

Conductive Switch Amplifier

KFD2-ER-1.5

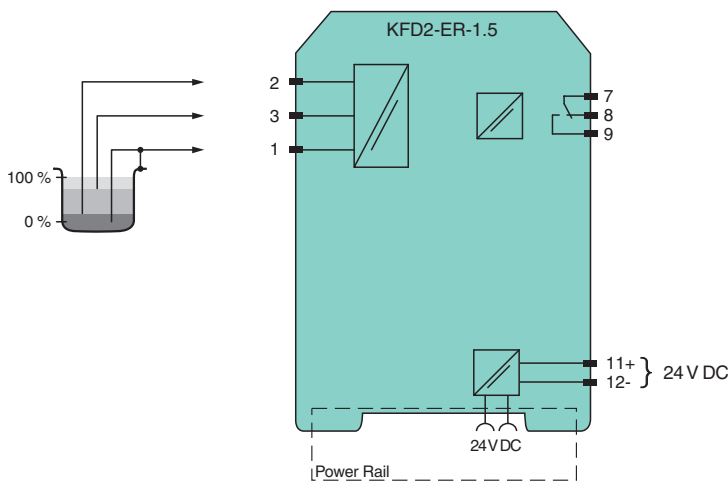
- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Level sensing input
- Adjustable range 1 kΩ ... 30 kΩ
- Relay contact output
- Minimum/maximum control



Function

This signal conditioner provides the AC measuring voltage for the levelsensing electrodes. Once the measured medium reaches the electrodes, the unit reacts by energizing a form C changeover relay contact. The module is voltage and temperature stabilized and guarantees defined switching characteristics. An electronic holding circuit is used that allows minimum/maximum control. Since the conductance of the media may vary, the relay response sensitivity is adjustable. The normal output state can be reversed through the mode of operation switch S1.

Connection



Technical Data

General specifications

Signal type	Digital Input		
Supply			
Connection	Power Rail or terminals 11+, 12-		
Rated voltage	U_r	20 ... 30 V DC	
Input			
Connection side	field side		
Connection	terminals 1 (mass), 2 (min), 3 (max)		
Open circuit voltage/short-circuit current	approx. 10 V AC (approx. 1 Hz) / approx. 5 mA		
Control input	min./max. control system: terminals 1, 2, 3 on/off control system: terminals 1, 3		

Release date: 2021-12-20 Date of issue: 2021-12-20 Filename: 096863_eng.pdf

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

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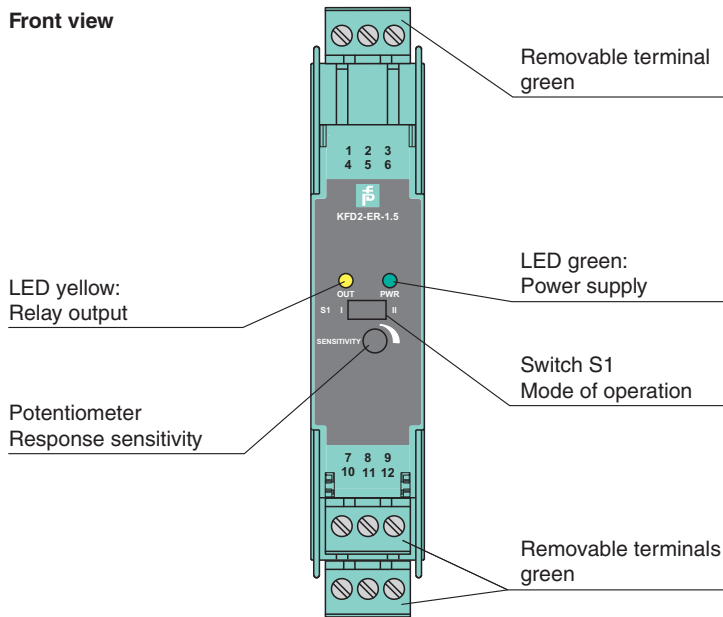
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Technical Data







Response sensitivity	1 ... 30 k Ω , adjustable via potentiometer (20 turns)
Output	
Connection side	control side
Connection	terminals 7, 8, 9
Output	1 changeover contact
Contact loading	253 V AC/2 A/cos ϕ > 0.7; 40 V DC/2 A resistive load
Energized/De-energized delay	approx. 1 s / approx. 1 s
Galvanic isolation	
Input/Output	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V _{eff}
Input/power supply	reinforced 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
Control elements	DIP switch potentiometer
Configuration	via DIP switches : switch S1 Position I open circuit current: In the open circuit current principle, the relay becomes active when the limit is reached. Position II closed circuit current: In closed circuit current principle, the relay is activated when power is applied. The relay is deactivated when the limit is reached. via potentiometer
Labeling	space for labeling at the front
Directive conformity	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
Conformity	
Electromagnetic compatibility	NE 21:2006
Degree of protection	IEC 60529:2001
Ambient conditions	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F) extended ambient temperature range up to 70 °C (158 °F), refer to manual for necessary mounting conditions
Mechanical specifications	
Degree of protection	IP20
Connection	screw terminals , max. 2.5 mm ²
Mass	approx. 110 g
Dimensions	20 x 107 x 115 mm (0.8 x 4.2 x 4.5 inch) (W x H x D) , housing type B1
Mounting	on 35 mm DIN mounting rail acc. to EN 60715:2001
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



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-GY	Profile rail, wiring comb field side, gray
	K-DUCT-GY-UPR-03	Profile rail with UPR-03-* insert, 3 conductors, wiring comb field side, gray

Accessories

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

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