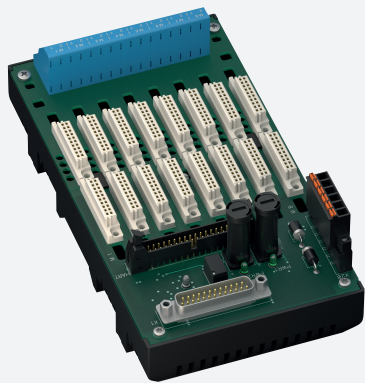




# Termination Board

## HiCTB08-FBM-RSC-SP-IO08-Y1

- System board for Schneider, Foxboro FBM series
- For 8 modules
- For 8-channel cards FBM201/214(b)/216(b) (AI), FBM215/218/237 (AO), FBM204/205 (AO/AI), FBM244 (AI/AO), FBM247/248 (UIO)
- 24 V DC supply
- Recommended modules: HiC2025(A) (AI), HiC2031 (AO), HiC2081 (TI), HiC2831R5 (DI), HiC2883 (DO), HiC2441 (UIO)
- Hazardous area: spring terminals, blue
- Non-hazardous area: Sub-D connector (male), 25-pin



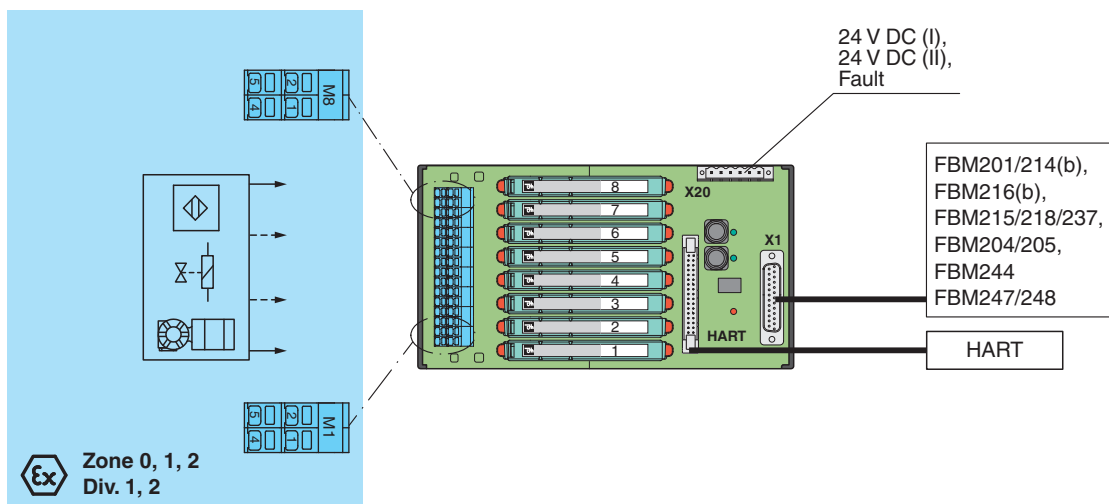
## Function

The function of the termination board and the connector pin assignment are exactly fitted to the requirements of the Foxboro FBM system. The signal is output to the process control system via the system connector. The connection to the separate HART Communication Board is realized via a HART connection cable. 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 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.

## Application

For detailed listing of connectable cards and recommended modules see application section.

## 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                                                               |

## Technical Data

|                                                                |                                                                                                                                                                                            |
|----------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 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 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                                               | LED PWR1 (termination board power supply), green LED<br>LED PWR2 (termination board power supply), 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: 4 spring terminals per module , blue                                                                                                                             |
| Control side                                                   | non-explosion hazardous area: Sub-D connector , 25-pin                                                                                                                                     |
| Supply                                                         | pluggable spring terminals , black                                                                                                                                                         |
| Fault output                                                   | pluggable spring terminals , black                                                                                                                                                         |
| Core cross section                                             | 0.25 ... 1.5 mm <sup>2</sup> (24 ... 16 AWG)                                                                                                                                               |
| Material                                                       | housing: polycarbonate, 10 % glass fiber reinforced                                                                                                                                        |
| Mass                                                           | approx. 355 g                                                                                                                                                                              |
| Dimensions                                                     | 108 x 200 x 163 mm (4.25 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<br>Ⓔ II (1)D [Ex ia Da] IIIC<br>Ⓔ 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                                                                                                                |
| 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                                                 |                                                                                                                                                                                            |
| 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>                                     |                                                                                                                                                                                            |

