

Платы подключения HART K-System

Технические характеристики

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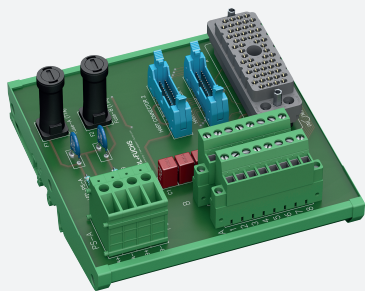
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HART Termination Board

FI-PFH-TR-AO-380X

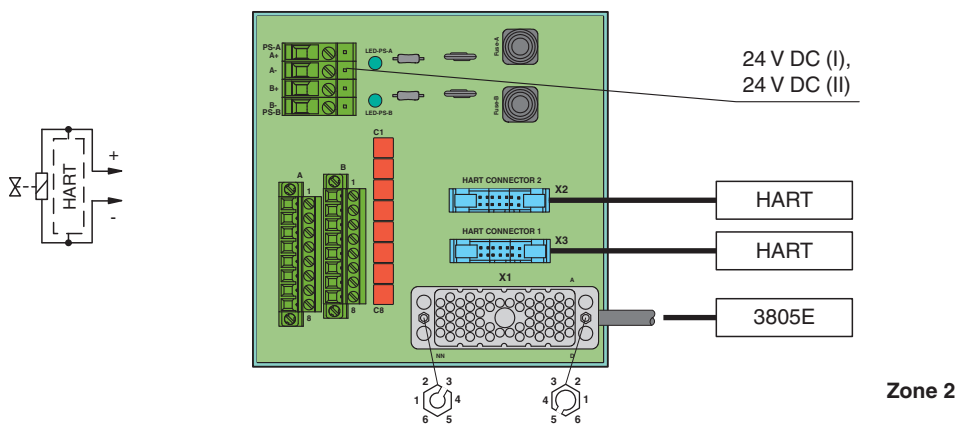
- System board for Schneider Electric, Tricon series by Triconex
- HART Termination Board (ETP) for Tricon AO module
- For 8-channel AO card 3805E
- 8-channel
- Field side: pluggable screw terminals, green
- Control side: ELCO socket, 56-pin



Function

The function of the HART Termination Board as well as the connector pin assignment exactly fit the requirement of Triconex systems. The HART termination board has pluggable screw terminals to connect HART field devices. The 26-pin flat cable K-HM26 is used for connection of each HART Multiplexers KFD*-HM*-16 to the termination board. The design permits the fast and reliable installation in the system cabinet.

Connection



Technical Data

Supply

Rated voltage	U_r	25 ... 28 V DC SELV/PELV
Ripple		max. 10 %
Fusing		1 A
Power dissipation		≤ 500 mW

Interface

Type		multiplexer connection : IDC plug, 26-pin
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Redundancy

Supply		Redundancy available. The supply is monitored and fused.
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Signal lines

Rated current	I_B	max. 30 mA per channel
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Indicators/settings

Technical Data

Display elements		- LED PS-A (Termination Board power supply), green LED - LED PS-B (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
Shock resistance		EN 60068-2-27
Vibration resistance		EN 60068-2-6
Ambient conditions		
Ambient temperature		0 ... 50 °C (32 ... 122 °F)
Storage temperature		-15 ... 50 °C (5 ... 122 °F)
Relative humidity		≤ 93 % non-condensing
Shock resistance		15 g , 11 ms
Vibration resistance		1 g , 10 ... 150 Hz
Mechanical specifications		
Degree of protection		IP20
Connection		
Field side		pluggable screw terminals , green
Control side		ELCO socket, 56-pin HART : 2 x IDC plug, 26-pin
Supply		screw terminals , green
Core cross section		0.5 ... 2.5 mm ² (20 ... 12 AWG)
Material		
Housing		PVC
Mass		approx. 300 g
Dimensions		126 x 123 x 59 mm (5.0 x 4.9 x 2.3 inch) (W x H x D)
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
Certificate		PF 11 CERT 1933 X
Marking		Ⓔ II 3G Ex nA IIC T4 Gc
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-15:2010
General information		

