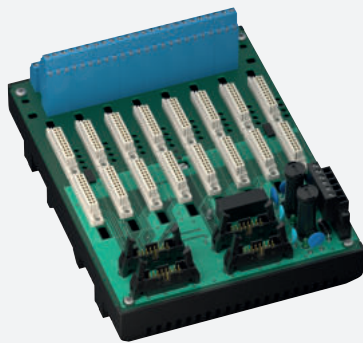




Termination Board

HiDTB08-DVM-IDC4-SC-R1-SM32

- System board for Emerson DeltaV, M-series and S-series
- For two 8-channel AI/AO/DO cards via 16-pin Mass Termination Block
- For four 8-channel DI cards via 16-pin Mass Termination Block
- For 8 modules/16 or 32 channels
- Recommended modules: HiD2030SK (AI), HiD2038 (AO), HiD2824 (DI), HiD2844 (DI), HiD2872 (DO)
- Volt-free fault indication output
- 24 V DC supply
- Hazardous area: screw terminals, blue
- Non-hazardous area: IDC connector, 16-pin



Function

The function of the termination board and the connector pin assignment is exactly fitted to the requirements of the Emerson DeltaV M-series and S-series.

The signal is output to the process control system via the system connector.

Information about a missing supply voltage of the isolated barriers is available for the system as a volt-free contact.

Wiring faults from the field side will be reported via the same relay contact, if this function is supported by the isolated barriers.

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.

Application

DeltaV M-series 8-channel AI Series 2 simplex card (4 mA ... 20 mA) and

DeltaV S-series 8-channel AI simplex card (4 mA ... 20 mA):

- HiD2030SK
- Card 1 and cable 1 connected to CN1: channel 1 ... 8
- Card 2 and cable 2 connected to CN2: channel 9 ... 16

DeltaV M-series 8-channel AO Series 2 simplex card (4 mA ... 20 mA) and

DeltaV S-series 8-channel AO simplex card (4 mA ... 20 mA):

- HiD2038
- Card 1 and cable 1 connected to CN1: channel 1 ... 8
- Card 2 and cable 2 connected to CN2: channel 9 ... 16

DeltaV M-series 8-channel DO Series 2 simplex card (24 V DC, high-side) and

DeltaV S-series 8-channel DO simplex card (24 V DC, high-side):

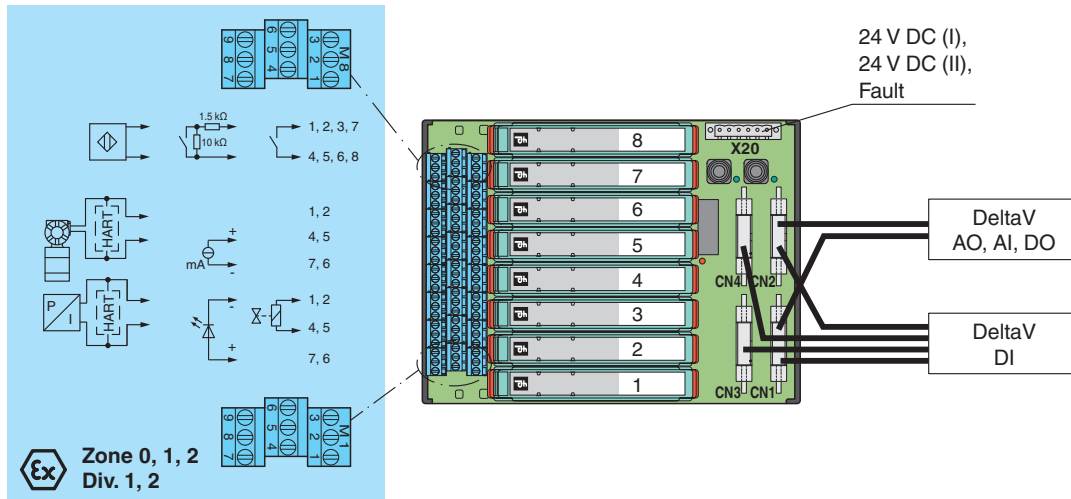
- HiD2872
- Card 1 and cable 1 connected to CN1: channel 1 ... 8
- Card 2 and cable 2 connected to CN2: channel 9 ... 16

DeltaV M-series 8-channel DI Series 2 simplex card (24 V DC, dry contact) and

DeltaV S-series 8-channel DI simplex card (24 V DC, dry contact):

- HiD2824, HiD2844
- Card 1 and cable 1 connected to CN1: channel 1 ... 8, field side: M1 ... M4 terminals 1, 2, 4, 5
- Card 2 and cable 2 connected to CN2: channel 9 ... 16, field side: M5 ... M8 terminals 1, 2, 4, 5
- Card 3 and cable 3 connected to CN3: channel 17 ... 24, field side: M1 ... M4 terminals 3, 6, 7, 8
- Card 4 and cable 2 connected to CN4: channel 25 ... 32, field side: M5 ... M8 terminals 3, 6, 7, 8

