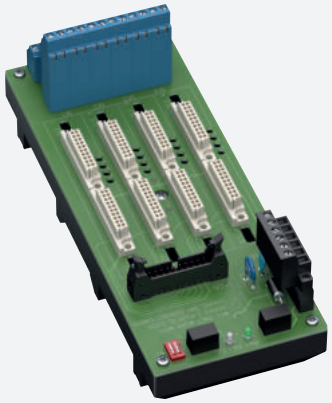


Termination Board

HiDTB04-DVM-IDC1-SC-R2-DI16

- System board for Emerson DeltaV, M-series and S-series
- For one 32-channel DI card via 40-pin Mass Termination Block
- For 4 modules/16 channels
- Recommended module: HiD2844 (DI)
- Volt-free fault indication output
- 24 V DC supply, reverse polaritiy protected, optional daisychainable
- Hazardous area: screw terminals, blue
- Non-hazardous area: IDC connector, 20-pin

Function

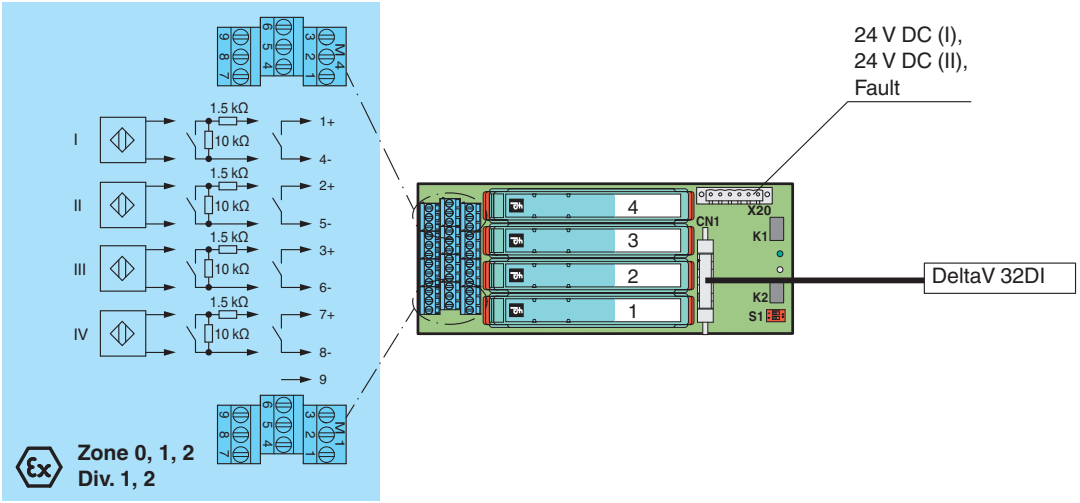
The function of the termination board and the connector pin assignment is exactly fitted to the requirements of the Emerson DeltaV M-series and S-series.
The signal is output to the process control system via the system connector.
Wiring faults from the field side will be reported via a volt-free relay 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 32-channel DI Series 2 Plus redundant card (24 V DC, dry contact) and
DeltaV S-series 32-channel DI Plus redundant card (24 V DC, dry contact):

- Termination board 1 and cable 1: channel 1 ... 16
- Termination board 2 and cable 2: channel 17 ... 32

Connection



Technical Data

Supply		
Connection		X20: terminals 1, 3(+); 2, 4(-)
Nominal voltage		24 V DC , in consideration of rated voltage of used isolators
Voltage drop		0.9 V , voltage drop across the reverse polarity protection diode on the termination board must be considered
Ripple		≤ 10 %

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Technical Data

Fusing	3.15 A with back-up fuse
Power dissipation	≤ 500 mW , without modules
Reverse polarity protection	yes
Redundancy	
Supply	The supply for the isolators is reverse polarity protected and monitored.
Fault indication output	
Connection	X20: terminals 5, 6
Output type	volt-free contact
Switch behaviour	no fault: relay contact closed module fault: relay contact open
Contact loading	max. 30 V DC / 30 V AC , 1 A DeltaV specific output: max. 24 V DC, 25 mA
Indicators/settings	
Display elements	LED PWR (power supply), green LED LED FAULT (fault indication), red LED - LED lits: module fault
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Conformity	
Electromagnetic compatibility	NE 21:2012 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
Control side	non-explosion hazardous area: IDC plug, 20-pin
Supply	pluggable screw terminals , black
Fault output	pluggable screw terminals , black
Core cross section	screw terminals: 0.2 ... 2.5 mm² (24 ... 12 AWG)
Material	housing: polycarbonate
Mass	approx. 290 g
Dimensions	82 x 205 x 157 mm (3.23 x 8.1 x 6.2 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	SIRA 13 ATEX 2388X
Marking	see certificate
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
International approvals	
CSA approval	
Control drawing	116-0381
IECEx approval	
IECEx certificate	IECEx CSA 13.0040X
IECEx marking	see certificate
General information	

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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.

