

# HRH-5 | Level switch for monitoring 1 or 2 levels

**5 YEAR  
WARRANTY**

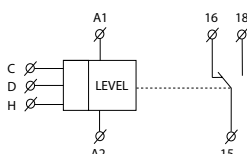


EAN code  
HRH-5: 8595188136396

Technical parameters		HRH-5
Functions:	2	
Supply terminals:	A1 - A2	
Voltage range:	AC/DC 24 - 240 V (AC 50-60 Hz)	
Input:	max. 2 VA/1.5 W	
Max. dissipated power (Un + terminals):	2 W	
Toleration of voltage range:	-15 %; +10 %	
Measuring circuit		
Sensitivity (input resistance):	adjustable in range 5 kΩ - 100 kΩ	
Voltage n electrodes:	max. AC 3.5 V	
Current in probes:	AC < 0.1 mA	
Time response:	max. 400 ms	
Max. capacity of probe cable:*	800 nF (sensitivity 5 kΩ), 100 nF (sensitivity 100 kΩ)	
Time delay (t):	adjustable, 0.5 -10 sec	
Time delay after switching on (t1):	1.5 sec	
Accuracy		
Accuracy in setting (mech.):	± 5 %	
Output		
Number of contacts:	1× changeover/SPDT (AgNi/Silver Alloy)	
Current rating:	8 A/AC1; 1/3 HP 240 Vac, 1/4 HP 120 Vac; PD. B300	
Switching voltage:	2000 VA/AC1, 240 W/DC	
Switched voltage:	250 V AC/24 V DC	
Mechanical life (AC1):	60.000.000 ops.	
Electrical life:	150.000 ops.	
Other information		
Operational temperature:	-20 .. 55 °C (-4 .. 131 °F)	
Storing temperature:	-30 .. 70 °C (-22 .. 158 °F)	
Dielectrical strenght:	2.5 kV (supply - sensors)	
Operational position:	any	
Mounting:	DIN rail EN 60715	
Protection degree:	IP40 from font panel/IP10 terminals	
Overvltage category:	II.	
Pollution degree:	2	
Profile of connecting wires (mm²):	max. 2× 2.5, max. 1× 4/ with sleeve max. 1× 2.5, max. 2× 1.5 (AWG 12)	
Dimensions:	90 × 17.6 × 64 mm (3.5" × 0.7" × 2.5")	
Weight:	73 g (2.6 oz.)	
Standards:	EN 60255-1, EN 60255-26, EN 60255-27, EN 60669-1, EN 60669-2-1	
Recommended measuring probes:	see pg. 132	

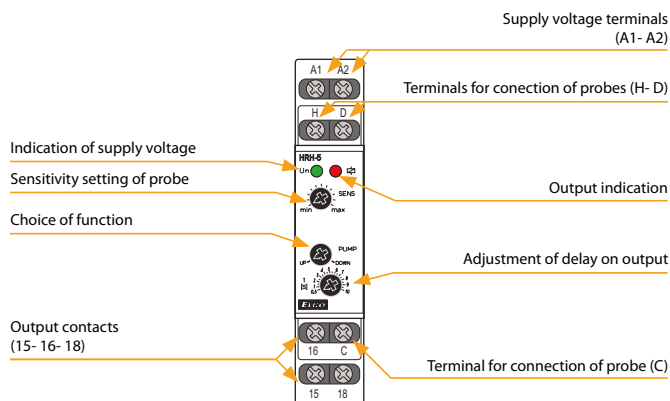
\* Max. line length is limited by the capacity between the individual cable cores.

## Symbol



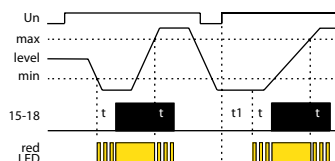
- Relay is designed for monitoring levels in wells, basins, reservoirs, tanks,...
- In one device you can choose the following configurations:
  - One-level switch of conductive liquids (by connecting H and D)
  - Two-level switch of conductive liquids.
- One-state device monitors one level, two-state device monitors two levels (switches on one level and switches off on another level).
- Adjustable time delay on the output (0.5 - 10s).
- Sensitivity adjustable by a potentiometer (5 - 100 kΩ).
- Measuring frequency 10 Hz prevents polarization of liquid and raising oxidation of measuring probes.
- Galvanically separated supply voltage UNI 24 to 240 V AC/DC.

## Device description

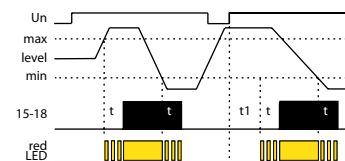


## Function

### Function PUMP UP



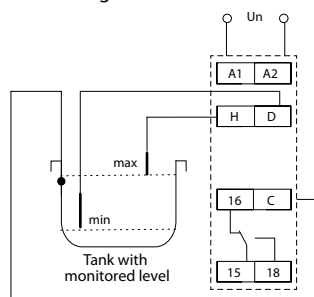
### Function PUMP DOWN



Relay is designated for monitoring of levels of conductive liquids with possibility of functions: PUMP UP or PUMP DOWN. To prevent polarization and liquid electrolysis of liquid, and undesirable oxidation of measuring probes, alternating current is used. For measuring use three measuring probes: H- upper level, D- lower level, C - common probe. In case you use a tank made of a conductive material, you can use it as probe C. In case you require monitoring of one level only, it is necessary to connect inputs H and D and connect them to one probe - in this case sensitivity is lowered by half (2.5 to 50 kΩ). Probe C can be connected with a protective wire of supply system (PE). To prevent undesirable switching out output contacts by various influences (sediment on probes, humidity,...) it is possible to set sensitivity of the device according to conductivity of monitored liquid (corresponding to "resistance" of liquid) range 5 up to 100 kΩ. To reduce influences of undesirable switching of output contacts by liquid gorgle in tanks, it is possible to set delay of output reaction 0.5 - 10 s.

## Connection

### Monitoring of two levels



### Monioring of one level

