

Resistance thermometer LTS 190

Rel. 20240321

Features

- Resistance thermometer as room temperature sensor
- Closed protective fitting, not perforated
- Cleaning resistant materials
- Position of screw connection to protection fitting selectable
- Sensor break monitoring
- Available with: with measuring transducer DMU50 (4..20 mA 3-wire/ OLED display)
with measuring transducer KMU100 (4..20 mA 2-wire)
with measuring transducer KMUS100 (0..10 V 3-wire)

Product advantages

The LTS 190 is a temperature sensor in a wall-mounted housing. This makes it the right choice for reliably detecting temperatures in rooms or in outdoor areas. Thanks to the robust polyamide housing, the LTS 190 can also be used without any problems in blast freezers, deep-freeze warehouses and in aggressive ambient conditions in industry. Optionally, the LTS 190 is available with KMU100 or KMUS100. The KMU100 has a 4..20 mA and the KMUS100 a 0..10 V output. The LTS190 is also available with DMU50. The DMU has a 4..20 mA output and a high resolution OLED display.

Technical data

- Material protective fitting: stainless steel 1.4571 (V4A)
- Length of sensor: 45 mm, other lengths on request
- Connecting box: plastic polyamide
- Dimensions: 58 x 64 x 34 mm
- Protection class: IP 65 according to DIN 60529
- Operating temperature: -50 °C bis +130 °C
(deviation when using a transmitter)
min. 1,25 Nm up to max. 2,0 Nm
- Torque

Technical data DMU50

- Operating temperature: -30 °C..+70 °C
- Operating voltage: $U_B = 10..35 \text{ VDC}$
- Electricity demand: 7,3 mA ($U_B=24 \text{ V}$) + 4..20 mA output
- Input: PT1000 2-wire
- Measuring range max.: -100°C bis +650°C
- Measuring span min.: 10K
- Accuracy: $\pm 0,1\%$ from final value
- Output: 4..20 mA 3-wire active (underflow 3,5mA, overflow 20,5mA)
- Sensor break: 21 mA
- Standard configuration: 4 mA = -50°C, 20 mA = 150°C
(more temperature ranges parameterizable by factory)
- Max. permissible load: $R_{max} = [(U_B - 6V) / 0,021 \text{ A}] \Omega$
- Display: high-resolution OLED display 0,96 Zoll
- Alignment display: 0° or 180°
- Display digits: 4-digits
- Display range: -99.9 bis +999.9 °C
- Electrical connection: 5x terminal connection 1.5 mm²
- Configuration: by factory

Technical data KMU100

- Operating temperature: -40 °C..+85 °C
- Operating voltage: $U_B = 10..35 \text{ VDC}$
- Electricity demand: 4..20 mA output
- Input: PT100 2-, 3-, 4- wire
- Measuring range max.: -200°C to +650°C
- Measuring span min.: 10K
- Accuracy: $\pm 0,1\%$ from final value
- Output: 4..20 mA 2-wire passive (underflow 3.5 mA, overflow 21 mA)
- Sensor break: 22 mA
- Standard configuration: 4 mA = -50°C, 20 mA = 150°C
(more temperature ranges parameterizable by factory)
- Electrical connection: 6x screw terminal 1.5 mm²
- Configuration: by factory



