

Job Name/Location:

Tag No.:

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For:	File	Resubmit
	Approval	Other_____

PO No.:

Architect: GC:

Engr: Mech:

Rep:

(Company)

(Project Manager)

VUCQMS8350
MultisITE™ MS8350 Room Controller
For Commercial / Hotel HVAC Fan Coil Applications



Description:

Cost-effective room controller for upgrading low-voltage fan coil unit thermostats.

Features:

- Customizable color digital touch screen interface with Multi-language support
- BACnet® (Available BACnet options listed under Connectivity) or Modbus®
- Automatic Demand Response (ADR) used to reduce energy load when electric grid contingencies threaten supply-demand balance
- Custom LUA script can be uploaded to the Room Controller
- Passwords can be set to prevent unauthorized user access to main screen adjustments and / or configuration menu parameters
- Date and Time display
- Senses both Room Temperature and Relative Humidity
- On / Off Operation
- Auto / Cool / Heat / Off Modes
- Occupied cooling and heating temperature setpoints
- Unoccupied cooling and heating temperature setpoints
- 7 day occupancy schedule
- Auto / Low / Med / High Fan Speeds
- On-Board ZigBee Communication Module
- Advanced PIR Occupancy Functions

Optional Accessories (Sold Separately):

- VCM8001V504 - CO₂ Sensor Module
- VCM8002V504 - Wi-Fi Module
- SEDCO2G5045 - Wall Mounted ZigBee® Room Sensor (CO₂, Temperature, and Humidity)

Electrical:

Power Supply	24 VAC
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Operating Environment:

Operating Temperature	32 to 122°F (0 to 50°C)
Storage Temperature	-22 to +122°F (-30 to +50°C)
Storage Humidity	0-95% RH (Non-Condensing)

Connectivity:

BACnet MS/TP
BACnet/IP (Available with optional Wi-Fi Module)
Modbus
ZigBee® PRO wireless mesh network (P)

Dimensions:

4.72" H x 3.39" W x 1.06" D

BACnet is a registered trademark of ASHRAE.
 Modbus is a registered trademark of Schneider Electric USA, Inc.
 ZigBee and ZigBee PRO are registered trademarks of the ZigBee Alliance, Inc.

Notes:

Must follow installation instructions in the applicable LG installation manual.
 Available functions / features may differ based on the connected system.
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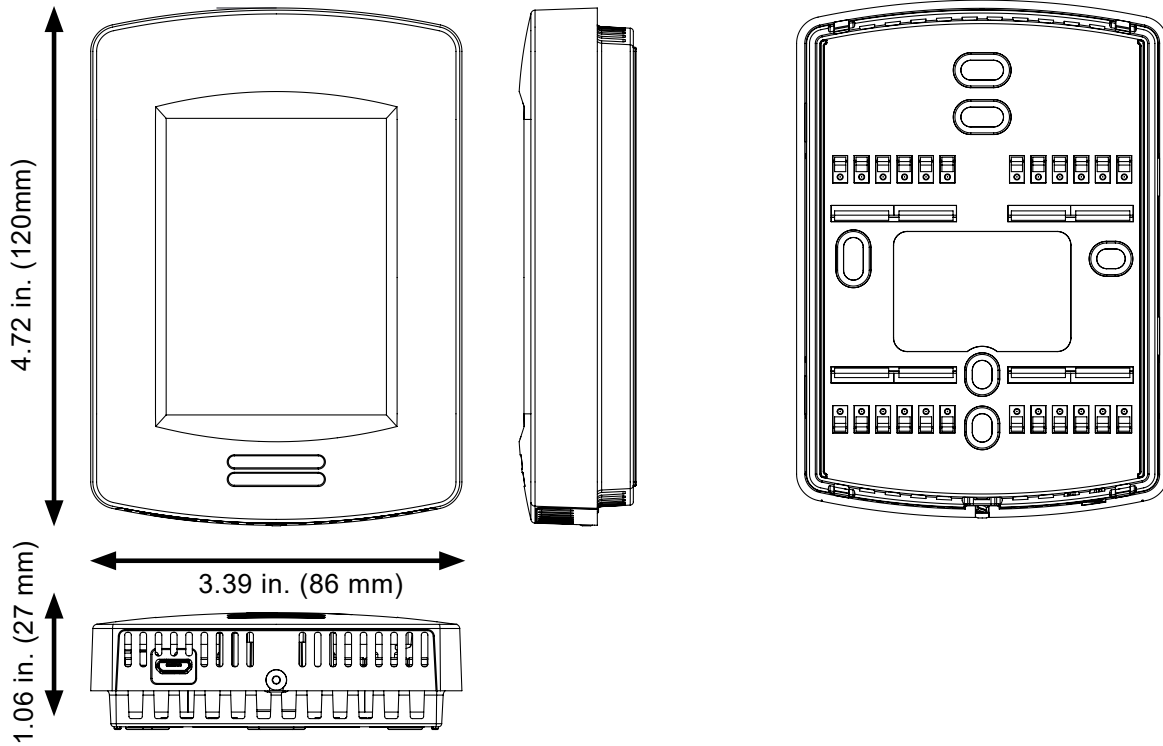