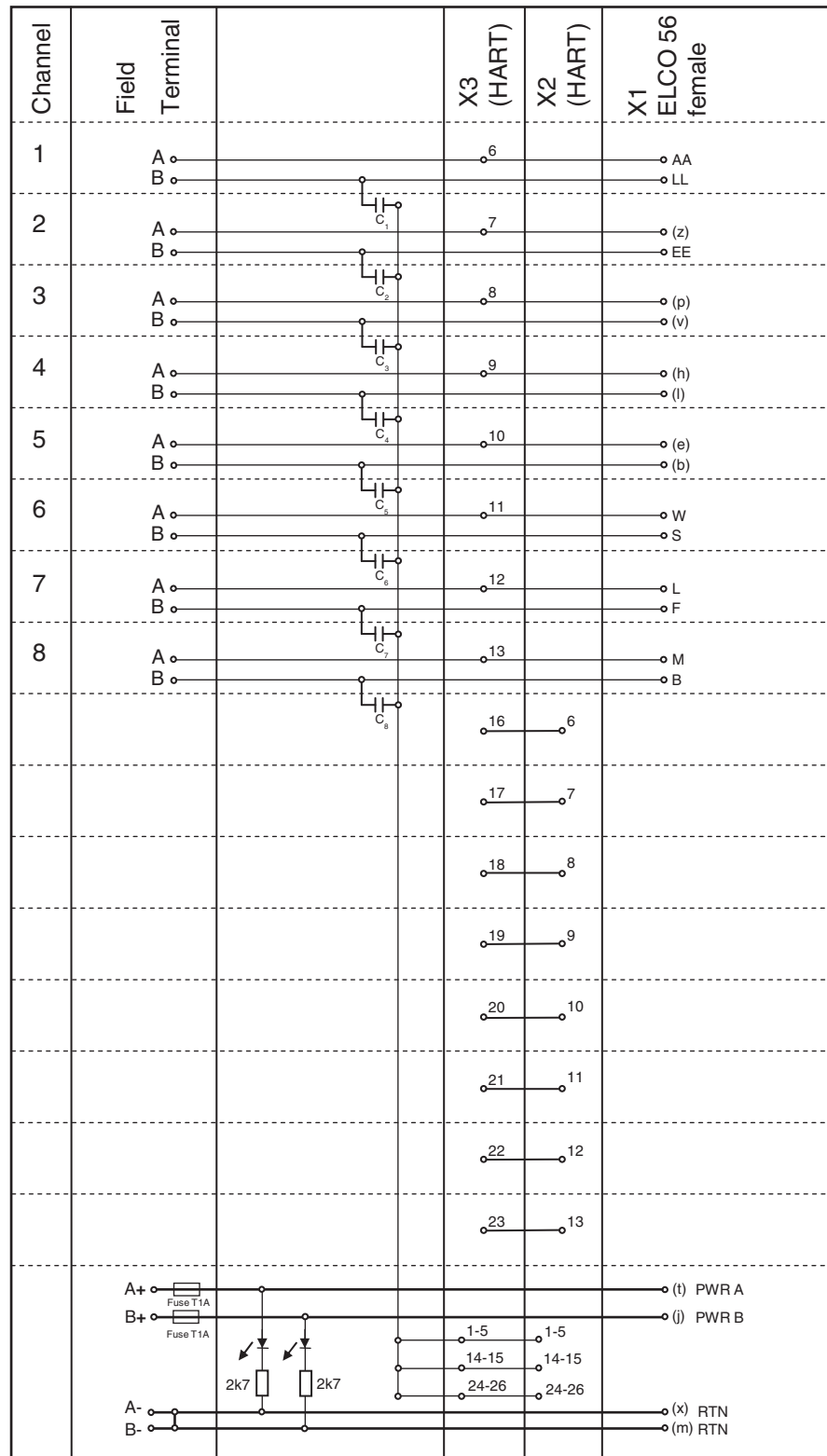
Safety Information

We recommend that you do not connect the device supply to a DC supply network.
If you connect the device supply to a DC supply network, make sure that appropriate protective measures are implemented to ensure that no transient overvoltages occur.

