




# Falcon WiNG Wireless Network Gateway

RLE has revolutionized the wireless sensor market with the launch of the WiNG wireless platform. A complete proprietary system of sensors, gateway manager, and range extenders monitors your facility for changes in conditions including temperature, humidity, conductive fluid leaks, 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 provide 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 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 to the application.

## Features

- Proprietary wireless design
- A transmission range between manager and sensors that is second to none:
  - Up to 100ft (30.5m) through multiple walls
  - Up to 270ft (82.3m) through one wall
  - Up to 600ft (183m) direct line of sight
  - Add up to 1,000ft (305m) direct line of sight with a 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 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
- WiNG sensors monitor conditions including:
  - Temperature
  - Temperature/Humidity with optional calculated dew point
  - Leak detection cable or spot detectors
  - Digital input
  - Analog input
  - Thermistor
- NO licensing fees - Firmware updates are available free of charge

# Monitoring & Notification

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## WiNG-MGR Specifications

<b>Power</b>	24VAC @ 600mA max, 50/60Hz, 24VDC @ 600mA max.
<b>Included Equipment</b>	WiNG-MGR, PSWA-DC-24 power supply, antennas, rack mount tabs
<b>Wired Relay Outputs</b>	Two (2) Dry Contact, Form C, 1A @ 24VDC resistive, 0.5A @ 120VAC
<b>Maximum Number of Wireless Sensors Per Manager</b>	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.
<b>Communications</b> Ethernet RS232 EIA-485 USB	Available in 868MHz or 900MHz configurations 10/100 BASE-T, RJ45 connector; 500VAC RMS isolation DB9 female connector; 9600 baud; no parity; 8 data bits; 1 stop bit 1200, 2400, 9600 or 19200 baud (selectable); no parity; even or odd; 8 data bits; 1 stop bit Serial port emulation for diagnostics; 115200 baud; no parity; 8 data bits; 1 stop bit
<b>Protocols</b> TCP/IP, HTML, TFTP, SNMP Modbus (EIA-485) Modbus TCP/IP UDP/IP BACnet/IP BACnet/MSTP Terminal Emulation (RS232)	V1: V2C MIB-2 compliant; NMS Manageable with Get; IPv4; IPv6 Modbus Slave; RTU mode; Supports function codes 03 Modbus Slave; TCP/IP transmission protocol ASHRAE STD 135-2004 Annex J EIA-485 VT100 compatible
<b>Wireless Interface</b>	Proprietary protocol from sensors to manager/range extender; mesh backbone between manager and range extender; appropriate receivers for configuration (868MHz or 900MHz), RP/SMA connectors for 868-928MHz antennas.
<b>Login Security</b>	Web browser access (Ethernet); 8 users and passwords can be configured
<b>Data Trending</b> Temperature Temperature/Humidity	Records temperature data at 5 minute intervals; daily records; retains 30 days of information Records temperature and humidity data at 10 minute intervals; daily records; retains 30 days of information
<b>Operating Environment</b> Temperature Humidity Altitude	32°F to 140°F (0°C - 60°C) 5% to 95% RH (Non-condensing) 15,000ft (4572m) max.; 9,842ft (3000m) max. if applying more than 150V, 50/60Hz to relays from overvoltage category II circuit
<b>Storage Temperature</b>	-4°F to 185°F (-20°C - 85°C)
<b>Mounting</b>	Desktop, rack mount (tabs included)
<b>Dimensions and Weight</b>	9.7"W x 4.8"D x 1.8"H (24.6cmW x 12.2cmD x 4.6cmH), 2.7lb (1.23kg)
<b>Certifications</b>	ETL listed; CE; conforms to UL 61010-1, EN 61010, EN 61000-3-2, EN61000-3-3; ETSI EN 301 489-1, ETSI EN 301 489-3; IEC 61326-1; certified to CSA C22.2 #61010; FCC X7J-A11072401, MCQ-XB900HP, and 47CFR 15B; IC 8975A-A11072401, 1846A-XB900HP, and ICES-003; RoHS compliant

## WiNG-T and WiNG-TH Sensor Specifications

<b>Power</b>	3.6V AA lithium battery
<b>Battery Life</b>	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
<b>Shelf Life</b>	10 years in quiescent mode with battery installed
<b>Transmission</b> Interval Frequency Range	10-20 seconds (random) Available in 868MHz or 900MHz configurations Up to 600ft (183m) line of sight
<b>Accuracy</b> Temperature Humidity	+/- 0.2°C at room temperature; +/- 0.5°C over full operating range +/- 2% over full operating range
<b>Operating Environment</b> Temperature Altitude	-13°F to 167°F (-25°C - 75°C) -200ft to 15,000ft (-70m to 4572m) max.
<b>Mounting</b>	Free standing, magnets (included), 1U screw, 15mm mini din rail, zip ties
<b>Dimensions and Weight</b>	2.8"L x 1.1"W x 1.1"H (7.1cmL x 2.8cmW x 2.8cmH), 0.08lb (0.036kg)
<b>Certifications</b>	CE UL61010, CSA 22.2 #61010, IEC 61326-1, FCC 47CFR 15B, IC ICES-003, EN 61000-3-2, EN61000-3-3, ETSI EN 301 489-1, ETSI EN 301 489-3; FCC ID: X7J-A11072401; IC: 8975A-A11072401

