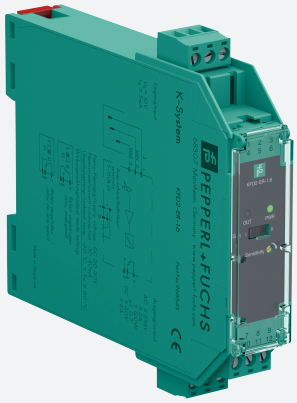


# Conductive Switch Amplifier

## KFD2-ER-1.6

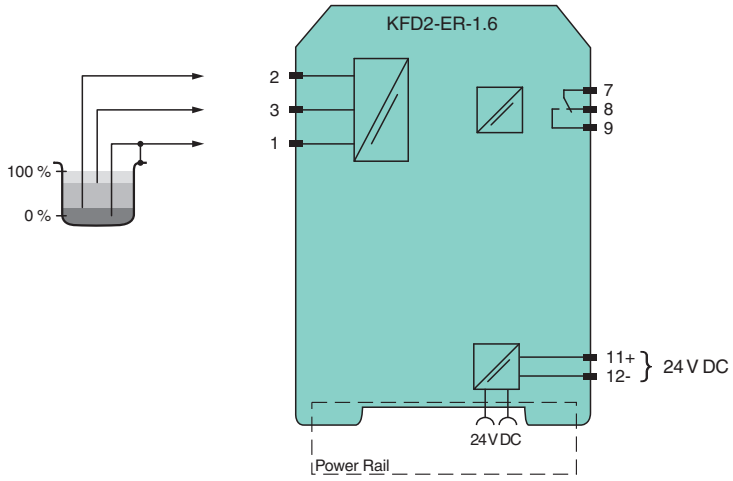
- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Level sensing input
- Adjustable range 5 kΩ ... 150 kΩ
- Relay contact output
- Minimum/maximum control

CE

## 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<br>on/off control system: terminals 1, 3 |

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## Technical Data

| | |
|---|---|
| Response sensitivity | 5 ... 150 kΩ , 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<br>potentiometer |
| Configuration | via DIP switches : switch S1<br>Position I open circuit current: In the open circuit current principle, the relay becomes active when the limit is reached.<br>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.<br>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)<br>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. |

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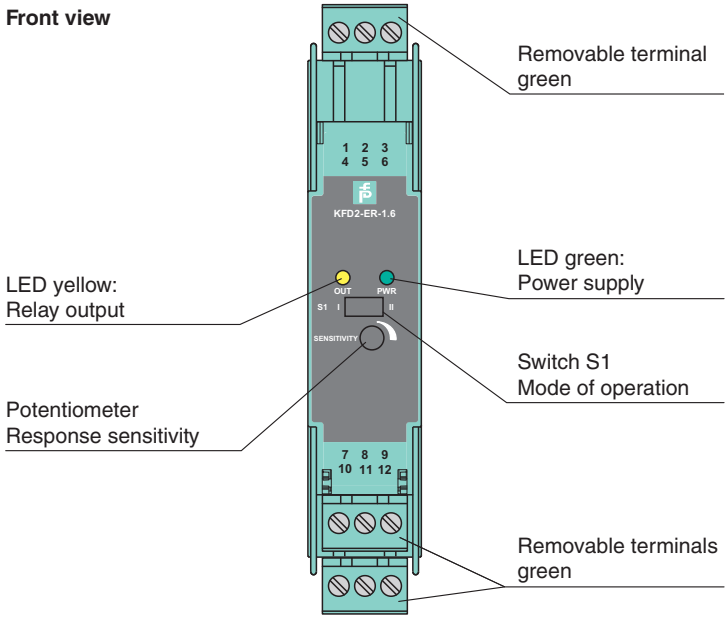
## Assembly

**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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