Allure™ EC-Smart-Vue Sensor Series

Line of communicating sensors with backlit display and graphical menus

Overview

The Allure EC-Smart-Vue Series is designed to interface with Distech Controls' ECLYPSE™ series BACnet/IP and Wi-Fi Controllers, ECB series BACnet® Controllers and ECL series LonWorks® Controllers.

This line of communicating sensors with backlit display consists of eight models that provide precise environmental zone control. Models are available with any combination of the following: temperature, humidity, CO_2, and motion sensor.

Features & Benefits

- Multi-sensing capabilities (temperature, humidity, CO_2, and motion) using one wire and one connection
- Optional CO_2 sensor facilitates demand-controlled ventilation strategies
- Optional motion sensor helps achieve energy efficiency through occupancy-based control
- Automatic self-calibration system guarantees lifetime CO_2 calibration
- The ECO-Vue leaf pattern graphically indicates energy consumption in real time to promote an occupant's energy-conscious behavior
- Password protected technician mode allows an installer to perform commissioning and troubleshooting
- Can be used as a hand-held tool for HVAC equipment configuration and system troubleshooting
- When associated to VAV controllers, the Allure EC-Smart-Vue Series sensors can also perform air balancing of the system without requiring an onsite controls engineer.
- Programmability with Distech Controls' EC-*gfx*Program, which makes Building Automation System programming effortless
- Quick and easy installation: Both power and communications pass through a single Cat 5e cable for reduced installation costs and easier installation
- Two RJ-45 ports facilitate the daisy-chain connections of room devices.

Model Selection Table

Example: Allure EC-Smart-Vue***-M***

Series	Functionality
Allure EC-Smart-Vue	[blank]**:** Temperature only ***-C***: CO_2[1], Temperature ***-H***: Humidity, Temperature ***-M***: Motion, Temperature ***-CH***: CO_2[1], Humidity, Temperature ***-CM***: CO_2[1], Motion, Temperature ***-HM***: Humidity, Motion, Temperature ***-CHM***: CO_2[1], Humidity, Motion, Temperature

1. The Allure EC-Smart-Vue CO_2 models must be used in spaces that are periodically unoccupied (e.g. during evening or nighttime hours). A controller can support a maximum of two communicating sensors equipped with a CO_2 sensor. Any remaining connected communicating sensors must be without a CO_2 sensor.

Product Specifications

Power Supply Input

Voltage	16 VDC maximum, Class 2
Power Consumption	At the connected controller, an additional 5.25 VA per CO_2 sensor model and 1.0 VA per non-CO_2 sensor model.

Communications

Rate	38 400 bps
Communications	RS-485
Wiring	Cable length: 600 ft (180 m) maximum
Cable Type	T568B Cat 5e network cable, 4 twisted pairs
Input Connector	RJ-45
Output Connector	RJ-45 (pass-through for daisy chain connection to other room devices)
Network Access Jack[1]	⅛" (3.5 mm) stereo plug connector
Daisy-chaining	Up to 12 Allure EC-Smart-Vue sensors or room devices depending on the controller model – see the controller's datasheet

1. Not available with ECLYPSE Series, PTU Series, ECB-VAVS, or ECL-VAVS

Temperature Sensor

Type	10 kΩ NTC Thermistor
Range	41°F to 104°F (5°C to 40°C)
Sensing Component Typical Accuracy	±0.5°F (±0.28°C)
Overall Accuracy	± 0.9°F (± 0.5°C)
Resolution	0.18°F (0.1°C)

Humidity Sensor

Accuracy	±3%
Resolution	1%

Motion Sensor

Type	Passive Infrared (PIR) sensor with Fresnel lens. See Figure 2.

CO_2 Sensor

Measurement Range	0 to 2000 ppm
Operating Elevation	0 to 10000 ft (0 to 3050 m)
Warm-up Time	< 2 minutes (operational), 10 minutes (maximum accuracy)
CO_2 Accuracy	400-1000 ppm ± 75 ppm or 3% of reading, whichever is greater [1] 1000-2000 ppm ± (40 ppm + 5% of reading) [1]
Repeatability	± 10 ppm
Response Time	60 s
Accuracy Drift	< 0.03 °C / year
Additional accuracy drift per year after five years of sensor operation and with automatic self-calibration algorithm enabled	Typical ± (5 ppm + 0.5 % of reading)
Pressure Dependence	0.135% of reading per mm Hg; Elevation adjusted in configuration software
Sensing Method	Non-dispersive infrared (NDIR)
Calibration Method	Automatic self-calibration enabled

1. Tolerance based on span gas of ±2% and automatic self-calibration enabled.

Mechanical

Dimensions with motion sensor (H×W×D)	4.62 × 3.29 × 1.15" (117.27 × 83.57 × 28.84 mm)
Dimensions without motion sensor (H×W×D)	4.62 × 3.29 × 1.06" (117.27 × 83.57 × 26.81 mm)
Shipping weight with motion sensor	0.20 kg (0.44lbs)
Shipping weight without motion sensor	0.18 kg (0.40lbs)
Enclosure Material	ABS
Enclosure Rating	Plastic housing, UL94-V1
Color	white
Installation	wall mounting through mounting holes (see Figure 1 for hole positions)

Environmental

Operating Temperature	32°F to 122°F (0°C to 50°C)
Storage Temperature	-4°F to 122°F (-20°C to 50°C)
Relative Humidity	0 to 90% Non-condensing

