Temperature Multi-Input Device with Aluminum Housing
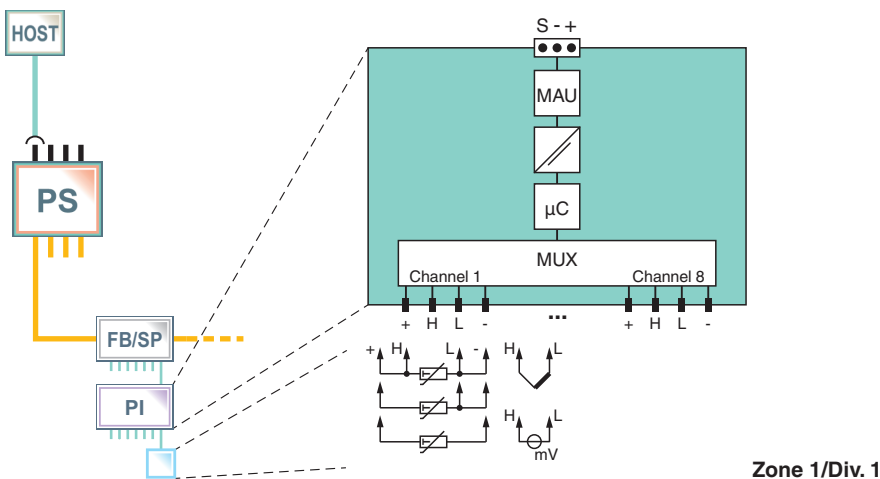
F2D0-TI-Ex8.PA.*

- For 8 temperature or analog sensors
- Installation in Zone 1/Div. 1, intrinsically safe
- Sensors in Zone 0/Div. 1
- Connection to fieldbus acc. to FISCO or Entity
- For PROFIBUS PA
- DCS integration via GSD and FDT/DTM
- Monitors sensor condition
- For T/C, RTD 2-, 3-, 4-wire, voltage and resistance
- Cold junction compensation
- Removable terminals

Function

This fieldbus junction box holds a temperature multi-input device for transferring signals from resistance temperature measuring sensors and thermocouples, as well as resistance and millivolt signals via PROFIBUS PA. The fieldbus junction box with 8 inputs can be installed in Zone 1/Div. 1 with sensors located in Zone 0/Div. 1.
The housing, type F2, is made of sturdy cast aluminum for installation in rough environments. Fieldbus and field device entrances can be selected individually from a range of cable glands. Optionally, either screw terminals or spring terminals can be chosen. A tag plate is available as option.

Connection

Zone 1/Div. 1

Technical Data

General specifications

Design / Mounting	Outside installation
Electronic component	Temperature Multi-Input Device RD0-TI-Ex8.PA* For technical data on installed electronic component see data sheet.

Directive conformity

Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013

Standard conformity

Galvanic isolation	EN 60079-11
Electromagnetic compatibility	NE 21:2011

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

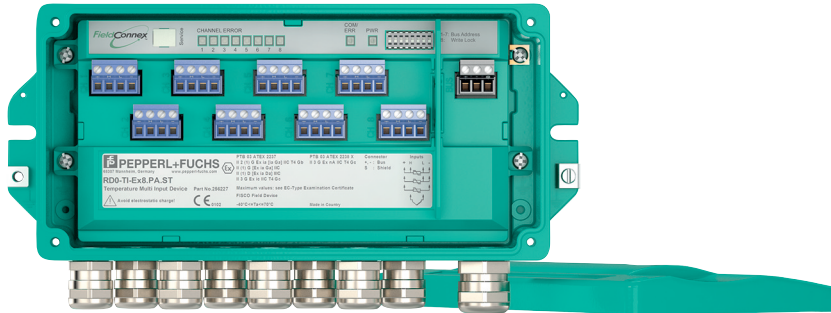|	
Degree of protection	IEC 60529
Fieldbus standard	IEC 61158-2
Shock resistance	EN 60068-2-27
Vibration resistance	EN 60068-2-6
Ambient conditions	
Ambient temperature	see table 1
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	≤ 95 % non-condensing
Shock resistance	15 g , 11 ms
Vibration resistance	10 g , 10 ... 150 Hz
Corrosion resistance	acc. to ISA-S71.04-1985, severity level G3
Mechanical specifications	
Connection type	plug-in terminals , spring terminal and screw terminal
Core cross section	
Bus	up to 2.5 mm^2
Inputs	up to 2.5 mm^2
Cable diameter	see table 2
Cable gland	sensor inputs M16, fieldbus M20
Housing material	EN 1780-1 46000 , ISO AlSi9Cu3(Fe) , anodized
Degree of protection	IP66
Mass	1800 g
Mounting	wall mounting
Data for application in connection with hazardous areas	
EU-type examination certificate	PTB 03 ATEX 2237
Marking	Ⓔ II 2 (1) G Ex ia [ia Ga] IIC T4 Gb , Ⓔ II (1) G [Ex ia Ga] IIC , Ⓔ II (1) D [Ex ia Da] IIIC , Ⓔ II 3 G Ex ic IIC T4 Gc
Bus	FISCO see EC-Type Examination Certificate
Voltage U$_i$	24 V
Inputs	see EC-Type Examination Certificate
Certificate	PTB 03 ATEX 2238 X
Marking	Ⓔ II 3 G Ex nA IIC T4 Gc
Galvanic isolation	
Bus	see Statement of Conformity
Input	see EC-Type Examination Certificate
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012 , EN 60079-11:2012 , EN 60079-15:2010
International approvals	
FM approval	CoC 3025732
CSA approval	CoC 3025732C
IECEx approval	IECEx PTB 05.0001 , IECEx PTB 05.0002X
Approved for	Ex ia [ia Ga] IIC T4 Gb , [Ex ia Ga] IIC , [Ex ia Da] IIIC , Ex ic IIC T4 Gc , Ex nA IIC T4 Gc
Certificates and approvals	
Marine approval	DNV A-14038
General information	
Supplementary information	EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Assembly

