



- 1-channel
- Relay for conductive limit value detection
- Adjustable sensitivity
- Measuring circuit in acc. with VDE 0100 part 410 "Funktionskleinspannung"
- Minimum/maximum control
- Open/closed circuit current principle switchable
- EMC acc. to NAMUR NE 21
- This model replaces KHA6-ER-1.\* and HR-122620

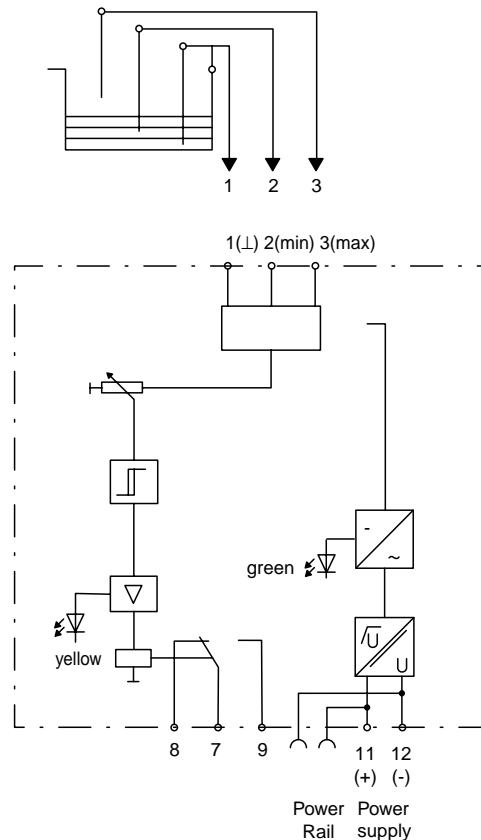
24 V DC  
**KFD2-ER-1.5**  
 24 V DC  
**KFD2-ER-1.6**

**Function**

The relays provide the AC measuring voltage for the electrodes and react with a small alternating current after the electrodes get in contact with the medium.

The switching amplifiers are voltage and temperature stabilised and guarantee a defined switching characteristics. An electronic holding contact allows a minimum maximum control. Since the conductance of the media may vary, the relay response sensitivity is adjustable.

**Connection**



**Composition**

**Front View**

Housing type A4

LED yellow:  
 Relais output

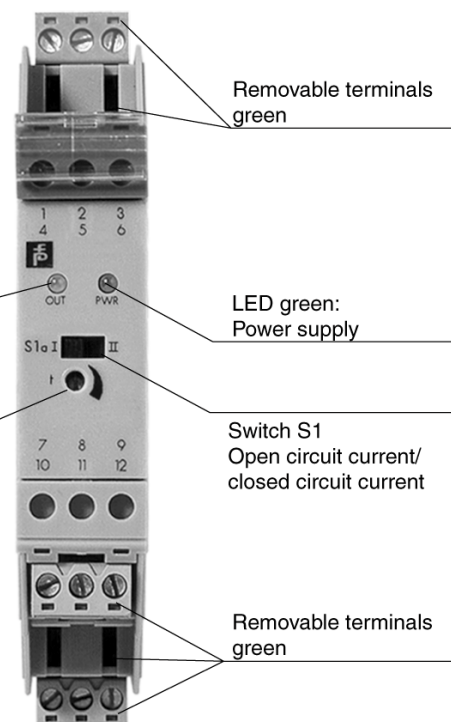
Potentiometer  
 Response sensitivity

Removable terminals  
 green

LED green:  
 Power supply

Switch S1  
 Open circuit current/  
 closed circuit current

Removable terminals  
 green



	KFD2-ER-1.5	KFD2-ER-1.6
<b>Supply</b>		
Connection	Power Rail or terminals 11+, 12-	
Rated voltage	20 ... 30 V DC	
<b>Input</b>		
Connection	terminals 1 (mass), 2 (min), 3 (max)	terminals 1 (mass), 2 (min), 3 (max)
Control input	min./max. control system: terminals 1, 2, 3 on/off control system: terminals 1, 3	min./max. control system: terminals 1, 2, 3 on/off control system: terminals 1, 3
Potentiometer	response sensitivity: 1 ... 30 kOhm, adjustable (20 turns)	response sensitivity: 5 ... 150 kOhm, adjustable (20 turns)
<b>Output</b>		
Connection	terminals 7, 8, 9	
Output	1 changeover contact	
Contact loading	253 V AC / 2 A / $\cos \varphi > 0.7$ ; 40 V DC / 2 A resistive load	
Energised/De-energised delay	approx. 1 s / approx. 1 s	
<b>Electrical isolation</b>		
Input/Output	basic insulation according to DIN EN 50178, rated insulation voltage 253 V <sub>eff</sub>	
Input/Power supply	basic insulation according to DIN EN 50178, rated insulation voltage 253 V <sub>eff</sub>	
Output/Power supply	basic insulation according to DIN EN 50178, rated insulation voltage 253 V <sub>eff</sub>	
<b>Directive conformity</b>		
Electromagnetic compatibility		
Directive 89/336/EEC	EN 61326, EN 50081-2, NE 21	
<b>Ambient conditions</b>		
Ambient temperature	-20 ... 60 °C (253 ... 333 K)	
<b>Mechanical specifications</b>		
Protection degree	IP20	
Connection	screw connection, 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 inches)	
Mounting	Power Rail or pull-out latches using for screw mounting	
<b>Indication and operation</b>		
Operating elements	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	

## Accessories

### PR-03 Power Rail

### UPR-03 Power Rail

### KFD2-EB2 power feed module

The devices are supplied with 24 V DC through the KFD2-EB2 power feed module and the PR-03 or the UPR-03 Power Rail. Each power feed module monitors and provides protection for groups of as many as 100 individual devices. The PR-03 Power Rail is an insert component for the DIN rail. The UPR-03 Power Rail is a complete unit consisting of an electrical insert and an aluminium DIN rail measuring 35 mm x 15 mm x 2000 mm. The devices are simply snapped in place to make electrical contact.

If a Power Rail is not being used, power can be supplied to the devices directly through the device terminals.