i-Vu® Building Automation System
Wireless Motion/Lux Sensor

Part Number: WS-ML-902

The i-Vu® Building Automation System provides everything you need to access, manage, and control your building, including the powerful i-Vu user interface, plug-and-play BACnet controllers, and state-of-the-art Carrier equipment.

As part of Carrier's wireless sensing line, wireless motion/lux sensors are used to detect motion and light in a space. Because there are no wires to run, they can be added to your building easily.

Wireless sensors work in conjunction with a wireless adapter, which enables wireless communication between the sensors and an i-Vu® BACnet controller in the space. By sensing motion and lighting levels wirelessly, our i-Vu controllers can make smart decisions to optimize the control of heating, cooling, and lighting systems in the building, providing optimum occupant comfort and energy efficiency.

Ideal applications for the wireless motion/lux sensor include occupancy-based lighting and temperature control, as well as indoor daylight harvesting.

Features and Benefits

- Communicates on the Rnet sensor network via a wireless adapter
- Can be installed up to 60' away from wireless adapter
- Enables wireless sensing on new or retrofit projects
- Wireless software included for quick and easy sensor pairing
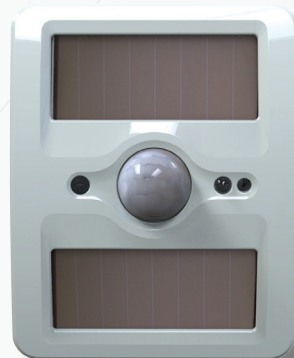
Comprehensive Capabilities

- Passive infrared motion sensor ensures reliable detection of occupant presence for occupancy-based control
- Integrated light sensor for daylight harvesting strategies

i-Vu® Wireless System Benefits

- Wireless and battery-less space sensors (assuming sufficient lighting exists in space)
- Maintenance-free capacitors power the sensors during unlit periods for up to 4-days without a light source
- No repeaters or amplifiers required for zone-based applications
- Integrates seamlessly with i-Vu® system alarming for proactive monitoring of important sensor conditions, including:
  - Sensor charge level
  - Sensor signal strength
  - Sensor offline
- Can coexist on Rnet with Carrier's wired ZS sensors
- Single-zone controllers can support a total of 5 sensors
- Multi-zone controllers can support up to 15 sensors

Wireless Adapter

Wired Sensor

Rnet

Wireless Motion/Lux Sensor

Specifications

Power supply	Solar harvesting, internal energy storage
Supplemental battery	A 1/2 AA 3.6 V 1200 mA battery is included to supplement power during commissioning and for low-light conditions
Maximum operating life	Up to 4 days with no light power or battery Time to fully charge Depends on available lux. Full charge in 8 hours @ 1000 lux or 24 hours @333 lux
Motion effective detection range	39 ft (12 m) maximum Motion effective detection angle 102° x 92° (horizontal & vertical) Light sensor measuring range 0 to 1020 lux
Protocol	Customized version of EnOcean®
Radio frequency	902 MHz (North America)
Transmission range	Typically, 60 ft. (18.29 m) maximum from wireless adapter, assuming sensor and wireless adapter are separated by no more than 1 drop ceiling or 2 walls (drywall with metal studs)
Transmission interval	Configurable in SensorBuilder. The sensor transmits: • On change of sensed value, and • At a regular interval (heartbeat). The default is every 15 minutes
Minimum illumination strength	40 lux, constant
Degree of protection	IP50
Operating environment	-3° to 140°F (20° to 60°C) 5% to 95% relative humidity (non-condensing)
Housing	ABS plastic, traffic white color
Weight	0.2 lb. (.09 kg)
Dimensions	3.17 in. W x 4.02 in. H x 1.25 in. D (8.05 cm W x 10.2 cm H x 3.18 cm D)
Compliance	**United States of America:** FCC CFR 47, Chapter 1, Subchapter A, Part 15, Subpart B Class B Contains FCC ID: SZV-STM300U UL-916 (PAZX) Energy Management Equipment **Canada:** Industry Canada Compliant, ICES-003, Class B cUL Listed UL 916,PAZX7, Energy Management Equipment **Europe:** CE EN50491-5-2:2009; Part 5-2: EMC requirements for HBES/BACS used in residential, commercial and light industry environment EN50491-3:2009 Part 3: Electrical safety requirements for Home and Building Electronic Systems (HBES) and Building Automation and Control Systems (BACS) Low Voltage Directive: 200695/EC RoHS Compliant: 2011/65/EU Australia and New Zealand: C-Tick Mark AS/NZS 61000-6-3

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