

Resistance Characteristic

| Temp. | PT100 | PT1000 | NI1000 | NI1000 TK5000 | NTC 1kOhm | NTC 1,8kOhm | NTC 3kOhm | NTC 5kOhm | NTC 10kOhm |
|-------|--------|---------|---------|------------------|--------------|----------------|--------------|--------------|---------------|
| °C | Ohm | Ohm | Ohm | Ohm | Ohm | Ohm | Ohm | Ohm | Ohm |
| -50 | 80,31 | 803,10 | 743,00 | 790,88 | 32886,00 | | 200338,00 | | |
| -40 | 84,27 | 842,70 | 791,00 | 830,83 | 18641,00 | 35658 | 100701,00 | 166555 | 333282 |
| -30 | 88,22 | 882,20 | 842,00 | 871,69 | 10961,00 | 21131 | 53005,00 | 87897 | 175846 |
| -20 | 92,16 | 921,60 | 893,00 | 913,48 | 6662,00 | 12838 | 29092,00 | 48322 | 96659 |
| -10 | 96,06 | 960,90 | 946,00 | 956,24 | 4175,00 | 7992 | 16589,00 | 27584 | 55171 |
| 0 | 100,00 | 1000,00 | 1000,00 | 1000,00 | 2961,00 | 5095 | 9795,20 | 16300 | 32600 |
| 10 | 103,90 | 1039,00 | 1056,00 | 1044,79 | 1781,00 | 3221 | 5971,12 | 9942 | 19885 |
| 20 | 107,79 | 1077,90 | 1112,00 | 1090,65 | 1205,00 | 2212 | 3748,10 | 6244 | 12489 |
| 25 | 109,74 | 1097,40 | 1141,00 | 1113,99 | 1000,00 | 1820 | 3000,00 | 5000 | 10000 |
| 30 | 111,67 | 1116,70 | 1171,00 | 1137,61 | 834,20 | 1504 | 2416,80 | 4029 | 8058 |
| 40 | 115,54 | 1155,40 | 1230,00 | 1185,71 | 589,20 | 1042 | 1597,50 | 2664 | 5329 |
| 50 | 119,40 | 1194,00 | 1291,00 | 1234,97 | 424,00 | 735 | 1080,30 | 1803 | 3606 |
| 60 | 123,24 | 1232,40 | 1353,00 | 1285,44 | 310,40 | 528 | 746,12 | 1246 | 2492 |
| 70 | 127,07 | 1270,00 | 1417,00 | 1337,14 | 231,00 | 384 | 525,49 | 878 | 1756 |
| 80 | 130,89 | 1308,90 | 1483,00 | 1390,12 | 174,50 | 284 | 376,85 | 630 | 1260 |
| 90 | 134,70 | 1347,00 | 1549,00 | 1444,39 | 133,60 | 213 | 274,83 | 459 | 920 |
| 100 | 138,50 | 1385,00 | 1618,00 | 1500,00 | 103,70 | 162 | 203,59 | 340 | 682 |
| 110 | 142,29 | 1422,00 | 1688,00 | 1556,98 | 81,40 | 125 | 153,03 | 256 | 513 |
| 120 | 146,06 | 1460,60 | 1760,00 | 1615,36 | 64,70 | 97 | 116,58 | 195 | 391 |
| 130 | 149,82 | 1498,20 | 1833,00 | 1675,18 | 51,90 | | 89,95 | 150 | |
| 140 | 153,58 | 1535,80 | 1909,00 | 1736,47 | 42,10 | | 70,22 | 117 | |
| 150 | 157,31 | 1573,10 | 1987,00 | 1799,26 | 34,40 | | 55,44 | 93 | |

Resistance Characteristic

| Temp. | NTC 20kOhm | KTY 81-210 | KTY 11-6 | KTY 81-110 | KTY 81-121 | NTC 10kPRECON | LM235Z |
|-------|---------------|---------------|-------------|---------------|---------------|------------------|---------|
| °C | Ohm | Ohm | Ohm | Ohm | Ohm | Ohm | mVolt |
| -50 | | 1068,65 | 1035,91 | 515,00 | 510,00 | 454910 | 2232,00 |
| -40 | 804170 | 1158,95 | 1139,27 | 567,00 | 562,00 | 245089 | 2332,00 |
| -30 | 412798 | 1269,25 | 1250,39 | 624,00 | 617,00 | 137307 | 2432,00 |
| -20 | 220734 | 1385,15 | 1396,25 | 684,00 | 677,00 | 79729 | 2532,00 |
| -10 | 122439 | 1508,65 | 1495,86 | 747,00 | 740,00 | 47843 | 2632,00 |
| 0 | 70440 | 1639,60 | 1630,21 | 815,00 | 807,00 | 29588 | 2732,00 |
| 10 | 41544 | 1778,10 | 1772,32 | 886,00 | 877,00 | 18813 | 2832,00 |
| 20 | 25341 | 1924,15 | 1922,17 | 961,00 | 951,00 | 12272 | 2932,00 |
| 25 | 20000 | 2000,00 | 2000,00 | 1000,00 | 990,00 | 10000 | 2982,00 |
| 30 | 15888 | 2077,80 | 2079,77 | 1040,00 | 1029,00 | 8195 | 3032,00 |
| 40 | 10214 | 2238,90 | 2245,17 | 1122,00 | 1111,00 | 5593 | 3132,00 |
| 50 | 6718 | 2407,60 | 2418,21 | 1209,00 | 1196,00 | 3894 | 3232,00 |
| 60 | 4517 | 2583,80 | 2599,06 | 1299,00 | 1286,00 | 2763 | 3332,00 |
| 70 | 3110 | 2767,50 | 2787,65 | 1392,00 | 1378,00 | 1994 | 3432,00 |
| 80 | 2167 | 2958,80 | 2983,99 | 1490,00 | 1475,00 | 1462 | 3532,00 |
| 90 | 1541 | 3152,50 | 3188,08 | 1591,00 | 1575,00 | 1088 | 3632,00 |
| 100 | 1114 | 3363,90 | 3399,91 | 1696,00 | 1679,00 | 821 | 3732,00 |
| 110 | 818 | 3577,75 | 3619,50 | 1805,00 | 1786,00 | 628 | 3832,00 |
| 120 | 608 | 3799,10 | 3846,83 | 1915,00 | 1896,00 | 486 | 3932,00 |
| 130 | 457 | 4028,05 | 4081,91 | 2023,00 | 2003,00 | 380 | 4032,00 |
| 140 | 347 | 4188,10 | 4324,74 | 2124,00 | 2103,00 | 301 | 4132,00 |
| 150 | 266 | 4397,70 | 4575,31 | 2211,00 | 2189,00 | 240 | 4232,00 |

