# MECHANICAL THERMOSTAT

## FZK 011 | 01170.0-02




The set value corresponds to the upper switching point, where the normally closed contact opens. The set value minus the switching temperature differential of 5 K (and tolerances) corresponds to the lower switching point, where the normally closed contact closes. The mechanical thermostat is used to control heating, cooling devices, filter fans or signal transmitters.

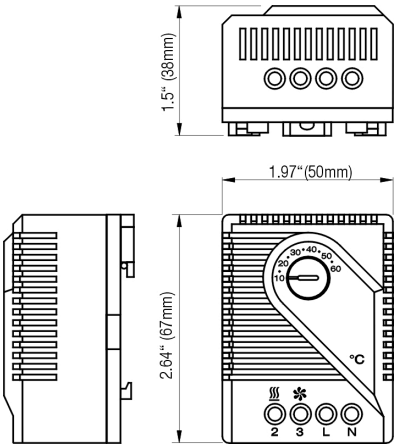
- Adjustable temperature
- Small hysteresis enables precise control
- High switching capacity
- Changeover contact (heating or cooling)
- Clip mounting

## OVERVIEW TECHNICAL DATA

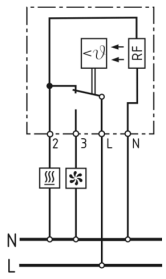
| | |
|---|---|
| Device type | Thermostats |
| Setting range | -20 °C - 35 °C |
| Contact type | Snap-action contact |
| Sensor | Thermostatic bimetal |
| Protection type | IP20 |
| Casing | Plastic to UL94 V-0, light grey |
| AC/DC | AC |
| Operating voltage | 230 V |
| Inrush current | 16 A |
| Inrush current duration | 10 s |
| Switching capacity | Normally closed: AC 10 (4) A, DC 30 W;<br>Normally open: AC 5 (2) A, DC 30 W |
| Switching current ohmic | 10 A(NC) |
| Switching current 2 ohmic | 5 A(NO) |
| Reference voltage ohmic | 250 VAC |
| Reference voltage 2 ohmic | 120 VAC |
| Switching current inductive | 4 A(NC) |
| Switching current 2 inductive | 2 A(NO) |
| Reference voltage inductive maximum | 250 VAC |
| Reference voltage 2 | 120 VAC |
| Switching current dc ohmic | 1 A |
| Reference voltage dc ohmic | 30 VDC |
| Minimal switching capacity | 0,48 W |
| Reference voltage | 24 V |
| Switching current | 10 mA |

| | |
|---|---|
| Service life | >100000 cycles |
| Switching differential | 5 K |
| Switching differential tolerance | -3/+2 K |
| Operating temperature | -45 °C - 65 °C |
| Operating humidity | ≤90 % RH |
| Storage humidity | ≤90 % RH |
| Storage temperature | -45 °C - 65 °C |
| Torque | 0,5 Nm max. |
| Connection | 4-pole clamp:<br>Rigid wire/stranded wire² 2.5 mm² (AWG 14) |
| Design | Changer |
| Mounting | Clip for 35 mm DIN rail, EN 60715 |
| Height | 67 mm |
| Width | 50 mm |
| Depth | 38 mm |
| Weight | 100 g |
| Note | The controller's contact system is exposed to environmental influences, which can change the contact resistance. This can lead to a voltage drop and/or self-heating of the contacts. During usage of the NC (normally closed) contact, there is the possibility of thermal return to reduce the switching temperature differential by connecting the clamp "N" (RF heating resistor). It depends on the ambient conditions and must be determined in tests for the respective application. Wire end ferrules must be used for connections with stranded wires. |

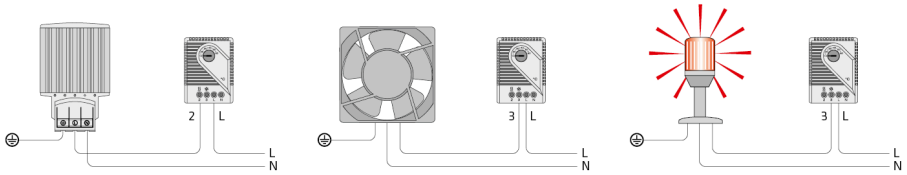
## TECHNICAL DRAWINGS




Connection diagram




Heater
Filter fan, cooling equipment, signal device




Connection examples