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	Acetal resin
	Dimensions	25mm x 6mm dia. (not including outer heat shrink)
Housing:		
	Material	ABS (flame retardant type VO)
	Dimensions	55mm x 90mm dia.
	Mounting holes	4mm spaced 85mm apart
Protection:		
	Without potting	IP40
	With potting	IP67
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-555 - Router radio flying lead temperature sensor

-5m	5 Meter cable length
-R	End cap potted for waterproofing

Technical Overview

The **RF-RR-T-555** flying lead temperature sensors are used in conjunction with the **RF-RX20** or **RF-RX40** receiver units, and if required (depending on installation topography), **RF-RS-T** and **RF-RS-R** 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. Units contain a high quality thermistor sensing element which is housed in a acetal resin probe, with 2 metres of screened cable as standard.

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

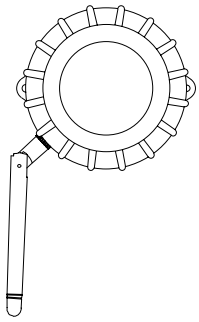
NB Each router can support a maximum of 16 “children”, a maximum of 8 of which can be battery powered “end devices” and a maximum of which can be 8 routers. Consideration should be given on network planning for redundancy in case of router failure or damage.

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. It is recommended that the unit be mounted with the cable entry at the bottom.
5. 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.
6. Remove the lid by twisting separating from the main body.
7. 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.
8. Secure the probe to the surface to be monitored
9. 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.
10. Observe correct polarity if using a 24Vdc power supply.
11. To power on the unit, fit J200.
12. Replace the lid after the electrical connections have been made.
13. 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.