

# Termination Board

## HiCTB08-YRS-RRB-AK-CC-DI16

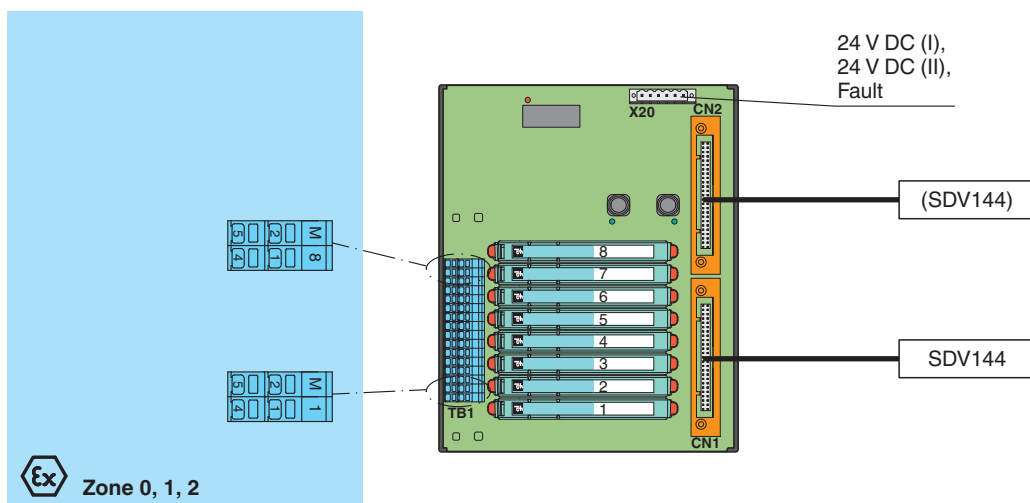
- System board for Yokogawa ProSafe-RS
- For 16-channel DI card SDV144
- For 8 modules
- Recommended module: HiC2832R1 (DI)
- 24 V DC supply
- Hazardous area: spring terminals, blue
- Non-hazardous area: Yokogawa system connector, 50-pin



### 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 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.

### 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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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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## Technical Data

|                                                                |                                                                                                                                                                                                   |
|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Connection                                                     | X20: terminals 1, 2                                                                                                                                                                               |
| Output type                                                    | volt-free contact                                                                                                                                                                                 |
| Switch behaviour                                               | no fault: relay contact closed<br>power supply fault: relay contact open                                                                                                                          |
| Contact loading                                                | 30 V DC , 1 A                                                                                                                                                                                     |
| <b>Indicators/settings</b>                                     |                                                                                                                                                                                                   |
| Display elements                                               | LEDs PWR ON (Termination Board power supply)<br>- LED power supply I, green LED<br>- LED power supply II, green LED<br>LED FAULT (fault indication), red LED<br>- LED flashes: power supply fault |
| <b>Directive conformity</b>                                    |                                                                                                                                                                                                   |
| Electromagnetic compatibility                                  |                                                                                                                                                                                                   |
| Directive 2014/30/EU                                           | EN 61326-1:2013 (industrial locations)                                                                                                                                                            |
| <b>Conformity</b>                                              |                                                                                                                                                                                                   |
| Electromagnetic compatibility                                  | NE 21:2017<br>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: 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:<br>rigid: 0.2 ... 2.5 mm <sup>2</sup><br>flexible: 0.25 ... 1.5 mm <sup>2</sup>                                                                                                 |
| 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                                                                                                                                                  |
| <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<br>⊕ II (1)D [Ex ia Da] IIIC<br>⊕ I (M1) [Ex ia Ma] I                                                                                                                    |
| <b>Non-hazardous area</b>                                      |                                                                                                                                                                                                   |
| 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                                                                                                                       |
| Directive conformity                                           |                                                                                                                                                                                                   |
| Directive 2014/34/EU                                           | EN IEC 60079-0:2018+AC:2020 , EN 60079-11:2012 , EN 50303:2000                                                                                                                                    |
| <b>International approvals</b>                                 |                                                                                                                                                                                                   |
| IECEx approval                                                 |                                                                                                                                                                                                   |
| IECEx certificate                                              | IECEx CES 06.0003                                                                                                                                                                                 |
| IECEx marking                                                  | [Ex ia Ga] IIC<br>[Ex ia Da] IIIC<br>[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> .   |

