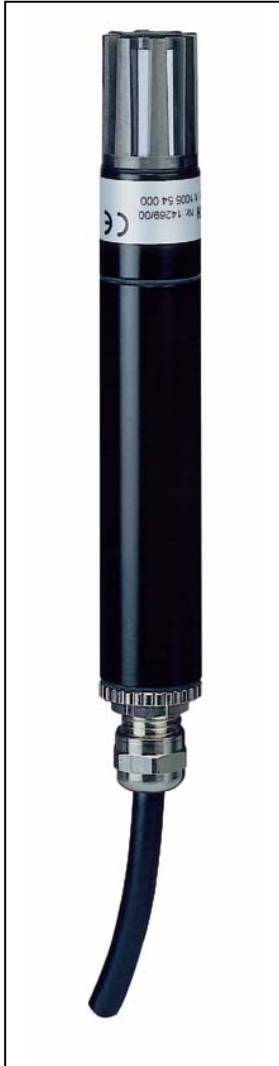


Thermo-Sensor-compact

Instruction for use 2.1280.00.000 / ...141 / ...160 / ...161



Range of application

The **Thermo-Sensor-compact** with connected cable is designed to measure the air temperature and other non-aggressive gases.

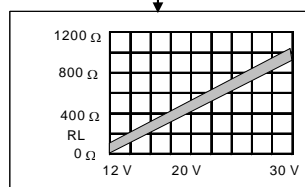
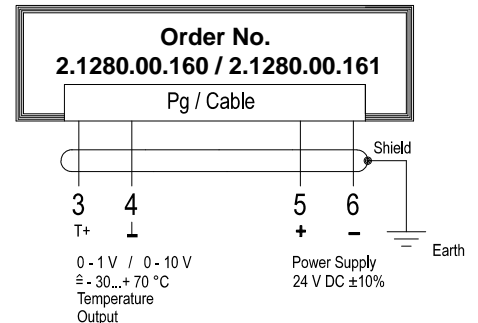
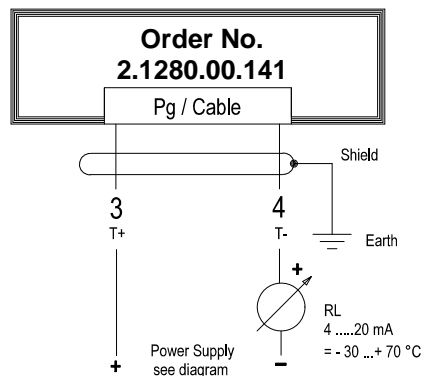
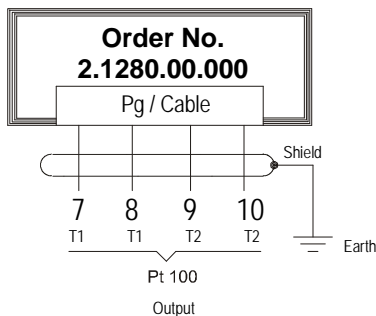
Models available

Order-No.	Electr. Output	Accuracy
2.1280.00.000	Pt 100	acc. to IEC 751 1/3 class B
2.1280.00.141	4...20 mA	± 0,3 K at > 1m/s and +20°C
2.1280.00.160	0... 1 V	± 0,2 K (-27 ... + 70°C)
2.1280.00.161	0...10 V	± 0,2 K (-29 ... + 70°C)

Technical Data

Measuring Element	: Resistant thermometer Pt 100
Measuring Range	: -30...+70°C
Response time	: 20 s
Ambient Temperature	: -40...+80°C
Protection	
Sensor / Electronic	: IP 30 / IP 65
Operating Voltage	
I-Output	: 12 ... 30 V DC
U- Output (0..10 V)	: 24 V DC ± 10%
U- Output (0.. 1 V)	: 9 ... 30 V DC
Load Resistor	
I- Output	: see diagram
U- Output (10 V/1 V)	: ≥ 10 kΩ / ≥ 2 kΩ
Power Supply	: ca. 5 mA (10 V) / 3 mA (1 V)
Cable	: 5 m long
Dimensions	: Ø 20 x 138 mm
Weight	: 0,35 kg

Connection Diagram



Diagram

RL as function of Power Supply

Mounting

For correct measurements, the **Temperature-Sensor-compact** should be mounted at a site of the room which is representative of the climate within the room. The mounting position itself is arbitrary. Mount the sensor such that water cannot penetrate the inside of the sensor. Dew and jets of water do not harm the sensor.

Moreover, you should care for a minimum air flow and the operating voltage to be maintained. Deviations can lead to errors (e.g. due to self-heating) in the measuring values. Preferably, the sensor should be mounted vertically facing downwards to a wall (indoor mounting) and should be mounted horizontally facing backwards in canals. When using the sensor in the open air a Weather- and Thermal Radiation Shield is recommended. It reduces to a minimum the possibility of direct radiation or precipitation influencing the data in a negative manner. In addition, it protects the **Temperature-Sensor-compact** from damaging environmental influences. If the measuring place is badly ventilated, it is recommendable to use a Weather- and Thermal Radiation Shield with force ventilation.

Maintenance

The **Temperature-Sensor-compact** is supplied already calibrated and its characteristics remain stable for years.

Dust does not damage the humidity sensor but does influence the dynamic behaviour negatively. If the instrument is very dirty, the sensor element can be cleaned by blowing-off the dust or carefully rinsed in distilled water. Make sure you do not touch the highly-sensitive sensor element.

Accessories - Weather and Thermal Radiation Shield

Order no.: 1.1025.55.000 / 1.1025.55.100 (with Ventilation)



The use of the **Weather and Thermal Radiation Shield** in combination with the **Temperature-Sensor-compact** compact in the open air reduces to a minimum the possibility of radiation, and precipitation influencing the data in a negative manner. Moreover, the sensor is protected from environmental influences to a greatest possible extent.

More exactly measuring results are achieved by using the ventilated Weather and Thermal Radiation Shield (mod. 1.1025.55.100 with ventilation). The ventilation reduces those errors which might occur during the measurements in a weather hut caused by the so-called „proper climate“ .

Remark: It is recommendable to use the weather and thermal radiation shield-compact with ventilation order-no. 1.1025.55.100 for **Temperature-Sensor-compact** model ...141 (4-20 mA)

The **Weather and Thermal Radiation Shield** consists of white UV-proof lamella which exhibits very good reflective properties and ventilation.

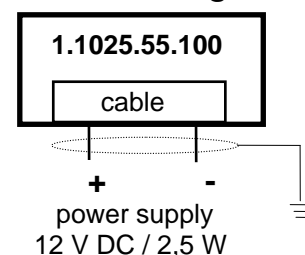
Preferably, **Weather and Thermal Radiation Shield** is mounted to hangers or to plane walls. Make sure you avoid heat-reflecting surfaces.

The Thermo Transmitter is put into the Weather and Thermal Radiation Shield from below and is mounted by means of a clamping screw.

Technical Data

Dimensions lamella	: Ø 120 mm x 140 mm/155 mm (ventilated)
Total height	: 275 / 290 mm (with holding plate)
Sensor types	: Humidity and temperature sensors Ø 20 mm
Mounting	: to a mast tube Ø 30 - 50 mm / wall mounting
Weight	: 0,65 / 0,75 kg
Order-No. 1.1025.55.000	: without ventilator
Order-No. 1.1025.55.100	: with ventilator 12 V DC / 2,5 W / cable 5 m

Ventilator Connection Diagram



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