

SONNET WIRELESS TEMPERATURE, HUMIDITY AND CO₂ SENSORS RF-RS SERIES



Sontay®



Plant Housing
Sensor



Space Housing
Sensor



DESCRIPTION

The **Sontay RF-RS Series** of SonNet Wireless Temperature and Humidity, CO₂ Sensors are used in conjunction with the SonNet **RF-RX20** or **RF-RX40** receiver units, and if required (depending on installation topography), SonNet **RF-RR series** of routers. 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 automatically find the best path back to the receiver, which may be directly to the receiver or via 'parent' routers.

FEATURES

- Up to 5 years battery life
- Encrypted data transmission
- Configurable parameters
- Self-healing tree topology
- Lower installation costs
- Easy to install and commission

SPECIFICATIONS

DEVICE OPERATION

Supply Voltage	Lithium 3.6V 2.4 mAh
Battery	AA similar to Xeno, XL-060F (Included)
Battery Life	3 years @60 second intervals
Sensor Type	1K O Platinum RTD, 385 Curve
-SP	Setpoint knob option
-MS	Manual override switch
-FS3 (5)	Fan Speed option, 3 or 5 speed
-VFC	Dry contact option (Voltage Free Contact)
	Change Of State (COS), Programmed Interval (PI)
Transmitted Range Value	14° to 158°F (-10° to 70°C), Transmits at PI or COS differential
Temperature	0-100%, Transmits on COS
Setpoint	Speed ABC or ABCDE, Transmits on COS
Fan Speed	Open/Closed, Transmits on COS
Dry Contact	0-2000 PPM
CO ₂	
Accuracy	
Temperature	±0.54°F (0.3°C)
Setpoint	±2% Rotary dial
Override	Latching open/closed each time button depressed
Fan Speed	Direct closure 3 or 5 positions
Dry Contact	Momentary monitoring, (Follows input contact)
	This can be used as a pulse accumulator up to 4096 counts
CO ₂	±75 PPM
Controls	
A/D resolution	10 bit resolution

Mounting

Wiring	Wall mount, vertical, indoor use only
Operating Temperature	None
Operating Humidity	14° to 122°F (-10° to 50°C)
Construction	0-90% RH non-condensing
Enclosure Rating	ABS plastic, flame retardant, UL94-V-0
Dimensions	IP30, Indoor use only
Weight	3.3"W x 4.5"H x 1.2"D (8.5 x 11.5 x 2.8 cm)
Warranty	0.79 lb (0.36 Kg)
	3 year
RADIO TRANSMITTER	
Protocol	Proprietary Healing Mesh (Sontay), 128 encrypted
Frequency	2.4 GHz w/16 channels automatically selected
Modulation	Direct Sequence Spread Spectrum (DSSS)
Transmit Power	1 mW (0dB)
Receiver Sensitivity	No receiver (transmit only)
Open Air Range	50 ft. (15m) open air
Low Battery Indication	Yes (No local indication)
Transmission time	5 ms
Transmission Interval	Configurable 1 minute w/±10% dither, w/ confirmation
Antenna	Internal board, 360° pattern
Channels	16 channels automatically selected
Device Addresses	50 transmitters per receiver
Programming	In field w/ laptop/Free SW and USB Cable
Repeater Capable	Yes
Compliance	FCC ID: OA3MRF24J0MA, IEEE 802.15.4-2006 CE, RoHS

ORDERING INFORMATION

MODEL	DESCRIPTION	MODEL	DESCRIPTION
RF-RS-1000	Room temperature sensor, end device, with battery	RF-RS-CO2-1000	Room CO ₂ sensor, end device, battery, 0-2000 ppm
RF-RS-1000-MS	Room temperature sensor, end device, with battery, override button	RF-RS-CO2-RH-1000	Room CO ₂ /Humidity temperature sensor, end device, with battery
RF-RS-1000-SP	Room temperature sensor, end device, with battery, set point	RF-RS-T-322	Duct temperature sensor, 6" probe with battery
RF-RS-1000-MS-SP	Room temperature sensor, end device, with battery, override button and set point	RF-RS-T-331	OSA temperature sensor with battery
RF-RS-RH-1000	Room humidity temperature sensor, end device, with battery	RF-RS-T-332	OSA sensor with rad. shield and battery
RF-RS-RH-1000-SP	Room humidity temperature sensor, end device, with battery, set point	RF-RS-T-341	Immersion temperature sensor, 6" probe with battery
RF-RS-RH-1000-MS	Room humidity temperature sensor, end device, with battery, override button	RF-RS-T-351	Clamp-on temperature sensor
RF-RS-RH-1000-MS-SP	Room humidity temperature sensor, end device, with battery, override button and set point	RF-RS-T-555-2	Flying lead temperature sensor, 2M cable, with battery
		RF-RS-T-555-5	Flying lead temperature sensor, 5M cable, with battery
		RF-RS-R-622	8.25" Duct RH and temperature sensor with battery
		RF-RS-R-631	Wall humidity and temperature sensor with battery
		RF-RS-R-632	Outside humidity temperature sensor with battery

ACCESSORIES

RF-RP	Replacement battery for probe sensors
RF-RS	Replacement battery for room sensors