

Technical Data

Rated current	I_r	≤ 30 mA at 24 V
Power dissipation		≤ 600 mW at 20 mA and 500 Ω load
Power consumption		≤ 700 mW
Input		
Connection side		control side
Connection		terminals 7-, 8+, (9+)
Input signal		4 ... 20 mA , limited to approx. 30 mA
Input voltage		open loop voltage of the control system ≤ 30 V
Voltage drop		approx. 6 V at 20 mA
Input resistance		field wiring open circuit : > 100 k Ω field wiring < 50 Ω : > 100 k Ω when using terminals 1 and 2
Output		
Connection side		field side
Connection		terminals 1+, 2- terminals 3+, 2- (no short circuit detection)
Voltage		≥ 13 V at 20 mA
Current		4 ... 20 mA
Load		100 ... 650 Ω , for terminals 1, 2 0 ... 550 Ω , for terminals 2, 3
Ripple		20 mV rms
Line fault detection		breakage, load > 100 k Ω , short-circuit, load < 50 Ω
Fault indication output		
Output type		open collector transistor (internal fault bus)
Transfer characteristics		
Deviation		at 20 °C (68 °F), 4 ... 20 mA < 0.1 % of full scale, incl. non-linearity and hysteresis
Influence of ambient temperature		< 2 μ A/K (-20 ... 70 °C (-4 ... 158 °F)); < 4 μ A/K (-40 ... -20 °C (-40 ... -4 °F))
Frequency range		field side into the control side: bandwidth with 0.5 V_{pp} signal 0 ... 3 kHz (-3 dB) control side into the field side: bandwidth with 0.5 V_{pp} signal 0 ... 3 kHz (-3 dB)
Rise time		10 to 90 % ≤ 10 ms
Galvanic isolation		
Input/Output		basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff}
Input/power supply		basic insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff}
Output/power supply		reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V_{eff}
Indicators/settings		
Display elements		LEDs
Labeling		space for adhesive label at the front
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations)
Conformity		
Electromagnetic compatibility		NE 21:2017 EN 61326-3-2:2018
Degree of protection		IEC 60529
Protection against electrical shock		UL 61010-1:2012
Ambient conditions		
Ambient temperature		-40 ... 70 °C (-40 ... 158 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw terminals
Mass		approx. 115 g
Dimensions		20 x 124 x 115 mm (0.8 x 4.9 x 4.5 inch) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with hazardous areas		
EU-type examination certificate		BAS 00 ATEX 7240 X

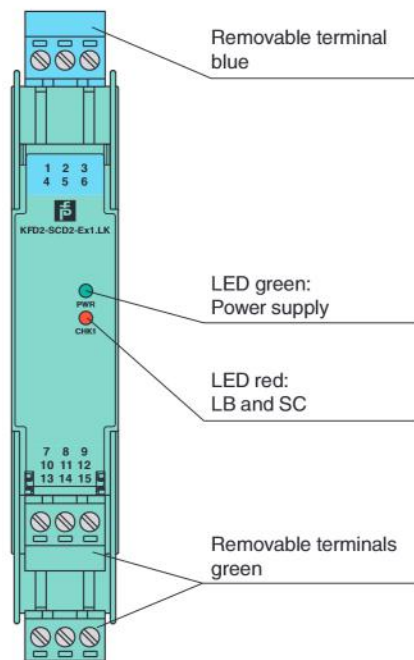
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Marking		Ⓢ II (1)G [Ex ia Ga] IIC Ⓢ II (1)D [Ex ia Da] IIIC Ⓢ I (M1) [Ex ia Ma] I
Output		Ex ia, Ex iaD
Voltage	U_o	25.2 V
Current	I_o	93 mA
Power	P_o	585.3 mW
Internal capacitance	C_i	1.05 nF
Internal inductance	L_i	0
Supply		
Maximum safe voltage	U_m	250 V _{rms} (Attention! The rated voltage can be lower.)
Input		
Maximum safe voltage	U_m	250 V _{rms} (Attention! The rated voltage can be lower.)
Certificate		TÜV 99 ATEX 1499 X
Marking		Ⓢ II 3G Ex nA II T4
Galvanic isolation		
Input/output		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Output/power supply		safe electrical isolation acc. to IEC/EN 60079-11, voltage peak value 375 V
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2018 , EN 60079-11:2012 , EN 60079-15:2005
International approvals		
UL approval		E106378
Control drawing		116-0345 (cULus)
IECEX approval		
IECEX certificate		IECEX BAS 04.0014X
IECEX marking		[Ex ia Ga] IIC , [Ex ia Da] IIIC , [Ex ia Ma] I Ex ec IIC T4 Gc
General information		
Supplementary information		Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see www.pepperl-fuchs.com .

Assembly

Front view



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Operation







Lead monitoring, input characteristics

During lead breakage ($> 16\text{ V}$) in the field the input resistance is $> 100\text{ k}\Omega$, the field current is 0 mA , the input current is $< 0.3\text{ mA}$ and the red LED is flashing.

During short circuit ($< 50\ \Omega$) in the field the input resistance is $> 100\text{ k}\Omega$, the input current is $< 100\ \mu\text{A}$, the field current is $< 2.5\text{ mA}$ and the red LED is flashing.

The voltage drop at the current input (terminals 7-, 8+) is lower than 6 V .

Matching System Components

	KFD2-EB2	Power Feed Module
	UPR-03	Universal Power Rail with end caps and cover, 3 conductors, length: 2 m
	UPR-03-M	Universal Power Rail with end caps and cover, 3 conductors, length: 1,6 m
	UPR-03-S	Universal Power Rail with end caps and cover, 3 conductors, length: 0.8 m
	K-DUCT-BU	Profile rail, wiring comb field side, blue
	K-DUCT-BU-UPR-03	Profile rail with UPR-03- * insert, 3 conductors, wiring comb field side, blue

Accessories

	KF-ST-5GN	Terminal block for KF modules, 3-pin screw terminal, green
	KF-ST-5BU	Terminal block for KF modules, 3-pin screw terminal, blue
	KF-CP	Red coding pins, packaging unit: 20 x 6