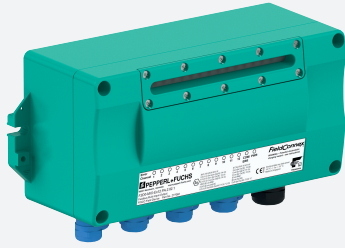


Multi-Input/Output Device with Aluminum Housing

F2D0-MIO-Ex12.PA.*



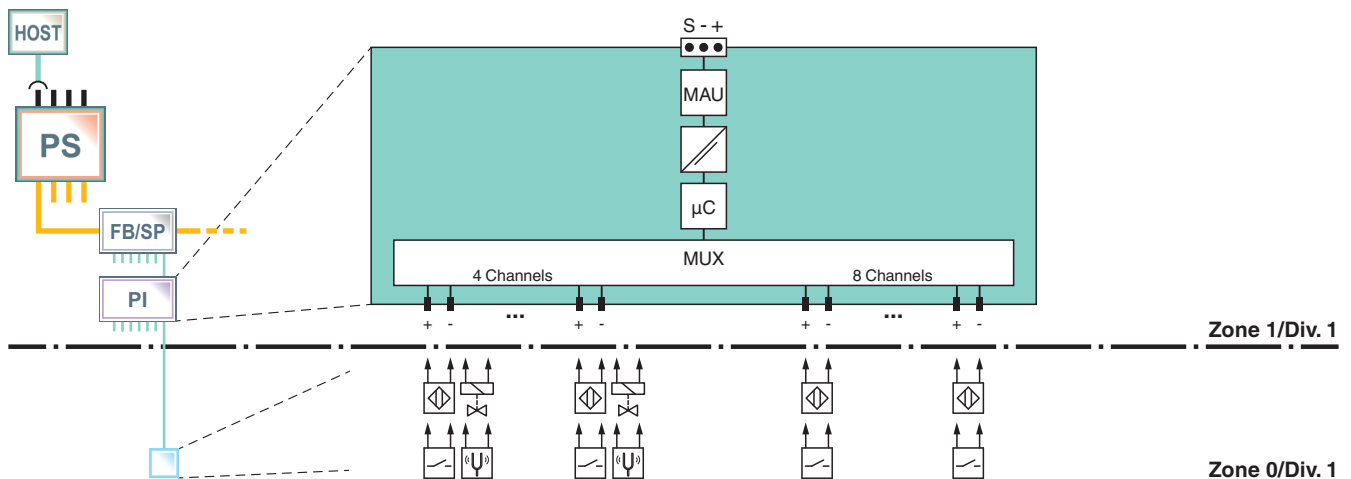
- For discrete inputs and outputs
- Aluminum cast iron, IP66
- Configurable cable entries for bus lines and field signal lines
- International approvals
- For PROFIBUS PA
- Installation in Zone 1/Div. 1, intrinsically safe
- Sensors in Zone 0/Div. 1
- Monitors sensor condition
- Removable terminals
- Power, Com, Diagnostics, and Error LEDs
- Test points for easy troubleshooting



Function

This fieldbus junction box holds a multi-input/output (MIO) for transferring signals from discrete inputs and valves to the control system. The MIO offers the same functionality as the components FD0-VC-Ex* and FD0-BI-*. The fieldbus junction box can be installed in Zone 1/Div. 1 with sensors and actuators 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.

Connection



Technical Data

| | |
|-----------------------------------|--|
| General specifications | |
| Design / Mounting | Outside installation |
| Electronic component | Binary multi-input/output R8D0-MIO-Ex12.PA* For technical data on installed electronic component see data sheet. |
| Fieldbus connection | |
| Fieldbus type | PROFIBUS PA |
| Galvanic isolation | |
| Foundation Fieldbus/Field circuit | safe galvanic isolation acc. to EN 60079-11, voltage peak value 375 V |
| Directive conformity | |

