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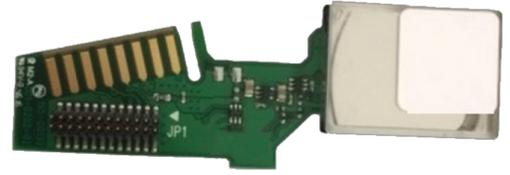
Engr: Mech:

Rep:

(Company)

(Project Manager)

**VCM8001V504**  
CO<sub>2</sub> Sensor Module



**Description:**

The CO<sub>2</sub> sensor is an optional, easy-to-install module for the LG MultiSITE™ MS8350 and MS8650 Room Controllers. For HVAC applications, the CO<sub>2</sub> Sensor Module can be used to monitor the indoor air quality, its data made available to interfacing devices on the MultiSITE MS8000 Series Room Controller's data buses (i.e., BACnet®), and control fresh air inputs into the monitored zone. Typical site installations can include indoor zones with constantly or periodically high concentrations of people, or in close proximity to commercial equipment generating high levels of CO<sub>2</sub> gas.

**Features:**

- Maintenance-free in normal environments because of the built-in self-correcting Automatic Baseline Correction (ABC) algorithm function.
- Life expectancy of 15 years.
- No calibration required.
- Convenient, out-of-the-box module simplifies full implementation in minutes.
- Low power consumption.

**CO<sub>2</sub> Sensor Module Main Specifications:**

Function	Description
Target Gas	CO <sub>2</sub>
Operating Principle	Non-dispersive infrared (NDIR)
Measurement Range	400 to 10,000 ppm
Measurement Interval	2 to 7 seconds
Accuracy	±30 ppm +3% of reading (400 to 2,000 ppm range)
Pressure Dependence	+ 1.6% reading per kPa deviation from normal pressure
Response Time	Approximately 2 minutes
Operating Temperature	23°F to 131°F (-5°C to +55°C) with excursions
Operating Humidity	0 to 95% RH Non-condensing
Storage Temperature	-40°F to +158°F (-40°C to +70°C)
Dimensions W x H x D (inches [mm])	2.8 x 0.99 x 0.32 (71 x 25.1 x 8.2)
Weight	0.3 oz. (8 g)
Power Supply	3.4V to 4.5V
Power Consumption	300 mA peak (28 mA average)
Life Expectancy	15+ years
Compliance	Emission: EN 55022:2010 Class A Immunity: EN 55024:2010 RoHS directive 2011/65/EU
Internal Serial Communications between Sensor Module and MultiSITE MS8000 Series Room Controller	Universal Asynchronous Receiver/Transmitter (UART), Modbus® protocol
Maintenance	Maintenance-free

**Electrical:**

Power Supply	3.4V to 4.5V
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**Operating Environment:**

Operating Temperature	23°F to 131°F (-5°C to +55°C)
Storage Temperature	-40°F to +158°F (-40°C to +70°C)
Operating Humidity	0 to 95% RH Non-condensing

**Dimensions:**

W x H x D (inch [mm])	2.8 x 0.99 x 0.32 (71 x 25.1 x 8.2)
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**Firmware Version:**

The LG MultiSITE MS8000 Series Room Controller must be running Firmware version 2.0 or greater (starting with shipment of products with date code 1842 or later) to activate the functionality of the CO<sub>2</sub> Sensor Module. The CO<sub>2</sub> Sensor Module will not function with any Firmware version below 2.0. Download the latest Firmware version before installing the CO<sub>2</sub> Sensor Module.

**Room Controller Input Power:**

Usage of the CO<sub>2</sub> Sensor Module within the LG MultiSITE MS8000 Series Room Controller draws additional power. It is recommended when using the CO<sub>2</sub> Sensor Module, the site transformer be capable to accommodate the additional power consumption. LG MultiSITE MS8000 Series Room Controller power consumption of 12 VA is required.

**Notes:**

BACnet is a registered trademark of ASHRAE.  
Modbus is a registered trademark of Schneider Electric USA, Inc.  
Must follow installation instructions in the applicable LG installation manual.  
Available functions / features may differ based on the connected system.  
For continual product development, LG reserves the right to change specifications without notice.  
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