Soil Depth Thermometer

with support

Instruction for Use 2.2110.05.003 / 2.2110.10.006 / 2.2110.20.009

Description

The soil thermometer is a mercury glass thermometer that can be calibrated. It is designed for measuring the soil temperature. The reading is carried out at the upper part of the mercury column.

Mounting

At the measuring location a hole must be dug out in the ground. The depth of the ground hole has to correspond at least to the length of the inserting shaft of the thermometer.

Afterwards, the support is put into the ground, close to the hole, up to a horizontal strut.

The soil thermometer is now carefully clamped onto the support, or resp. is put into the ground hole. The ground hole is filled up with soil, afterwards.

Technical Data

Measuring range	: see model
Graduation	: see model
Accuracy	: see model
Inserting depth	: see model
Liquid	: mercury
Angle	: 150°
Model	: DIN 58655
Weight - Thermometer with support	: 950 g
Total length - Thermometer with support	: approx. 700 mm

Model

Description	Order-No.	Meas. range	Graduation	Accuracy	Inserting depth
Soil Depth Thermometer	2.2110.05.003	-25...+45°C	0,2°C	±0,4 K(<0°C) ±0,2 K(0-+50°C) ±0,3 K(>50°C)	50 mm
Soil Depth Thermometer	2.2110.10.006	-20...+40°C	0,2°C		100 mm
Soil Depth Thermometer	2.2110.20.009	-15...+35°C	0,2°C		200mm

Separated liquid columns – what do you do?

Before use of a liquid in glass thermometer, make sure that the liquid column is not interrupted. These phenomena are frequently caused by violent shocks during transport.

In most cases it is possible to rejoin broken columns by application of the following directions:

If there is only a small interruption at the upper end of the column, try to rejoin it by holding the thermometer in a vertical position and taping it against the inside of the hand.

Another procedure may be effective by warming the bulb until the column reaches the separated portions in the safety chamber at the upper end of the capillary tube. Great care is necessary to avoid filling the safety chamber completely with mercury, which might produce pressures large enough to burst the bulb. Joining the mercury is more readily accomplished if the quantity in either cavity has first shattered into droplets by tapping the thermometer laterally against the hand.

If an interruption is in the lower part of the liquid column, the bulb of the thermometer may be cooled in a solution of common salt, ice and water (about –20°C) to bring the mercury down into an enlargement of the bore or finally into the bulb. Moderate tapping of the bulb on a paper pad, inside of the hand, or the application of centrifugal force usually serves to unite the mercury in the bulb. If the salt solution does not provide sufficient cooling carbon dioxide snow (dry ice about –78°C) may be used. Since mercury freezes at about –38°C, it will cause the mercury to solidify. Care must be taken to warm at first the top of the bulb or the enlargement of the capillary tube so that pressures in the bulb due to the expanding mercury may be relieved.

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