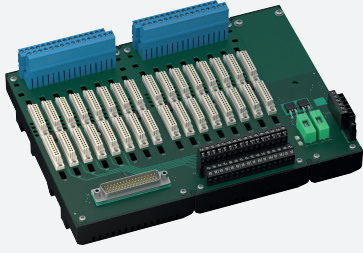


# Termination Board

## HiCTB16-TRX-RAS-PL-IO16



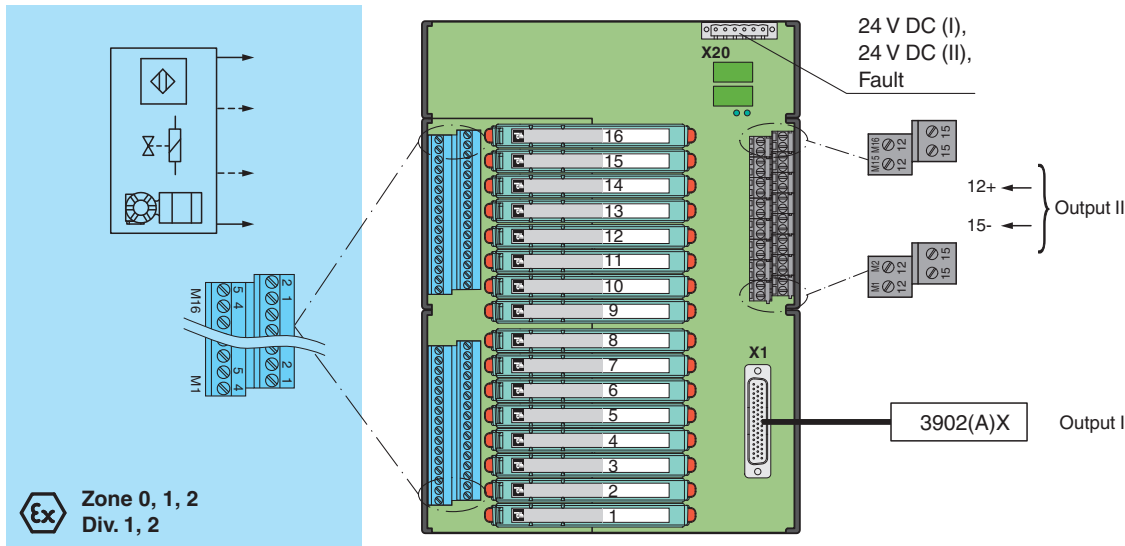
- System board for Schneider Electric, Tricon CX series by Triconex
- For 16-channel universal I/O card 3902(A)X
- For 16 modules
- Recommended modules: HiC2027 (AI), HiC2027ES (AI), HiC2821 (DI), HiC2831R4 (DI), HiC2841 (DI), HiC2853R4 (DI)
- 24 V DC supply
- Hazardous area: pluggable screw terminals, blue
- Non-hazardous area: screw terminals, black
- Non-hazardous area: Sub-D connector (male), 50-pin
- Up to SIL 3 acc. to IEC/EN 61508



### 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 and additionally via screw terminals (signal splitter function). 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

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## Technical Data


Ripple		≤ 10 %
Fusing		4 A , in each case for 16 modules
Power dissipation		≤ 500 mW , without modules
Reverse polarity protection		yes
<b>Redundancy</b>		
Supply		Redundancy available. The supply for the isolators is decoupled, monitored and fused.
<b>Fault indication output</b>		
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 ( $T_{amb} = 25\text{ °C}$ (77 °F)) power supply fault/module fault: blocked output (off-state current ≤ 10 μA)
<b>Indicators/settings</b>		
Display elements		LED PWR1 (termination board power supply), green LED LED PWR2 (termination board power supply), green LED
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
<b>Conformity</b>		
Electromagnetic compatibility		EN IEC 61326-3-2:2018 , NE 21:2017 For further information see system description.
Degree of protection		IEC 60529:2001
<b>Ambient conditions</b>		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Storage temperature		-40 ... 85 °C (-40 ... 185 °F)
<b>Mechanical specifications</b>		
Degree of protection		IP20
Connection		
Field side		explosion hazardous area: pluggable screw terminals , blue
Control side		non-explosion hazardous area: output I: 50-pin Sub-D connector output II: screw terminals , black
Supply		pluggable screw terminals , black
Fault output		pluggable screw terminals , black
Core cross section		screw terminals 0.25 ... 2.5 mm <sup>2</sup> (24 ... 12 AWG)
Material		housing: polycarbonate, 10 % glass fiber reinforced
Mass		approx. 935 g
Dimensions		266 x 200 x 163 mm (10.5 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
<b>Data for application in connection with hazardous areas</b>		
EU-type examination certificate		CESI 06 ATEX 022
Marking		⊕ II (1)G [Ex ia Ga] IIC ⊕ II (1)D [Ex ia Da] IIIC ⊕ 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
<b>International approvals</b>		
UL approval		E106378
Control drawing		116-0327
IECEx approval		

