



Function

The sensor (828) measures air, soil or water temperatures. As measuring element a platinum measuring resistance Pt100 is used, which is protected by a stainless-steel shaft. With a special sealing compound an optimised heat conducting between shaft and measuring element (capsule of hardened glass) is achieved. The temperature is measured via the integrated sensor cable with a 4-wire circuit.

Assembly

For measuring the

- **air temperature**, the sensor shall be mounted in a sensor shelter.
- **soil temperature**, the shaft of the sensor is buried in the corresponding soil depth. Make sure that the shaft has good contact with the surrounding earth layer so that an optimal heat exchange can take place.
- **water temperature**, the sensor is simply sunk into the desired water depth.

Electrical Connection

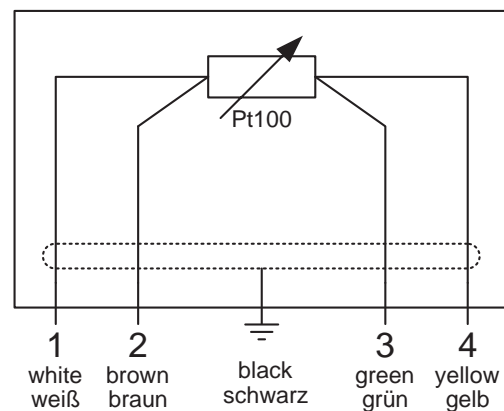
The sensor (828) has an integrated 4 cores shielded sensor cable

Connect the sensor to the data acquisition system with a 4-wire circuit. Please see the wiring diagram.

If the measuring cable is not long enough to connect the sensor to a data acquisition system, a shielded 4-wire extension cable must be connected to the measuring cable over a protected distribution box.

Pin Assignment

Pin assignment according to DIN 47100 colour code:



Ader core	DIN 47100 Farbcod		DIN 47100 color code	
	Farbcode	Code	Color	Code
1	weiß	WS	white	WH
2	braun	BR	brown	BN
3	grün	GN	green	GN
4	gelb	GE	yellow	YE

Putting into operation

The sensor (828) is immediately ready for operation after connection to the data acquisition system.

Maintenance

The sensor (828) is maintenance-free.

As simply function check the plausibility of the measured temperature value is enough.

For a precise function check a comparison measurement is done. Doing this the water temperature inside a large vessel (e.g. bucket) is measured with the sensor (828) and a precise thermometer at the same time. For this check it is important that the temperature distribution in the water is homogeneous; moreover, allowance for transient time must be considered.

Alternative you can measure the temperature inside a large vessel with well stirred ice water. This temperature should be 0 °C.

Technical Data

Id-No. 00.08280.010 507

Measuring element: Pt100 1/3 DIN 43 760
resp. DIN IEC 751

Measuring range: -40...+70 °C

Accuracy: 0.1 °C at 0 °C according to
DIN IEC 751

Protection class: IP 67

Weight: 0.4 kg

Approx. dimensions:

Cable length: 7500 mm

Shaft length: 105 mm

Shaft Ø: 8 mm

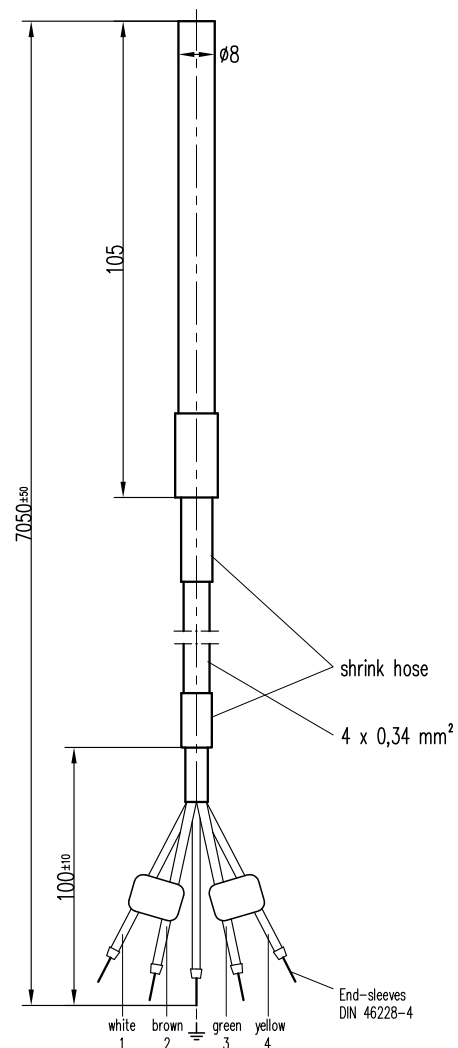
Accessory (please order separately):

Armoured conduit for ground installation (rodent protection)

Length: 6 m

Id.-No. 32.08280.010 060

Dimensional Drawing



Please note the loss of warranty and non-liability by unauthorised manipulation of the system. You need a written permission from LAMBRECHT meteo GmbH for changes of system components. These activities must be operated by a qualified technician.

The warranty does not cover:

1. Mechanical damages caused by external impacts (e. g. icefall, rockfall, vandalism).
2. Impacts or damages caused by over-voltages or electromagnetic fields which are beyond the standards and specifications in the technical data.
3. Damages caused by improper handling, e. g. by wrong tools, incorrect installation, incorrect electrical installation (false polarity) etc.
4. Damages which are caused by using the device beyond the specified operation conditions.