KUEBLER Water Detector Relay Type WW230 and WW24

General Description

Our water detector relays Type WW230 and WW24 operate on the conductive measurement principle. In conjunction with the floor electrodes they can be used to monitor water ingress into rooms and areas caused by burst pipes or leaking vessels etc.

The water detector relays provide an AC measuring voltage for the electrode circuit. Any number of floor electrodes can be connected to this to serve as detection points. As soon as electrically conductive liquids such as water, chemicals, alkaline or acidic solutions bridge one of the 2-pole floor electrodes, a small alternating current flows.

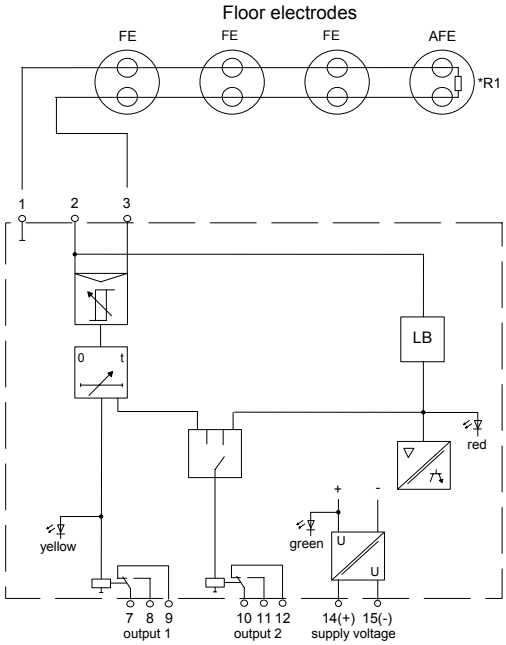
The controllers are voltage and temperature stabilised and guarantee a defined switch behaviour. The signal delay is adjustable from between 0.5 s and 10 s and refers to the on/off switching of the output relays.

The device is equipped with wire break (LB) monitoring (current free relay in event of failure). For this purpose an end-electrode (Type AFE) with built-in 430 kOhm resistor must be used. This function can be de-activated via a DIP switch. When utilising the LB (wire break) monitoring the second relay output serves as a fault signal output. When LB (wire break) monitoring is de-activated the second relay output follows the first relay output.

Open circuit current principle
In the open circuit current principle the relay energises when the liquid bridges the 2-pole floor electrode.

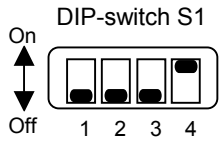
Closed circuit current principle
In the closed circuit current principle the relay energises immediately on power-up. It de-energises, when the 2-pole floor electrode is bridged by the liquid.

- **Wire break monitoring (LB)**
- **open circuit current / closed circuit current – user selectable**



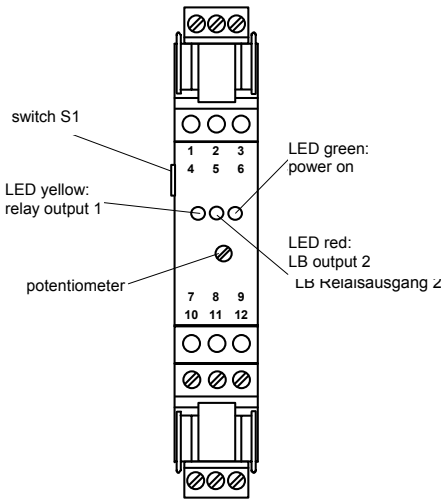
* resistor R1 = 430 kOhm required with activated wire break monitoring

