



MultiSITE™ MS8000 Series Room Controllers

INSTALLATION MANUAL



MS8350

Model No. VUCQMS8350

Commercial and Hotel HVAC Fan Coil Controller

MS8650

Model No. VUCQMS8650

Rooftop Unit, Heat Pump, and Indoor Air Quality Controller

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Please read carefully and store in a safe place for future reference.
Content familiarity required for proper installation.

The instructions included in this manual must be followed to prevent product malfunction, property damage, injury, or death to the user or other people. Incorrect operation due to ignoring any instructions will cause harm or damage. A summary of safety precautions begins on page 4.

For more technical materials such as submittals, engineering databooks, and catalogs, visit www.lghvac.com.

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SAFETY PRECAUTIONS

The instructions below must be followed to prevent product malfunction, property damage, injury or death to the user or other people. Incorrect operation due to ignoring any instructions will cause harm or damage. The level of seriousness is classified by the symbols described below.

TABLE OF SYMBOLS

 DANGER	<i>This symbol indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.</i>
 WARNING	<i>This symbol indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.</i>
 CAUTION	<i>This symbol indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.</i>
Note:	<i>This symbol indicates situations that may result in equipment or property damage accidents only.</i>
	<i>This symbol indicates an action that should not be performed.</i>

Safety of personnel is the primary concern during all procedures. Read and understand this safety summary. Read and understand the installation procedure before beginning installation. Use the appropriate tools and accessories during installation. Plan the work and  do not work alone, if possible. Know how to obtain emergency medical and fire fighting assistance.

DANGER

 **Do not use or store flammable gas or combustibles near the unit.**

There is risk of fire, explosion, and physical injury or death.

Disconnect power before installing or servicing the unit.

There is risk of physical injury or death due to electric shock.

Properly size all circuit breakers or fuses.

There is risk of fire, electric shock, explosion, physical injury, or death.

 **Do not share the electrical circuit with other devices.**

There is risk of fire, electric shock, physical injury, or death due to heat generation.

 **Do not use damaged or loose power wiring.**  **Do not modify or extend the power wiring randomly. Ensure that the power wiring will not be pulled nor weight be placed on the power wiring during operation.**

There is risk of fire, electric shock, and physical injury or death.

WARNING

The information contained in this manual is intended for use by an industry-qualified, experienced, trained electrician familiar with local, national, and regional codes and who is equipped with the proper tools and test instruments.

Failure to carefully read and follow all instructions will result in personal injury or death.

All electric work must be performed by a licensed electrician and conform to local building codes or, in the absence of local codes, with the National Electrical Code, and the instructions given in this manual.

If the power source capacity is inadequate or the electric work is not performed properly, it will result in fire, electric shock, physical injury or death.

Use copper conductors only. Refer to local, state, and federal codes, and use power wires of sufficient current capacity and rating.

Wires that are too small will generate heat, cause a fire and physical injury or death.

Before making power terminations during earth grounding, de-energize the power source.  **Do not restore power until completing all other mounting and wiring.**

There is risk of electric shock and physical injury or death.

SAFETY PRECAUTIONS

WARNING

Discharge yourself correctly before handling and installing the controller.

There is risk of electric shock and physical injury or death.

Install in a controlled environment relatively free of contaminants.

There is risk of electric shock and physical injury or death.

Secure all field wiring connections with appropriate wire strain relief.

Improperly securing wires will create undue stress on equipment power lugs. Inadequate connections will generate heat, cause a fire and physical injury or death.

Ensure the system is connected to a power source that provides adequate power. Ensure that the wiring is the correct size.

If the power source capacity is inadequate, the wiring is not the correct size, or the electric work is not performed properly, it will result in short circuiting, fire, electric shock, physical injury or death.

Do not change the settings of the protection devices.

If the protection device is shorted and forced to operate improperly, or parts other than those specified by LG are used, there is risk of fire, electric shock, explosion, and physical injury or death.