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.
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Fault indication output

Connection	X20: terminals 1, 2
Output type	volt-free contact
Switch behaviour	no fault: relay contact closed power supply fault: relay contact open module 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 lits: module fault - LED flashes: power supply fault
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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: screw terminals , blue

Technical Data

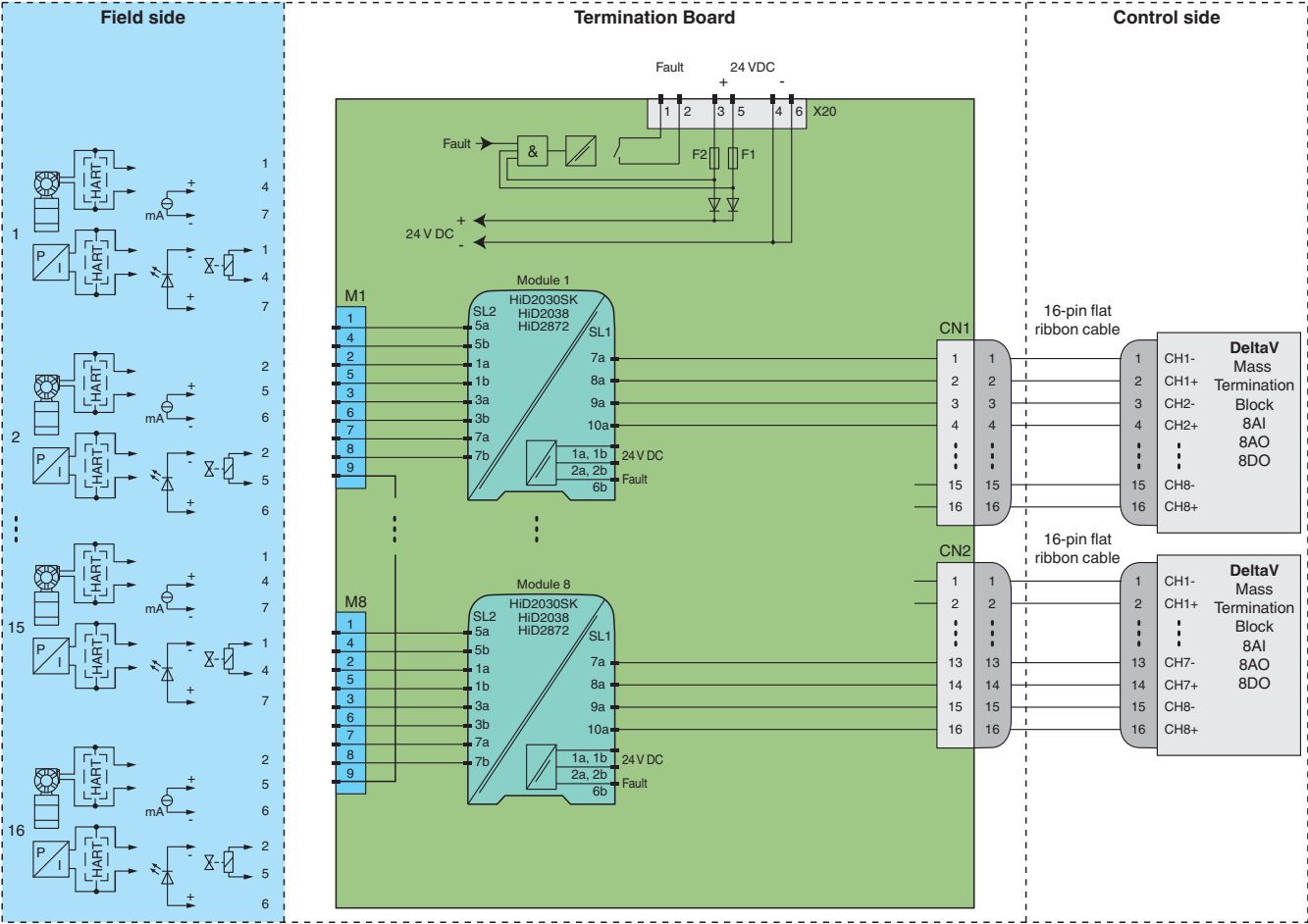
Control side		non-explosion hazardous area: IDC plug, 16-pin
Supply		pluggable screw terminals , black
Fault output		pluggable screw terminals , black
Core cross section		screw terminals: 0.2 ... 2.5 mm ² (24 ... 12 AWG)
Material		housing: polycarbonate, 10 % glass fiber reinforced
Mass		approx. 540 g
Dimensions		150 x 200 x 163 mm (5.9 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
Data for application in connection with hazardous areas		
EU-type examination certificate		CESI 11 ATEX 062
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		
CSA approval		
Control drawing		see control drawing of corresponding modules
IECEx approval		
IECEx certificate		IECEx CES 11.0022
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 .

