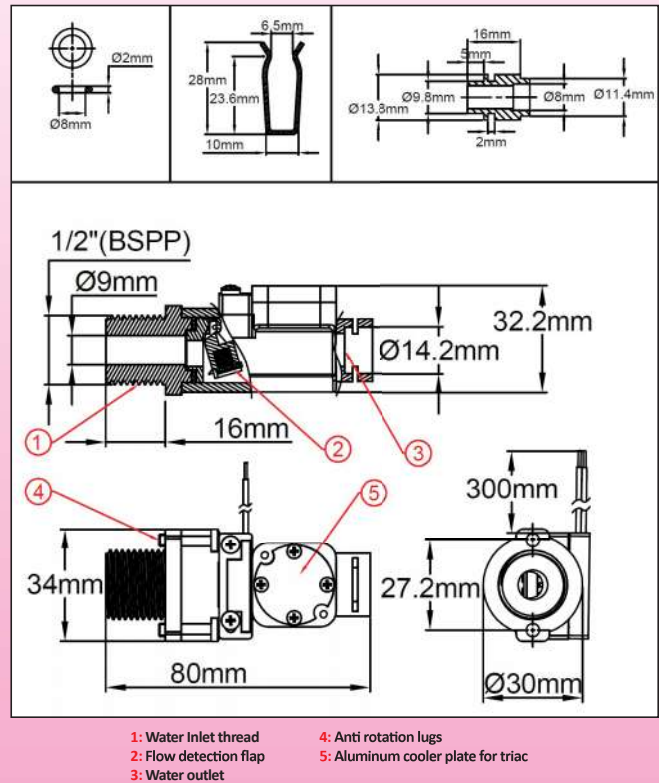


# Flap flow switches, reed switch contact, 1/2" BSPP male thread, with triac cooler, Type: R21

| Pressure and size | Flow sensing:<br>Magnetic flap | Mounting:<br>1/2" male thread and snap-in dia. 8 mm | Contact:<br>Reed switch, close on flow rise | Electrical rating                             | Mounting position | Type       |
|-------------------|--------------------------------|---|---|---|-------------------|------------|
| <b>PN10</b>       |                                |   |   | $\leq 1A$<br>$\leq 70W$<br>$\leq 250V_{\sim}$ |                   | <b>R21</b> |
| <b>DN8</b>        |                                |   |   |   |                   |            |



**Main applications:** Product developed for miniature instantaneous water heaters for showers. The mobile flap system provides compactness. Water inlet is done directly by the 1/2" BSPP male thread. Mandatory vertical mounting, with water inlet from the bottom. Connection to internal copper piping DN8 and DN10 with quick coupling. **A built in aluminum heat exchanger, in contact with the cold water input is provided to cool a triac.**

**Functional principle:**

Magnetic flap mounted perpendicular to the flow and activating a reed switch through the wall. The return of the flap is by made by gravity, without spring. No seal or liquid can pass between the piping system and the electrical contact. Suitable for potable water. Must not be used for water containing magnetic particles or high viscosity liquids, which block the movement of the flap.

**Adjustment:** Can be factory set by adjusting the counterweight mounted in the flap

**Body material:** PPO compatible with drinking water.

**Flap:** PPO

**Paddle shaft:** stainless steel

**Electrical rating:** Max 1A, Max 70W, Max 250V, resistive load. Use on inductive circuits reduces electrical rating. We recommend to protect the reed switch with contact protection device when used in inductive loads

**Electric contact type:** Normally open, closes by flow rise

**Liquids compatibility:** For use with clean water and liquids without magnetic particles and without chemical incompatibility with PPO and stainless steel

**Nominal pressure at 20°C:** 1MPa (PN10)

**Flow detection set point factory setting limits:**

Close by flow rise: 1.8 to 3 L/min

Open by flow decrease: About 0.4 to 0.5L/min lower than close value

**Nominal diameter:** DN8-DN10

**Mandatory mounting position:** on vertical pipes, upstream flow

**Water pipe connection:**

- Water inlet: on male 1/2" fitting with gasket with 2 anti-rotation lugs. recommended torque 5N.m

- Water outlet: fast-on connection with O-ring and clips on DN8 or DN10 copper tubes with brazed or welded brass termination.

**Liquids temperature range:** 5 to 80°C

**Ambient temperature range:** 5 to 50°C

**Ingress protection:** IP65

**Electrical connection:** 2 x AWG24 wires (0.2mm<sup>2</sup>), PVC insulation, T80°, standard length 300 mm.

**Accessories:** brass terminations for brazing or soldering on other pipe diameters : see last section of this catalogue

**Options (MOQ apply):** cable with connector or terminals, other cable length, other calibration values.

**Important note:** Standard copper tube diameters for building applications (Water and gas) are given by the EN1057 standard, which defines the nominal diameter (DN) as the inside diameter. Copper tubes for applications in air conditioning and refrigeration are described in EN 12735-1 and those for vacuum and medical gases are described in EN 13348. The EN127357 standard defines the copper tubes for refrigeration with diameters in inches.

Copper tubes are often described in France by the outside diameter followed by the thickness in mm.

### Main references (with 300 mm wires)

| Outlet for copper tube dia. 10 x 8 mm |                            |                               | Outlet for copper tube dia. 12 x 10 mm |                            |                               |
|---------------------------------------|----------------------------|-------------------------------|--|----------------------------|-------------------------------|
| References                            | Close on flow rise (L/min) | Open on flow decrease (L/min) | References                             | Close on flow rise (L/min) | Open on flow decrease (L/min) |
| R21B67020000430                       | 2 ±0.2                     | 1,6±0.2                       | R21B68020000430                        | 2 ±0.2                     | 1,6±0.2                       |
| R21B670250000430                      | 2,5±0.25                   | 2±0.25                        | R21B680250000430                       | 2,5±0.25                   | 2±0.25                        |
| R21B670300000430                      | 3±0.3                      | 2,5±0.3                       | R21B680300000430                       | 3±0.3                      | 2,5±0.3                       |

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