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Dimensions



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Terminal Identification and Functions for Three-Speed Fan

Control Type	On/Off	Floating	Analog
1- BO1	Not used	Not used	Not used
2- BO2	Fan-L	Fan-L	Fan-L
3- BO3	Fan-M	Fan-M	Fan-M
4- BO4	Fan-H	Fan-H	Fan-H
5- RC / 24 V~ Hot	24 V~ Hot	24 V~ Hot	24 V~ Hot
6- C / 24 V~ Com	24 V~ Com	24 V~ Com	24 V~ Com
7- RH	Aux Heat	Aux Heat	Aux Heat
8- BO8	Aux Heat	Aux Heat	Aux Heat
9- UO9	Normally Close Cool Valve	Close Cool Valve	Not used
10- UO10	Normally Close Heat Valve	Close Heat Valve	Not used
11- UO11	Normally Open Cool Valve	Open Cool Valve	Analog Heat Valve
12- UO12	Normally Open Heat Valve	Open Heat Valve	Analog Cool Valve
13- RS485 +		BACnet (+)	
14- RS485 -		BACnet (-)	
15- RS485 Ref		BACnet Shield	
16- UI16		UI16 Function	
17- UI17		UI17 Function	
18- Scom		Common	
19- UI19		UI19 Function	
20- UI20		Remote Room Sensor	
21- Scom		Common	
22- UI22		Remote Supply Sensor	
23- UI23		Not used	
24- UI24		Not used	

Terminal Identification and Functions for ECM Fan Systems

Control Type	On/Off	Floating	Analog
1- BO1	Normally Close Heat Valve	Close Heat valve	Not used
2- BO2	Not used	Not used	Not used
3- BO3	Not used	Not used	Not used
4- BO4	ECM Fan Start	ECM Fan Start	ECM Fan Start
5- RC / 24 V~ Hot	24 V~ Hot	24 V~ Hot	24 V~ Hot
6- C / 24 V~ Com	24 V~ Com	24 V~ Com	24 V~ Com
7- RH	Aux Heat	Aux Heat	Aux Heat
8- BO8	Aux Heat	Aux Heat	Aux Heat
9- UO9	Normally Close Cool Valve	Close Cool Valve	Not used
10- UO10	Analog ECM Fan	Analog ECM Fan	Analog ECM Fan
11- UO11	Normally Open Cool Valve	Open Cool Valve	Analog Heat valve
12- UO12	Normally Open Heat Valve	Open Heat Valve	Analog Cool Valve
13- RS485 +		RS485 +	
14- RS485 -		RS485 -	
15- RS485 Ref		RS485 Ref	
16- UI16		UI16 Function	
17- UI17		UI17 Function	
18- Scom		Common	
19- UI19		UI19 Function	
20- UI20		Remote Room Sensor	
21- Scom		Common	
22- UI22		Remote Supply Sensor	
23- UI23		Not used	
24- UI24		Not used	

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Home Screen Display



Note:

User HMI is configurable and allows display functions such as Date, Time, Humidity, Outdoor Temperature, Setpoint, and others to be enabled or disabled by setting various parameters.

BACnet Compatibility Specifications

Note:

This document contains BACnet compatibility specifications of the LG MultiSITE MS8000 Series Room Controllers, and follows the BACnet PICS format. Objects common to the models appear in one table, objects that are model specific appear in separate tables.

Supported BACnet Services: The BACnet communicating controller meets all requirements for designation as an Application Specific Controller (B-ASC). The BACnet controller supports the following BACnet Interoperability Building Blocks (BIBBs).

