AIR TEMPERATURE SENSOR

(TA70 Series)

Features

- Microprocessor accuracy
- Frequency output
- Strong signal (250m distance with no loss)
- Sensors fully interchangeable with no software adjustment
- Digital semi-conductor sensing element
- Welded stainless steel tip
- Electronics sealed to IP67
- Excellent long term stability
- Australian Made

Applications

- General meteorology
- 10m and 2m temperature for Inversions
- Industrial ambient temperatures
- Australian Standard weather monitoring
- Irrigation scheduling
- Scientific research
- Process control and automation

The TA70 Series Air Temperature sensors are high quality electronic sensors designed to measure ambient air temperature.

Designed and built with high stability components, the TA70 is accurate and stable. This provides temperature measurement accuracies of better than ±0.1°C over the measurement range.

The sensing element consists of a semi-conductor integrated circuit that provides a digital output voltage proportional to the ambient temperature.

TA70 Air Temperature Sensor

SS32 Bottom Mounted Sensor Shelter

The sensor's microprocessor reads the digital signal and provides a very stable square-wave frequency proportional to the air temperature.

For ambient air temperature readings we recommend that the sensors are located inside a louvred sensor shelter, or radiation screen.

Environdata's Sensor Shelters are modern versions of the "Stephenson Screen". Free standing models, or versions designed to sit on a mounting arm or post are available.

The sensor shelters are made from aluminium and stainless steel, and are durable enough for any environment.

AIR 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.

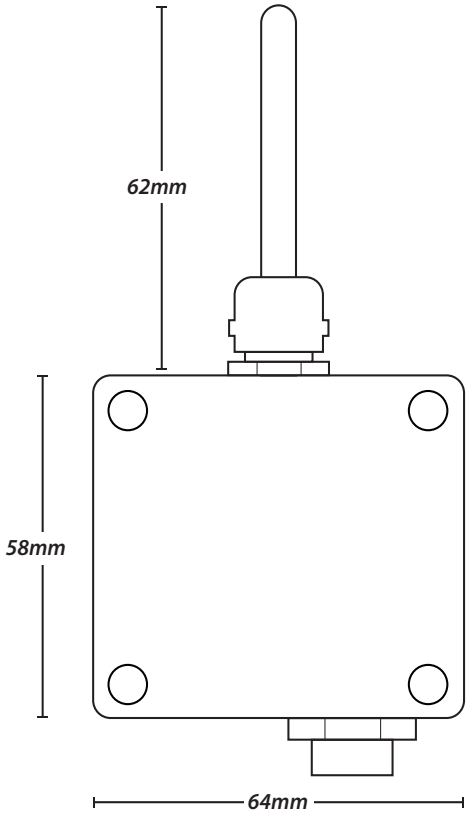
Reliability
- Ten years operation before factory recalibration recommended.
- Field calibrations annual or as required.

Enclosure
- Electronics fully sealed to IP67

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

Sensor Shelter on a typical 2 metre Weather Station

Air Temperature Sensor Dimensions



Supply Voltage
- 5.5 to 15 Volts DC

Current Drain
- < 2.5mA at 12V 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

Options
- Sensor shelter required
- Bottom mounted Sensor Shelter (SS32)
- Top mounted Sensor Shelter (SS33)
- FX1M5 - 1.5m cable
- FX16 - 16m cable

Environdata
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