Accessories

	DTM FieldConnex	FieldConnex® DTM Collection
	Microsoft .NET	Connection Software
	PACTware 5.0	FDT Framework
	PACTware 4.1	FDT Framework

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Additional Information

Type Code

Type of housing							
F2D0	Field housing, aluminum, IP67						

	Type of device						
	TI	Temperature Multi-Input Device					

		Explosion protection method					
		Ex	intrinsically safe				

			Number of inputs				
			8				

				Fieldbus type			
				PA	PROFIBUS PA		

					Type of connection		
					CG	Cable gland, plastic	
					CGB	Cable gland, nickel plated brass	
					CGS	Cable gland, stainless steel	

						Type of terminal	
						ST	Screw terminals
						SC	Spring terminals

F2D0	-	TI	-	Ex	8	.	PA	.		.	
A	-	B	-	C	D	.	E	.	F	.	G

Identification for assignment of the type code to the following tables

Example:

F2D0-TI-Ex8.PA.CGB.ST: Temperature Multi-Input Device in aluminum housing with cable glands made of nickel plated brass and 8 inputs with screw terminals

Note:

Contact your Pepperl+Fuchs representative to check the availability of individual variants.

Release date: 2022-07-04 Date of issue: 2022-07-04 Filename: t165021_eng.pdf

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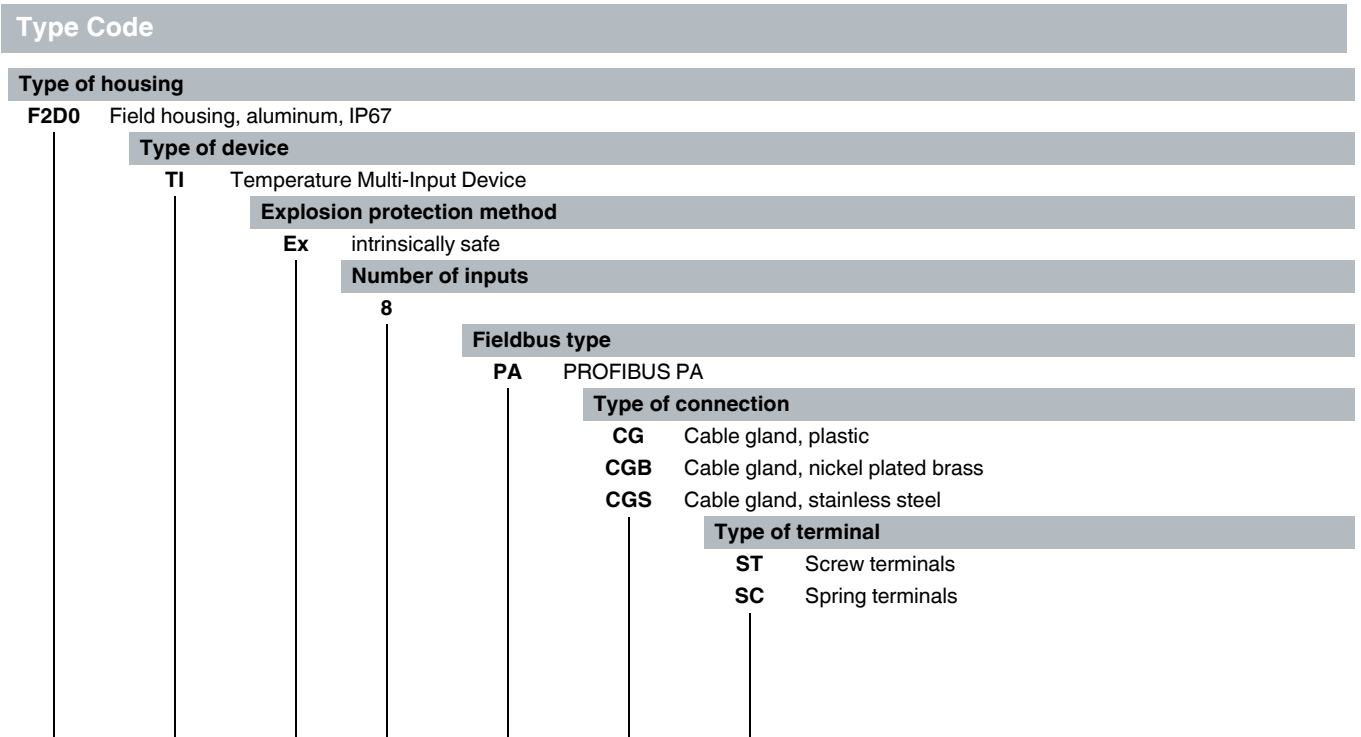Pepperl+Fuchs Group   USA: +1 330 486 0002   Germany: +49 621 776 2222   Singapore: +65 6779 9091
