

# Termination Board

## HiCTB16-TRI-DIIS-EL-PL



- System board for Schneider Electric, Tricon series by Triconex
- TAN48 approval
- For 32-channel (16+16) DI card 3503E
- For 16 modules
- Recommended module: HiC2821 (DI)
- 24 V DC supply
- Line fault detection (LFD)
- Hazardous area: pluggable screw terminals, blue
- Non-hazardous area: ELCO socket, 56-pin



### Function

The function of the termination board and the connector pinout is exactly fitted to the requirements of Triconex system. The termination board has a fault bus (Fault) that is available at the redundant terminals. Power supply faults and module faults are indicated via this fault bus. The fault signals of several termination boards can be connected together and can be monitored by an optional fault indication board. The fault signals are then available to the control system as a volt-free contact. In addition, the termination board has a fault indication output (LFD), which will be used to indicate module faults as a volt-free contact. These fault signals can also be output via this fault indication output without a separate fault indication board. This assumes that the termination board is fully equipped and the isolators are configured for this function. The termination board is supplied with a robust plastic housing. This design permits the fast and reliable installation on 35 mm DIN mounting rail according to EN 60715 in the switch cabinet.

### Application

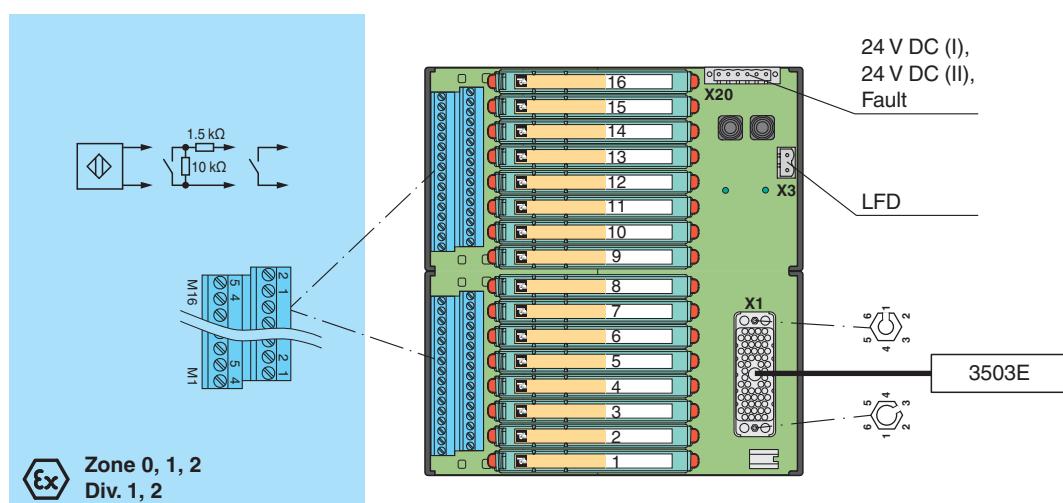
Triconex card Tricon:

- Termination board 1 and cable 1: channel 1 to 16
- Termination board 2 and cable 2: channel 17 to 32

Line fault detection

- A line fault detection via the X20 fault bus (Fault) and the separate HiATB01-FAULT-01 fault indication board is always possible, regardless of whether the termination board is partially or fully equipped.
- A line fault detection via the X3 fault indication output (LFD) of the termination board is only possible if the termination board is fully equipped with isolators.

### Connection



### Technical Data

#### Supply

## Technical Data

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
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	fault bus (Fault) : X20: terminals 1, 2 fault indication output (LFD) : X3: terminals 1, 2
Output type	volt-free contact
Switch behaviour	fault bus (Fault) - no fault: relay contact of the fault indication board closed - power supply fault: relay contact of the fault indication board open - module fault: relay contact of the fault indication board open fault indication output (LFD) - no fault: relay contact closed - module fault: relay contact open
Contact loading	fault bus (Fault) : 30 V DC , 1 A , see fault indication board fault indication output (LFD) : see datasheet of isolated barrier
<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	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 ... 70 °C (-40 ... 158 °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: ELCO socket, 56-pin
Supply	pluggable screw terminals , black
Fault output	pluggable screw terminals , black
Core cross section	screw terminals: 0.2 ... 2.5 mm <sup>2</sup> (24 ... 12 AWG)
Material	housing: polycarbonate, 10 % glass fiber reinforced
Mass	approx. 785 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
<b>Data for application in connection with hazardous areas</b>	
EU-type examination certificate	CESI 06 ATEX 022
Marking	Ex II (1)G [Ex ia Ga] IIC Ex II (1)D [Ex ia Da] IIC Ex I (M1) [Ex ia Ma] I
Non-hazardous area	
Maximum safe voltage	250 V (Attention! U <sub>m</sub> is no rated voltage.)
Galvanic isolation	
Field circuit/control circuit	safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V