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## Technical Data

Supplementary information

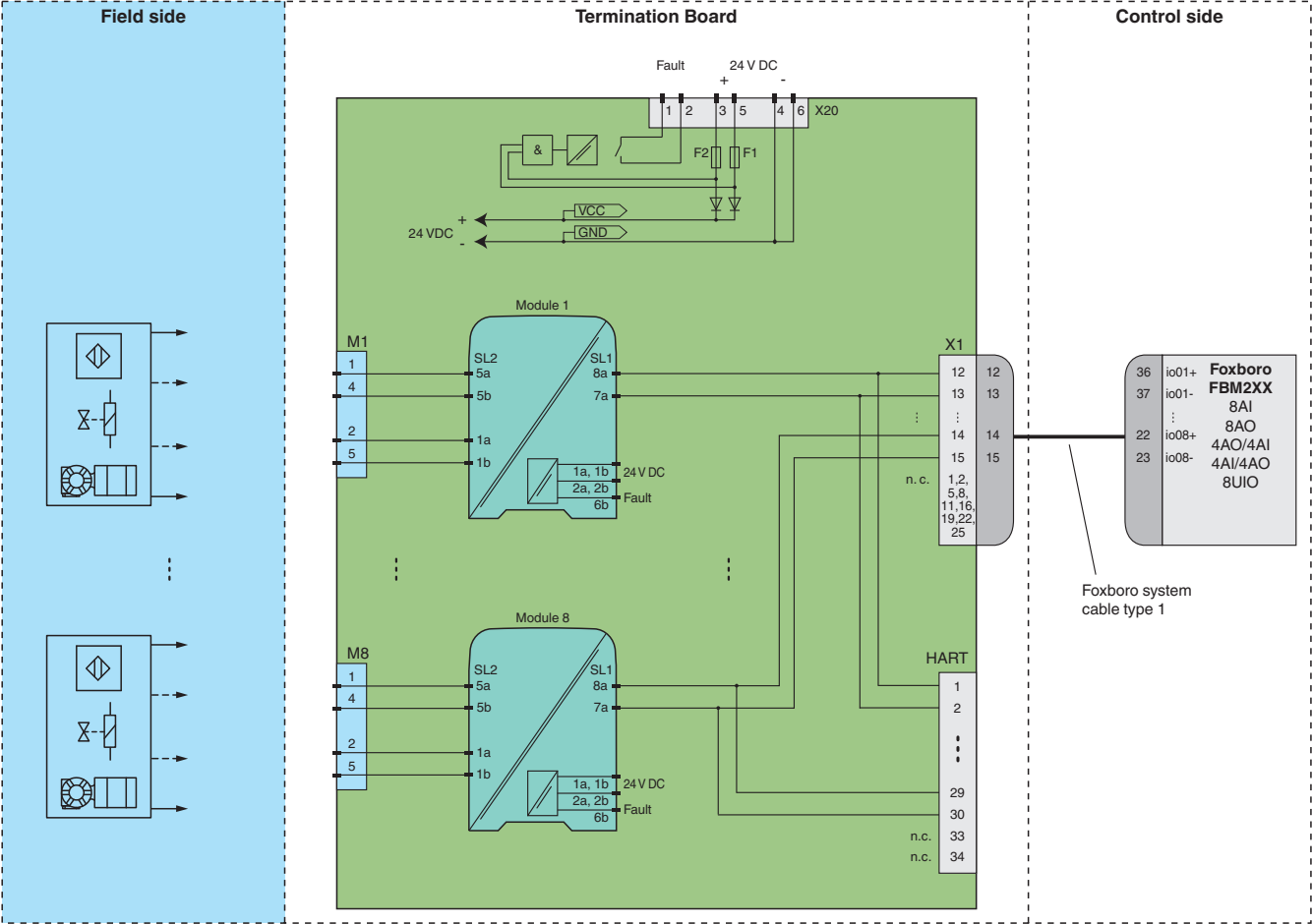
Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see [www.pepperl-fuchs.com](http://www.pepperl-fuchs.com).

