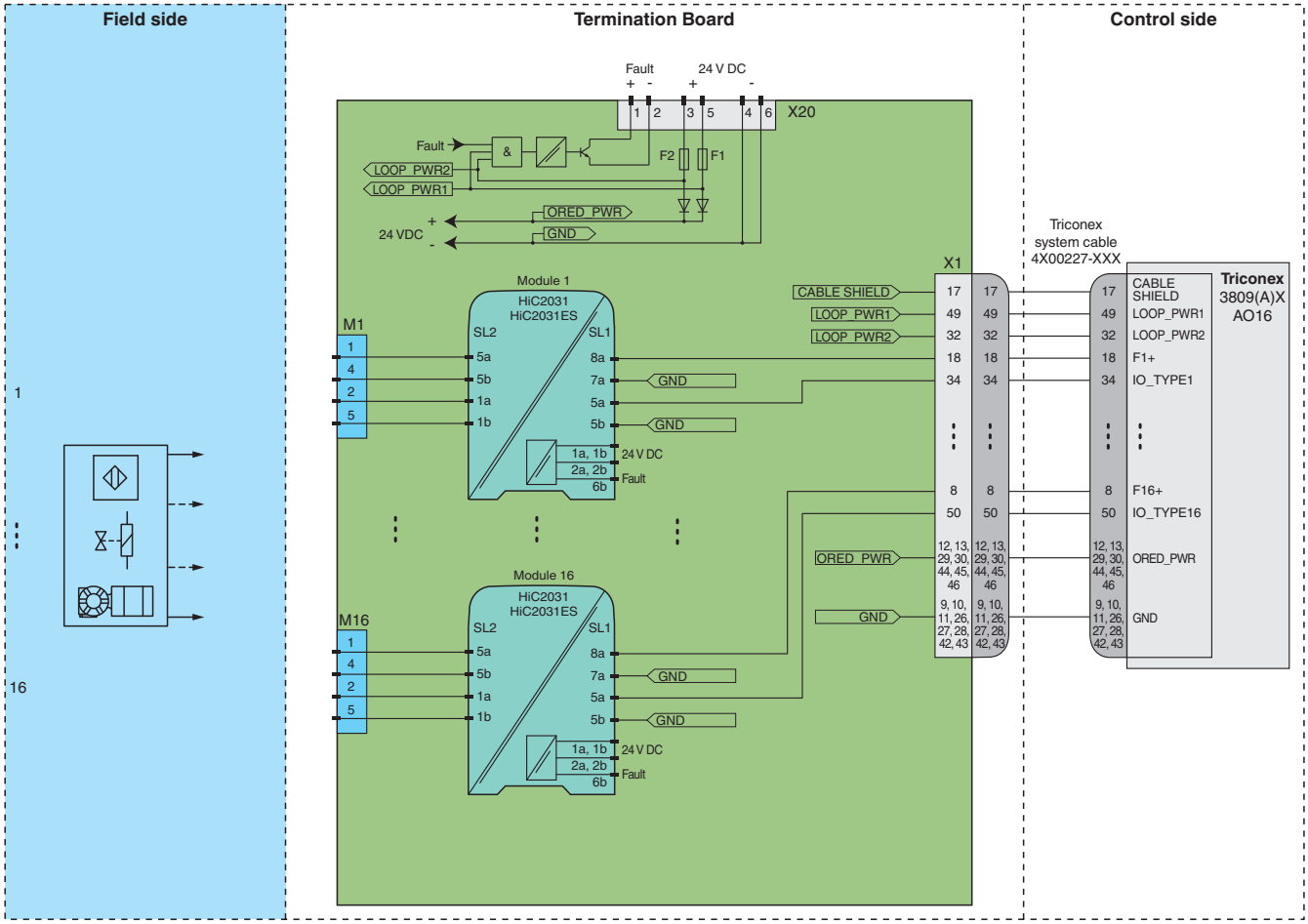
Typical circuit for 16-channel AO card 3809(A)X



Module switch settings

Type (AO)	
HiC2031, HiC2031ES	not available

For exact pin assignment for field side and control side see the documentation of the isolated barrier.

The pin-out configuration has to be observed. For information see corresponding pin-out table on www.pepperl-fuchs.com.

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