Properly tighten all power connections.

Loose wiring may overheat at connection points, causing a fire, physical injury or death.

Dispose of any packing materials safely.

- Packing materials, such as nails and other metal or wooden parts will cause puncture wounds or other injuries.
- Tear apart and throw away plastic packaging bags so that children may not play with them and risk suffocation and death.

Do not install the controller if it will be exposed to rain or other precipitation. Do not install the unit in a location exposed to open flame, extreme heat, or direct sunlight.

Do not touch the unit with wet hands.

There is risk of fire, electric shock, physical injury, and/or death.

Use a soft, pre-moistened lint-free cloth for cleaning.

Avoid getting moisture in openings.

If moisture accesses the electrical components of the controller, there is risk of fire, electric shock, and physical injury or death.

Do not use caustic / corrosive products, ammonia, solvents or any cleaning product containing alcohol or grit.

There is risk of fire, electric shock, and physical injury or death.

Do not drop or crush the controller, or allow it to come into contact with liquids.

There is risk of fire, electric shock, and physical injury or death.

Do not spray anything directly on the controller or use compressed air.

There is risk of fire, electric shock, and physical injury or death.

Never use paint on the controller.

If moisture accesses the electrical components of the controller, there is risk of fire, electric shock, and physical injury or death.

Do not use a damaged device (such as one with a cracked screen).

There is risk of fire, electric shock, and physical injury or death.

CAUTION

Wear protective gloves when handling equipment.

Sharp edges cause personal injury.

SAFETY PRECAUTIONS

Note:

The information contained in this manual is intended for use by an industry-qualified, experienced, trained electrician familiar with local, national, and federal codes and who is equipped with the proper tools and test instruments.

Failure to carefully read and follow all instructions will result in equipment malfunction or equipment / property damage.

Ensure the system is connected to a power source that provides adequate power. Ensure that the wiring is the correct size.

If the power source capacity is inadequate, the wiring is not the correct size, or the electric work is not performed properly, it will result in controller malfunction, miscommunication, and / or degraded performance.

Install the controller at least eight (8) inches away from inhabitants, and do not locate near or operating in conjunction with any other antenna or transmitter.

There is risk of controller malfunction, miscommunication, and / or degraded performance.

Disconnect power before installing or servicing the unit.

There is risk of equipment damage and degraded performance.

Clean up the site after all procedures are finished, and check that no metal scraps, screws, or bits of wiring have been left inside or surrounding the controller or indoor units.

⊘ **Do not allow water, dirt, or animals to enter the controller.**

There is risk of unit failure or degraded performance.

⊘ **Do not spill water or other liquid on the inside of the controller. Do not drop the controller into water. If the unit is immersed in water or other liquid, contact your local authorized LG distributor for support.**

There is risk of unit failure or degraded performance.

This device is only intended for use as a monitoring and control device. It is not a safety device. Do not use it for any other purpose.

Tampering with the devices or unintended application of the devices will result in a void of warranty. There also is risk of data loss or equipment damage.

The controller is not compatible with a Power-Over-Ethernet (POE) network. Do not connect the controller on a network segment that carries power.

The unit may fail.

Use a soft, pre-moistened lint-free cloth for cleaning.

⊘ **Avoid getting moisture in openings.**

There is risk of equipment damage, and will void the manufacturer's warranty.

⊘ **Do not spray anything directly on the controller or use compressed air.**

There is risk of equipment damage, and it will void the manufacturer's warranty.

⊘ **Do not use caustic / corrosive products, ammonia, solvents or any cleaning product containing alcohol or grit.**

There is risk of equipment damage, and it will void the manufacturer's warranty.

⊘ **Never use tools directly on the touchscreen.**

There is risk of damage to the controller screen, and it will void the manufacturer's warranty.

⊘ **Never use paint on the controller.**

There is risk of equipment damage, and it will void the manufacturer's warranty.