Selection



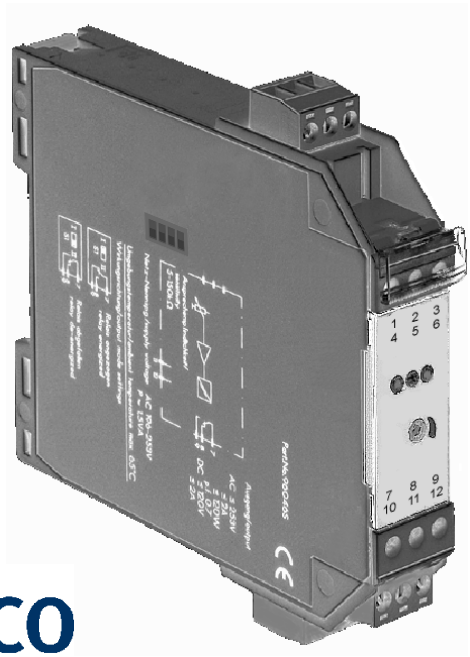
DIP Switch S1	Position	Function
DIP Switch 1	Off On	Closed circuit current Open circuit current
DIP Switch 2	Off On	LB deactivated LB activated

DIP Switch 3	DIP Switch 4	Energised and de-energised delay
Off Off	Off On	0.5 s 2 s
On On	Off On	5 s 10 s



Dimensions

B	20 mm
H	105 mm
T	115 mm



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Technical data

		WW230	WW24
Supply			
supply voltage	terminals 14(+) , 15(-)	230V AC, 48Hz ... 62Hz	20V DC ... 30V DC
power consumption		≤ 1.2W	
Input/control circuit	terminals 1 and 3		
response sensitivity		1 kOhm ... 150 kOhm adjustable	
max. voltage		10V	
max. current		2.5mA	
max. power		6mW	
max. inductance L_o		100mH	
max. capacitance C_o		3µF	
max. L/R-relation		5mH/Ω	
Output	terminals 7, 8, 9 ; 10, 11, 12	1 relay output (changeover contact) per output terminal set, volt-free	
contact rating AC		253V / 2A / cosφ > 0,7	
contact rating DC		40V / 2A / resistance load	
delay time: energising / de-energising (DIP-Switch 3 & 4)		0.5s , 2s , 5s , 10s	
open circuit / closed circuit current (DIP-Switch 1)		„On“ open circuit current „Off“ closed circuit current	
wire break (LB) monitoring (DIP-Switch 2)		„On“ LB activated „Off“ LB de-activated	
Transfer characteristics			
switching frequency		≤ 10Hz	
Galvanic isolation			
power supply / output		galvanic isolation to DIN 106 rated insulation voltage 253V_{eff}	
power supply / input			
input / output			
Environmental conditions			
operating temperature		-25°C ... +65°C	
type of protection		IP 20	
Mechanical data			
design		modular terminal housing in Makrolon, flammability class UL94: V - 0	
mounting		snap/clip onto standard 35mm rail or screw mounted via 2 screws	
connection terminals		self-opening instrument terminals max. 2.5mm²	
weight		approx. 110g	

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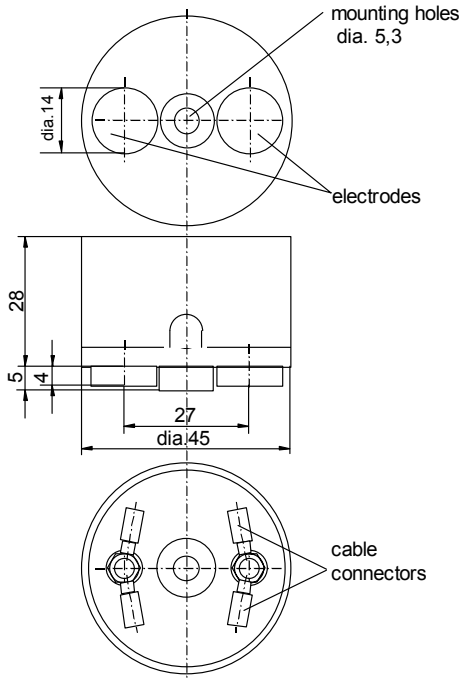
KUEBLER-Floor Electrodes

Type coding	**FE** - grey housing **AFE** - red housing with built-in resistor 430 kOhm
housing material	PVC
electrode material	stainless steel 1.4571 (SS 316Ti)
distance electrode to floor	1 mm
max. permissible ambient temperature	-40°C ... + 60°C



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Bosmanskamp 30
4191 MV Geldermalsen
Nederland
Tel. +31 (0) 345 596 000
Fax +31 (0) 345 596 001
www.waterdetectie.nl