




Falcon WiNG

Wireless Network Gateway & Sensors

RLE has revolutionized the wireless sensor market with the launch of the WiNG wireless platform. A complete system of sensors, gateway manager, and range extenders monitors your facility for changes in temperature, humidity, and dew point and allows you to fine tune your environment to meet energy efficiency goals, maintain optimal equipment performance parameters, and ensure your facility is operating as expected.

The WiNG-MGR receives and aggregates signals from WiNG sensors. This data is displayed on a sleek web interface, accessible from any browser or mobile device. Designed to keep the most relevant information close at hand, the web interface provides direct alarm notification which allows users to quickly and effectively locate areas of concern. The WiNG-MGR will also send email alarm notifications and provides trending information to help pinpoint potential trouble spots in any monitored areas.

An open protocol approach streamlines communications and allows the WiNG-MGR to easily integrate into larger BMS and NMS systems via SNMP, Modbus, or BACnet. There are no licensing fees and as our firmware evolves you can update your WiNG-MGR to ensure your unit always has the newest features.

WiNG temperature and temperature/humidity sensors are compact and unobtrusive, yet provide an industry leading battery life - sensor batteries will last up to 12 years at room temperatures. WiNG sensors maintain this extended battery life while communicating readings to the WiNG-MGR every 10-20 seconds.

The WiNG system has an unprecedented transmission range: up to 600 feet indoor, direct line of sight. While this range is more than ample for most situations, sometimes applications require signals to be pushed through more complex physical or noisy RF environments. The WiNG-RXT range extender can be implemented in these situations to add up to 1,000 feet direct line of sight transmission distance per range extender to the application.

Features

- Proprietary wireless design
- A transmission range between manager and sensors that is second to none:
 - Up to 100 feet (30.5m) through multiple walls
 - Up to 270 feet (82.3m) through one wall
 - Up to 600 feet (183m) direct line of sight
 - Add up to 1,000 feet (305m) direct line of sight with each range extender
- Unparalleled sensor battery life:
 - Up to 5 years across full operating range: -13°F to 185°F (-25°C to 85°C)
 - Up to 8 years at temperatures up to 122°F (50°C)
 - Up to 12 year battery life at room temperature
- Support 250 sensors on a single manager, up to 400 sensors with range extenders
- Open protocols support integration with BMS/NMS/DCiM via:
 - SNMP
 - Modbus
 - BACnet
- Polling rate of 10-20 seconds
- Web interface enables direct alarm notification and stand-alone operation
- Optional calculated dew point with use of WiNG temperature/humidity sensors
- NO licensing fees - Firmware updates are available free of charge

Monitoring & Notification

WiNG-MGR Specifications

Power	24VAC @ 600mA max, 50/60Hz, 24VDC @ 600mA max.
Included Equipment	WiNG-MGR, PSWA-DC-24 power supply, antennas, rack mount tabs
Wired Relay Outputs	Two (2) Dry Contact, Form C, 1A @ 24VDC resistive, 0.5A @ 120VAC
Maximum Number of Wireless Sensors Per Manager	RLE recommends not exceeding 250 sensors per WiNG-MGR; 400 sensors per WiNG-MGR may be accomplished with range extenders, but signal conflict will increase.
Communication Ports	<ul style="list-style-type: none"> Ethernet 10/100 BASE-T, RJ45 connector; 500VAC RMS isolation RS232 DB9 female connector; 9600 baud; no parity; 8 data bits; 1 stop bit EIA-485 1200, 2400, 9600 or 19200 baud (selectable); no parity; even or odd; 8 data bits; 1 stop bit USB Serial port emulation for diagnostics; 115200 baud; no parity; 8 data bits; 1 stop bit
Protocols	<ul style="list-style-type: none"> TCP/IP, HTML, TFTP, SNMP V1: V2C MIB-2 compliant; NMS Manageable with Get; IPv4; IPv6 Modbus (EIA-485) Modbus Slave; RTU mode; Supports function codes 03 Modbus TCP/IP UDP/IP Modbus Slave; TCP/IP transmission protocol BACnet/IP ASHRAE STD 135-2004 Annex J BACnet/MSTP EIA-485 Terminal Emulation (RS232) VT100 compatible
Wireless Interface	Proprietary protocol from sensors to manager/range extender; mesh backbone between manager and range extender; 900MHz receivers for configuration, RP/SMA connectors for 900MHz antennas.
Login Security	Web browser access (Ethernet); 8 users and passwords can be configured
Data Trending	<ul style="list-style-type: none"> Temperature Records temperature data at 5 minute intervals; daily records; retains 30 days of information Temperature/Humidity Records temperature and humidity data at 10 minute intervals; daily records; retains 30 days of information
Operating Environment	<ul style="list-style-type: none"> Temperature 32°F to 140°F (0°C - 60°C) Humidity 5% to 95% RH (Non-condensing) Altitude 15,000 ft (4572m) max.; 9,842 ft (3000m) max. if applying more than 150V, 50/60Hz to relays from overvoltage category II circuit
Storage Temperature	-4°F to 185°F (-20°C - 85°C)
Mounting	Desktop, rack mount (tabs included)
Dimensions and Weight	9.7"W x 4.8"D x 1.8"H (24.6cmW x 12.2cmD x 4.6cmH), 2.7lb (1.23kg)
Certifications	ETL listed; conforms to UL 61010-1, EN 61010; certified to CSA C22.2 NO, 61010.1; RoHS compliant; FCC ID: MCQ-XB900HP; IC: 1846A-XB900HP

WiNG-T and WiNG-TH Sensor Specifications

Power	3.6V AA lithium battery
Battery Life	<ul style="list-style-type: none"> Up to 5 years when system spans full operating temperature range. Up to 8 years at room temperatures up to 122°F (50°C) Up to 12 years at room temperature
Shelf Life	10 years in quiescent mode with battery installed
Transmission	<ul style="list-style-type: none"> Interval 10-20 seconds (random) Frequency 900 MHz Range Up to 600 ft (183m) line of sight
Accuracy	<ul style="list-style-type: none"> Temperature +/- 0.2°C at room temperature; +/- 0.5°C over full operating range Humidity +/- 2% over full operating range
Operating Environment	<ul style="list-style-type: none"> Temperature -13°F to 167°F (-25°C - 75°C) Altitude -200 ft to 15,000 ft (-70m to 4572m) max.
Mounting	Free standing, magnets (included), 1U screw, 15mm mini din rail, zip ties
Dimensions and Weight	2.8"L x 1.1"W x 1.1"H (7.1cmL x 2.8cmW x 2.8cmH), 0.08lb (0.036kg)
Certifications	FCC ID: X7J-A11072401; IC: 8975A-A11072401

