Environdata
WEATHER STATION SPECIALISTS

Air Temperature Sensor

(TA60 Series)

Features

- Microprocessor accuracy
- Frequency output
- Robust signal (250m distance with no loss)
- Sensors fully interchangeable with no software adjustment
- Digital semi-conductor sensing element
- Waterproof, aluminium sheathed tip
- Robust housing
- Fully weatherproof, IP66
- Australian Made

Applications

- General meteorology
- Inversion Layer detection
- Irrigation scheduling
- Scientific research
- Process control & automation

The TA60 Series air temperature sensors are high quality electronic sensors designed to measure ambient air temperature.

Improved 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 entire measurement range.

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

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

Figure 1: TA60 Air Temperature Sensor

For ambient air temperature readings we recommend that the sensors are located inside a louvred radiation screen, to protect from direct and reflected solar radiation and precipitation.

This sensor screen should preferably be located at a height of 1.2 to 1.5 metres above ground level.

The ideal screens to use are Environdata's Sensor Shelters. These modern versions of the "Stephenson Screen" are constructed from powdercoated aluminium using stainless steel fasteners so it is robust enough for any environment.

The SS11 is the standalone, top-mounted version, while the SS31is mounted on the 50mm SHS side arm (MA30) .

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Version 141030

AUSTRALIAN MADE

The MA30 is designed to fit with all standard Environdata mounting hardware, and for special applications, the adjustable version provides flexible mounting options to suit your needs.

Specifications

Sensing Element:

- Digital Semiconductor Integrated Circuit

Resolution:

- 0.04°C

Accuracy:

- ±0.1°C over operating range

Drift:

- <0.05°C per year

Calibration Accuracy:

- < ±0.1°C between 5°C and 45°C

Response time:

- < 30 seconds in air

Reliability:

- Five (5) years operation before factory recalibration recommended.

Housing:

- Fully sealed grey ABS with neoprene gasket

Operating Conditions:

- Temperature: -10°C to +60°C
- Humidity: 0% to 100%

Weather Exposure:

- IP66: Do not submerge

Supply Voltage:

- 5.5 to 15 Volts DC

Current Drain:

- < 2mA at 6V DC

Output:

- +5 Volt square wave frequency (pulse) proportional to the temperature.
- -10°C = 5 Hz
- +60°C = 40 Hz
- 100% linear progression
- Frequency = °C/2 + 10

Cable Specification:

- Custom wound 3-core
- Shielded
- UV stabilised
- 1.5m standard length
- Extension cables to 250m with no signal loss

Dimensions (65mm x 64mm x 38mm)

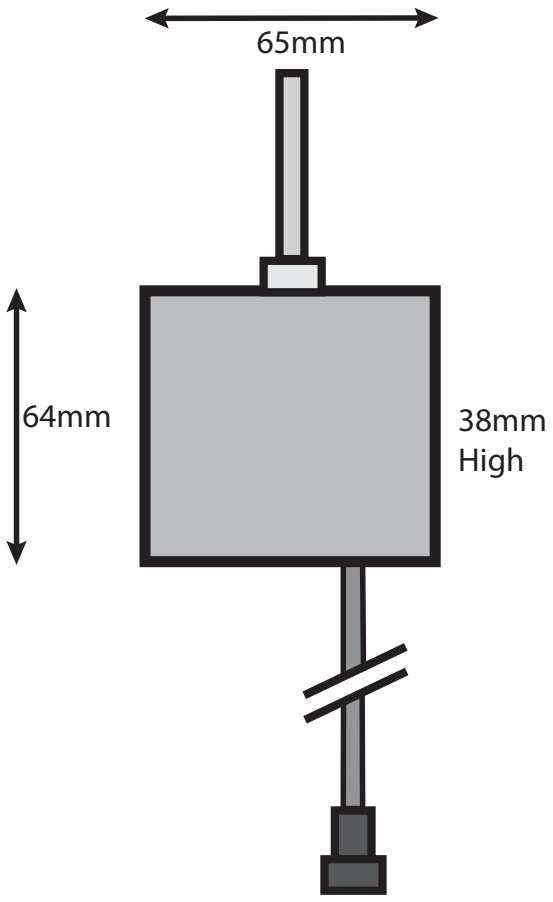

Figure 2: Dimensions of TA60 Air Temperature Sensor

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