⊘ **Do not drop or crush the controller, or allow it to come into contact with liquids.**

There is risk of equipment damage, and it will void the manufacturer's warranty.

⊘ **Do not use a damaged device (such as one with a cracked screen).**

Performance can be affected if the glass on the screen is broken, and it will void the manufacturer's warranty.

Introduction

This manual shows the installation instructions for the LG MultiSITE MS8350 Room Controller (Firmware Release version 2.1) and the LG MultiSITE MS8650 Room Controller (Firmware Release version 2.1) for User and Integrators.

MS8350 Controllers

For Commercial and Hotel HVAC Fan Coil Applications.

Features

- Auto / Low / Med / High Fan Speeds
- Low-voltage 24 Vac
- Customizable color digital touch screen interface with Multi-language support
- BACnet® MS/TP 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
- Role based configuration (password protected)
- Function code settings
- Function Code Search Tool
- Date and Time Display only when a network time synchronization command is received
- Room temperature display
- On / Off Operation
- Auto / Cool / Heat / Fan Only Modes
- Occupied cooling and heating temperature setpoints
- Unoccupied cooling and heating temperature setpoints
- 7 day scheduling with mode
- Error code display during unit or system malfunction

BACnet® is a registered trademark of ASHRAE.

Modbus® is a registered trademark of Schneider Electric USA, Inc.

MS8650 Controllers

For Rooftop Unit, Heat Pump and Indoor Air Quality Applications.

Features

- Auto / On / Smart Fan Speeds
- Low-voltage 24 Vac
- Customizable color digital touch screen interface with Multi-language support
- BACnet MS/TP 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
- Role based configuration (password protected)
- Function code settings
- Function Code Search Tool
- Date and Time Display only when a network time synchronization command is received
- Room temperature display
- On / Off Operation
- Auto / Cool / Heat / Fan Only Modes
- Occupied cooling and heating temperature setpoints
- Unoccupied cooling and heating temperature setpoints
- 7 day scheduling with mode
- Error code display during unit or system malfunction

CHOOSING A LOCATION

Choosing a Location for the Controller

⚠ WARNING

A trained technician should always install the controller following local, national, and federal electrical codes; industry best practices; the instructions in this manual; and using the proper tools and test instruments.

Failure to carefully read and follow all instructions will result in personal injury or death.

Discharge yourself correctly before handling and installing the controller.

There is risk of electric shock and physical injury or death.

Ensure the system is connected to a power source that provides adequate power. Ensure that the wiring is the correct size.

If the power source capacity is inadequate, the wiring is not the correct size, or the electric work is not performed properly, it will result in short circuiting, fire, electric shock, physical injury or death.

Note:

A trained technician should always install the controller following local, national, and federal electrical codes; industry best practices; the instructions in this manual; and using the proper tools and test instruments.

Failure to carefully read and follow all instructions will result in equipment malfunction, controller and property damage, and will void the manufacturer's warranty.

This device is only intended for use as a monitoring and control device. It is not a safety device. Ⓣ Do not use it for any other purpose.

Tampering with the devices or unintended application of the devices will result in a void of warranty. There also is risk of data loss or equipment damage.

Ensure the system is connected to a power source that provides adequate power. Ensure that the wiring is the correct size.

If the power source capacity is inadequate, the wiring is not the correct size, or the electric work is not performed properly, it will result in controller malfunction, miscommunication, and / or degraded performance.

Install the controller at least eight (8) inches away from inhabitants, and Ⓣ do not locate near or operating in conjunction with any other antenna or transmitter.

There is risk of controller malfunction, miscommunication, and / or degraded performance.

CHOOSING A LOCATION

Choosing a Location for the Controller, continued.

A room temperature sensor is inside the controller, so the installation location is critical to proper system operation. Install the controller in a location away from direct sunlight, high humidity, and direct flow or hot or cold air. Install the controller on a flat, clean wall surface approximately four to five (4 to 5) feet above the floor in an area with good circulation and average temperature.

