



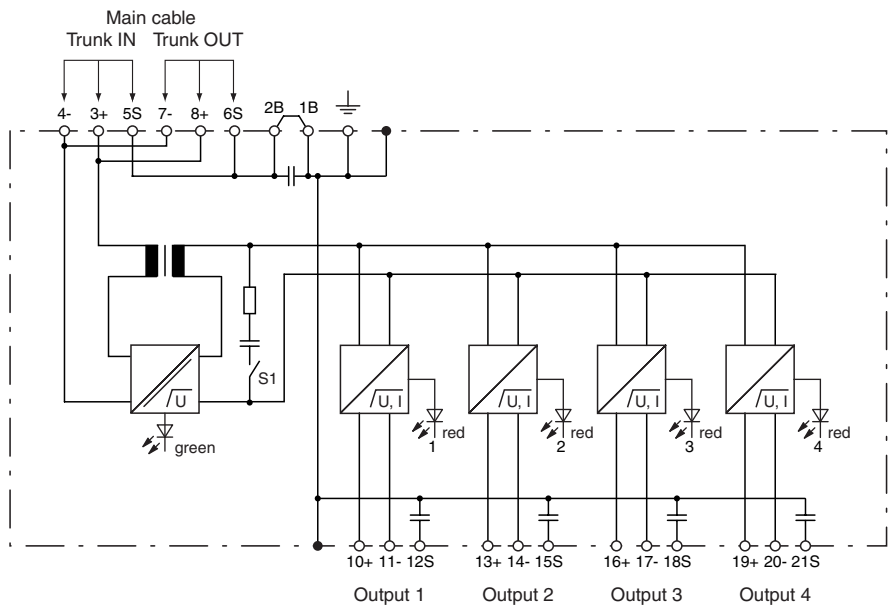
FieldBarrier for IEC 61158-2 fieldbuses

- High power in the field due to Ex e / Ex i power feed concept
- Connects up to 4 intrinsically safe output lines to a non-intrinsically safe fieldbus trunk
- Connection of fieldbus trunk in increased safety EEx e
- Trunk protection due to short-circuit current limitation for each output
- Cascadable
- 4 intrinsically safe EEx ia IIC outputs in accordance to FISCO and Entity
- Installation in zone 1
- Housing IP67 for mounting in the field
- Switchable integrated fieldbus termination resistor
- Efficient shielding concept due to electrical isolation between the fieldbus trunk and the intrinsically safe outputs
- Variants with different cable glands

Function

The FieldBarrier connects a non-intrinsically safe fieldbus main line to 4 intrinsically safe output lines. Due to the 'increased safety' Ex e power feed concept, sufficient power is available to feed a multitude of field devices. Each output provides 40 mA. Up to 120 m of cable can be connected to an output and operated without a termination resistor. The FieldBarrier is connected to a fieldbus according to IEC 61158-2 (MBP) on the trunk side by means of Ex e connection terminals. The trunk can be fed to another FieldBarrier of other fieldbus stations by means of the trunk-out terminals (cascading). Faults on the output lines have no negative influence on the trunk due to the individual short-circuit monitoring of each output. In terms of plant reliability it is recommendable to connect one field device to each output only.

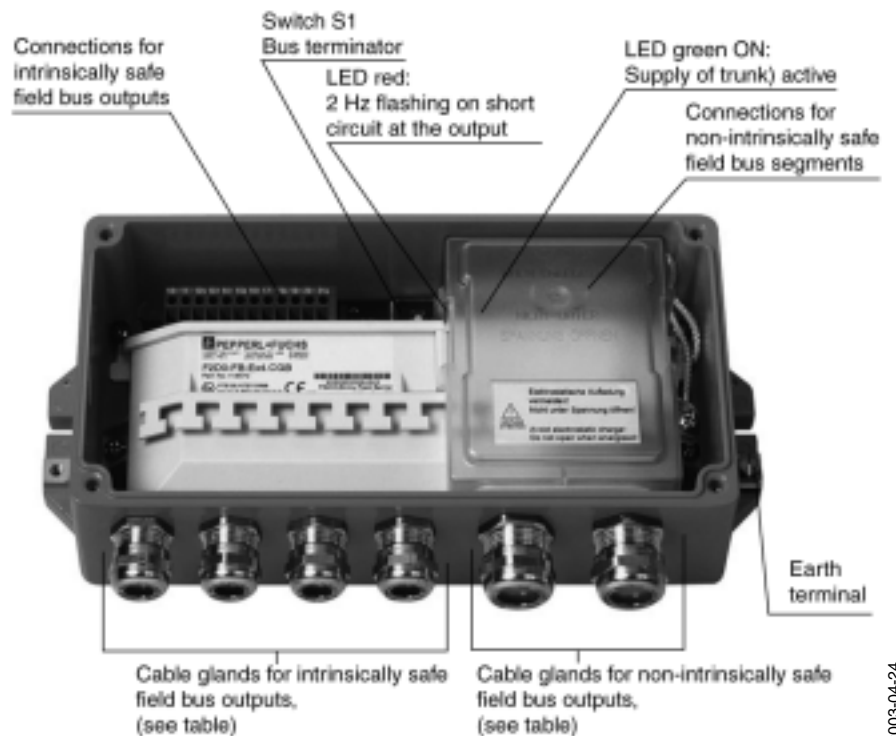
Connections for the non-intrinsically safe fieldbus segment



Connections for the intrinsically safe fieldbus segments

S1: Fieldbus termination, switchable

Composition



Fieldbus connection

Main cable (Trunk)