Application Service	Designation
Data Sharing-COV-B	DS-COV-B
Data Sharing – Read Property - B	DS-RP-B
Data Sharing – Read Property Multiple - B	DS-RPM-B
Data Sharing – Write Property - B	DS-WP-B
Data Sharing - Write Property Multiple Service - B	DS-WPM-B
Device Management - Time Synchronization - B	DM-TS-B
Device Management - Device Communication Control - B	DM-DCC-B
Device Management – Dynamic Device Binding - B	DM-DDB-B
Device Management – Dynamic Object Binding - B	DM-DOB-B
Scheduling-Internal-B	SCHED-I-B

Note:

The controller does not support segmented requests or responses.

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Name / Type & Instance	Object Property	Controller Parameter
Room Controllers / Device	Object_Identifier::Property 75 (R,W)	Unique ID number of a device on a network
	Object_Name: Property 77 (R,W)	Unique name of a device on a network
	Model Name: Property 70 (R)	Controller model number
	Firmware Revision: Property 44 (R)	Current BACnet firmware revision used by controller
	Protocol Version: Property 98 (R)	Current BACnet firmware protocol version; Default is Version 1
	Protocol Revision: Property 139 (R)	Current BACnet firmware protocol revision; Default is Version 2
	Max ADPU Length: Property 62 (R)	Maximum ADPU Length accepted; Default is 480
	ADPU Timeout: Property 10 (R)	ADPU timeout value; Default is 3000 ms
	Application-Software-Version: Property 12 (R)	Controller base application software version; Default is based on current released version
	Max_Master (R,W)	Maximum master devices allowed to be part of network. 0 to 127, default is 127
	Description Property 28 (R,W)	String of printable characters (Same as "Long Screen Message" CSV2)
	Location: Property 58 (R,W)	String of printable characters (Same as "Short Screen Message" CSV1)
	Local Date: Property 56 (R)	Indicates date to best of device knowledge
Local Time: Property 57 (R)	Indicated time of day best of the device knowledge	

Object Properties

Analog Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input AI	Output AO	Values AV		
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) the physical input object represents is not in service
Read / Write*	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
Read Only	Read Only	Read Only	Reliability Property 103	Indicates if Present_Value is "reliable"
N/A	Read Only	Read / Write†	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object
Read Only	Read Only	Read Only	Units Property 177	Indicates measurement units of Present_Value
N/A	Read Only	N/A	High Limit Property 1101	Specifies a limit Present_Value must exceed before an event is generated
N/A	Read Only	N/A	Low Limit Property 1100	Specifies a limit Present_Value must fall below before an event is generated

N/A = Not Applicable, property not used for objects of that type.

* The Present_Value is only writeable when Out_Of_Service is TRUE.

† Relinquish default is Read Only for AV100+

Binary Objects

Object Type Read/Write Settings			Object Property	Controller Parameter
Input BI	Output BO	Values BV		
Read Only	Read Only	Read Only	Active Text Property 4	Characterizes intended effect of the ACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Read Only	Inactive Text Property 46	Characterizes intended effect of INACTIVE state of Present_Value property
Read Only	Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read Only	Read / Write	N/A	Polarity Property 84	Indicates relationship between physical state of input and Present_Value
Read / Write	Read / Write	Read / Write	Present Value Property 85	Contains values of all properties specified
Read Only	Read Only	Read Only	Priority Array Property 87	Read-only array of prioritized values
N/A	Read Only	Read Only	Relinquish Default Property 104	Default value to be used for Present Value when values in Priority_Array have a NULL value
Read Only	Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type.

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Multi-state Objects

Object Type Read/Write Settings		Object Property	Controller Parameter
Input MSI	Values MV		
Read Only	Read Only	Event State Property 36	Indicates if object has an active event state associated with it
Read Only	Read Only	Number of States Property 74	Defines number of states Present_Value may have
Read Only	Read Only	Object Identifier Property 75	Unique ID number of an object on a network
Read Only	Read Only	Object Name Property 77	Unique name of an object on a network
Read Only	Read Only	Object Type Property 79	Indicates membership in a particular object type class
Read / Write	Read / Write	Out of Service Property 81	Indicates whether (TRUE/FALSE) physical input object represents is not in service
Read / Write*	Read / Write	Present Value Property 85	Contains values of all properties specified
N/A	Read Only	Priority Array Property 87	Indicates relationship between physical state of input and Present_Value
N/A	Read / Write	Relinquish Default Property 104	Default value used for Present_Value when values in Priority_Array have a NULL value
Read Only	Read Only	State Text Property 110	Represents descriptions of all possible states of Present_Value
Read Only	Read Only	Status Flags Property 111	Represents flags that indicate general health of life safety point object

N/A = Not Applicable, property not used for objects of that type.

*The Present_Value is only writeable when Out_Of_Service is TRUE.