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

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Technical Data

| | | |
|--|--|--|
| Electromagnetic compatibility | | |
| Directive 2014/30/EU | | EN 61326-1:2013 |
| Low voltage | | |
| Directive 2014/35/EU | | EN 61010-1:2010 |
| Standard conformity | | |
| Galvanic isolation | | EN 60079-11 |
| Electromagnetic compatibility | | NE 21:2011 |
| 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 | | -40 ... 70 °C (-40 ... 158 °F) hazardous area |
| 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 AISi9Cu3(Fe) , anodized |
| Degree of protection | | IP66 |
| Mass | | 1800 g |
| Mounting | | wall mounting |
| Data for application in connection with hazardous areas | | |
| EU-type examination certificate | | BVS 16 ATEX E 075 X |
| Marking | | ⊕ II 2 (1) G Ex ib [ia Ga] IIC T4 Gb , ⊕ II 3 (1) G Ex ic [ia Ga] IIC T4 Gc , ⊕ II 3 (1) G Ex ec [ia Ga] IIC T4 Gc , ⊕ I (M1) [Ex ia Ma] I , ⊕ II (1) D [Ex ia Da] IIC , ⊕ II 2 (1) D Ex tb [ia Da] IIC T130 °C Db |
| Bus | | FISCO see EC-Type Examination Certificate |
| Directive conformity | | |
| Directive 2014/34/EU | | EN 60079-0:2012 , EN 60079-7:2015 , EN 60079-11:2012 , EN 60079-31:2014 |
| International approvals | | |
| FM approval | | pending |
| IECEx approval | | IECEx BVS 16.0051X |
| Approved for | | Ex ib [ia Ga] IIC T4 Gb , Ex ic [ia Ga] IIC T4 Gc , Ex ec [ia Ga] IIC T4 Gc , [Ex ia Ma] I , [Ex ia Da] IIC , Ex tb [ia Da] IIC T130 °C Db |
| Certificates and approvals | | |
| Marine approval | | pending |
| 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 . |

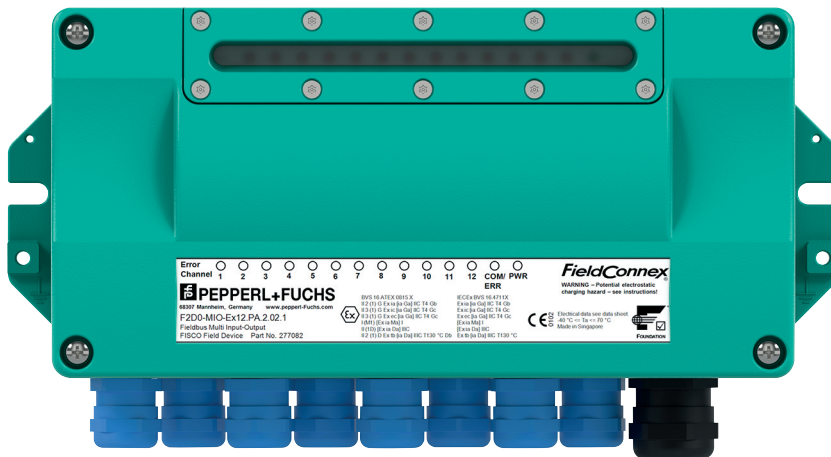
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Assembly



