

# Conductive Switch Amplifier

## KFA6-ER-1.6

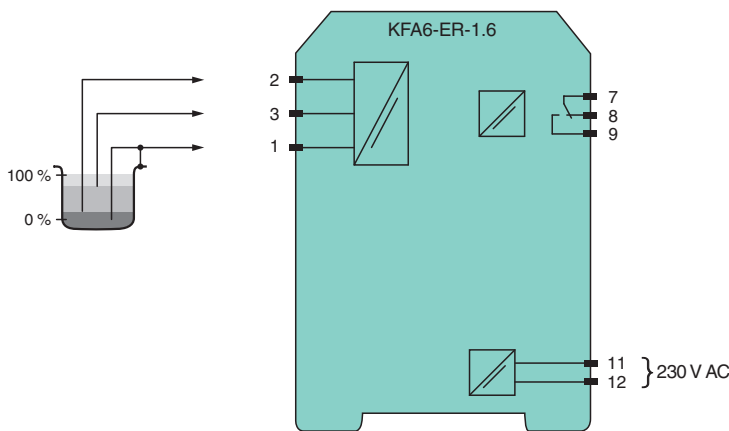
- 1-channel signal conditioner
- 230 V AC supply
- Level sensing input
- Adjustable range 5 kΩ ... 150 kΩ
- Relay contact output
- Minimum/maximum control



### 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		
<b>Supply</b>			
Connection	terminals 11 (L1), 12 (N)		
Rated voltage	$U_r$	207 ... 253 V AC, 45 ... 65 Hz	
Power consumption	approx. 0.8 W		
<b>Input</b>			
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		

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

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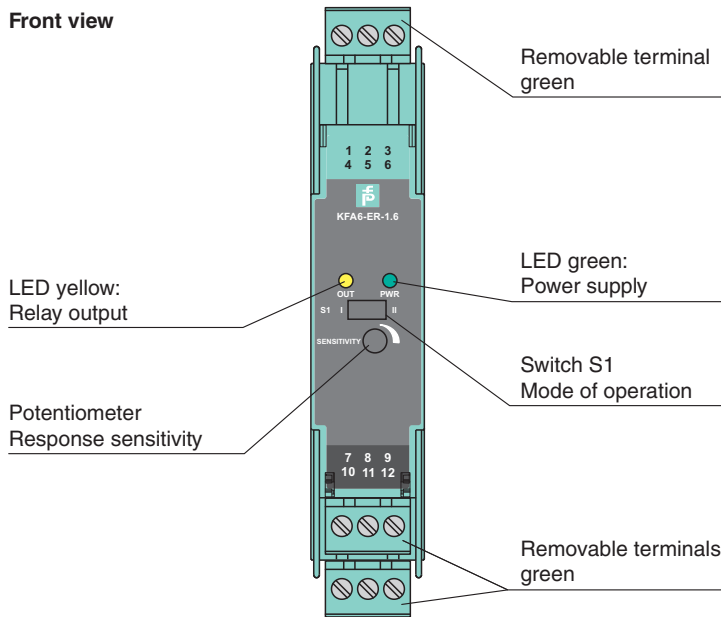
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## Technical Data

Control input	min./max. control system: terminals 1, 2, 3 on/off control system: terminals 1, 3
Response sensitivity	5 ... 150 k $\Omega$ , adjustable via potentiometer (20 turns)
<b>Output</b>	
Connection side	control side
Connection	terminals 7, 8, 9
Output	1 changeover contact
Contact loading	253 V AC/2 A/cos $\phi$ > 0.7; 40 V DC/2 A resistive load
Energized/De-energized delay	approx. 1 s / approx. 1 s
<b>Galvanic isolation</b>	
Input/Output	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Input/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
Output/power supply	reinforced insulation according to IEC/EN 61010-1, rated insulation voltage 300 V <sub>eff</sub>
<b>Indicators/settings</b>	
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
<b>Directive conformity</b>	
Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations)
Low voltage	
Directive 2014/35/EU	EN 61010-1:2010
<b>Conformity</b>	
Insulation coordination	EN 50178:1997
Galvanic isolation	EN 50178:1997
Electromagnetic compatibility	NE 21:2006
Degree of protection	IEC 60529:2001
<b>Ambient conditions</b>	
Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
<b>Mechanical specifications</b>	
Degree of protection	IP20
Connection	screw terminals , max. 2.5 mm <sup>2</sup>
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
<b>General information</b>	
Supplementary information	Observe the certificates, declarations of conformity, instruction manuals, and manuals where applicable. For information see <a href="http://www.pepperl-fuchs.com">www.pepperl-fuchs.com</a> .

## Assembly

Front view



Removable terminal green

LED yellow:  
Relay output


LED green:  
Power supply

Potentiometer  
Response sensitivity



Switch S1  
Mode of operation

Removable terminals  
green

## Matching System Components

	<b>K-DUCT-GY</b>	Profile rail, wiring comb field side, gray
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## Accessories

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