Matching System Components

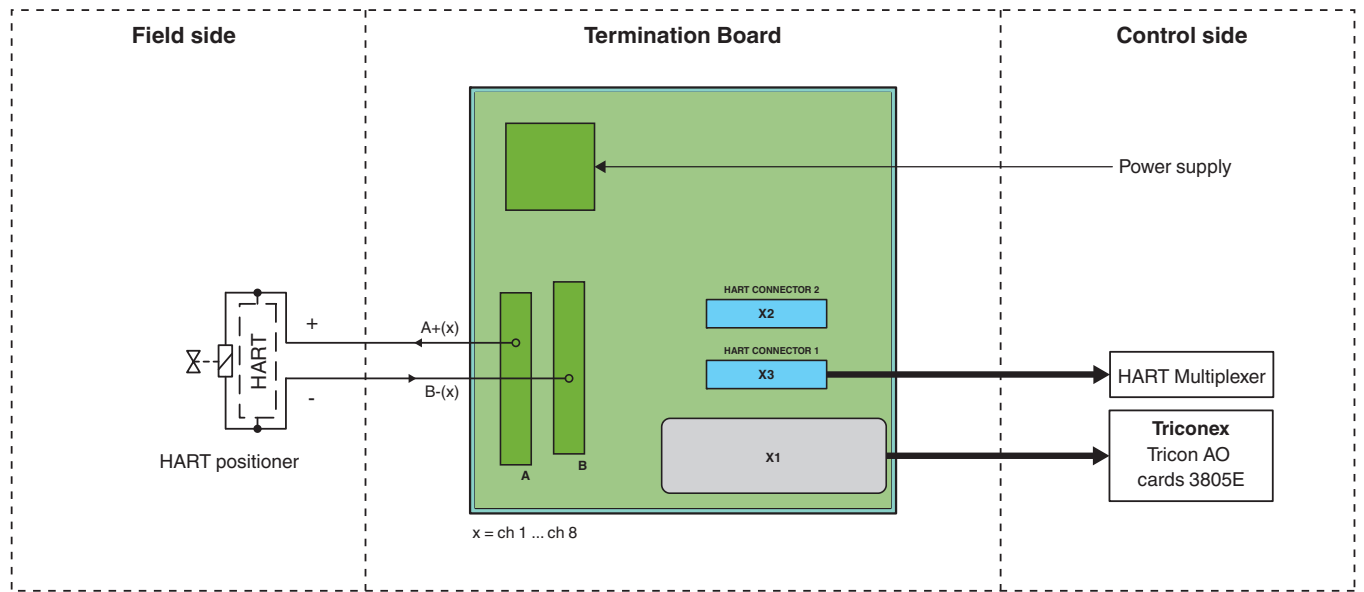
	KFD0-HMS-16	HART Multiplexer Slave
	KFD2-HMM-16	HART Multiplexer Master