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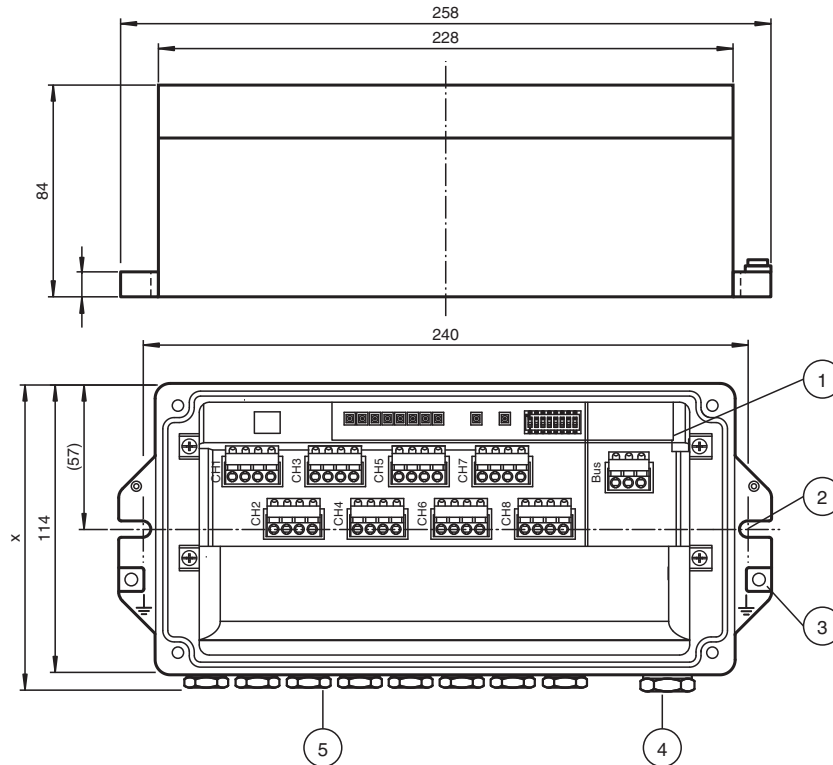
Dimensions and Assembly

Figure 1: F2D0-TI-Ex8.PA.CGB.SC

1   For details on the function unit see data sheet on RD0-TI-*
2   Notch for fixing the device housing with screw M6
3   Grounding point
4   Hexagon screw for fieldbus IN, fix with a spanner size AF2
5   8 hexagon screws for inputs, fix with a spanner size AF1

Installation

see manual

Electrical Connection

Variations of cable connections, housing types and temperature ranges

Type of connection	Type of cable connection	Number of inputs	F2 housing, outside dimension "X" (mm)	Temperature range for use in hazardous area (°C)	Temperature range for use in safe area (°C)
CG	Terminals, cable glands plastic	8	140	-30 ... 70	-30 ... 85
CGB	Terminals, cable glands nickel plated brass	8	140	-40 ... 70	-40 ... 85
CGS	Terminals, cable glands stainless steel	8	140	-40 ... 70	-40 ... 85

Table 1

Cable diameter depending on cable gland

Type of connection	Sensors				Fieldbus			
	Type	Material	Cable diameter (mm)	SW1	Type	Material	Cable diameter (mm)	SW2
CG	M16 x 1.5	Plastic	5.5 ... 10	20	M20 x 1.5	Plastic	5.5 ... 13	24
CGB	M16 x 1.5	Nickel plated brass	5 ... 10	20	M20 x 1.5	Nickel plated brass	7 ... 12	24
CGS	M16 x 1.5	Stainless steel	5 ... 9	17	M20 x 1.5	Stainless steel	7 ... 12	24

Table 2

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