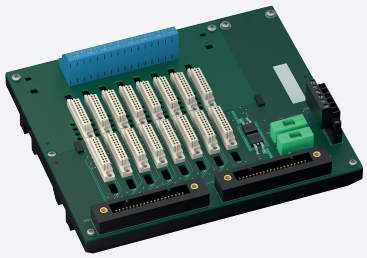
Termination Board

HiCTB08-YC3-RRB-KS-CC-AX16



- System board for Yokogawa CENTUM VP
- For 16-channel AI card AAI141
- For 16-channel AI card AAI143
- For 16-channel AO card AAI543
- For 16-channel AI/AO card AAI841
- For 8 modules
- Recommended module: HiC2422 (AI/AO)
- 24 V DC supply
- Hazardous area: spring terminals, blue
- Non-hazardous area: Yokogawa system connector, 40-pin

Function

The function of the termination board and the connector pin assignment is exactly fitted to the requirements of the Yokogawa Centum VP system.
The signal is output to the process control system via the system connector.
Information about missing supply voltage of the isolated barriers is available for the system at the volt-free transistor output.
Wiring faults from the field side will be reported via the volt-free transistor output, 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.

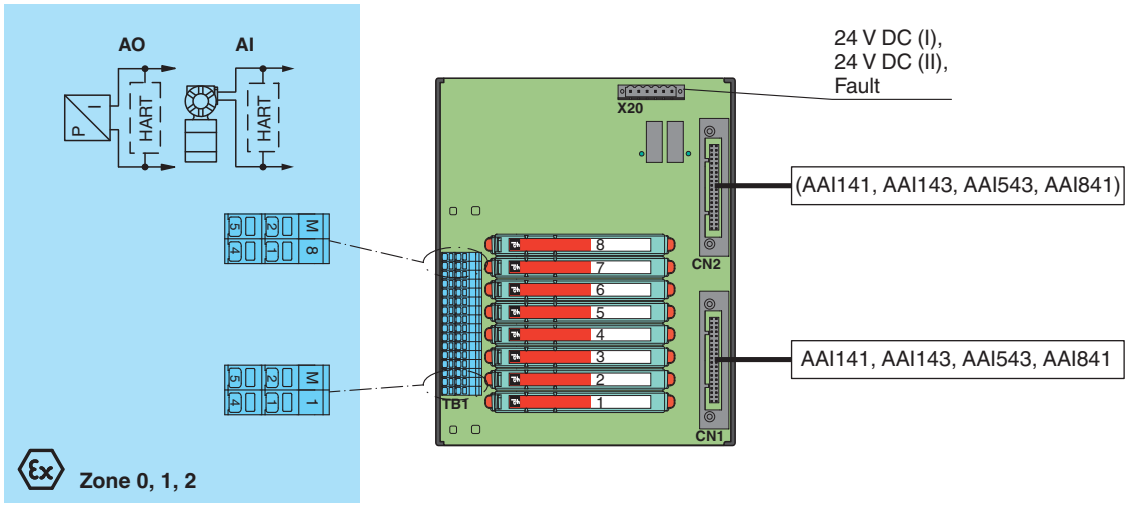
Application

Assembly of the termination board:
AI cards AAI141, AAI143:
- Plug-in position 1 to 8: AI modules

AO card AAI543:
- Plug-in position 1 to 8: AO modules

AI/AO card AAI841:
- Plug-in position 1 to 4: AI modules
- Plug-in position 5 to 8: AO modules

Connection



Technical Data

Supply	
Connection	X20: terminals 3, 5(+); 4, 6(-)

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Technical Data

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		
Connection		X20: terminals 1(+), 2(-)
Output type		volt-free transistor output , not short-circuit protected , not overload protected
Rated voltage	U_r	30 V DC
Rated current	I_r	100 mA
Signal level		no fault: (external voltage) - 1 V max. for 100 mA (T_{amb} = 25 °C (77 °F)) power supply fault/module fault: blocked output (off-state current ≤ 10 µA)
Indicators/settings		
Display elements		LED PWR1 (termination board power supply), green LED LED PWR2 (termination board power supply), green LED
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, 40-pin
Supply		pluggable screw terminals , black
Fault output		pluggable screw terminals , black
Core cross section		spring terminals: rigid: 0.2 ... 2.5 mm² flexible: 0.25 ... 1.5 mm²
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
Data for application in connection with hazardous areas		
EU-type examination certificate		CESI 06 ATEX 022
Marking		⟨Ex⟩ II (1)G [Ex ia Ga] IIC ⟨Ex⟩ II (1)D [Ex ia Da] IIIC ⟨Ex⟩ 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		

