Features

- 1-channel isolated barrier
- 115 V AC supply
- Level sensing input
- Adjustable range 1 kΩ ... 150 kΩ
- Relay contact output
- Fault relay contact output
- Adjustable time delay up to 10 s
- Minimum/maximum control
- Line fault detection (LFD)

Function

This isolated barrier is used for intrinsic safety applications. It provides the AC measuring voltage for the level sensing 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 a defined switching characteristic.

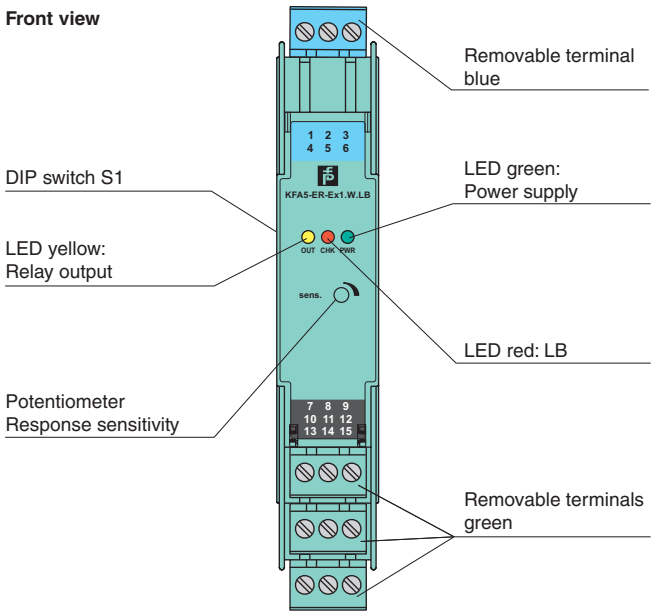
It can be used for on/off control or minimum/maximum control. A signal delay feature is available and is adjustable between 0.5 s and 10 s.

This module can also monitor the field circuit for lead breakage (LB). LB is indicated by a red LED. If LB monitoring is selected, output II serves as the fault signal output; otherwise, it will follow the function of output I.

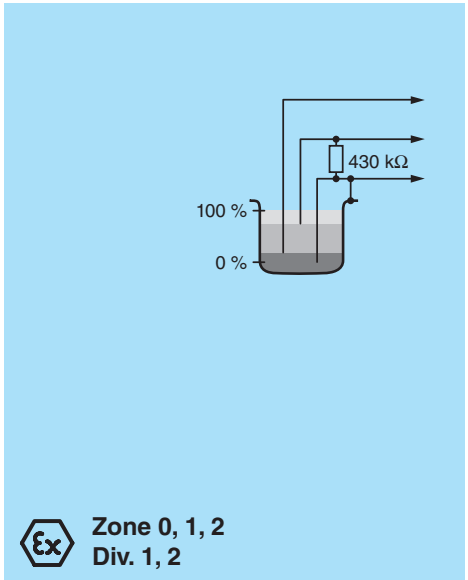
Application

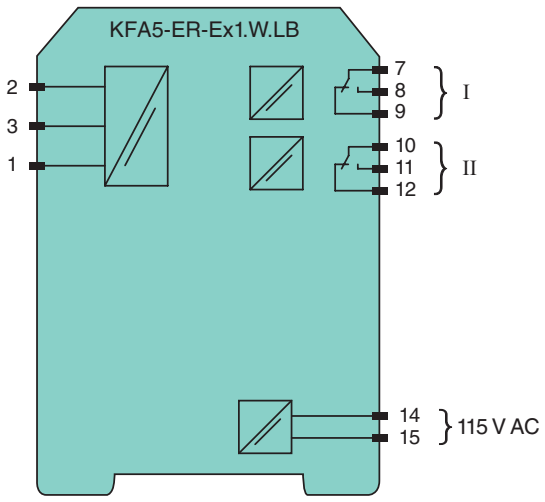
The device is equipped with lead breakage detection (current free relay in event of failure). For this purpose, the enclosed 430 kΩ resistance must be switched between the maximum and reference electrode. This function can be deactivated by DIP switches.

Assembly



Connection





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General specifications		
Signal type		Digital Input
Supply		
Connection		terminals 14, 15
Rated voltage	U_n	103.5 ... 126 V AC , 45 ... 65 Hz
Rated current	I_n	12 mA
Power consumption		< 1.2 W
Input		
Connection		terminals 1 (mass), 2 (min), 3 (max)
Control input		min./max. control system: terminals 1, 2, 3 on/off control system: terminals 1, 3
Response sensitivity		1 ... 150 kΩ , adjustable via potentiometer
Output		
Connection		terminals 7, 8, 9; 10, 11, 12
Switching power		max. 192 W , 2000 VA
Output		signal ; relay
Time constant for signal damping		0.5 s, 2 s, 5 s, 10 s
Electrical isolation		
Output/power supply		basic insulation according to EN 50178, rated insulation voltage 253 V_{eff}
Directive conformity		
Electromagnetic compatibility		
Directive 2004/108/EC		EN 61326-1:2006
Low voltage		
Directive 2006/95/EC		EN 50178:1997
Conformity		
Insulation coordination		EN 50178:1997
Electrical isolation		EN 50178:1997
Electromagnetic compatibility		NE 21:2006
Degree of protection		IEC 60529:2001
Ambient conditions		
Ambient temperature		-20 ... 60 °C (-4 ... 140 °F)
Mechanical specifications		
Degree of protection		IP20
Connection		screw connection, max. 2.5 mm^2
Mass		approx. 150 g
Dimensions		20 x 119 x 115 mm (0.8 x 4.7 x 4.5 in) , housing type B2
Mounting		on 35 mm DIN mounting rail acc. to EN 60715:2001
Data for application in connection with Ex-areas		
EC-Type Examination Certificate		DMT 00 ATEX E 032 , for additional certificates see www.pepperl-fuchs.com
Group, category, type of protection		Ⓔx II (1)G [EEx ia] IIC [circuit(s) in zone 0/1/2]
Input		[EEx ia] IIC
Voltage	U_o	10 V
Current	I_o	2.5 mA
Power	P_o	6 mW
Supply		
Maximum safe voltage	U_m	265 V AC / 150 V AC (Attention! U_m is no rated voltage.)
Type of protection [EEx ia and EEx ib]		
Output		
Contact loading		253 V AC/2 A/cos ϕ > 0.7; 40 V DC/2 A resistive load
Electrical isolation		
Input/Output		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Input/power supply		safe galvanic isolation acc. to EN 50020, voltage peak value 375 V
Directive conformity		
Directive 94/9/EC		EN 50014, EN 50020, EN 50284
General information		
Supplementary information		EC-Type Examination Certificate, Statement of Conformity, Declaration of Conformity, Attestation of Conformity and instructions have to be observed where applicable. For information see www.pepperl-fuchs.com.

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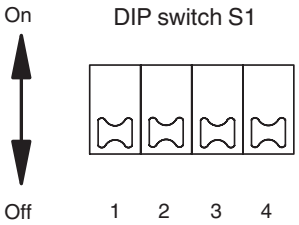
Configuration

DIP switch function on side of device



Switches	Position	Function
1	Off On	open circuit current closed circuit current
2	Off On	LB deactivated LB activated

Switch 3	Switch 4	Time constant for signal damping
Off Off	Off On	0.5 s 2 s
On On	Off On	5 s 10 s

- Open circuit current principle: In open circuit current principle the relay becomes active when the limit is reached.
- Closed circuit current principle: In closed circuit current principle, the relay is activated when power is applied. The relay is deactivated when the limit is reached.

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