SOIL TEMPERATURE SENSOR

(TS70 Series)

Features

- Microprocessor accuracy
- Frequency output
- Robust signal (250m distance with no loss)
- Sensor's fully interchangeable with no software adjustment
- Digital semi-conductor sensing element
- Waterproof, stainless steel welded tip
- Electronics sealed to IP67
- Australian Made

Applications

- General meteorology
- Asphalt temperature profiling
- Irrigation scheduling
- Scientific research
- Agriculture
- Soil heat flux studies

AUSTRALIAN MADE

TS70 Soil Temperature Sensor with electronics to IP67

The TS70 Series Soil Temperature sensors are high quality electronic sensors designed to measure ambient soil temperature at your chosen depth.

Advanced design using high stability components provides faster and more accurate temperature sensing. The temperature stability of the new design allows realistic temperature measurement accuracies of better than ±0.1°C over the typical soil temperature range.

The sensing element consists of a semi-conductor integrated circuit & microprocessor that provides a frequency proportional to temperature.

This design is highly stable with 10+ years typically achieved in the field with no re-calibration.

For correct soil temperature readings at your chosen depth, the sensor probe should be inserted into the undisturbed soil in a horizontal plane. An excavated access hole, and a 5mm drill bit to create the tip insertion hole in compacted soils may be required. (Tip diameter is 6.0mm)

Backfilling the access hole once all sensors are inserted will complete the installation.

Using a series of probes at your specific depths will provide you with readings much more accurate and reliable than any vertically inserted sensor or multi-parameter probe.

SOIL TEMPERATURE SENSOR
SPECIFICATIONS

Sensing Element
- Semiconductor Integrated Circuit

Resolution
- 0.025°C

Accuracy
- ±0.1°C over operating range

Drift
- < 0.1°C per year

Response Time
- <2 minutes in air; 30 seconds in liquid

Calibration Method
- Single point calibration in a warm water bath, using certified standard

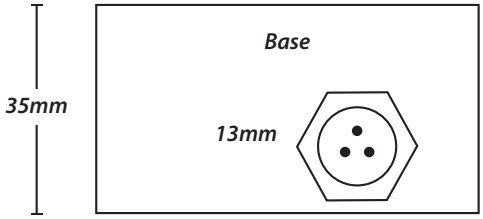
Reliability
- Ten years operation before factory recalibration recommended

Operating Conditions
- Temperature -20°C to +60°C
- Humidity 0% to 100%
- Full submersion possible

Enclosure
- Electronics fully sealed to IP67

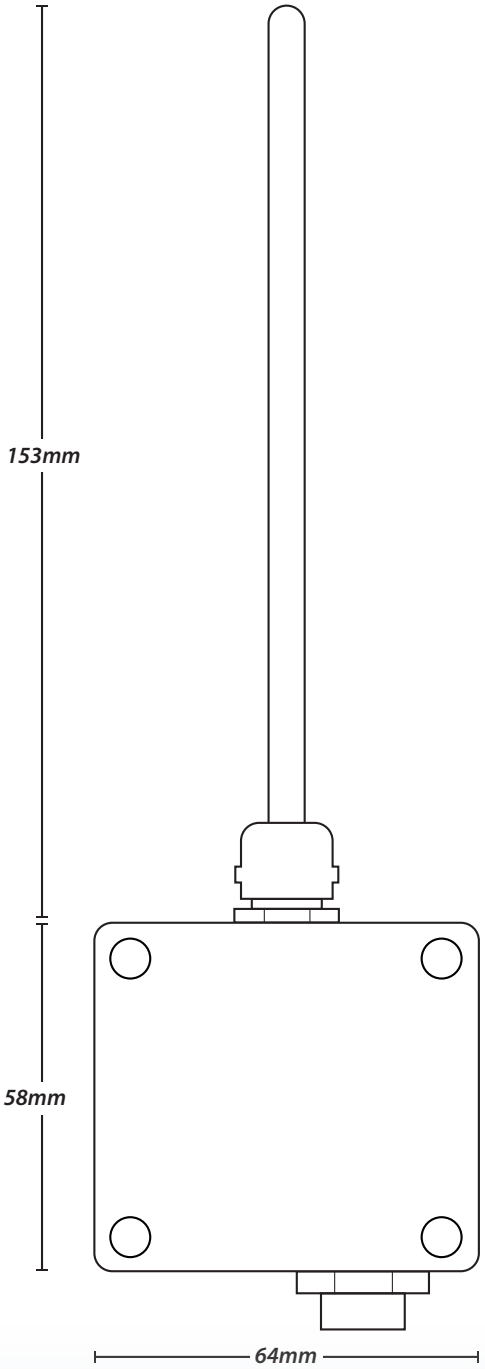
Supply Voltage
- 5.5 to 15 Volts DC

Current Drain
- < 2.5mA at 6V DC



Output
- +5 Volt square wave frequency (pulse) proportional to the temperature
- -20°C = 0 Hz
- +60°C = 40 Hz
- 100% linear progression
- Frequency = °C/2 + 10
- 3 pin male Conxall socket

Soil Temperature Sensor Dimensions



Options
- FX08 - 8m F-F cable
- FX16 - 16m F-F cable
- Custom cables available; 1.0m to 250m

Environdata
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