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DC-TT-A.....

Immersion temperature sensor with flexible silicone connection



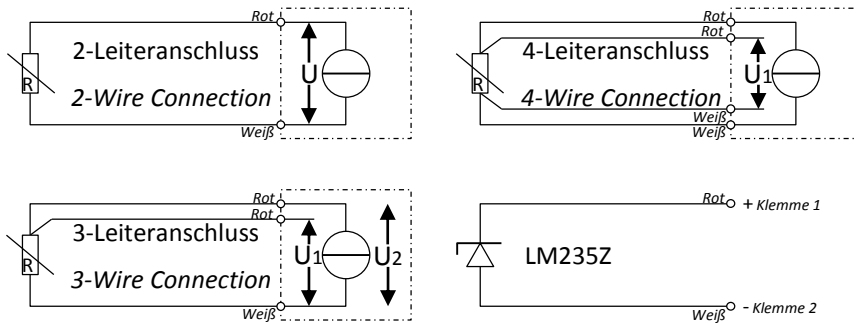
Application

Apparatus for measuring the temperature in gaseous media. In combination with an immersion sleeve, the DC-TT-A can also be used for measuring the temperature of liquid media (as in pipes, kettles or water tanks). The DC-TT-A is well-suited for immersion applications thanks to the 200 mm sleeve. With the help of the respective sensors (see below), the device can be connected to all conventional control and display systems.

technical data

| | |
|------------------------------|-------------------------------------|
| Required temperature sensor: | Pt1000 class B (2-wire) |
| Measurement peak: | Listed in the table above |
| sensor: | According to customers requirements |
| Circuit type: | 2-wire-conneciton (standard) |
| connection: | ferrules |
| cable: | 2 m |
| Einbaulänge: | 6 x 200 mm |
| Protection class: | IP65 (standard) |
| Mounting material included: | Mounting flange |

electrical connection

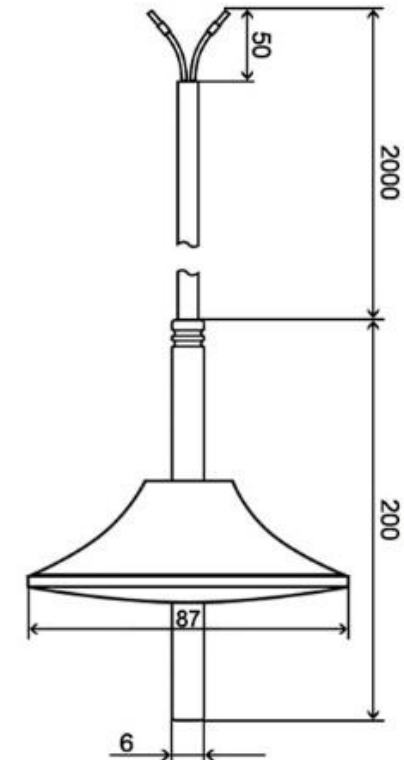


The temperature sensors are designed for safety extra low voltage operation (SELV). The technical data specified in this Data Sheet have to be considered. For Pt 100 sensor model in two- wire version, the line resistance of the connecting cable (cable) must be considered. This can be corrected in the display or DDC/SPS. The measuring current should not be greater than 1 mA. An excessively high measurement current will arise self - heating of the sensor and thus can distort the measurement result.

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technical drawings



General informations

- Installation of the equipment must be performed by qualified personnel.
- The device may only be connected with the power off.
- The safety of the VDE, the states, the TÜV and the local energy supply company must be observed.
- The EMC directives are observed. It must be shielded connecting cables, and a parallel installation to live
- Pipes to be avoided.
- The operation in the vicinity of equipment that does not comply with EMC directives may adversely affect the functioning
- The buyer has to ensure compliance with the applicable building and safety guidelines
- This product should not be used for safety-related tasks, such as for the protection of persons as emergency stop switch on equipment . .
- Improper use of any deficiencies or damage are excluded from warranty or liability .
- Consequential damages caused by a fault in this device are excluded from warranty or liability .
- It Only the technical data and connecting conditions of installation and operating instructions supplied with the instrument . Changes are possible at any time in the sense of technical progress and the improvement of the products.
- Changes of the device by the user, all warranty claims .