Connection Assignment

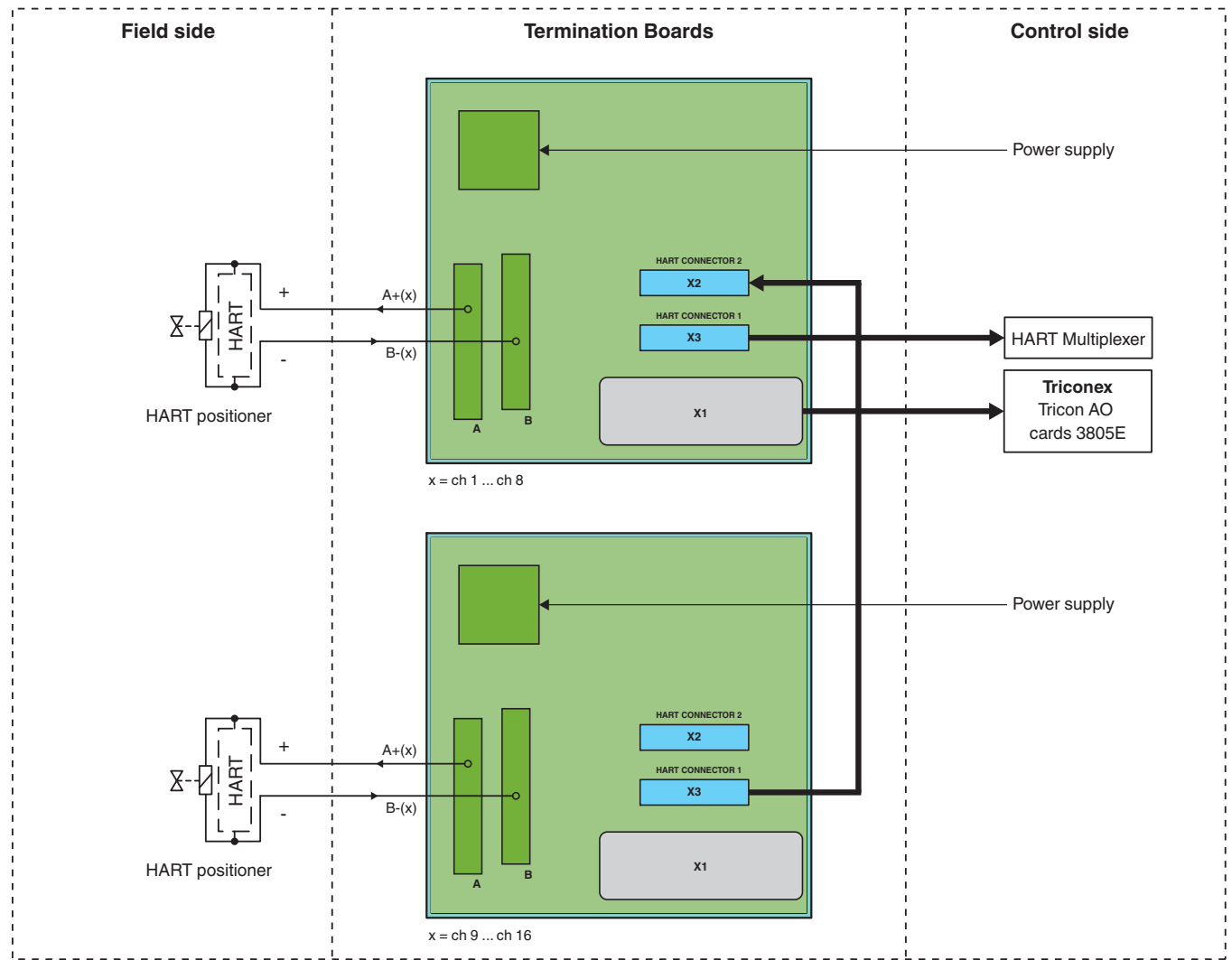


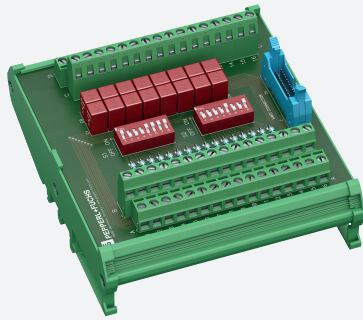
Application

Typical loop with 8 channels



Typical loop with 16 channels





HART Termination Board

FI-PFH-NS0137-R

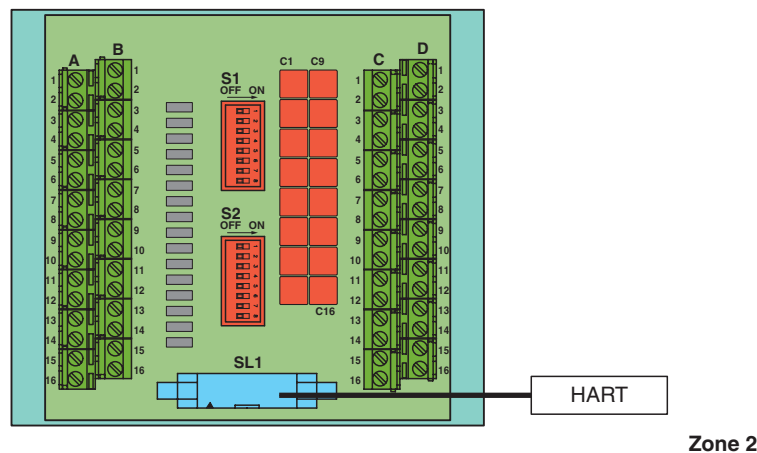
- Connection board for K-System HART Multiplexer
- 16-channel
- Interface for series connection or parallel connection
- Integrated, switchable 220 Ω resistor
- Connection via screw terminals



Function

This HART termination board has 16 terminal blocks to connect up to 16 HART field devices. It has an integrated, switchable 220 Ω load resistor and an integrated ground capacitor. It also has terminal blocks for the 4 mA ... 20 mA signal to the DCS/ PLC.
A 26-pin flat cable K-HM26 is used for connection of each HART Multiplexers KFD*-HM*-16 to the termination board.
Other termination boards are available. Contact Pepperl+Fuchs for details.

