

Termination Board

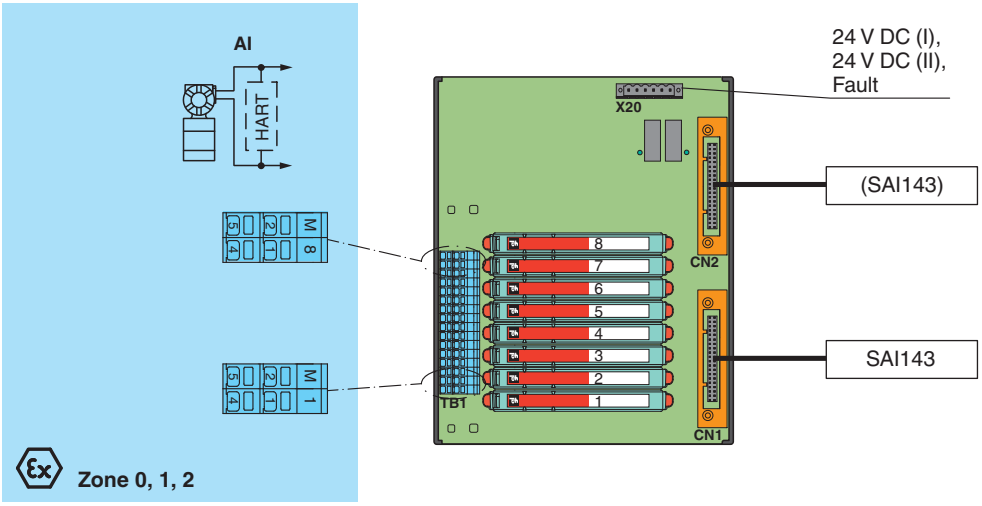
HiCTB08-YRS-RRB-KS-CC-AI16

- System board for Yokogawa ProSafe-RS
- For 16-channel AI card SAI143
- For 8 modules
- Recommended module: HiC2422 (AI/AO)
- 24 V DC supply
- Hazardous area: spring terminals, blue
- Non-hazardous area: Yokogawa system connector, 40-pin

Function

The function of the termination board and the connector pin assignment is exactly fitted to the requirements of the Yokogawa ProSafe-RS 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.
The termination board has a robust 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

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		2 A , in each case for 8 modules
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		

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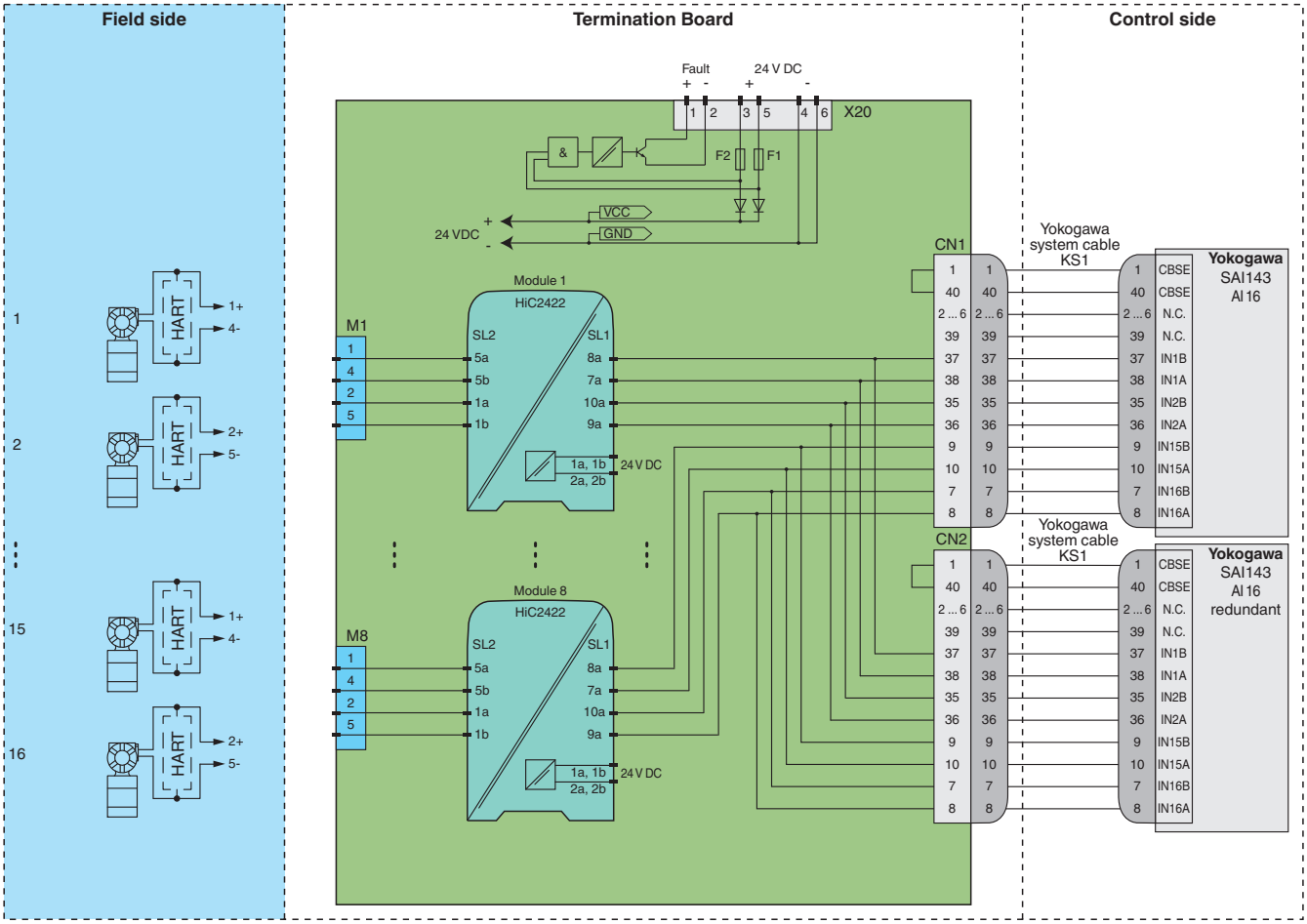
Technical Data

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: 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		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 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		
Field side		explosion hazardous area: spring terminals , blue
Control side		non-explosion hazardous area: Yokogawa system connector, 40-pin
Supply		pluggable screw terminals , black
Fault output		pluggable screw terminals , black
Core cross section		spring terminals: rigid: 0.2 ... 2.5 mm² flexible: 0.25 ... 1.5 mm²
Material		housing: polycarbonate
Mass		approx. 480 g
Dimensions		205 x 175 x 153 mm (8.1 x 6.9 x 6.02 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		
IECEx approval		
IECEx certificate		IECEx CES 06.0003
IECEx marking		[Ex ia Ga] IIC [Ex ia Da] IIIC [Ex ia Ma] I
General information		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com.

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Application

Typical circuit



Module switch settings

Type (AI/AO)	DIP switch	Position
HiC2422 (analog input current source)	S1	I
	S2	II
	S3	I
	S4	II

Card switch settings

Type (AI)	Function
SAI143 (sink)	4-wire

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.

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