

Features

- Relay is designed for monitoring levels in wells, sumps, reservoirs or storage tanks.
- In one device you can choose the following configurations:
 - one-level switch of conductive liquids (formed by connecting H and D)
 - two-level switch of conductive liquids
- One-state connection monitors one level, two-state connection monitors two levels (closes at one level and opens at another level)
- Adjustable time delay (0.5 – 10s)
- Adjustable probe sensitivity (5 – 100 kΩ)
- Measuring frequency 10 Hz prevents polarization of liquid and raising oxidation of measuring probes
- Galvanically isolated supply voltage AC/DC 24 – 240 V.

RS PRO Monitoring Relay

766913



RS PRO is the own brand of RS. The RS PRO Seal of Approval is your assurance of professional quality, a guarantee that every part is rigorously tested, inspected, and audited against demanding standards. Making RS PRO the Smart Choice for our customers.

Product Description

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Technical parameters

Functions:	2
Supply terminals:	A1-A2
Supply voltage:	AC/DC 24 – 240 V (AC 50-60 Hz)
Consumption (max.):	3 VA/1 W
Toleration of voltage range:	-15 %; +10 %

Measuring circuit

Sensitivity (input resistance):	5 – 100 kΩ
Voltage on electrodes (max.):	AC 3.5 V
Probe current:	AC < 0.1 mA
Response time (max.):	400 ms
Probe cable capacitance* (max.):	800 nF (sensitivity 5 kΩ) 100 nF (sensitivity 100 kΩ)
Time delay (t):	0.5 – 10 s
Switch-on delay (t ₁):	1.5 s
* max. line length is limited by the capacity between the individual cable cores.	

Accuracy

Setting accuracy (mechanical):	± 5 %
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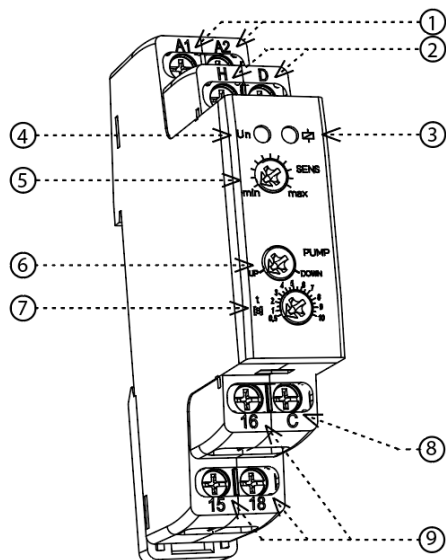
Output

Contact type:	1x changeover / SPDT (AgNi)
Current rating:	8 A/AC1; PD. B300
Breaking capacity:	2000 VA / AC1, 240 W /DC1
Switching voltage:	AC 250 V/DC 24 V
Power dissipation (max.):	0.6 W
Mechanical life (AC1):	60.000.000 ops.
Electrical life:	150.000 ops.

Other information

Operating temperature:	-20 .. +55 °C (-4 .. +131 °F)
Storage temperature:	-30 .. +70 °C (-22 .. +158 °F)
Dielectric strength:	
supply – probes	AC 4kV
supply – output	AC 4kV
probes - output	AC 4kV
Operating position:	any
Mounting:	DIN rail EN 60715
Protection degree:	IP40 front panel/IP20 terminals
Overvoltage category:	II.
Pollution degree:	2
Cross-wire section; solid/ stranded with ferrule (max.):	1× 4 mm ² (12), 2× 2.5 mm ² (14 AWG)/ 1× 4 mm ² (12), 2× 1.5 mm ² (16 AWG)
Dimensions:	90 × 17.6 × 64 mm (3.5" × 0.7" × 2.5")
Weight:	69 g (2.4 oz)
Standards:	EN 60255-1, EN 60255-26, EN 60255-27
Recommended probes:	SHR-1-N, SHR-2, SHR-3