Connection	Input (Trunk in): Terminals 3+, 4-, 5s Output (Trunk out): Terminals 7+, 8-, 6s
Rated voltage	16 ... 32 V DC
Rated current	25 mA ... 22 mA (without load) 121 mA ... 74mA (at 20mA load per input) 230 mA ... 125 mA (at 40 mA load per input) 255 mA ... 135 mA (short-circuit on all outputs)

Outputs

Connection	Output 1: terminals 10+, 11-, 12S shield; Output 2: terminals 13+, 14-, 15S shield; Output 3: terminals 16+, 17-, 18S shield; Output 4: terminals 19+, 20-, 21S shield
Rated voltage	≥ 10 V at 40 mA
Rated current	≤ 40 mA
Short-circuit current	≤ 50 mA

Terminating impedance	100 Ω switchable on
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Electrical isolation

Main wire/outputs	Isolation is not affected by interference according to EN 50020, voltage peak value 375 V
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Standard conformity

Electromagnetic compatibility	NAMUR NE 21
Protection degree	IEC/EN 60529
Fieldbus standard	IEC 61158-2
Climatic conditions	DIN IEC 721

Directive conformity

Electromagnetic compatibility	standards
Directive 89/336/EG	EN 61326, EN 50081-2

Ambient conditions

Ambient temperature	see table
Storage temperature	-40 ... 85 °C (233 ... 358 K)

Mechanical specifications

Connection type	terminals
Core cross-section	up to 2.5 mm ²
Housing	258 mm x 114 mm x 84 mm (without cable glands)
Protection degree	IP67
Cable diameter	see table
Mass	2500 g
Mounting	Panel mounting

Data for application in conjunction with hazardous areas

EC-Type Examination Certificate	PTB 02 ATEX 2086
Group, category, type of protection, Temperature classification	⊕ II 2 (1) G EEx me [ia] IIC T4

Main cable (Trunk)

Safety maximum voltage U_m	253 V AC
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Outputs

Voltage U_o	15,75 V
Current I_o	248 mA
Power P_o	975 mW

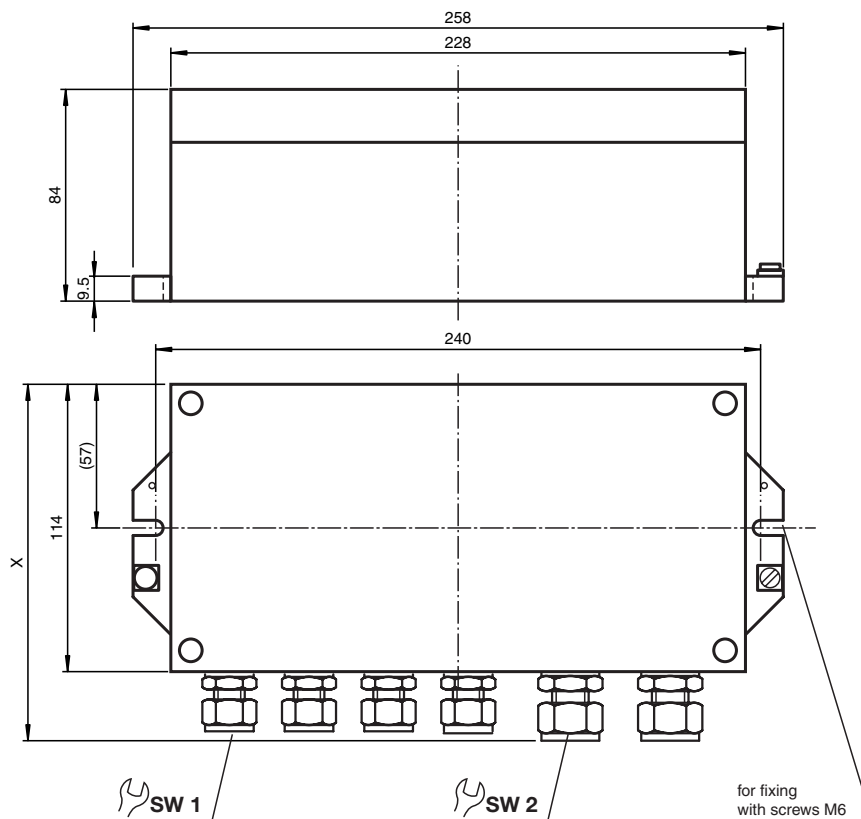
Directive conformity	standards
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Directive 94/9 EU	EN 50014, EN 50019, EN 50020, EN 50028
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Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. This information can be found under www.pepperl-fuchs.com

Dimensions



Installation note
see system description

Accessories

Cover form gasket F 2 04-AVP3E
Cable gland closing plug M20 Ex #118302 (for SW 1 and SW 2)

Versions of cable glands

Identification (*)	Type of cable gland	Dimension X (mm)	SW 1 (mm)	SW 2 (mm)
CG	Plastic	140	20	24
CGB	Nickel plated brass	140	20	24
CGS	Stainless steel	140	22	24
CGAB	Nickel plated brass, for armoured cable	160	24	24

Example for designation F2D0-FB-Ex4.*:
FieldBarrier with 4 outputs, nickel plated brass gland = F2D0-FB-Ex4.CGB

Cable diameter depending on the cable gland

Identification (*)	Output cable diameter (mm)	Trunk cable diameter (mm)
CG	5 ... 10	7 ... 12
CGB	5 ... 10	7 ... 12
CGS	5 ... 10	7 ... 12
CGAB	8.5 ... 16 external 6 ... 12 internal 0 ... 1.25 armour	8.5 ... 16 external 6 ... 12 internal 0 ... 1.25 armour

Ambient temperature range depending on the cable gland

Identification (*)	Temperature range °C
CG	-30 ... 70
CGB	-40 ... 70
CGS	-40 ... 70
CGAB	-40 ... 70