



Soil Temperature (TS10 Series)

Features

- Semi-conductor sensing element
- Waterproof, aluminium sheathed tip
- Robust PVC housing
- Fully weatherproof

Applications

- General meteorology
- Irrigation scheduling
- Crop studies
- Ecology
- Pest management

The TS10 Series Temperature Sensors are specially designed for measuring the temperature of soil, grass or water.

Improved design provides for faster and more accurate temperature sensing. Temperature stability of the new design allows realistic temperature measurement accuracies of $\pm 0.2^{\circ}\text{C}$ over the range.

The sensing element consists of a semi-conductor integrated circuit which provides an output voltage proportional to the ambient temperature. The relationship between temperature and output voltage is extremely linear due to the high internal gain of the integrated circuit.

The body which houses the electronic circuit is made from high impact PVC which provides mechanical protection.



The electronic circuit is encapsulated in a potting compound to prevent water damage. Although the sensor is weatherproof, burying in soil or submersion in water should be avoided.

The tip is sealed into an aluminium sleeve and is fully protected against moisture.

Envirodata Environmental Monitoring & Management

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Specifications

Sensing Element:

Semiconductor I.C.

Measurement Units:

Degrees Celsius (°C)

Operating Range:

-20°C to +60°C

Resolution:

0.1°C

Accuracy:

± 0.3°C over operating range

Drift:

< 0.2°C per year

Calibration Accuracy:

± 0.2°C at 0°C and 30°C

Response time:

< 5 mins in air; 30 secs in liquid

Calibration Method:

Two point calibration (gain and offset controls).

Reliability:

Typically five (5) years operation before possible overhaul.

Sealing:

The electronic circuit is encapsulated in potting compound to protect against water damage.

Housing:

High impact Black PVC

Operating Conditions:

Temperature: -10°C to +50°C

Humidity: 0% to 100%

Weather Exposure:

Constant water pressure should be avoided on the body housing the electronic circuit. The tip is fully moisture sealed.

Supply Voltage:

5.5 to 7 Volts DC

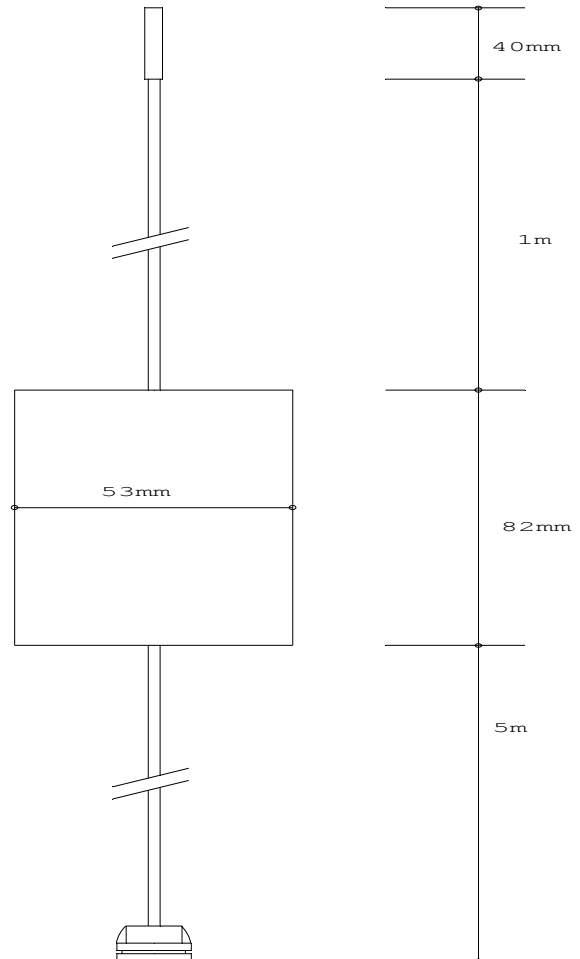
Current Drain:

< 2.5 mA.

Output:

+5 Volt pulse

Dimensions (mm)



Model	TS 10	TS11
Output (-20°)	0	0
Output (+60°)	40	320
Cable Type	3 core shielded	3 core shielded
Cable Length	5m	5m
	1m Tip	1m Tip

Ordering Information

TS	models:
	TS10
	TS11

Shipping Weight: 0.75kg

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