WEEE	All products are marked according to the Waste Electrical and Electronic Equipment (WEEE) directive
RoHS	All materials and manufacturing processes comply with the RoHS directive

Standards and Regulations

CE Emission	EN 61000-6-3: 2007 + A1: ed.2011
CE Immunity	EN 61000-6-1: 2007
FCC	FCC rules part 15, subpart B class B
UL Listed (CDN & US)	UL916 Energy management equipment

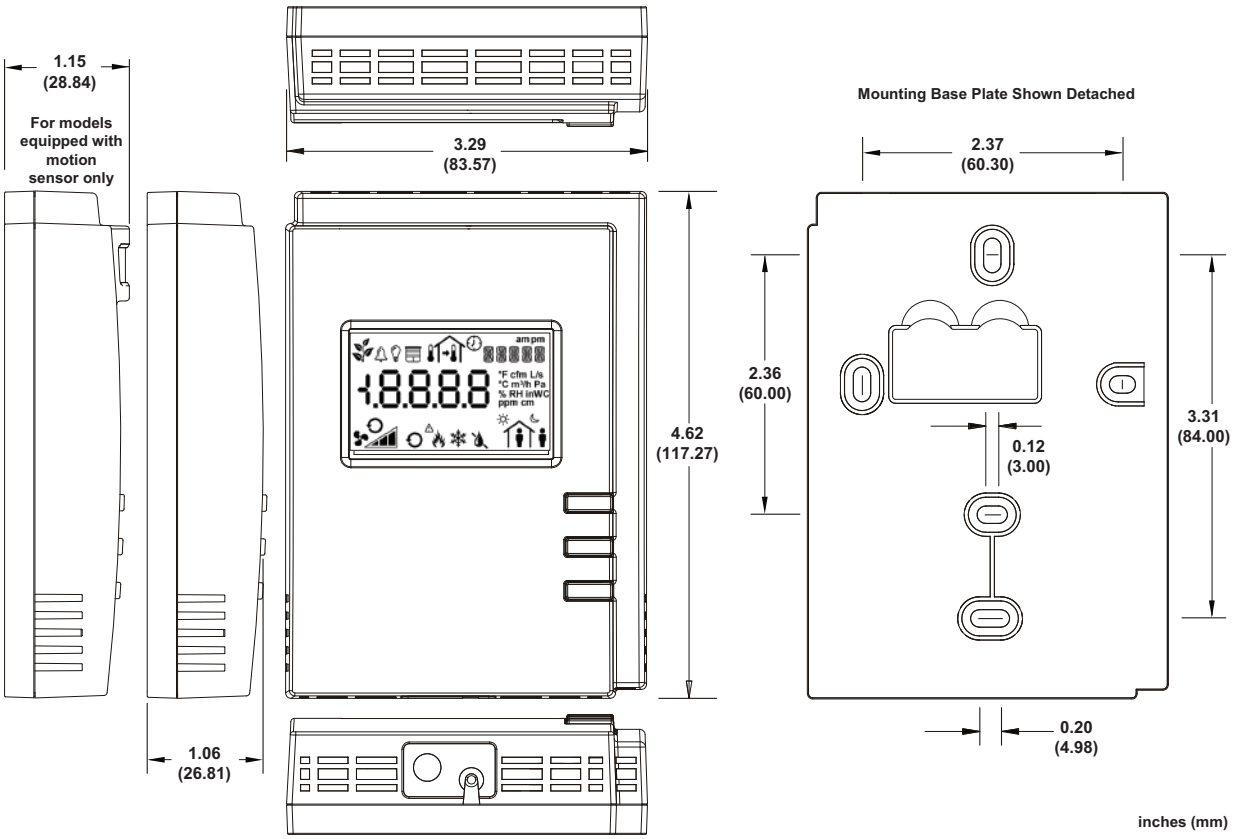

Figure 1: EC-Smart-Vue Dimensions

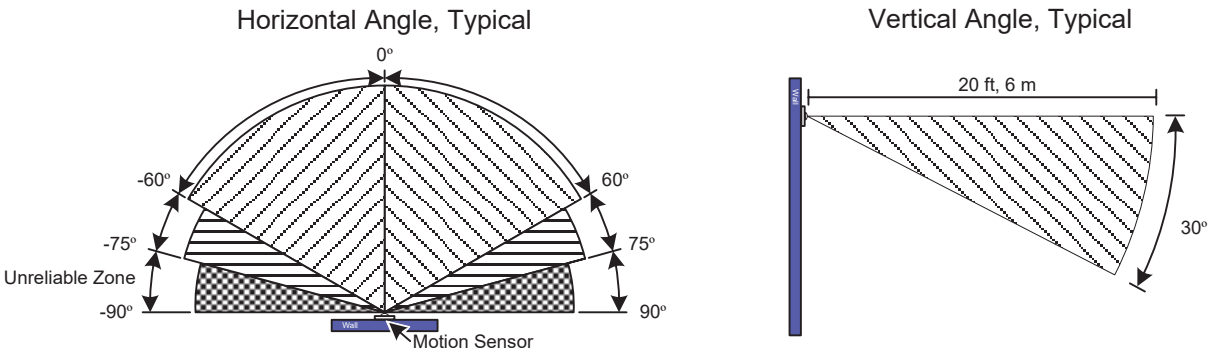

Figure 2: Motion Sensor

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