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DATA SHEET

# TEKV-M

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# TEKV-M FROST GUARD TRANSMITTER / CONTROLLER

TEKV-M Modbus temperature transmitter is designed for automatic HVAC system to monitoring the air heater radiators against frost. Transmitter information can be used to control other device in the HVAC system.

Temperature is measured by a Pt1000 element. . The sensor element resistance information is converted into a 0…10 V signal and this voltage signal is available also via Modbus. The temperature range can be chosen at the commissioning.

TEKV-M settings can be changed by using the ML-SER tool. One point field calibration of the transmitter can be executed, the temperature output can be changed to the controller function and the communication settings of the Modbus can be configured.

TEKV-M transmitter can be equipped with a 3.5-digit liquid crystal display option TE-N V2. The display resolution is 0.1 °C.

Housing is made of heat resistant plastics. The bayonet cover and the terminal blocks tilted to 45° make an easy installation. The material of the stem is stainless steel for prolonged life. Installation to the radiator is made by means of an R1/4" joint. Mounting depth is adjustable to max. 210 mm. Time constant of the sensor is ca 2.5 seconds.

## Range selection

| 0…+50 °C | *0…+100 °C | -50…+50 °C | -50…+150 °C |
|---|---|---|---|
| S1 S2 | S1 S2 | S1 S2 | S1 S2 |

* = factory setting

## Output signal

| 0…+50 | 0…+100 | -50…+50 | -50…+150 | Signal |
|---|---|---|---|---|
| 0 °C | 0 °C | -50 °C | -50 °C | 0 V |
| 25 °C | 50 °C | 0 °C | 50 °C | 5 V |
| 50 °C | 100 °C | 50 °C | 150 °C | 10 V |



**Technical data:**

| | |
|---|---|
| supply voltage | 24 Vac/dc < 1 VA (22…30Vac/dc) |
| sensor | Pt1000 EN 60751/B |
| output 1 | 0…10 Vdc < 2 mA (temp. / controller) |
| output 2 | RS-485 Modbus/RTU |
| temperature range | selectable |
| connection | R ¼" |
| stem | Ø 4 mm x 234 mm, material AISI316 |
| housing | plastics (< 120 °C) |
| protection class | IP54, cable entry or stem down |
| cable entry | M16 |
| pressure rating | PN16 |
| accuracy | ± 0.5 °C (at 50 °C) |
| ambient temperature | 0…+60 °C |
| time constant | ca 2.5 s |

**Wiring:**

| | |
|---|---|
| 1 | supply 24 Vac/dc |
| 2 | 0 V |
| 3 | output 0…10 Vdc (temperature / controller) |
| 4 | Modbus A+ |
| 5 | Modbus B- |

**Ordering guide:**

| Model | Product number | Description |
|---|---|---|
| TEKV-M | 117Z120 | Modbus frost guard transmitter |
| TE-N V2 | 1170250 | display module (cover) |
| ML-SER | 1139010 | transmitter commissioning tool |

Products fulfill the requirements of directive 2004/108/EC and are in accordance with the standards EN61000-6-3: 2001 (Emission) and EN61000-6-2: 2001 (Immunity).


Information is subject to change without prior notice.