Accessories

	HiALC-HIDTB-SET-150	Label carrier for HiD termination boards
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Application

Typical circuit for AI, AO, DO



Module switch settings

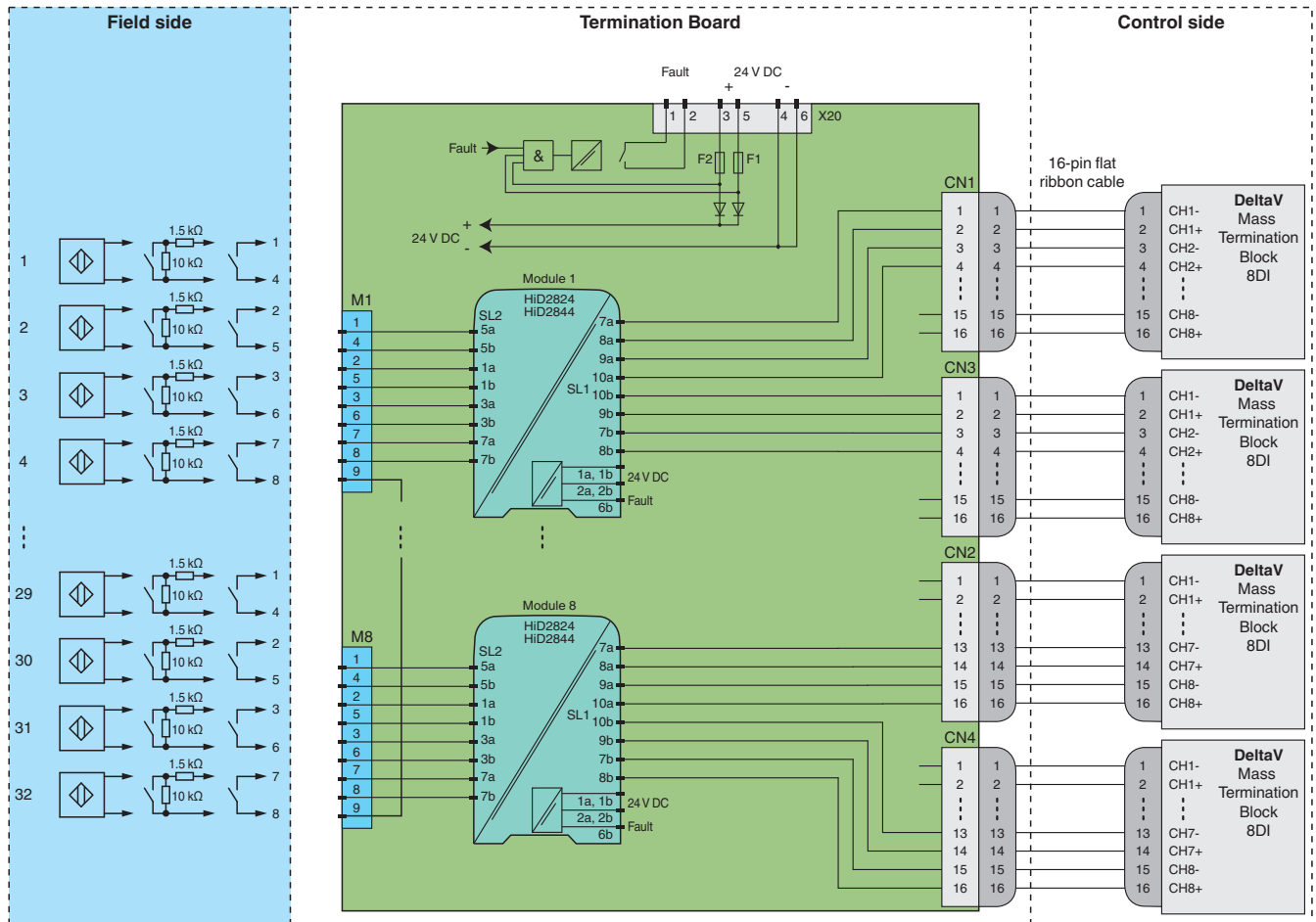
Type (DO)	DIP switch	Position
HiD2872 - Bus powered - Control input: logic signal - Line fault detection: enabled - Filter: disabled	S1	ON
	S2	OFF
	S3	ON
	S4	OFF
	S5	ON
	S6	OFF
	S7	ON
	S8	ON
Type (AI)		
HiD2030SK	not available	
Type (AO)		
HiD2038	not available	

Card software settings

Type	Parameter	Setting
• DeltaV M-series 8-channel DO Series 2 card	LINEFAULT_DETECT	False
• DeltaV S-series 8-channel DO card		

Release date: 2023-02-20 Date of issue: 2023-02-20 Filename: 255404_eng.pdf

Typical circuit for DI



Module switch settings

Type (DI)	DIP switch	Position
HiD2824, HiD2844	S1	ON
	S2	ON
	S3	ON
	S4	ON
	S5	ON
	S6	ON
	S7	ON
	S8	ON

Card software settings

Type	Parameter	Setting
- DeltaV M-series 8-channel DI Series 2 card - DeltaV S-series 8-channel DI card	LINEFAULT_DETECT	False



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.