

# EkkoAir

## Wireless Cooling Duty Sensor



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EkkoAir Wireless is a unique, manufacturer-agnostic wireless sensor that provides real time cooling duty performance in kWc for any CRAC/AHU unit.



## About EkkoAir

### Unique, manufacturer-agnostic wireless sensor for real-time cooling duty performance

EkkoAir Wireless is housed in a standard DIN rail mount enclosure with two compact temperature and humidity sensors that connect via small cables. Sensors can be fixed in position using screws or cable ties. The humidity-sensing element is protected with a PTFE membrane to avoid measurement errors caused by dust build-up. Single or three phase fan current measurements are made using standard millivolt output current transformers. An opto-isolated 12V-24V AC input is provided. This can be used to monitor the operating status of the CRAC/AHU.

The EkkoAir Wireless cooling duty sensor transmits data at intervals of between 30 seconds and 10 minutes. Data can either be transmitted as an instantaneous value, or as the average from multiple measurements spaced evenly throughout the transmit interval. This ensures that changes to AHU/CRAC operating conditions between transmissions are captured.

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## Critical Things®

### INTEGRATED SENSOR TECHNOLOGY

Our ultra-low cost 'Critical Things®' sensors are compact and unobtrusive, and can be deployed in large numbers, ensuring that high spatial resolution is available, down to rack-level where required. This allows the air temperature and humidity at each asset of interest to be accurately monitored, and wirelessly transmitted to enable the measurement of values at predefined intervals.

Parameter	Specification
Operating temperature range (EkkoAir unit)	0°C to 40°C (32°F to 104°F)
Operating humidity range (EkkoAir unit)	5% to 95% RH
Measuring temperature range	0°C to 60°C (32°F to 140°F)
Measuring humidity range	0% to 100% RH
Temperature accuracy	±0.2°C typical (±0.4°F)
Relative Humidity accuracy	±2% typical
RF data link	GFSK 250bit/s 868.3MHz (ES-EA-10) or 923MHz (FS-EA-10)
Operating range (from EkkoHub)	>20m (21yds)
Power Supply	12V to 24V AC or DC or internal battery
Internal battery (if not powered externally)	Replaceable LS14500 AA size Lithium Thionyl Chloride
Battery life	>3 years (transmitting once every two minutes an average of measurements at 30s intervals)
Current transformer inputs	Compatible with 333mV output current transformers rated between 1A and 1000A
Housing	ABS 70mm wide (4 DIN), 74mm high, 46mm deep (2.8"x2.9"x1.8") (53.5mm/2.1" including DIN rail)
Sensors	30mm (1.2") diameter, 10mm (0.4") deep, supplied with 3m (118") cable
Antenna connection	SMA female connector
Sensor, power and CT connections	Screw terminals