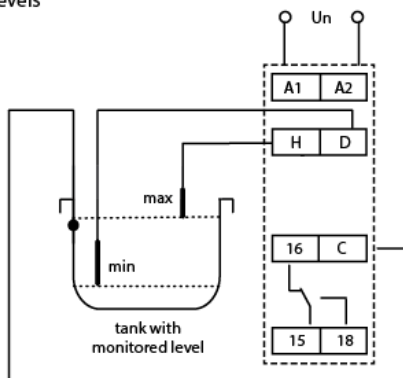
Approvals



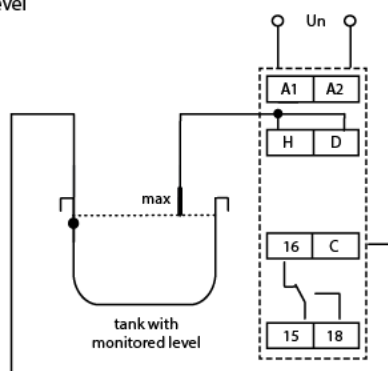
1. Supply voltage terminals (A1-A2)
2. Terminals for connection of probes
H (upper level - max), D (lower level - min)
3. Indication of operating states
4. Supply voltage indication
5. Probe sensitivity setting: 5 – 100 k Ω
6. Function selection:
PUMP UP / PUMP DOWN
7. Time delay setting: 0.5 – 10 s
8. Terminal for connection of probe C
(common probe)
9. Output contact (15-16-18)

Connection

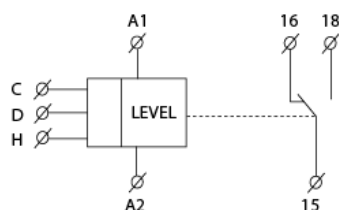
Monitoring of two levels



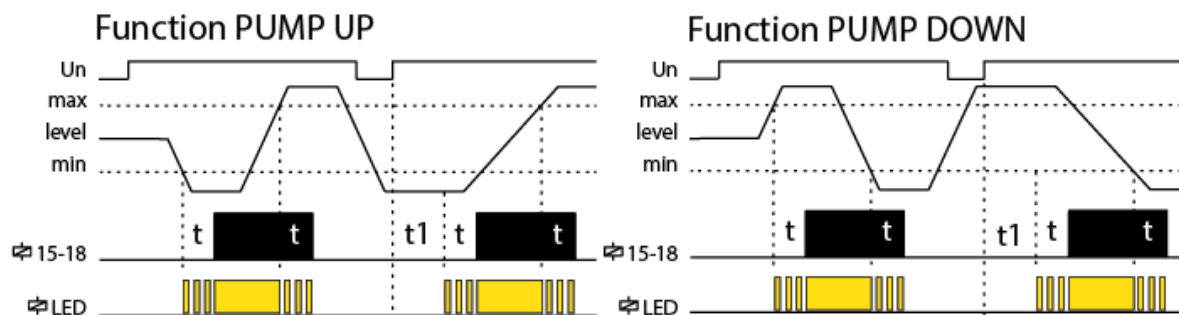
Monitoring of one level



Symbol



Function



The relay is designed for monitoring the level of conductive liquids, with a selectable function: FILLING or DRAINING (PUMP UP or PUMP DOWN). To prevent polarization and electrolysis of the liquid and unwanted oxidation of the measuring probes, an alternating current is used for measurement. Three measuring probes are used: H - upper level, D - lower level, and C - common probe. If a tank made of conductive material is used, the tank itself can serve as the C probe. If monitoring of only one level is required, the H and D inputs must be interconnected and connected to a single probe; in this case, the sensitivity is reduced by half (2.5 – 50 kΩ). The C probe can also be connected to the protective earth conductor (PE) of the supply system. To prevent unwanted switching caused by external influences (such as probe contamination by deposits, humidity, etc.), the device sensitivity can be adjusted according to the conductivity of the monitored liquid (corresponding to the "resistance" of the liquid) within a range of 5 – 100 kΩ. To limit the effect of undesired output contact switching due to turbulence of the liquid level in the tank, an output response delay of 0.5 – 10 s can be set.