



- 1-channel
- Device installation in Zone 2
- Input EEx ia IIC; $U_o = 25.4 V$
- 2 galvanically isolated outputs
- 24 V DC supply voltage
- SMART capable up to 7.5 kHz (-3 dB)
- EMC acc. to NAMUR NE 21
- Up to SIL2 acc. to IEC 61508

Input 0/4 mA ... 20 mA
2 x Output 4 mA ... 20 mA
(current sink)
KFD2-STC4-Ex1.20-
Y112668

Function

SMART transmitter power supplies provide a 2- or 3-wire SMART transmitter and transfer the analogue values.

Digital signals may be superimposed on the analogue values, which will be transferred bidirectionally. Handheld terminals should be connected as shown in the block diagram.

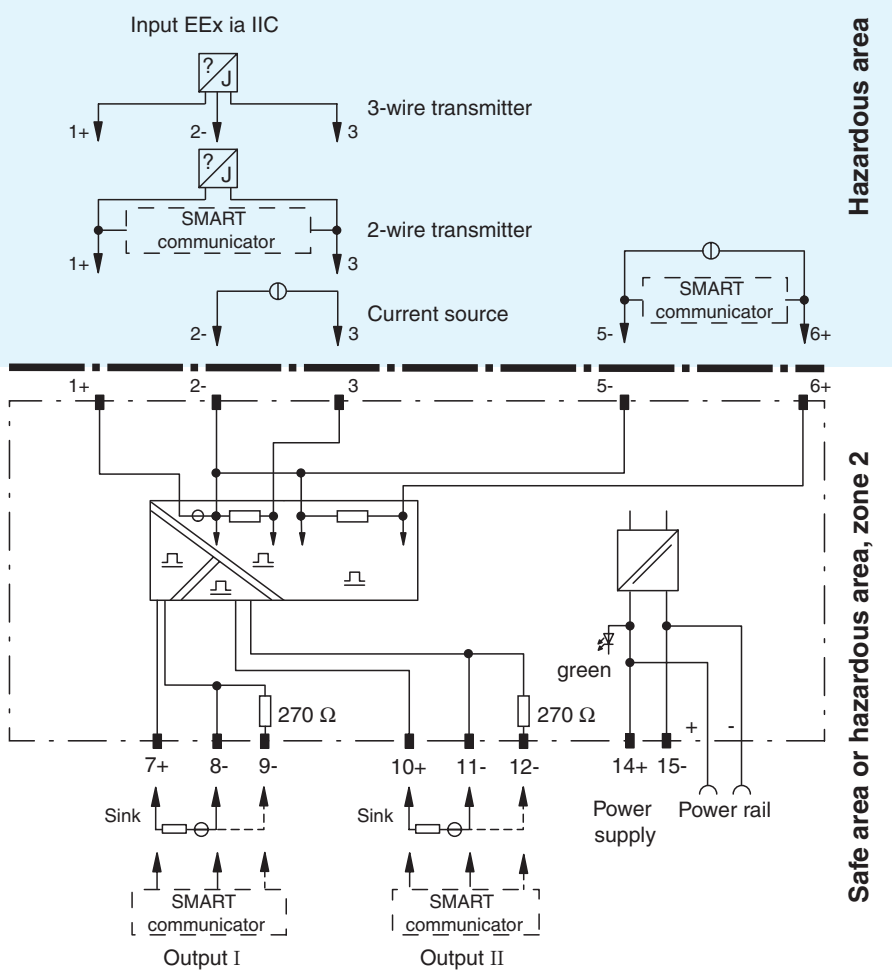
An internal resistor at terminal 9 (at terminals 9 and 12 with version 20) is available, which may be used to increase the AC impedance for the HART signal.

SMART transmitter power supplies are delivered with terminal type KF-STP-**. Jacks are integrated in these terminals for the connection of the handheld units.

Application

- Power supply for SMART transmitters and transfer of the measurement signal to the output
- for the transfer of a current source to the safe area
- suitable for the following SMART systems:
 ABB, Endress+Hauser, Emerson, Fuji, Smar, VEGA, Yokogawa

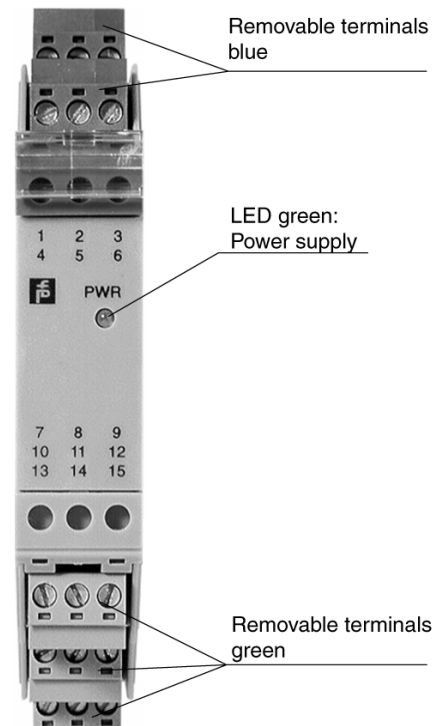
Connection



Composition

Front view

Housing type B2
 (see system description)