Do's

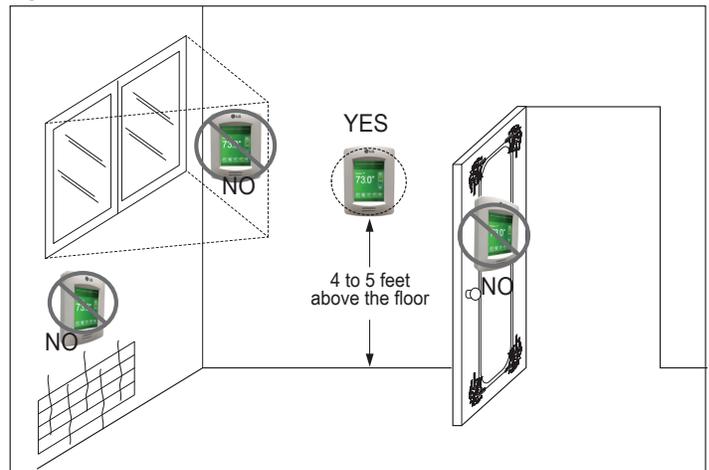
- If replacing an existing controller, label wires before removing.
- Ensure the wall surface is flat and clean.
- Ensure the controller has sufficient, natural air circulation.
- Ensure the external thermal sensor wiring is away from electrical sources.
- Install the controller four to five (4 to 5) feet (1.2 to 1.5m) above the floor.

Do Not's

Do not install the controller:

- In drafts or dead spots behind doors and corners.
- In areas subjected to hot or cold air from ducts / air discharge grills
- Near radiant heat from sun or appliances
- Near or with a direct heat source.
- In areas exposed to direct sunlight.
- Near concealed pipes or chimneys.
- Uncontrolled areas such as on an outside wall.

Figure 1: Controller Location.



Note:

Failure to comply with these recommendations will result in damage to the unit and void the manufacturer's warranty.

CLEANING THE CONTROLLER

Cleaning the Controller

⚠ WARNING

Use a soft, pre-moistened lint-free cloth for cleaning. Ⓣ Avoid getting moisture in openings.

If moisture accesses the electrical components of the controller, there is risk of fire, electric shock, and physical injury or death.

Ⓣ Do not spray anything directly on the controller or use compressed air.

There is risk of fire, electric shock, and physical injury or death.

Ⓣ Do not use caustic / corrosive products, ammonia, solvents or any cleaning product containing alcohol or grit.

There is risk of fire, electric shock, and physical injury or death.

Ⓣ Never use paint on the controller.

If moisture accesses the electrical components of the controller, there is risk of fire, electric shock, and physical injury or death.

Ⓣ Do not drop or crush the controller, or allow it to come into contact with liquids.

There is risk of fire, electric shock, and physical injury or death.

Ⓣ Do not use a damaged device (such as one with a cracked screen).

There is risk of fire, electric shock, and physical injury or death.

Note:

Use a soft, pre-moistened lint-free cloth for cleaning. Ⓣ Avoid getting moisture in openings.

There is risk of equipment damage, and will void the manufacturer's warranty.

Ⓣ Do not spray anything directly on the controller or use compressed air.

There is risk of equipment damage, and it will void the manufacturer's warranty.

Ⓣ Do not use caustic / corrosive products, ammonia, solvents or any cleaning product containing alcohol or grit.

There is risk of equipment damage, and it will void the manufacturer's warranty.

Ⓣ Never use tools directly on the touchscreen.

There is risk of damage to the controller screen, and it will void the manufacturer's warranty.

Ⓣ Never use paint on the controller.

There is risk of equipment damage, and it will void the manufacturer's warranty.

Ⓣ Do not drop or crush the controller, or allow it to come into contact with liquids.

There is risk of equipment damage, and it will void the manufacturer's warranty.

