

- ▶ Industrial design
- ▶ Width 45mm
- ▶ Level monitoring of conductive liquids
- ▶ 1 change over contact



Technical data

1. Functions

Level monitoring of conductive liquids with adjustable threshold, fixed tripping delay and turn-off delay

2. Time ranges

Start-up suppression time:	-	Adjustment range
Tripping delay:	fixed, ca. 2s	
Turn-off delay	fixed, ca. 2s	

3. Indicators

Green LED ON:	indication of supply voltage
Yellow LED ON/OFF:	indication of relay output

4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40
 Mounted on DIN-Rail TS 35 according to EN 50022
 Mounting position: any
 Shockproof terminal connection according to VBG 4 (PZ1 required), IP rating IP20
 Initial torque: max. 1Nm
 Terminal capacity:
 1 x 0.5 to 2.5mm² with/without multicore cable end
 1 x 4mm² without multicore cable end
 2 x 0.5 to 1.5mm² with/without multicore cable end
 2 x 2.5mm² flexible without multicore cable end

5. Input circuit

Supply voltage:		
24V AC	terminals A1-A2	(TLC4X 24VAC)
110V AC	terminals A1-A2	(TLC4X 110VAC)
230V AC	terminals A1-A2	(TLC4X 230VAC)
Tolerance:		
24V AC	-15% to +10%	(TLC4X 24VAC)
110V AC	-15% to +10%	(TLC4X 110VAC)
230V AC	-15% to +10%	(TLC4X 230VAC)
Rated frequency:	48 to 63Hz	
Rated consumption:		
24V AC	2VA (1.5W)	(TLC4X 24VAC)
110V AC	2VA (1.5W)	(TLC4X 110VAC)
230V AC	2VA (1.5W)	(TLC4X 230VAC)
Duration of operation:	100%	
Reset time:	500ms	
Residual ripple for DC:	-	
Drop-out voltage:	>30% of the supply voltage	

6. Output circuit

1 potential free change over contact
 Switching capacity: 1250VA (5A / 250V AC)
 Fusing: 5A fast acting
 Mechanical life: 20 x 10⁶ operations
 Electrical life: 1 x 10⁵ operations at 1000VA resistive load
 max. 60/min at 100VA resistive load
 max. 6/min at 1000VA resistive load (according to IEC 947-5-1)
 Switching frequency:
 Insulation voltage: 250V AC (according to IEC 664-1)
 Surge voltage: 4kV, overvoltage category III (according to IEC 664-1)

7. Measuring circuit

Input:	conductive probes (type SK1,SK2,SK3) terminals E1-E2-E3
Switching threshold:	5 to 100 kΩ (corresponds to 200 to 10μS)
Sensor voltage:	max. 16V AC
Sensor current:	max. 200μA
Line length:	max. 100m

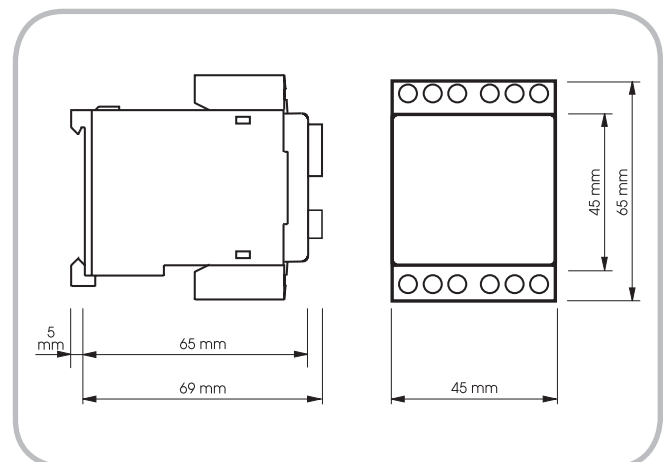
8. Accuracy

Base accuracy:	-5% to +10% (of maximum scale value)
Adjustment accuracy:	≤10% (of maximum scale value)
Repetition accuracy:	<2%
Voltage influence:	≤0,06% / V
Temperature influence:	≤0,05% / °C

9. Ambient conditions

Ambient temperature:	-25 to +55°C (according to IEC 68-1)
Storage temperature:	-25 to +70°C
Transport temperature:	-25 to +70°C
Relative humidity:	15% to 85% (according to IEC 721-3-3 class 3K3)
Pollution degree:	3 (according to IEC 664-1)

10. Dimensions



Functions

Level monitoring of conductive liquids with adjustable threshold, fixed tripping delay and turn-off delay

Pump up

Connection of the probe rods E1, E2 and E3. Alternatively the electrically conducting container can be connected in lieu of the test probe E3.

When the air-fluid level falls below the minimum probe E2 the fixed interval of the tripping delay begins. After the interval has expired the output relay R switches into on-position (yellow LED illuminated). When the air-fluid level again rises above the maximum probe E1, the output relay switches into off-position (yellow LED not illuminated) after the expiration of the fixed interval of the turn-off delay.

Pump down

Connection of the probe rods E1, E2 and E3. Alternatively the electrically conducting container can be connected in lieu of the test probe E3.

When the maximum probe E1 gets moistened the fixed interval of the tripping delay begins. After the interval has expired the output relay R switches into on-position (yellow LED illuminated). When the air-fluid level falls below the minimum probe E2, the output relay switches into off-position (yellow LED not illuminated) after the expiration of the fixed interval of the turn-off delay.

Minimum monitoring

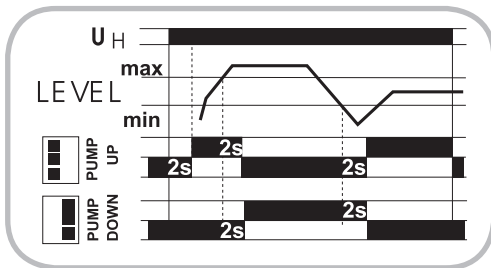
Connection of probe rods E2 and E3 (Bridge E1-E3). Alternatively the electrically conducting container can be connected in lieu of the test probe E3.

When the air-fluid level falls below the probe E2 the fixed interval of the tripping delay begins. After the interval has expired the output relay R switches into on-position (yellow LED illuminated). When the air-fluid level again rises above the probe E2, the output relay again switches into off-position (yellow LED not illuminated) after the expiration of the fixed interval of the turn-off delay.

Maximum monitoring

Connection of probe rods E2 and E3 (Bridge E1-E3). Alternatively the electrically conducting container can be connected in lieu of the test probe E3.

When the probe E2 gets moistened the fixed interval of the tripping delay begins. After the interval has expired the output relay R switches into on-position (yellow LED illuminated). When the air-fluid level sinks below the probe E2, the output relay again switches into off-position (yellow LED not illuminated) after the expiration of the fixed interval of the turn-off delay.



Connections