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Technical Data

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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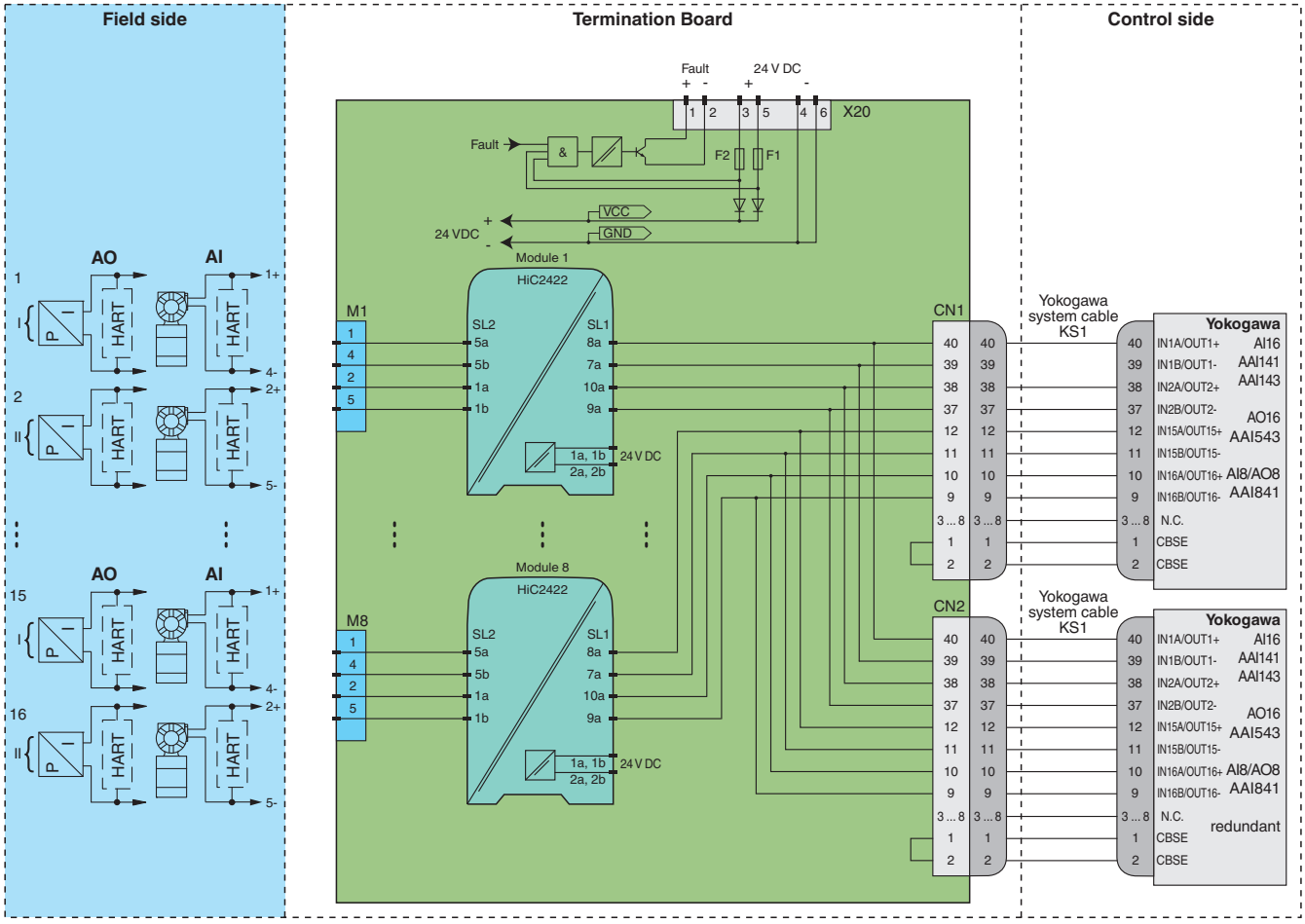
Application

Typical circuit



Module switch settings

Type (AI/AO)	DIP switch	Position
HiC2422 (analog input current sink/analog output)	S1	II
	S2	I
	S3	II
	S4	I

Card switch settings

Type (AI)	Function
AAI141 (source)	2-wire
AAI143 (source)	2-wire
AAI841 (source)	2-wire

Type (AO)	Function
AAI543	without function
AAI841	without function

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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