Connection



Technical Data

HART signal channels (non-intrinsically safe)

Load resistor 220 Ω , switchable on

Interface

Type multiplexer connection : IDC plug, 26-pin

Signal lines

Rated current I_B max. 30 mA per channel

Indicators/settings

Control elements DIP switch

DIP switch selection of operating mode:
- ON: without load resistor
- OFF: with load resistor

Factory setting DIP switches S1 and S2: ON

Technical Data

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

Shock resistance

EN 60068-2-27

Vibration resistance

EN 60068-2-6

Ambient conditions

Ambient temperature

0 ... 50 °C (32 ... 122 °F)

Storage temperature

-15 ... 50 °C (5 ... 122 °F)

Relative humidity

≤ 93 % non-condensing

Shock resistance

15 g , 11 ms

Vibration resistance

1 g , 10 ... 150 Hz

Mechanical specifications

Degree of protection

IP20

Connection

Field side

screw terminals , green

Control side

screw terminals , green
HART : 1 x IDC plug, 26-pin

Core cross section

0.25 ... 1.5 mm² (24 ... 16 AWG)

Material

Housing

PVC

Mass

approx. 210 g

Dimensions

110 x 125 x 61 mm (4.3 x 4.9 x 2.4 inch) (W x H x D)

Height

125 mm

Width

110 mm

Depth

61 mm

Mounting

on 35 mm DIN mounting rail acc. to EN 60715:2001

Data for application in connection with hazardous areas

Certificate

PF 11 CERT 1930 X

Marking

II 3G Ex nA IIC T4 Gc

Directive conformity

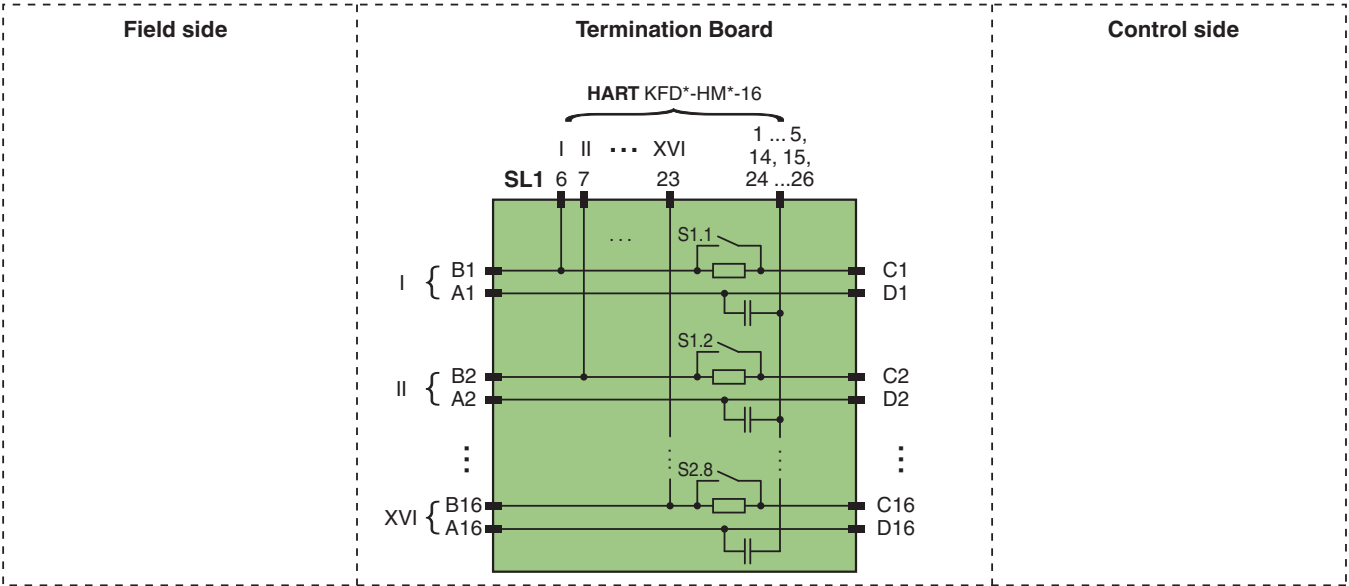
Directive 2014/34/EU

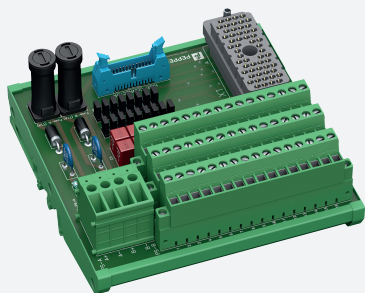
EN IEC 60079-0:2018+AC:2020 , EN 60079-15:2010

