TT-1000
Space Temperature Sensors

Features:

- Wide range of sensing element types
- Blends into the fabric of any building
- ABS Flame retardant
- Base plate compatible for both EU & North America fixings

Benefits:

- Aesthetically pleasing housing
- Uniformity of sensors with other Sontay products
- Housing designed to maximize air flow through it, giving fast response times

Technical Overview

The TT-1000 range of wall mounting temperature sensors can be fitted with either a high quality thermistor, Nickel or Platinum PTC sensing elements. This flexibility ensures compatibility with a vast majority of controllers.

The TT-1000 can be configured with a variety of user interface options including, set point control, fan speed switching (resistive) and momentary switches. The base plate allows for both EU and North American fixings.

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Specification:

Output types:		
	Thermistor	Resistive
	PT100a	Resistive
	PT1000a	Resistive
	NI1000a	Resistive
	Set point	Resistive (see page 4)
	Fan speed	Resistive (see page 4)
	Mom. switch	N/O push button
Accuracy:		
	Thermistor	±0.2°C (0 to 70°C)
	PT100a	±0.2°C @ 25°C
	PT1000a	±0.2°C @ 25°C
	NI1000a	±0.4°C @ 0°C
Housing:		
	Material	ABS (flame retardant)
	Colour	polished white finish
Dimensions		115 x 85 x 28mm (4.53 x 3.35 x 1.10")
Ambient range		-10 to 60°C (14 to 140°F)
Protection		IP30
Weight		120g (0.26lb)
Country of origin		UK

Part Codes:

TT-1000 Space Sensor

Sensing Element (add type to above code)

-A	(10K3A1) Trend, Cylon, Distech
-B	(10K4A1) Andover
-C	(20K6A1) Honeywell
-D	(PT100a) Serck
-E	(PT1000a) Cylon
-F	(NI1000a) Sauter
-G	(Ni1000a/TCR(LAN1)) Siemens
-H	(SAT1) Satchwell
-K	(STA1) Landis & Staefa
-L	(TAC1) TAC
-M	(2.2K3A1) Johnson Controls
-N	(3K3A1) Alerton
-P	(30K6A1) Drayton
-Q	(50K6A1) Ambiflex
-S	(SAT2) Satchwell
-T	(SAT3) Satchwell
-W	(SIE1) Siebe
-Y	(STA2) Landis & Staefa
-Z	(10K NTC) Carel
-DC	(10K4A1) Delta Controls

*Interface Options (add to part code)**

-SP	Resistive set point 0-10kΩ or 11-1kΩ
-FS3	Resistive 3-speed fan switch
-FS4	Resistive 3-speed fan switch
-FS5	Resistive 5-speed fan switch
-LEDG	24V green LED
-MS	Momentary switch

Accessories

DECOR	Decorators trim plate
GASKET	Insulating gasket (pack of 10

* Interface Restrictions

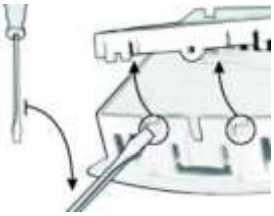
- SP only
- MS only
- SP-MS only
- SP-FSx only

Installation:

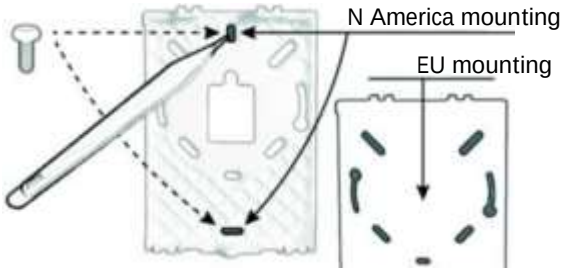
1. Select a location on a wall of the controlled space which will give a representative sample of the prevailing room condition. Avoid sitting the sensor in direct sunlight, on an outside wall or near heat sources. An idea mounting height is 1.5m from the floor.

2. Undo the tamperproof screw at the bottom of the housing.

3. To remove the front panel from the base, twist a screwdriver as below and pull gently the front panel from the base.



4. Using the base as a template mark the hole centres and fix to the wall with suitable screws. Alternatively the base plate can be mounted on to a conduit box or standard recessed back box. The base plate is suitable for EU & North America fixings.



5. Feed cable through the hole in the base plate of the housing and terminate the cores at the terminal block as required. Leaving some slack inside the unit.

6. Replace the housing to the base plate.

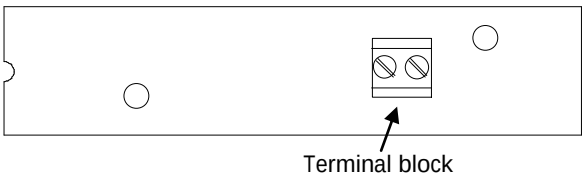
7. Re-fit the tamperproof screw (if required) through the lug at the bottom of the base plate.

Connections:

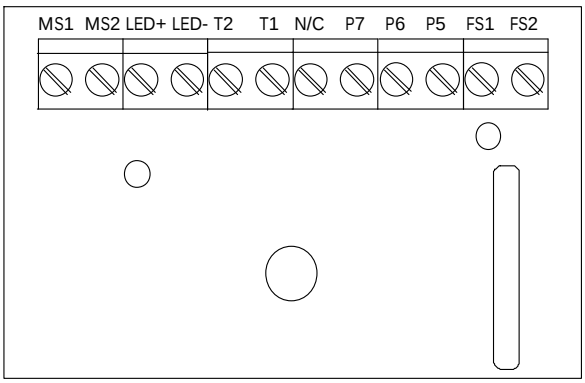
All connections to BEMS controllers, data recorders etc. should be made using screened cable. Normally, the screen should be earthed at one end only (usually the controller end) to avoid earth hum loops which can create noise. Low voltage signal and supply cables should be routed separately from high voltage or mains cabling. Separate conduit or cable trays should be used. Where possible, the controller's earth should be connected to a FUNCTIONAL EARTH, rather than the mains safety earth. This will provide better immunity to high frequency noise. Most modern buildings have a separate earth for this purpose.

Connections (continued):

Temperature only:



Temperature and Options:



All thermistor/RTD elements and options are polarity independent

MS1 & MS2	Momentary switch	LED+ & LED-	24V supply for LEDG
T2 & T1	Temperature sensor	P6 & P7	Set point, resistive 11-1kΩ
P5 & P6	Set point, resistive 0-10kΩ	FS1 & FS2	Fan speed, resistive

Options:

Set point, this is available in two standard values;

-	+	(legend markings on housing fascia)
0kΩ	10kΩ	
11kΩ	1kΩ	

Using an external 1kΩ resistor (not supplied) on the 0-10k terminals 1-11kΩ can be achieved if required.
Potentiometer tolerances are ±30%

Fan speed, the position of the selector switch will cause the resistance between the terminals to alter as shown below.

Switch position	Output
0	Open circuit
1	22.7kΩ
2	26kΩ
3	29.3kΩ
Auto	32.6kΩ

Momentary switch, rated at 24Vac/dc @ 500mA max.

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