Features

- High quality internal 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	1.2dBi
	VSWR	1.5:1
Data Encryption:		AES 128
Power Output:		+10dBm
Accuracy:		
	Temperature	±0.3°C
	RH	±3% RH
Power Supply:		24Vac/dc
Housing Material:		ABS (flame retardant)
Dimensions:		85 x 85 x 23mm
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-R-911 - Router radio RH&T sensor

RF-RR-R-911-SP - Router radio RH&T sensor c/w setpoint adjustment

RF-RR-R-911-MS - Router radio RH&T sensor c/w momentary switch

RF-RR-R-911-SP-MS - Router radio RH&T sensor c/w setpoint adjustment and momentary switch

Technical Overview

The radio RH&T sensors are used in conjunction with the **RF-RX20** or **RF-RX40** receiver units, and if required (depending on installation topography), **RF-RS** 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.

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.

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.

Interface Options:

-BL	Black housing
-BW	Brilliant white housing
-SP	Set point
-MS	Momentary switch

Labels

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

Colours

The basic housing, set point knob and momentary switch are available in either white or black. The momentary switch is a tactile type, located behind the label.

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. Undo the tamperproof screw at the bottom of the housing and gently pull the front panel from the base.
4. Mount the sensor in the required position (this will have been determined by the site survey tool, (see the quick start guide and manual for further details) taking care *not* to site the sensor;
   - In direct sunlight or near a source of heat
   - On a cold or hot outside wall, where conducted or radiant heat may affect the accuracy
   - Behind any obstruction likely to impede the radio signal (for example, a filing cabinet)
5. Take care to mount the sensor in the correct orientation, with the tamperproof screw at the bottom, to allow free flow of air over the sensor element. Ensure that the louvers in the sensor housing are clear and free from obstruction.
6. The sensor should be mounted between 1.5m and 2m up from floor level.
7. 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 a standard recessed back box.
8. Feed cable through the 22mm knockout in the base of the housing and terminate the cores at the terminal block as required. Leaving some slack inside the unit.
9. Observe correct polarity if using a 24Vdc power supply.
10. To power on the unit, fit J200.
11. Replace the housing to the base plate.
12. Fit the tamperproof screw (if required) through the lug at the bottom of the base plate.
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.