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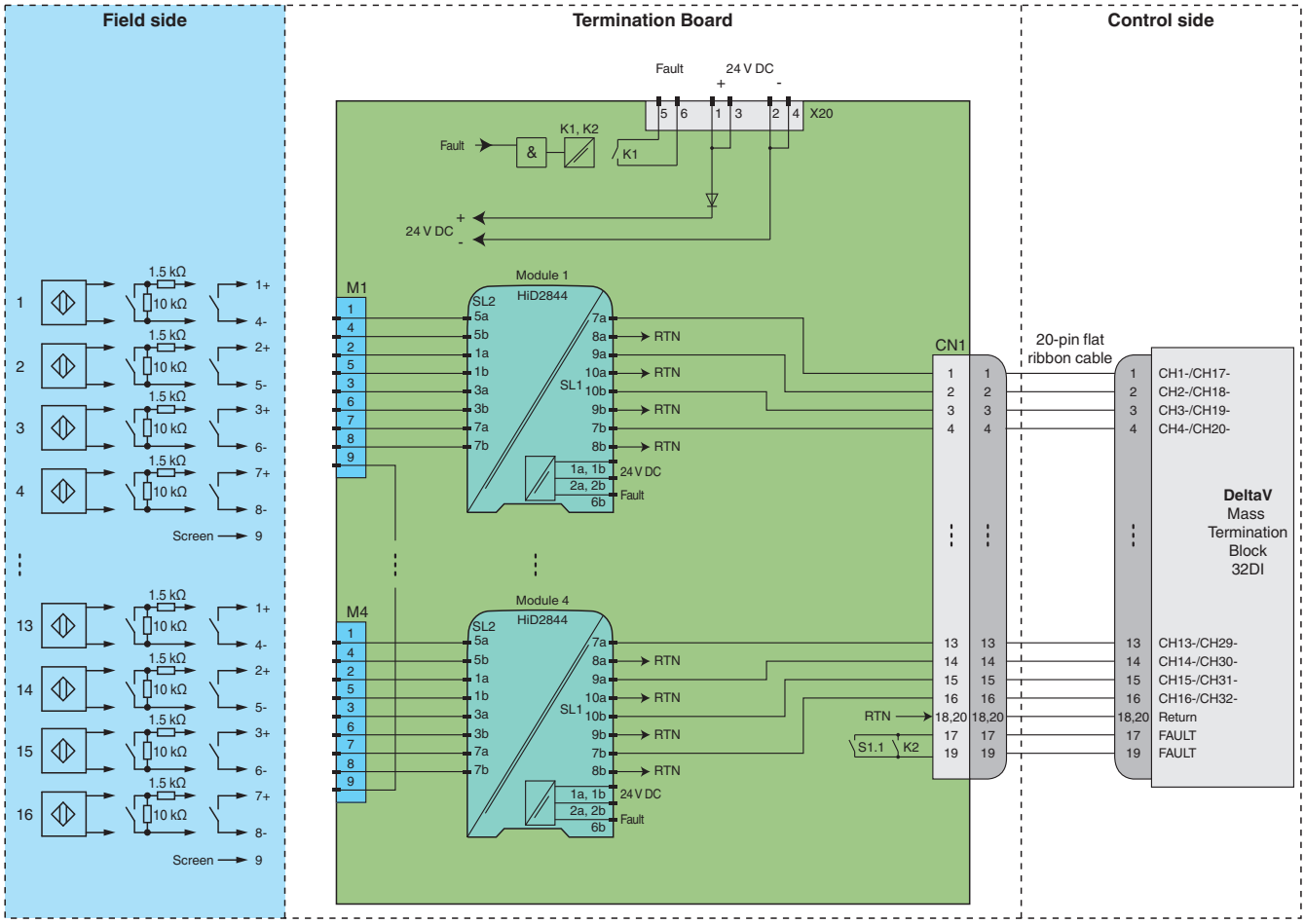
Application

Typical circuit



Module switch settings

Type (DI)	DIP switch	Position
HiD2844 • Mode of operation: open – energized close – de-energized • Input line fault detection: enabled	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 32-channel DI Series 2 Plus card • DeltaV S-series 32-channel DI Plus card	T1_FAULT_DETECT	True
• DeltaV M-series 32-channel DI Series 2 Plus card • DeltaV S-series 32-channel DI Plus card	T2_FAULT_DETECT	True

Termination board switch settings

DIP switch	Position	Description
S1.1	ON	Fault monitoring at CN1 inactive
	OFF	Fault monitoring at CN1 active
S1.2	n.a.	

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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