## Accessories

|                                                                                     |                                  |                                                                                       |
|-------------------------------------------------------------------------------------|----------------------------------|---------------------------------------------------------------------------------------|
|    | <b>HiDMux2700</b>                | HART Multiplexer Master                                                               |
|    | <b>HiATB01-HART-4X8-Y1</b>       | HART Communication Board                                                              |
|    | <b>H-CJC-Pt100</b>               | Resistance thermometer for cold junction compensation for H-System termination boards |
|    | <b>HiACA-UNI-FLK34-FLK34-0M5</b> | HART Connection Cable, length: 0,5 m                                                  |
|    | <b>HiACA-UNI-FLK34-FLK34-1M0</b> | HART Connection Cable, length: 1 m                                                    |
|    | <b>HiACA-UNI-FLK34-FLK34-2M0</b> | HART Connection Cable, length: 2 m                                                    |
|   | <b>HiACA-UNI-FLK34-FLK34-3M0</b> | HART Connection Cable, length: 3 m                                                    |
|  | <b>HiACA-UNI-FLK34-FLK34-6M0</b> | HART Connection Cable, length: 6 m                                                    |
|  | <b>HiALC-HiCTB-SET-108</b>       | Label carrier for HiC termination boards                                              |

Application

Typical loop



 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).

Possible card/module combinations

| Card                                     | Signal  | Recommended modules                                                  |
|------------------------------------------|---------|----------------------------------------------------------------------|
| FBM201, FBM214, FBM214b, FBM216, FBM216b | 8AI     | HiC2025(A), HiC2081                                                  |
| FBM215, FBM218, FBM237                   | 8AO     | HiC2031                                                              |
| FBM204, FBM205                           | 4AO/4AI | HiC2031 (module 1 to module 4) and HiC2025(A) (module 5 to module 8) |
| FBM244                                   | 4AI/4AO | HiC2025(A) (module 1 to module 4) and HiC2031 (module 5 to module 8) |
| FBM247, FBM248                           | 8UIO    | HiC2441, HiC2081, HiC2831R5, HiC2883                                 |

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## Module switch settings

| Type (AI)                                            | DIP switch | Position |
|------------------------------------------------------|------------|----------|
| HiC2025, HiC2025A<br>(current source 4 mA ... 20 mA) | S1         | OFF      |
|                                                      | S2         | OFF      |
|                                                      | S3         | ON       |
|                                                      | S4         | OFF      |

| Type (AO) |               |
|-----------|---------------|
| HiC2031   | not available |

| Type (UIO) |               |
|------------|---------------|
| HiC2441    | not available |

| Type (TI)                | DIP switch | Position |
|--------------------------|------------|----------|
| HiC2081 (current source) | S          | I        |

| Type (DI)                                                                           | DIP switch | Position    |
|-------------------------------------------------------------------------------------|------------|-------------|
| HiC2831R5<br>• Mode of operation: inverted<br>• Input line fault detection: enabled | S1         | I           |
|                                                                                     | S2         | I           |
|                                                                                     | S3         | no function |
|                                                                                     | S4         | no function |

| Type (DO)                                                                                                                      | DIP switch | Position    |
|--------------------------------------------------------------------------------------------------------------------------------|------------|-------------|
| HiC2883<br>• Line fault detection: enabled<br>• Mode of operation: bus powered<br>with logic input<br>• Minimum load: disabled | S1         | I           |
|                                                                                                                                | S2         | II          |
|                                                                                                                                | S3         | II          |
|                                                                                                                                | S4         | no function |