General information

Application

Typical loop





HART Termination Board

FI-PFH-TR-AI-370X-GP

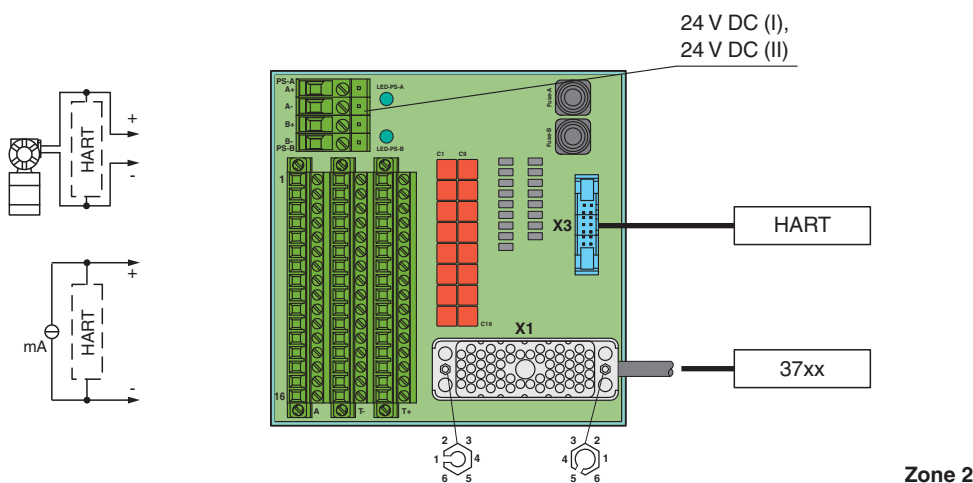
- System board for Schneider Electric, Tricon series by Triconex
- TAN48 approval
- HART Termination Board (ETP) for Tricon v10 AI module
- For 16-channel AI cards 3700, 3700A, 3703E and 3721
- 16-channel
- Field side: pluggable screw terminals, green
- Control side: ELCO socket, 56-pin



Function

The function of the HART Termination Board as well as the connector pin assignment exactly fit the requirement of Triconex systems. The HART termination board has pluggable screw terminals to connect HART field devices. The 26-pin flat cable K-HM26 is used for connection of each HART Multiplexers KFD*-HM*-16 to the termination board. The design permits the fast and reliable installation in the system cabinet.

Connection



Technical Data

Supply

Rated voltage	U_r	20.4 ... 27.6 V DC SELV/PELV
Voltage drop		0.9 V , voltage drop across the series diode on the termination board must be considered
Ripple		max. 10 %
Fusing		1 A
Power dissipation		≤ 500 mW
Reverse polarity protection		yes

Interface

Type		multiplexer connection : IDC plug, 26-pin
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Redundancy

Supply		Redundancy available. The supply is decoupled, monitored and fused.
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Technical Data

Signal lines		
Rated current	I_B	max. 30 mA per channel
Indicators/settings		
Display elements		- LED PS-A (Termination Board power supply), green LED - LED PS-B (Termination Board power supply), green LED
Directive conformity		
Electromagnetic compatibility		
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Ambient conditions		
Ambient temperature		0 ... 50 °C (32 ... 122 °F)
Storage temperature		-15 ... 50 °C (5 ... 122 °F)
Relative humidity		≤ 93 % non-condensing
Shock resistance		15 g , 11 ms
Vibration resistance		1 g , 10 ... 150 Hz
Mechanical specifications		
Degree of protection		IP20
Connection		
Field side		pluggable screw terminals , green
Control side		ELCO socket, 56-pin HART : 1 x IDC plug, 26-pin
Supply		screw terminals , green
Core cross section		0.5 ... 2.5 mm ² (20 ... 12 AWG)
Material		
Housing		PVC
Mass		approx. 415 g
Dimensions		126 x 123 x 59 mm (5.0 x 4.9 x 2.3 inch) (W x H x D)
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
Certificate		PF 11 CERT 1931 X
Marking		Ⓔ II 3G Ex nA IIC T4 Gc
Directive conformity		
Directive 2014/34/EU		EN IEC 60079-0:2018+AC:2020 , EN 60079-15:2010
General information		

