



OM3/E

Surface temperature transducer with stainless steel block

Measuring size: temperature

Output: 0-10 V, 4-20 mA, 2 Relay

Highlights: aluminium contacting block



Description

The OM3/E surface transducer with stainless steel block registers the temperature on surfaces and converts this measured value into a linear output signal 0-10 V respectively 4-20 mA. As an option the temperature transducer has two potential-free changeover contacts and a backlit display. The display content can be rotated in 90° steps using a menu and the measured value, the switching threshold set, the state of the respective relay, the MIN/MAX measured values for the selected intervals(1 h / 6 h / 12 h / 24 h) etc. can be read out.

On the display version the user can, via the menu, specify an individual temperature range.

Using a screw or mounting glue the stainless steel block of the temperature sensor is quickly and securely mounted to the surface to be measured.



Technical Specifications

| | |
|---------------------------------|---|
| Measurement range temp. | -40...+250°C |
| Scales | -50...0°C, -50...+50°C, -50...+150°C, -30...+20°C, -30...+70°C, -20...+50°C, -20...+80°C, -20...+120°C, -20...+150°C, -10...+15°C, 0...+50°C, 0...+100°C, 0...+150°C, 0...+200°C, 0...+250°C, +10...+35°C |
| Measurement range configuration | 1 freely programmable measuring range via the menu input in the display (span min. 25K) |
| Accuracy | ±0,2 K + max. ±1,5% Span |
| Supply voltage analog 0-10 V | 24 V AC/DC (±5%) |
| Supply voltage analog 4-20 mA | 15...36 V DC, depends on liability ($U_{bmin} = 15 \text{ V} + R_{load} * 0,02 \text{ A}$) |
| Current consumption at 0-10 V | typ. 10 mA, 30 mA peak current consumption for 50 ms at switching moment at option relay |
| Current consumption at 4-20 mA | max. 20 mA / output, 40 mA peak current consumption for 50 ms at switching moment at option relay |
| Analogue output 0-10 V | 3-wire connection, min. load resistance 100 kOhm |
| Analogue output 4-20 mA | 2-wire connection (transmitter), max. $R_{Load}(\text{Ohm}) = (+Ub - 15 \text{ V}) / 0,02 \text{ A}$ |
| Alarm output | 2 x potential-free change-over contact, 48 V, 1 A |
| Switching Hysteresis Relay | Temperature: 2K (without display), 0,5...5K adjustable (with display) |
| Electrical connection | screw terminals max. 1,5 mm² |
| Cable | 2 m glass fibre/stainless steel netting (2x0,22 mm², max. +400°C) |
| Housing | Polycarbonate PC UL 94 V0 with hinge locks, color signal white similar to RAL 9003 |
| Cable gland | PG11 high-strength cable gland with strain relief |
| Display | optional LCD display with backlight on/off/auto |
| Material | Contacting block: stainless steel VA 1.4571 |
| Dimensions | Housing: L 89 x W 80 x H 47 mm, Contacting block: L 15 x W 8 x H 8 mm, bore hole Ø 5 mm |
| Protection type | IP65 (housing), IP54 (probe) |
| Protection class | III |
| Working range r.H. | 0...98% r.H. in contaminant-free, non-condensing air |
| Working temperature | Probe: -40...+400°C, Electronic: -20...+70°C |
| Storage temperature | -20...+70°C |
| Installation | screw fixing or adhesive bond |
| Approvals | CE, EAC, RoHS |



Variants

| Article Number | | | |
|-------------------|--------------------|---|-----------------|
| MR temp. preset | Output temperature | Cable | Version |
| OM3/E-I | | | |
| 0...+100°C | 4-20 mA | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | without display |
| OM3/E-I2R | | | |
| 0...+100°C | 4-20 mA, 2 changer | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | without display |
| OM3/E-I2RD | | | |
| 0...+100°C | 4-20 mA, 2 changer | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | with display |
| OM3/E-ID | | | |
| 0...+100°C | 4-20 mA | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | with display |
| OM3/E-U | | | |
| 0...+100°C | 0-10 V | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | without display |
| OM3/E-U2R | | | |
| 0...+100°C | 0-10 V, 2 changer | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | without display |
| OM3/E-U2RD | | | |
| 0...+100°C | 0-10 V, 2 changer | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | with display |
| OM3/E-UD | | | |
| 0...+100°C | 0-10 V | 2 m glass fibre/stainless steel netting (2x0,22 mm ²) | with display |



Accessories

SB/E

Snap-on mounting for DIN rails



motrona AX350

AX350: touchMATRIX® Process Indicator with two 16 bit Analog Inputs



motrona AX020

AX020: Process Indicator for Analog Signals





Dimensional Drawing

