

# Remote Temperature Sensors

*Making Life Comfortable*

Often when installing an air conditioning system you may not be able to place the thermostat in the best location for perfect temperature control. In some larger arrears it may even be necessary to control the space temperature based on the average temperature of a larger area rather than the temperature measured in a single location.

For these times, Smart Temp has produced a range of remote temperature sensors that are accurate, attractive and perfectly match the performance of the Smart Temp range of thermostats and temperature controllers.

These sensors easily connect to suitable Smart Temp thermostats and permit the monitoring of the outside air temperature, remote room temperature or even individual zone temperatures when used in conjunctions with many of the Smart Temp Zoning systems.

Sensor types are available in either a wired or wireless versions. Some provide limited temperature control and if supported by the thermostat, an after hours run timer function.

## Features

**Perfectly matches the range of Smart Temp thermostats**

**Attractive & elegant design**

**10K NTC Type II sensors**

**90 x 90 x 20mm size**

**Low cost & reliable**

**Use as indoor, outdoor or averaging**

**Wired & RF types available**

### RS-1 Standard 2 wire temperature sensor



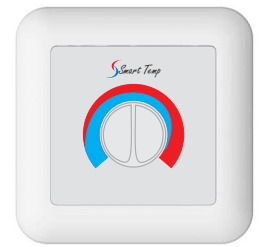
When all that is required is a single wall sensor with no frills, then the RS-1 is your perfect choice.

It is large enough to cover any marks that may be on the wall caused by wire penetrating the wall cavity or mounting screws.

This sensor is also available as an "averaging" sensor (RS-2) or with an after hours run button (RS-1S) for when used with the Smart Temp SMT-920 "Viking" or the Smart Temp SMT-770 "Chameleon" thermostat.

### RS-A Standard 2 wire temperature sensor

When you need to be able to adjust the current room temperature by a few degrees from the setpoint at the sensor, then consider the RS-A sensor. This sensor allows an offset of the current room temperature by +/- 2c permitting the room occupant to have limited control over their comfort levels.



The RS-A sensor is also fitted with an after hours run switch so when used with a suitable Smart Temp thermostat, after hour run calls can easy be made from the sensor location. Perfect for those commercial jobs !

### RS-W Wireless remote temperature sensor



For all those times when you need a remote sensor and don't have wiring available the Smart Temp RS-W may be the solution.

Utilising reliable two way communication and a radio frequency of 433 Mhz the RS-W provides reliable temperature data to the thermostat over a typical range of 35M indoors and up to 80m outdoors.

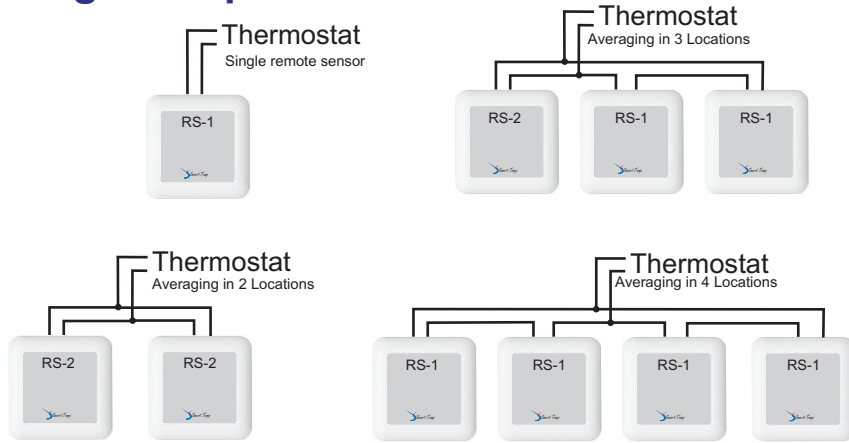
The receiver is powered by 24V (taken from the thermostat) while the transmitter operates for a year or more on 2 x AAA batteries.



Status LEDS provide information on the sensor function and provides loss of communication as well as low battery indication.

The RS-W can be provide as a basic version or as an adjustably version with adjustment and after hours run timer. (RS-WA).

## Wiring Examples



The Smart Temp remote temperature sensors can be used as a single, stand alone sensor or by using a combination of RS-1 & RS-2 sensors you are able to average 2, 3, 4 or even more sensing locations so that the thermostat will control to the average temperature of the space being controlled. This is useful when controlling the temperature of a large area.

For Smart Temp thermostats such as the SMT-770 "Chameleon" and SMT-920 "Viking" you are still able to place an after hours run switch in circuit with the sensors to control the thermostats integrated after hour run timer.

It is not recommended to use the RS-A adjustable sensors in a temperature averaging network.

## Resistance Data

Ohms	Temp C
32.96	0
31.31	1
29.76	2
28.29	3
26.9	4
25.58	5
24.34	6
23.16	7
22.05	8
20.99	9
20	10
19.05	11
18.16	12
17.32	13
16.286	14
15.34	15
14.395	16
14.36	17
13.76	18
13.09	19
12.51	20
11.96	21
11.43	22
10.93	23
10.45	24
10	25
9.57	26
9.16	27
8.75	28
8.4	29
8.05	30

## Specifications

### Wired Sensors

Size	90 x 90 x 21mm
Mounting	60mm spaced
Material	ABS/PC blend UV & fire resistant
Sensor	10K NTC type II
Operating temp	-5 to 45c
Storage temp	-30 to 95c
Adjustable range	+/- 2 @25c
Terminals	2mm cage 50V rated
Warranty	3 years RTB

### RF Sensor

RF Frequency	433 Mhz
Communication	2 way with verification
Range	30 M in building up to 80 M open air
Transmitter power	<0.1watt
LEDS	Power Data (sending & receiving) Status - (AH function called)
Batteries	Sensor 2 x AAA
Battery life	> 1 year typical
Low Bat warning	Yes - Receiver LEDES Flash
Transmitter	24VAC powered
Data transmission	5 mins or 0.5c change

## Smart Temp Sensors work best with...

### SMT-770 thermostat "Chameleon"



7 day or manual operation.  
Single or 3 fan speed control.  
Residential & commercial programming.  
Keyboard locks & after hours run timer.  
Remote or outside air sensor inputs.  
MODbus RTU communisations.

### SMT-920 thermostat "Viking"



7 day, 365 day or manual operation.  
4 compressor control.  
Built in after hours timer.  
Built in economy cycle control.  
Remote or outside air sensor inputs.  
MODbus & BACnet communisations.  
24 & 240V powered & relays.

### 44-800 thermostat "Apollo"



7 day, 5+2 day or manual operation.  
Large backlit touch screen.  
Multistage control.  
2 or 4 daily events.  
24 and/or battery operation.  
Remote and outside air sensor inputs.  
Intuitive operation.