Accessories

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

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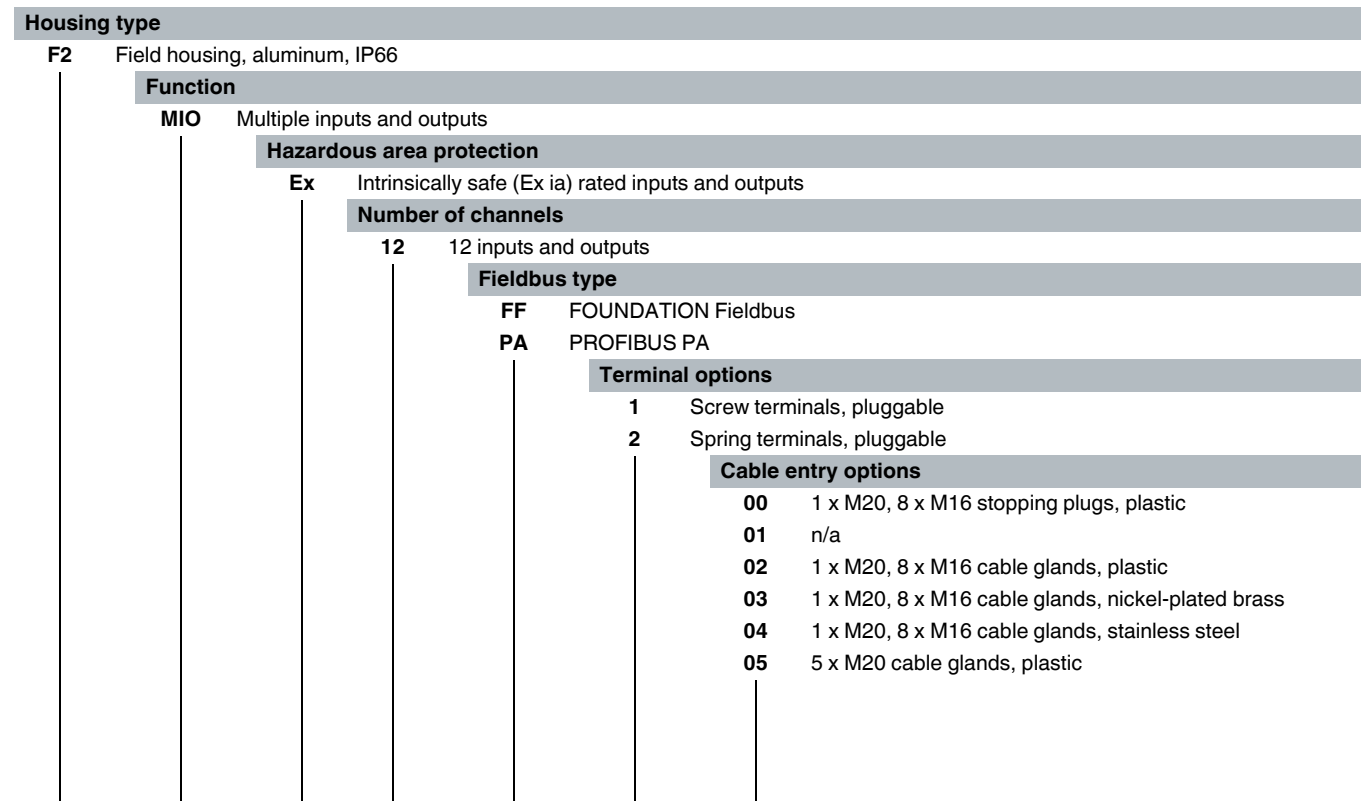
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 **PEPPERL+FUCHS**

Type Code



| | | | | | | | | | |
|----|---|--------|---|----|----|---|---|---|---|
| F2 | - | D0-MIO | - | Ex | 12 | . | . | . | . |
| A | - | B | - | C | D | . | E | . | F |
| | | | | | | | | | G |

Example:

F2D0-MIO-Ex12.FF.1.02: Multi-input/output in aluminum housing with cable glands made of plastic and 12 inputs/outputs with pluggable screw terminals.

Note:

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

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Overview of System Components

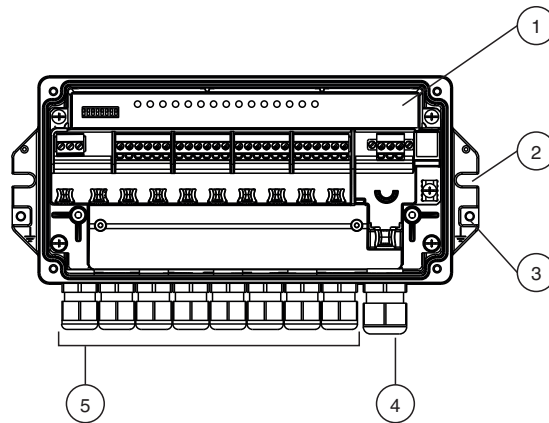


Figure 1: F2D0-MIO*

- 1 For details on the electronic unit see datasheet on R8D0-MIO-*
- 2 Notch for fixing the device housing with screw M6
- 3 Grounding point
- 4 Cable gland for fieldbus connection, fix with spanner, size see table 2, AF2
- 5 8 cable glands for up to 12 spur inputs/outputs, fix with spanner, size see table 2, AF1

