Features

- High power output
- High quality external whip antenna
- Encrypted data transmission
- Configurable parameters

Specification

Radio Output:		
	Frequency	2.4GHz
	16 channels, automatically selected	
	Direct-sequence spread spectrum	
	Compliance	IEEE 802.15.4-2006
Aerial Characteristics		
	Gain	2.0dBi
	VSWR	<2:1
Data Encryption:		AES 128
Power Output:		+10dBm
Temperature accuracy		±0.3°C
Power Supply:		24Vac/dc
Probe:		
	Material	Brass
	Dimensions	150mm x 6mm dia.
Housing:		
	Material	ABS (flame retardant type VO)
	Dimensions	55mm x 90mm dia.
	Mounting holes	4mm spaced 85mm apart
Protection:		IP65
Environmental:		
Operating:		
	Temperature	-10°C to +50°C
	RH	0 to 90%, non-condensing
Storage:		
	Temperature	-10°C to +80°C
	RH	0 to 90%, non-condensing

Product Codes

RF-RR-T-522 - Router radio duct temperature sensor

Technical Overview

The radio duct temperature sensors are used in conjunction with the **RS-RX20** or **RS-RX40** receiver units, and if required (depending on installation topography), **RS-TB** and **RS-RB** series of battery powered radio sensors.

Routers are used to route signals from battery powered nodes and other routers to the receiver module, where the signal strength of a direct path is not sufficient for reliable communications.

Data is transmitted back to the receiver at configurable time intervals, or on a configurable change in measured value. Each sensor retains these configurations if the battery becomes discharged or requires replacement.

The sensors, routers and receiver automatically select which of the 16 transmission channels available gives the best radio network performance, taking into account both signal strength and interference levels from adjacent channels and equipment (such as Wi-Fi etc.)

The sensors and routers automatically find the best path back to the receiver, which may be directly to the receiver or via “parent” routers.

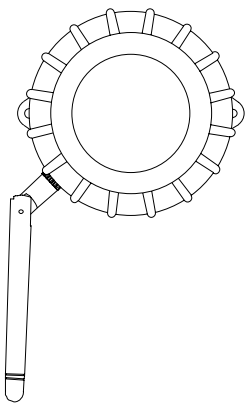
NB Each router can support a maximum of 16 “children”, and consideration should be given on network planning for redundancy in case of router failure or damage.

Labels

Labels are available in plain, pre-printed or customer print types and a choice of either dark grey or white.

Aerial Orientation

For best results ensure that the main body of the aerial is vertical.



Installation

1. Remove all packaging from the sensor
2. Note the MAC address printed on the affixed label and note where this MAC address is installed.
3. Mount the sensor in the required position (this will have been determined by the site survey tool, (see the quick start guide and manual).
4. Make sure to align the holes in the probe so that they point into the air flow, not at right angles to it.
5. It is recommended that the unit be mounted with the cable entry at the bottom.
6. If the cable is fed from above then into the cable gland at the bottom, it is recommended that a rain loop be placed in the cable before entry into the sensor.
7. Remove the lid by twisting separating from the main body.
8. Using the base of the housing as a template mark the hole centres. Drill two pilot holes at 85mm centres in the surface to which the sensor is to be mounted and a 6mm diameter hole centrally between them for the duct probe
9. Fix the sensor to the duct using appropriate screws.
10. The housing is designed to make it easy for an electrical screwdriver to be used if desired.
11. Feed the cable through the waterproof gland and terminate at the terminal block. Leaving some slack inside the housing, tighten the cable gland onto the cable to ensure water tightness.
12. Observe correct polarity if using a 24Vdc power supply.
13. To power on the unit, fit J200.
14. Replace the lid after the electrical connections have been made.
15. Ensure, at a minimum, that all routers and the receiver on the radio network are powered on, and allow about 5 minutes for the network to auto-commission before attempting to read values or make configuration changes.