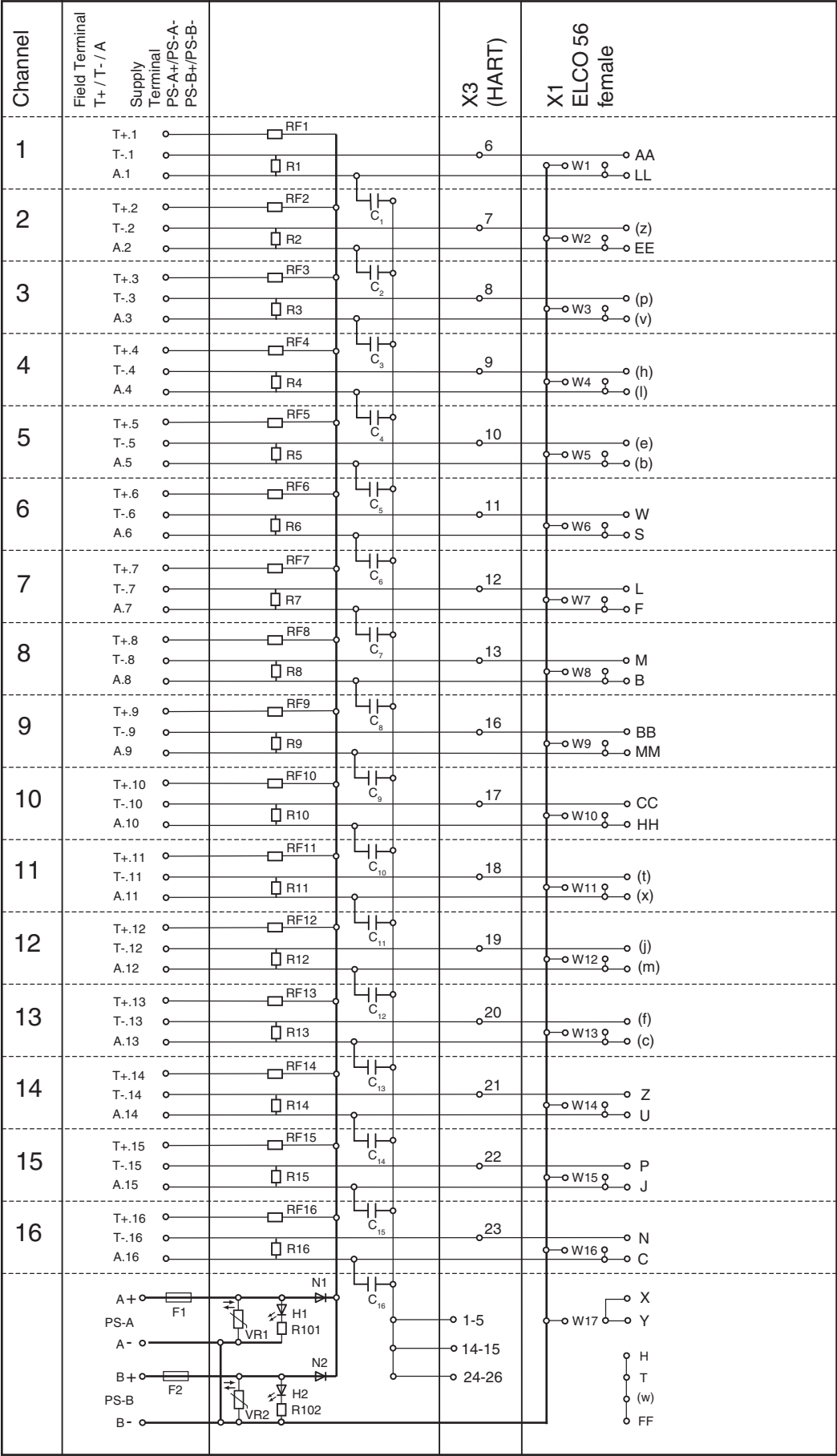
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Matching System Components

