

- System board for Yokogawa ProSafe-RS
- For 16-channel DI card SDV144
- For 16 modules
- Recommended modules: HiC2831R1 (DI), HiC2853R1 (DI)
- 24 V DC supply
- Hazardous area: spring terminals, blue
- Non-hazardous area: Yokogawa system connector, 50-pin



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 a missing supply voltage of the isolators is available for the system as a volt-free contact. 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.

Diagram of the rear panel of a 16-channel power supply unit. The panel features 16 DC output channels numbered 1 to 16, arranged in two columns of eight. Each channel has a red positive terminal and a black negative terminal. On the left, there are two terminal blocks labeled TB1 and TB2, each with 16 pins. On the right, there are two terminal blocks labeled CN1 and CN2, each with 16 pins. A label 'X20' is located at the top right. A label 'SDV144' is shown twice, connected to the CN1 and CN2 terminal blocks. A label 'Zone 0, 1, 2' is shown at the bottom left, connected to the TB1 and TB2 terminal blocks. A label '24 V DC (I), 24 V DC (II), Fault' is shown at the top right, connected to the X20 terminal block.


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
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		

Technical Data

Connection	X20: terminals 1, 2
Output type	volt-free contact
Switch behaviour	no fault: relay contact closed power supply fault: relay contact open
Contact loading	30 V DC , 1 A
Indicators/settings	
Display elements	LEDs PWR ON (Termination Board power supply) - LED power supply I, green LED - LED power supply II, green LED LED FAULT (fault indication), red LED - LED flashes: power supply fault
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, 50-pin
Supply	pluggable screw terminals , black
Fault output	pluggable screw terminals , black
Core cross section	spring terminals: rigid: 0.2 ... 2.5 mm ² flexible: 0.25 ... 1.5 mm ²
Material	housing: polycarbonate
Mass	approx. 625 g
Dimensions	240 x 175 x 153 mm (9.45 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	⊕ 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
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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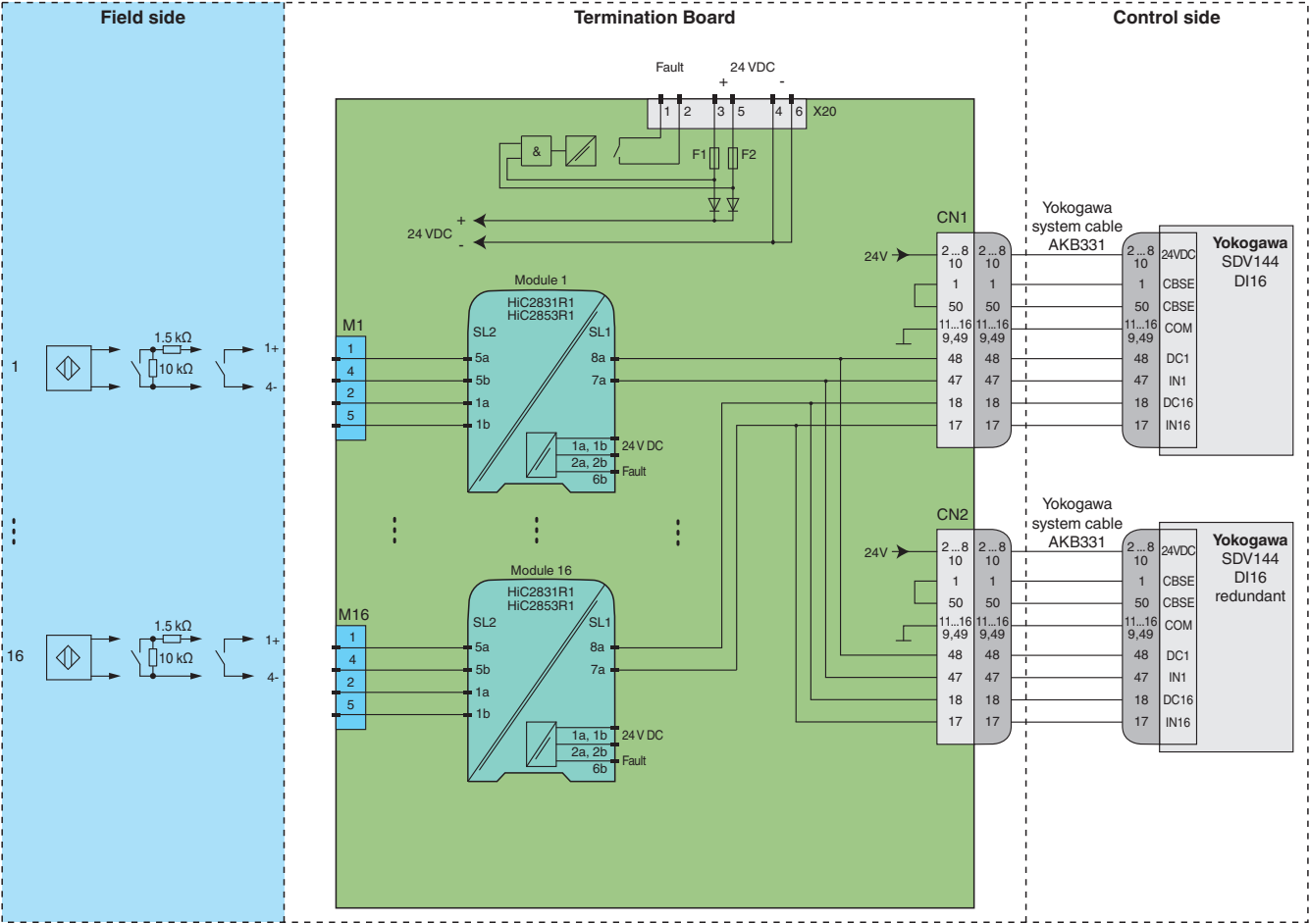
Accessories

	HiALC-HICTB-SET-108	Label carrier for HiC termination boards
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Application

Typical circuit



Module switch settings

Type (DI)	DIP switch	Position
HiC2831R1 • Input line fault detection: enabled	S1	freely selectable
	S2	I
	S3	no function
	S4	no function
HiC2853R1	not available	



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.