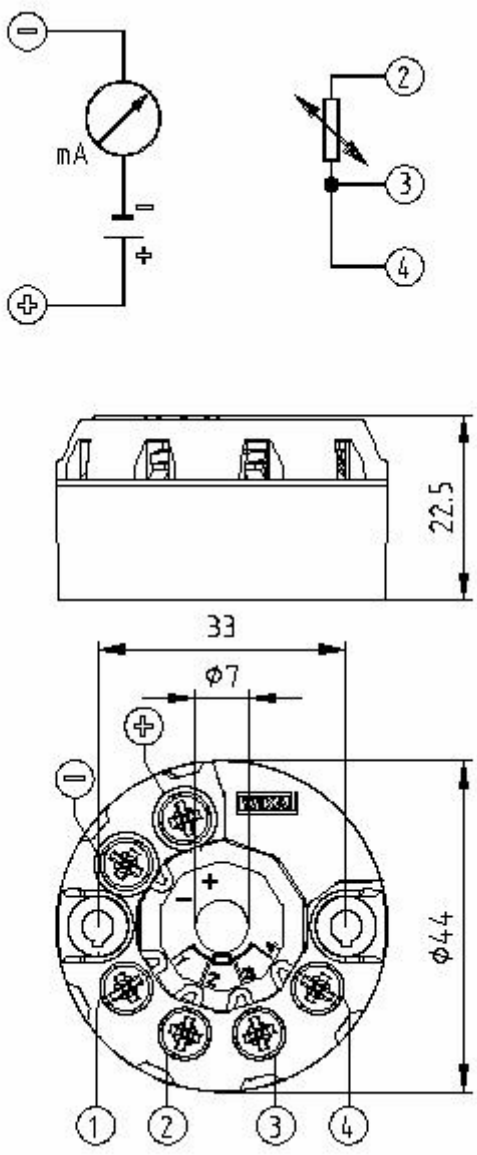
# Digital temperature transmitter for resistance sensors T15

**Modelcode type:** T15

**Item number:** 14139419

| Digital temperature transmitter for resistance sensors T15 | |
|---|---|
| Design | Head |
| **Housing** | |
| Material | Plastic PBT, glass-fibre reinforced |
| Weight | 45 g |
| Ingress Protection | IP00 (Electronics completely potted) |
| Connection terminals | Captive screws |
| Wire cross-section | Solid wire 0.14 ... 2.5 mm² (AWG 24 ... 14) |
| Wire cross-section | Wire with end splice 0.14 ... 1.5 mm² (AWG 24 ... 16) |
| Screwdriver | Cross head (Pozidrive tip), size 2 (ISO 8764) |
| Tightening torque | 0,5 Nm |
| Fasteners | Captive mounting elements enclosed (screw/spring/ring) |
| **Ambient conditions** | |
| Permissible ambient temperature transmitter | Standard -40...85°C |
| Climate class per IEC 654-1:1993 | Cx (-40 ... +85 °C, 5 ... 95 % r. F.) |
| Vibration resistance per IEC 60068-2-6:2008 | Test Fc: 10 ... 2,000 Hz; 10 g, amplitude 0.75 mm |
| Shock resistance per IEC 68-2-27:2009 | Acceleration / shock width |
| Shock resistance per IEC 68-2-27:2009 | 100 g / 6 ms |
| Salt fog | Acc. IEC 68-2-52:1996, IEC 60068-2-52:1996 |
| Condensation | Acceptable |
| Free fall - in line with IEC 60721-3-2:1997, DIN EN 60721-3-2:1998 | Drop height 1.5 m |




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# Digital temperature transmitter for resistance sensors T15

**Modelcode type:** T15

**Item number:** 14139419

| | |
|---|---|
| Electromagnetic compatibility (EMC) | Acc. DIN EN 55011:2010, DIN EN 61326-2-3:2013<br>NAMUR NE21:2012, GL 2012 VI Part 7<br>Emission (group 1, class B) and interference immunity (industrial application)<br>[HF field, HF cable, ESD, Burst, Surge] |

## Temperature transmitter input

| | |
|---|---|
| Configuration sensor | Pt100 |
| Standard | Per IEC 60751:2008 |
| Measuring current at the measurement | Max. 0,2 mA |
| Input configuration | 3-wire |
| Lead resistance / wire resistance | Max. 50 ? each wire |
| Unit | °C |
| Measuring range start value - sign | Plus (incl. 0) |
| Measuring range start value | 0 |
| Measuring range end value - sign | Plus (incl. 0) |
| Measuring range end value | 150 |

## Time response

| | |
|---|---|
| Switch-on time (time to get the first measured value) | Max. 3 s |
| Warm-up time | After max. 4 minutes the instrument will function to the specifications (accuracy) |
| Response time | < 0,4 s |
| Typical measuring rate | Measured value update with 2- and 4-wire connection, approx 20/s<br>With 3-wire connection/potentiometer, approx. 5/s |

## Monitoring

| | |
|---|---|
| Transmitter Signalling of error | Down scale 3,5 mA |
| Measuring range monitoring | Deactivated<br>(Monitoring of the set measuring range for upper/lower deviations configurable) |
| Drag pointer (internal temperature of the electronics) | Comparative value in relation to the permissible ambient temperature |

## Specifications

| | |
|---|---|
| Output signal | 4...20mA |
| Reference conditions | Calibration temperature Tref = 23 °C ±3 K<br>Power supply Ui_ref = 24 V<br>Atmospheric pressure = 860 .. 1,060 hPa<br>All accuracy specifications refer to the reference conditions. |

## Accuracy specifications

| | |
|---|---|
| Measuring deviation per DIN EN 60770, NE145 | 0.2 K or 0.1 % (greater value applies) |
| Measuring deviation per DIN EN 60770, NE145 | MS < 200 K: 0.2 K / MS > 200 K: 0.1 % of MS |
| Mean temperature coefficient (TC) every 1 K ambient temperature deviation from Tref | ? ±0,01 % of MS |
| Influence of power supply every 1 V voltage change from Ui_ref | ±0,005 % of MS |

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# Digital temperature transmitter for resistance sensors T15

**Modelcode type:** **T15**

**Item number:** **14139419**

| | |
|---|---|
| Long-term drift in line with IEC 61298-2 per year | < 0,1 % of MS |
| **Approvals / certificates** | |
| Explosion protection | Without |
| **Power supply** | |
| Load RA | RA ? (UB - 8 V) / 0.0215 A<br>with RA in ? and UB in V |
| **Certificates** | |
| Certificates | Without |

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