



## LM1/E

### Contact temperature transducer with silicon cable and strap

Measuring size: temperature

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

Highlights: 1 freely programmable measurement range



### Description

The LM1/E contact temperature transducer with silicon cable registers the surface temperature on pipelines 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 the strap, which is included in the scope of delivery, the application block of the temperature transducer can be quickly and securely directly fastened to, for example, the cold or hot water pipes of heating systems.



## Technical Specifications

Measurement range temp.	-50...+180°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 ( $U_{bmin} = 15 V + R_{load} \cdot 0,02 A$ )
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. $R_{load}(Ohm) = (+U_b - 15 V) / 0,02 A$
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 mm <sup>2</sup>
Cable	2 m silicone cable (max. +180°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: aluminium
Dimensions	Housing: L 89 x W 80 x H 47 mm
Protection type	IP65
Protection class	III
Working range r.H.	0...98% r.H. in contaminant-free, non-condensing air
Working temperature	Probe: -50...+180°C, Electronic: -20...+70°C
Storage temperature	-20...+70°C
Installation	clamping band, band width 9 mm, chucking capacity 50-110 mm, galvanized steel (in scope of delivery)
Approvals	CE, EAC, RoHS



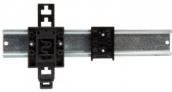
## Variants

Article Number			
MR temp. preset	Output temperature	Cable	Version
<b>LM1/E-I</b>			
0...+100°C	4-20 mA	2 m silicone (2x0,22 mm <sup>2</sup> )	without display
<b>LM1/E-I2R</b>			
0...+100°C	4-20 mA, 2 changer	2 m silicone (2x0,22 mm <sup>2</sup> )	without display
<b>LM1/E-I2RD</b>			
0...+100°C	4-20 mA, 2 changer	2 m silicone (2x0,22 mm <sup>2</sup> )	with display
<b>LM1/E-ID</b>			
0...+100°C	4-20 mA	2 m silicone (2x0,22 mm <sup>2</sup> )	with display
<b>LM1/E-U</b>			
0...+100°C	0-10 V	2 m silicone (2x0,22 mm <sup>2</sup> )	without display
<b>LM1/E-U2R</b>			
0...+100°C	0-10 V, 2 changer	2 m silicone (2x0,22 mm <sup>2</sup> )	without display
<b>LM1/E-U2RD</b>			
0...+100°C	0-10 V, 2 changer	2 m silicone (2x0,22 mm <sup>2</sup> )	with display
<b>LM1/E-UD</b>			
0...+100°C	0-10 V	2 m silicone (2x0,22 mm <sup>2</sup> )	with display

## Accessories

SB/E

Snap-on mounting for DIN rails



SZ/E

Accessories



motrona AX350

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





## Accessories

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motrona AX020

AX020: Process Indicator for Analog Signals



### Dimensional Drawing

