### Technical parameters HRH-4

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<th>Voltage range:</th>
<th>Burden</th>
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<th>Loading in AC:</th>
<th>Mechanical life</th>
<th>Other information</th>
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<td></td>
<td>AC/DC 230 V or AC/DC 24 V (AC 50 – 60 Hz)</td>
<td>7 A</td>
<td>-15 % – +10 %</td>
<td>adjustable in range 5 kΩ - 100 kΩ</td>
<td>max. AC 1.5 V</td>
<td>AC ≤ 0.1 mA</td>
<td>max. 400 ms</td>
<td>800 nF (sensitivity 5 kΩ), 100 nF (sensitivity 100 kΩ)</td>
<td>adjustable, 0.5 – 10 sec</td>
<td>1.5 sec</td>
<td>± 5 %</td>
<td>4x switching</td>
<td>25 A</td>
<td>4 kW / 400 V</td>
<td>3x10”</td>
<td></td>
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<tr>
<td>HRH-4/230 V</td>
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<td>HRH-4/24 V</td>
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</table>

### Function

**Function PUMP UP**

In an easy way it automates operations of pumps depending on level.
- **Control of level in wells, tanks, reservoirs...**
- **It is delivered as a connected set - easy installation.**
- **Possibility to monitor level of any type of conductive liquid.**
- **It serves for an automatic operation in 1-phased and 3-phased pumps.**
- **Set of level switch HRH-5 and a contactor VS425.**
- **Function choice - pumping up or down.**
- **Unit requires incoming over-current protection.**
- **Protection degree of the set is IP55.**
- **There is a possibility of 4 types of probes in a various design (they are not a part of this set, it is possible to deliver).**
- **Unit is placed in a plastic box with dimensions 160 x 135 x 83 mm (6.3 x 5.3 x 3.3”).**

**Function PUMP DOWN**

In an easy way it automates operations of pumps depending on level.
- **Control of level in wells, tanks, reservoirs...**
- **It is delivered as a connected set - easy installation.**
- **Possibility to monitor level of any type of conductive liquid.**
- **It serves for an automatic operation in 1-phased and 3-phased pumps.**
- **Set of level switch HRH-5 and a contactor VS425.**
- **Function choice - pumping up or down.**
- **Unit requires incoming over-current protection.**
- **Protection degree of the set is IP55.**
- **There is a possibility of 4 types of probes in a various design (they are not a part of this set, it is possible to deliver).**
- **Unit is placed in a plastic box with dimensions 160 x 135 x 83 mm (6.3 x 5.3 x 3.3”).**

### Connection

**HRH-5**

- **HRH-5-P: 230 VAC relay (switching voltage 230 VAC, 250 VDC) with protection degree IP55.**
- **HRH-5-H: contactor VS425 (4 kW / 400 V).**
- **HRH-5-M: stainless steel sensor.**
- **HRH-5-N: brass sensor.**
- **HRH-5: stainless steel sensor.**
- **HRH-5: brass sensor.**
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- **HRH-5: brass sensor.**

**Level switches accessories**

- **Sensor to control flooding.**
- **Electrode with diameter 4 mm (0.2”) is placed in plastic cover.**
- **Panel or to holder mounting.**
- **Conductor is connected to terminal board, shrink bushing for feeder place insulation is a part of device.**
- **Max. wire profile: 2.5 mm² (AWG10).**
- **Installation: after connecting a wire to the sensor, run the shrink bushing over the wire onto the sensor.**
- **Heat the sensor and by shrinking the connection of sensor and wire will be hermetical.**
- **Weight: 9.7 g (0.3 oz.).**
- **Operating temperature: -25 °C to +60 °C (-13 °F to 140 °F).**
- **Total sensor length: 65.5 mm (2.58”).**

**Level probe SHR-2**

- **Detection sensor is electrode, which in connection with switchable device is used for level detection for example in wells, tanks...**
- **To be used in electric conductive fluids and mechanically polluted fluids with temperature: 1°C to 80°C (33.8 °F to 176°F).**
- **Stainless steel one-pole electrode reside in PVC cover, intended for tank wall mounting or mounting by socket.**
- **To ensure correct function of the sensor, it is necessary to have the electrode without dirt which could disable the connection of the electrode and fluid and thus lead to malfunction.**
- **Max. wire profile: 2.5 mm² (AWG10).**
- **Recommended wire D05V-K0.75/3.2.**
- **Installation: conductor wire is connected by fusing of two brass screws to stainless steel electrode.**
- **Conductor is caulked by bushing Pg2 with protection degree IP66.**
- **Weight: 48.6 g (1.7 oz.).**
- **Dimensions: max. diameter 21 mm (0.8”), length 96 mm (3.8”).**

**Level probe SHR-3**

- **Stainless probes to be used into demanding industrial environments, designated for screwing into tank wall or cover.**
- **The probe is installed in horizontal, vertical or in sidelong position on tank side or in tank cover. Installation is done by soldering or by fixing nut. It is necessary to use 24 mm (1”) screw.**
- **To ensure correct function of the sensor, it is necessary to use an adequate torque with regards to a seal and operational overpressure in a tank.**
- **Sensor has connecting wire - length 3 m, which is connected to sensor to scan electrode and sensor bushing connecting wire is double-wire PVC AWG 18 (0.75 mm²), connection of wires: brown - scan electrode, blue - sensor bushing.**
- **Connection M8x8.5 screw.**
- **Protection degree IP65.**
- **Material: brass sensor: stainless steel.**
- **Sensor weight without cable: 100 g (3.3 oz.).**
- **Operating surroundings: place without the danger of detonation, temperature on screw: max. 95 °C (203 °F).**
- **Pressure immunity: on 25 °C (77 °F) 25 MPa on 95 °C (203 °F) 1.5 MPa.**
- **Weight: 239 g (8.4 oz.).**
- **Material: bushing and sensor electrode: stainless steel W.Nr. 1.4404, insulating insert of electrode: PTFE.**
- **Internal material self - extinguishing epoxide resin.**
- **Operating temperature: -25 °C to 60 °C (-13 °F to 140 °F).**
- **Total sensor length: 65.5 mm (2.58”).**
- **Dimensions: see pg 134.**