



Conductive Switch Amplifier KFD2-ER-1.5

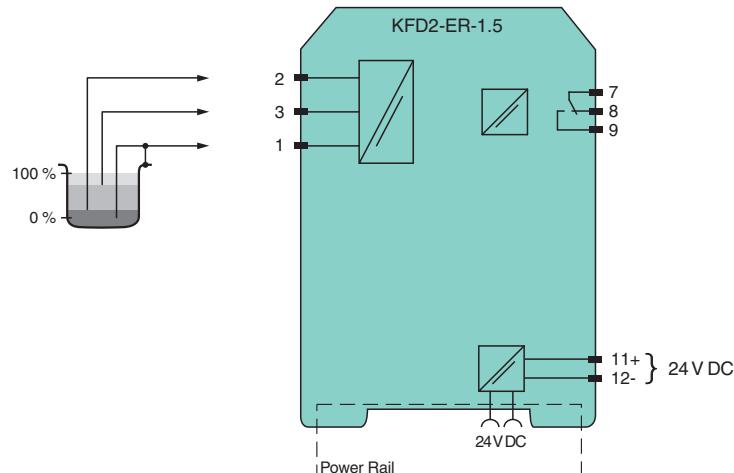
- 1-channel signal conditioner
- 24 V DC supply (Power Rail)
- Level sensing input
- Adjustable range 1 kΩ ... 30 kΩ
- Relay contact output
- Minimum/maximum control



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- | |
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| | | |
|---------------|-------|----------------|
| Rated voltage | U_r | 20 ... 30 V DC |
|---------------|-------|----------------|

Input

| | |
|-----------------|------------|
| Connection side | field side |
|-----------------|------------|

| | |
|------------|--------------------------------------|
| Connection | terminals 1 (mass), 2 (min), 3 (max) |
|------------|--------------------------------------|

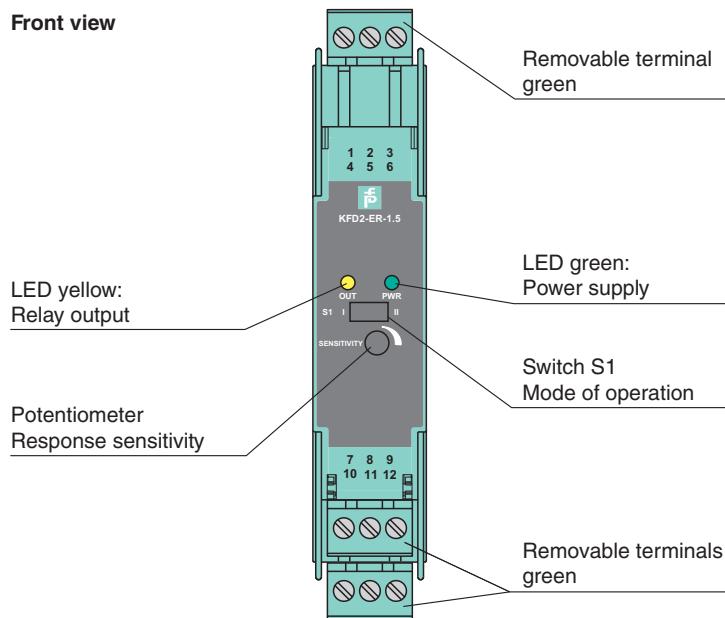
| | |
|--|---|
| Open circuit voltage/short-circuit current | approx. 10 V AC (approx. 1 Hz) / approx. 5 mA |
|--|---|

| | |
|---------------|--|
| Control input | min./max. control system: terminals 1, 2, 3 on/off control system: terminals 1, 3 |
|---------------|--|

Technical Data

| | |
|----------------------------------|--|
| Response sensitivity | 1 ... 30 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 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



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 |