## Technical Data

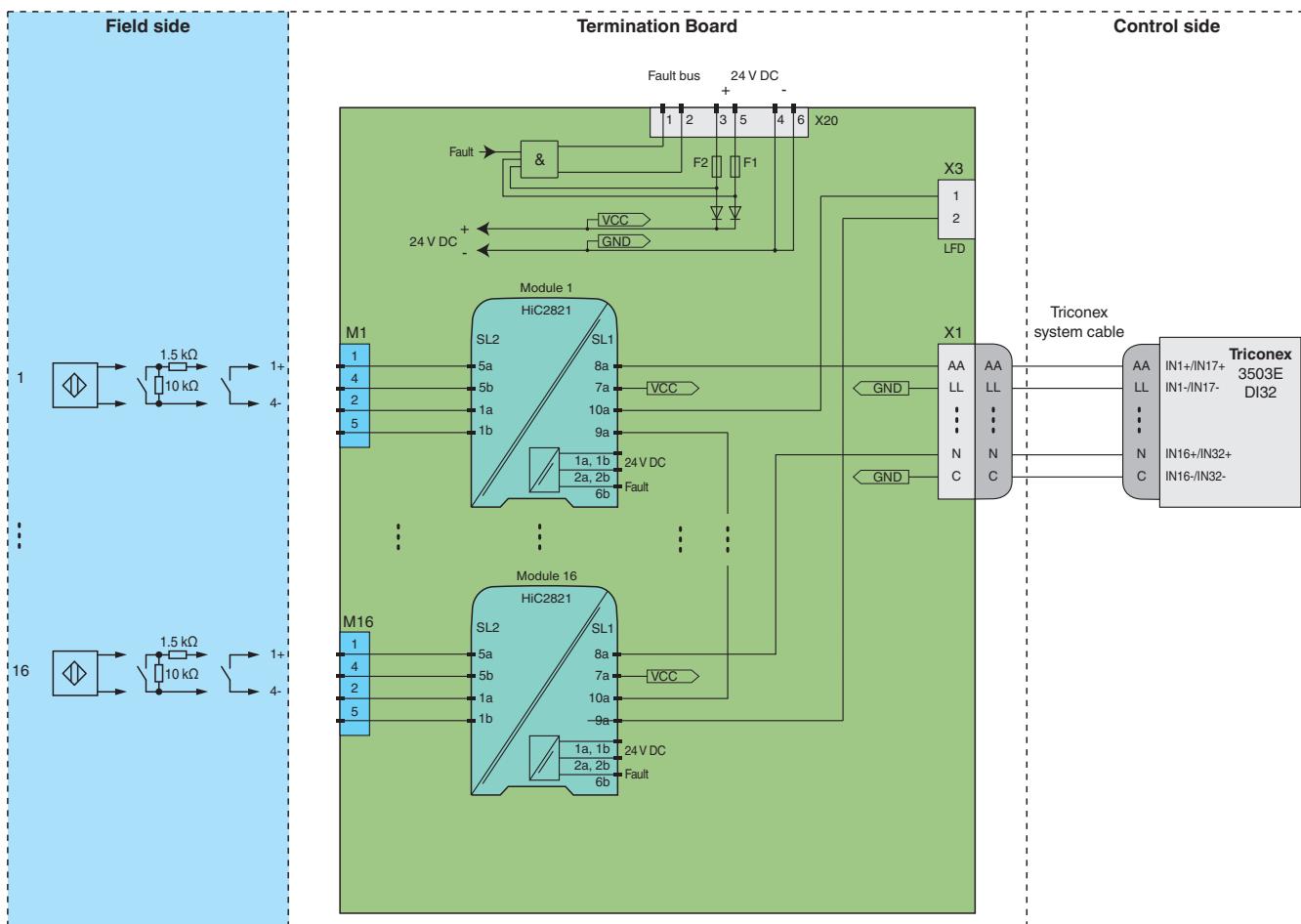
Directive conformity	
Directive 2014/34/EU	EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 50303:2000
<b>International approvals</b>	
UL approval	E106378
Control drawing	116-0327
<b>IECEx approval</b>	
IECEx certificate	IECEx CES 06.0003
IECEx marking	[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I
<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



If you want to use line fault detection (LFD), configure the modules as described in the following table. Note that all modules on the termination board must have the same configuration settings.

Type (DI)	DIP switch	Position
HiC2821	S1	II
• Mode of operation: close – energized open – de-energized	S2	I
• Second output: as fault	S3	II
• Input line fault detection: enabled	S4	no function



For exact pin assignment for connection to 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).