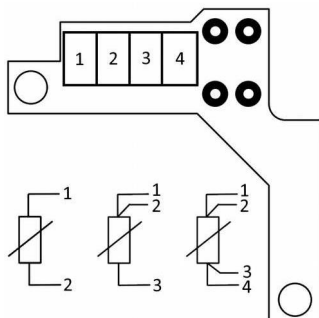
LTS 190-C1-1A2/Pt1000-DMU



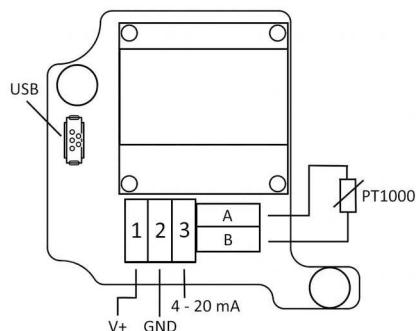
LTS 190-A1-1A3-KMU

Connection charts

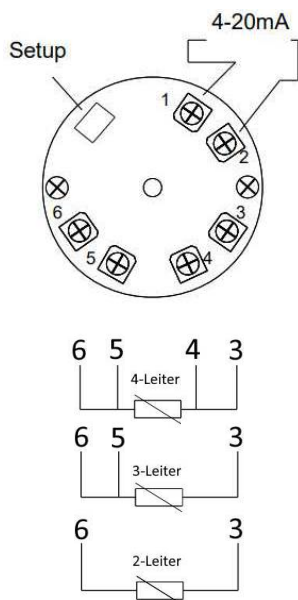
LTS 190 passive



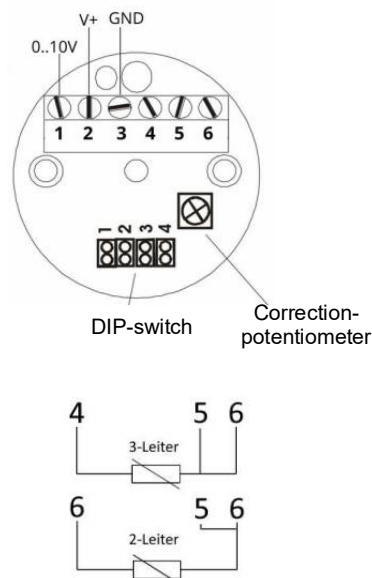
LTS 190 with DMU50



LTS 190 with KMU100



LTS 190 with KMUS100



Configuration

If the LTS 190 is used with a DMU50 or with a KMU100, the settings are configured in the factory (according to your requirements).

If the LTS 190 is used with a KMUS100, the measuring range can be set via four DIP switches. The measuring ranges are listed in the adjacent table. Furthermore, there is a correction potentiometer on the upper side of the head transmitter, which can be used for fine adjustment of the output voltage. A seal secures the potentiometer against accidental adjustment.

No.	measuring range	Dip-swi. 1 2 3 4
MB1:	- 20°C .. +150°C	1-1-1-1
MB2:	0°C .. + 50°C	0-1-1-1
MB3:	0°C .. +100°C	1-0-1-1
MB4:	0°C .. +200°C	0-0-1-1
MB5:	0°C .. +300°C	1-1-0-1
MB6:	0°C .. +400°C	0-1-0-1
MB7:	0°C .. +500°C	1-0-0-1
MB8:	0°C .. +600°C	0-0-0-1
MB9:	- 50°C .. + 50°C	1-1-1-0
MB10:	-100°C .. +100°C	0-1-1-0
MB11:	- 30°C .. + 70°C	1-0-1-0
MB12:	- 40°C .. + 60°C	0-0-1-0

jumper = 1: plugged, jumper = 0: not plugged

Attention: For Pt1000 only the ranges MB1..MB5 are available.

Order-code LTS 190

order example: LTS 190-C1-1A2-DMU(0..150°C)

Alignment of screw fitting and protective fitting (sensor)

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|------|---|-------------------------|
| - A1 | Screw connection at top, protective fitting (sensor) downwards | (not possible with DMU) |
| - B1 | Screw connection right, protective fitting (sensor) downwards | (not possible with DMU) |
| - C1 | Bottom screw connection, protective fitting (sensor) to the right | |

Sensor type and tolerance

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|--------------|--|
| - 1A2 | 1x PT100 2-wire class A |
| - 1A3 | 1x PT100 3-wire class A |
| - 1A4 | 1x PT100 4-wire class A |
| - 2A2 | 2x PT100 2-wire class A |
| - 2A3 | 2x PT100 3-wire class A |
| - 1A2/PT1000 | 1x PT1000 2-wire (PT1000 with DMU50) |
| - NI1000 | 1x NI1000 sensor TK6180 |
| - KTY81-110 | 1x KTY81-110 Sensor |
| - KTY81-210 | 1x KTY81-210 Sensor |
| - KX | sensor types or tolerances on customer request |

optional measuring transducer

- | | |
|--------|--|
| - DMU | with measuring transducer DMU50 (PT1000 2-wire, 4..20 mA 3-wire, OLED display) |
| - KMU | with measuring transducer KMU100 (PT100 2-, 3-, 4- wire, 4..20 mA 2-wire) |
| - KMUS | with measuring transducer KMUS100 (PT100/1000 2-, 3-, 4- wire, 0..10 V 3-wire) |