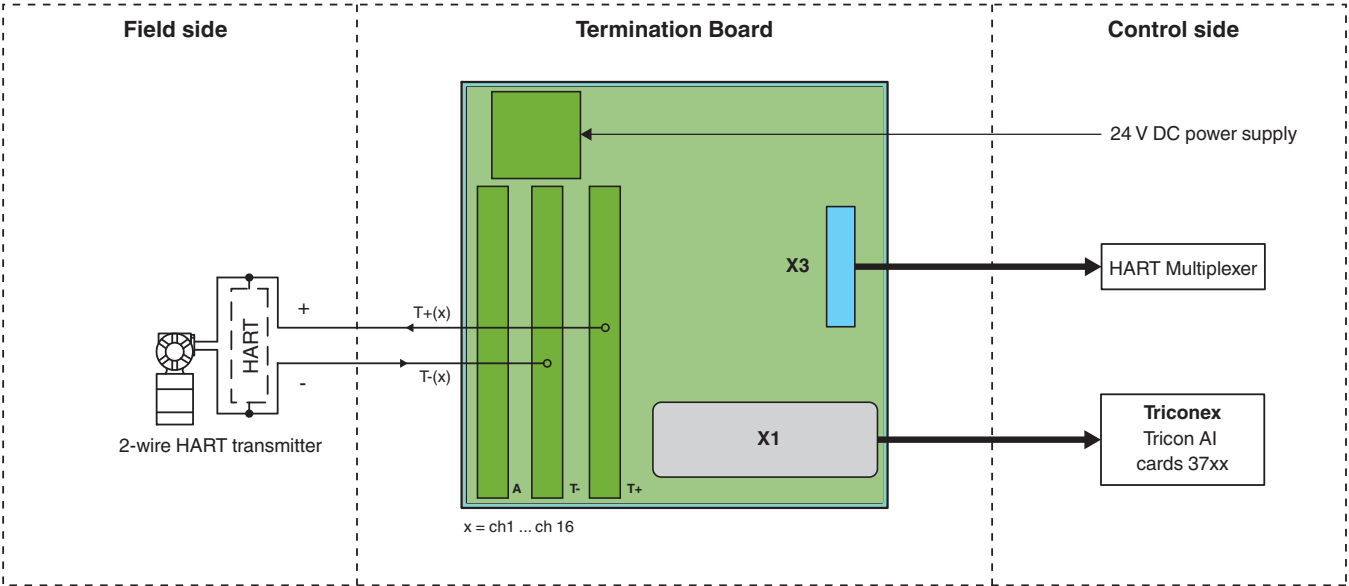
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	KFD2-HMM-16	HART Multiplexer Master

Connection Assignment



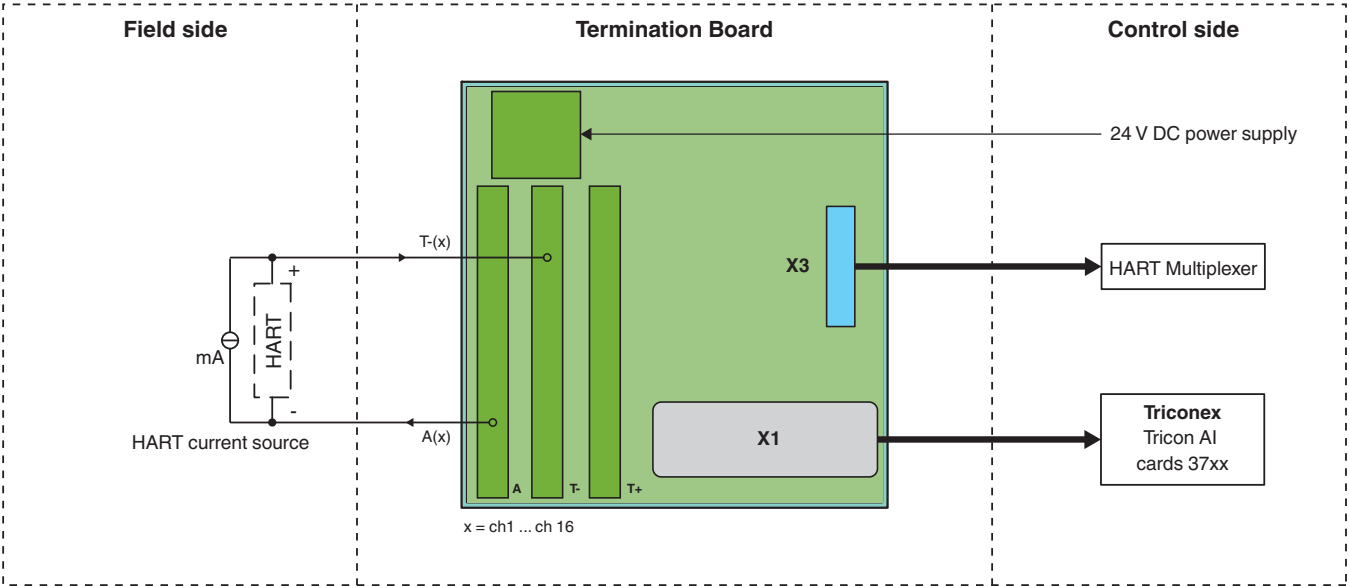
Application

Typical loop: 2-wire HART transmitter input



Always insert jumper W1 ... W16, W17.

Typical loop: HART current source



Common mode: insert jumper W1 ... W16, W17.
Differential mode: remove jumper W1 ... W16, W17.

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