Dimensions

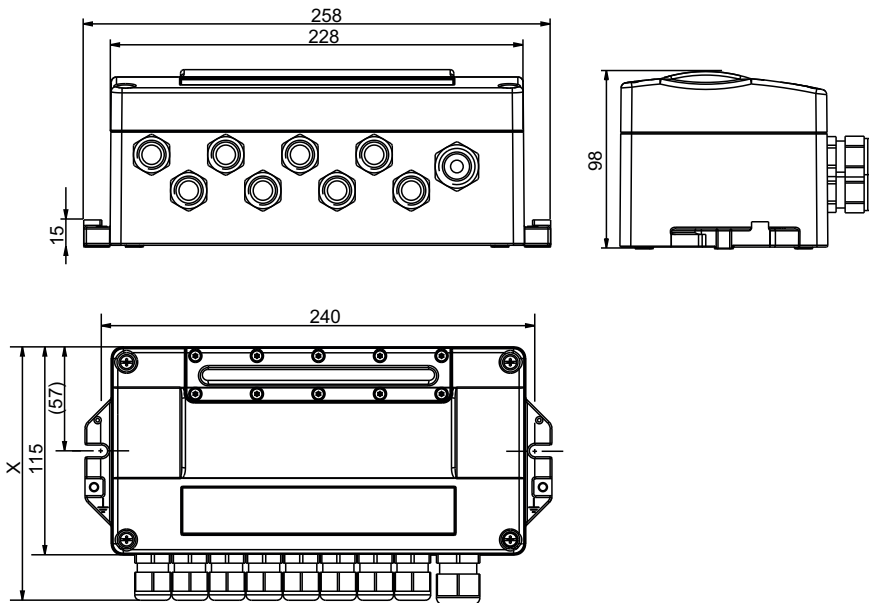


Figure 2: F2D0-MIO* All dimensions in mm without tolerance indication.

- X Height depending on the cable connection type used, see table 1

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Electrical Connection

Table 1: Variations of cable connections, housing types, and temperature ranges

| Cable entry option | Type of cable connection | F2 housing, outside dimension "X" (mm) | Temperature range for use in hazardous area (°C) | Temperature range for use in safe area (°C) |
|--------------------|---|--|--|---|
| 00 | M16 stopping plugs, plastic | 121.5 | -40 ... +70 | -40 ... +70 |
| 01 | n/a | -- | -- | -- |
| 02 | M16 & M20 cable glands, plastic | 146 | -40 ... +70 | -40 ... +70 |
| 03 | M16 & M20 cable glands, nickel-plated brass | 146 | -40 ... +70 | -40 ... +80 |
| 04 | M16 & M20 cable glands, stainless steel | 146 | -40 ... +70 | -40 ... +80 |
| 05 | M20 cable glands, plastic | 146 | -40 ... +70 | -40 ... +70 |

Table 2: Cable diameter depending on cable glands, spanner sizes

| Cable entry option | CH1 ... CH12 Multiple Inputs/Outputs | | | Fieldbus | | |
|--------------------|--------------------------------------|---------------------|----------|--------------------------------------|---------------------|----------|
| | Description | Cable diameter (mm) | AF1 (mm) | Description | Cable diameter (mm) | AF2 (mm) |
| 00 | M16 stopping plug, plastic | -- | 19 | M20, stopping plug, plastic | -- | 19 |
| 01 | n/a | -- | -- | n/a | -- | -- |
| 02 | M16 cable gland, plastic | 4 ... 8 mm | 19 | M20 cable gland, plastic | 6 ... 12 mm | 19 |
| 03 | M16 cable gland, nickel-plated brass | 4 ... 12 mm | 22 | M20 cable gland, nickel-plated brass | 4 ... 12 mm | 22 |
| 04 | M16 cable gland, stainless steel | 4 ... 12 mm | 22 | M20 cable gland, stainless steel | 4 ... 12 mm | 24 |
| 05 | M20 cable gland, plastic | 6 ... 12 mm | 24 | M20 cable gland, plastic | 6 ... 12 mm | 24 |