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Supply		
Connection		Power Rail or terminals 14+, 15-
Rated voltage		20 ... 35 V DC
Ripple		within the supply tolerance
Power loss		1.6 W
Power consumption		2.5 W
Input		
Connection		terminals 1, 2, 3 or 5-, 6+
Input signal		0/4 ... 20 mA
Input resistance		≤ 76 Ω terminals 2-, 3
Available voltage		≥ 15.7 V at 20 mA terminals 1+, 3
Output		
Connection		terminals 7+, 8-; 10+, 11-
Output signal		0/4 ... 20 mA (overload > 25 mA)
Ripple		≤ 50 μA _{rms}
Safety maximum voltage U _m		250 V (Attention! The rated voltage can be lower.)
External supply (loop)		30 V DC
Transfer characteristics		
Deviation		at 20 °C (293 K), 4 ... 20 mA ≤ 20 μA incl. calibration, linearity, hysteresis, loads and fluctuations of supply voltage
Influence of ambient temperature		≤ 20 ppm/K
Frequency range		hazardous area to safe area: bandwidth with 0.5 V _{pp} signal 0 ... 7.5 kHz (-3 dB) safe area to hazardous area: bandwidth with 0.5 V _{pp} signal 0.3 ... 7.5 kHz (-3 dB)
Electrical isolation		
Input/output		safe electrical isolation acc. to EN 50020
Input/power supply		safe electrical isolation acc. to EN 50020
Output/power supply		available
Directive conformity		
Electromagnetic compatibility		
Directive 89/336/EEC		EN 61326, EN 50081-2, EN 50082-2
Conformity		
Insulation coordination		EN 50178
Electrical isolation		EN 50178
Electromagnetic compatibility		NE 21
Protection degree		IEC 60529
Input		EN 60947-5-6 (NAMUR), see system description for electrical data
Ambient conditions		
Ambient temperature		-20 ... 60 °C (253 ... 333 K)
Mechanical specifications		
Protection degree		IP20
Mass		approx. 100 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in)
Data for application in conjunction with hazardous areas		
EC-Type Examination Certificate		BAS 99 ATEX 7060 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		⊕ II (1)G [Ex ia] IIC (-20 °C ≤ T _{amb} ≤ 60 °C)
Input		Ex ia IIC
Supply		
Safety maximum voltage U _m		250 V (Attention! The rated voltage can be lower.)
Equipment		
Equipment		terminals 1+, 3-
Voltage U _o		25.4 V
Current I _o		86.8 mA
Power P _o		551 mW
Equipment		terminals 5-, 6+
Current I _o /Current I _i		74 mA / 115 mA
Voltage U _o		3.5 V
Power P _o		64 mW
Equipment		terminals 1+, 2 / 3-
Voltage U _o		25.4 V
Current I _o		115 mA
Power P _o		584 mW
Equipment		terminals 5-, 6+
Voltage U _i		30 V
Current I _i		115 mA
Voltage U _o		8.7 V

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Current I_o	terminal 6: 0 mA terminal 5: 33 mA
Statement of conformity	TÜV 99 ATEX 1499 X , observe statement of conformity
Group, category, type of protection, temperature classification	⊕ II 3G EEx nA II T4
Electrical isolation	
Input/output	safe electrical isolation acc. to EN 50020
Input/power supply	safe electrical isolation acc. to EN 50020
Directive conformity	
Directive 94/9/EC	EN 50014, EN 50020, EN 50021

Supplementary information

EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity and instructions have to be observed. For information see www.pepperl-fuchs.com.

Accessories

Power Rail PR-03

Power Rail UPR-03

Power feed module KFD2-EB2...

Using Power Rail PR-03 or UPR-03 the devices are supplied with 24 V DC by means of the power feed modules. If no Power Rails are used, power supply of the individual devices is possible directly via their device terminals.

Each power feed module is used for fusing and monitoring groups with up to 100 individual devices. The Power Rail PR-03 is an inset component for the DIN rail. The Power Rail UPR-03 is a complete unit consisting of the electrical inset and an aluminium profile rail 35 mm x 15 mm x 2000 mm. To make electrical contact, the devices are simply engaged.

The Power Rail must not be fed via the device terminals of the individual devices!