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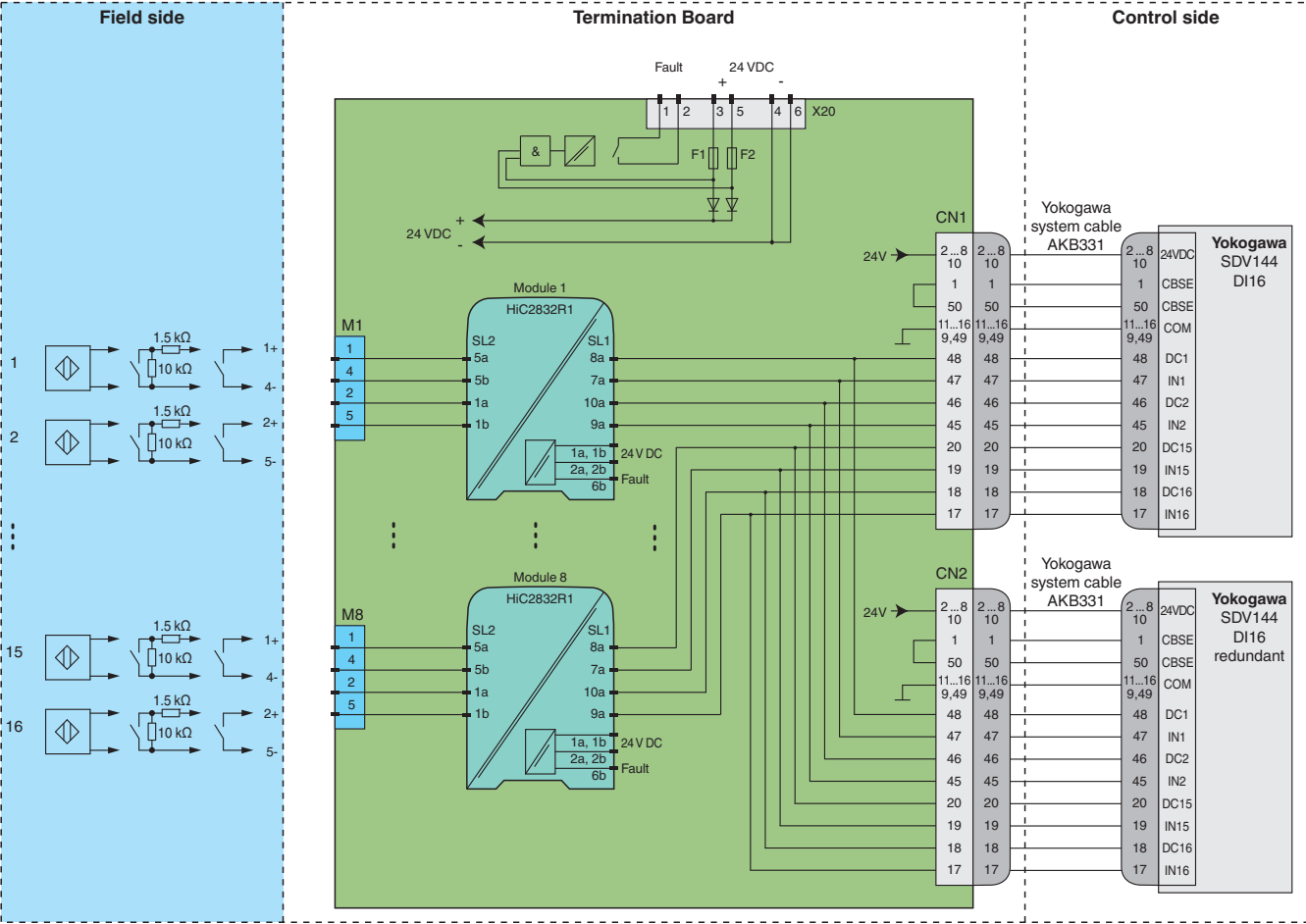
Accessories

|                                                                                   |                            |                                          |
|-----------------------------------------------------------------------------------|----------------------------|------------------------------------------|
|  | <b>HiALC-HIDTB-SET-150</b> | Label carrier for HiD termination boards |
|-----------------------------------------------------------------------------------|----------------------------|------------------------------------------|

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Application

Typical circuit



Module switch settings

| Type (DI)                                          | DIP switch | Position          |
|----------------------------------------------------|------------|-------------------|
| HiC2832R1<br>• Input line fault detection: enabled | S1         | freely selectable |
|                                                    | S2         | I                 |
|                                                    | S3         | freely selectable |
|                                                    | S4         | I                 |



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).