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## Technical Data

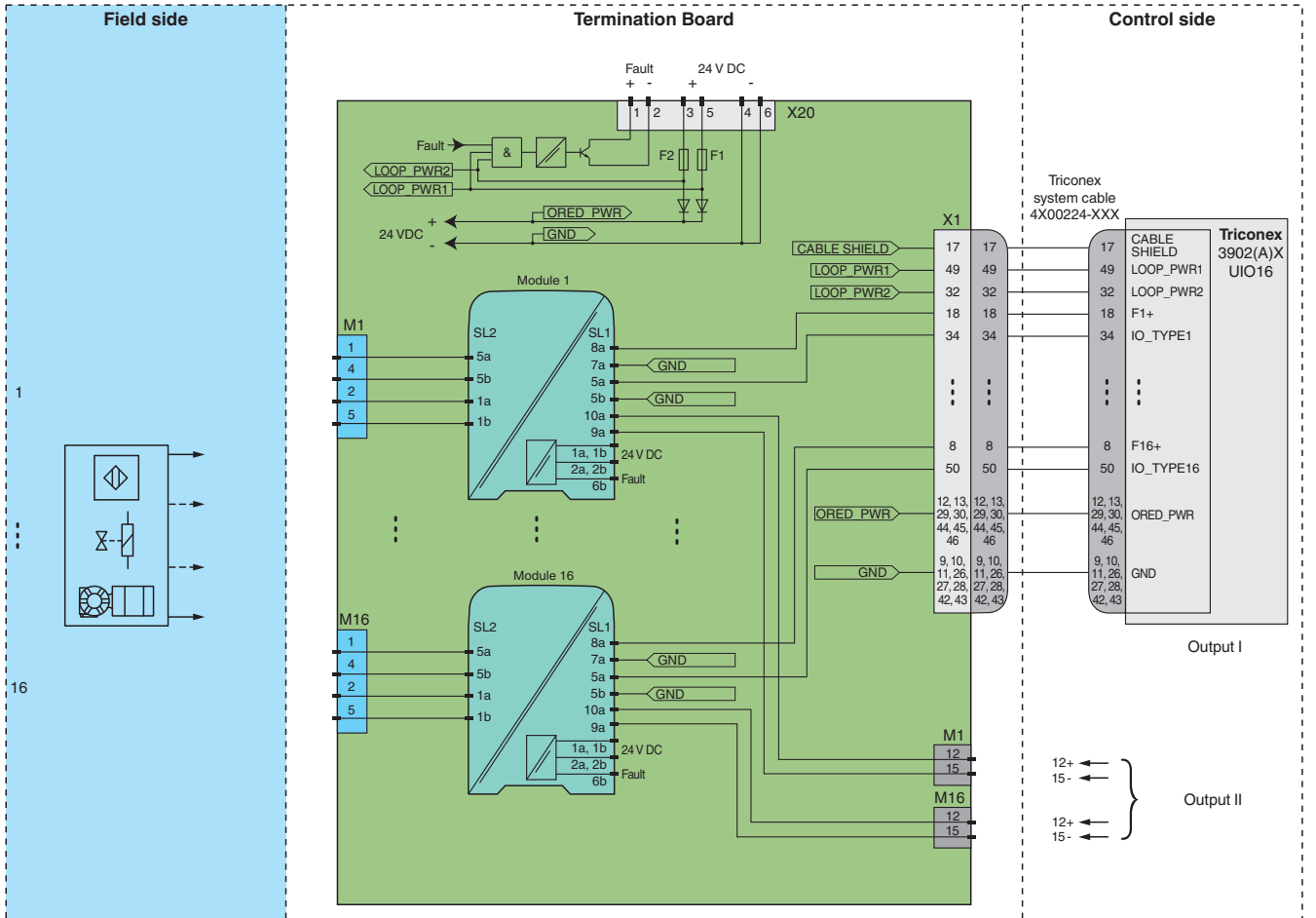
IECEX certificate	IECEX CES 06.0003
IECEX marking	[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

## Accessories

	<b>HIALC-HICTB-SET-108</b>	Label carrier for HiC termination boards
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**Application**

**Typical circuit**



**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	freely selectable
	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 (AI)	DIP switch	Position
HiC2027, HiC2027ES Channel I: current source output	S1	I
	S2	I
	S3	freely selectable
	S4	freely selectable



For HiC2027, HiC2027ES:  
Both output loads must be connected to ensure a complete and correct operation within the technical specification.



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](http://www.pepperl-fuchs.com).

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