Ⓣ Do not use a damaged device (such as one with a cracked screen).

Performance can be affected if the glass on the screen is broken, and it will void the manufacturer's warranty.

INSTALLATION FOR MS8350 AND MS8650

⚠ WARNING

Before making power terminations during earth grounding, de-energize the power source. ⓧ Do not restore power until completing all other mounting and wiring.

There is risk of electric shock and physical injury or death.

Installation

1. Remove security screw (if any) on bottom of Controller cover.
2. Open unit by pulling on bottom side of Controller (Figure 1).
3. Read FCC ID and IC label installed in cover before installing any wireless product.
4. Ensure correct side of base faces up.
5. Pull cables six (6) inches (15cm) out from wall.
6. Align base and mark location of two mounting holes on wall (Figure 2).
7. Install anchors in wall.
8. Insert cable in central hole of base.
9. Insert screws in mounting holes on each side of base.
10. Strip each wire 1/4 inches (0.6cm) from end.
11. Insert each wire and screw according to wiring chart (see following pages).
12. Gently push excess wiring back into hole.
13. Gently align cover to top of base and snap in place from bottom (Figure 3).
14. Install security screw.

Figure 2: Open the Cover.

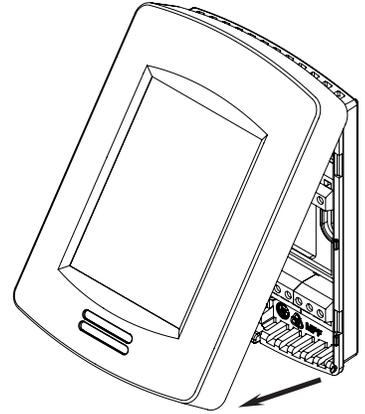


Figure 3: Install the Base.

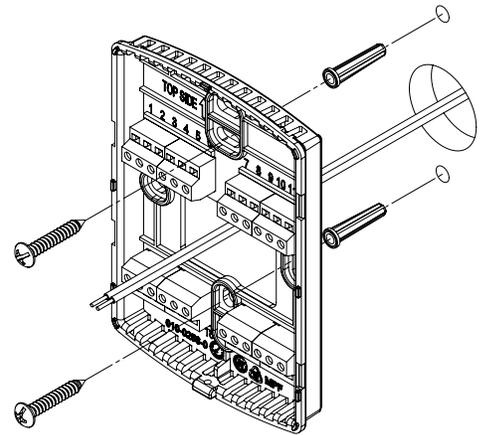
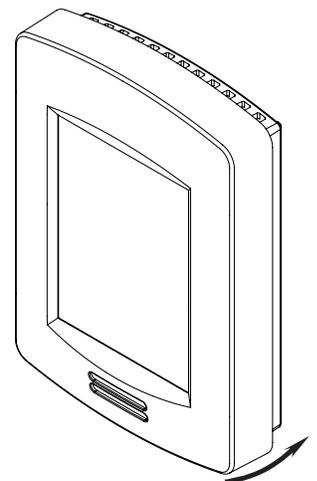


Figure 4: Reinstall Cover



TERMINAL IDENTIFICATION AND FUNCTION FOR MS8350

Terminal Identification for a Three-Speed Fan System

Table 1: Terminal Identification and Function for a Three-Speed Fan Type System.

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 Vac ~ Hot	24 Vac ~ Hot	24 Vac ~ Hot	24 Vac ~ Hot
6- C / 24 Vac ~ Com	24 Vac ~ Com	24 Vac ~ Com	24 Vac ~ 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 +		RS485 +	
14- RS485 -		RS485 -	
15- RS485 Ref		RS485 Ref	
16- UI16		UI16 Function	
17- UI17		UI17 Function	
18- Scm		Common	
19- UI19		UI19 Function	
20- UI20		Remote Room Sensor	
21- Scm		Common	
22- UI22		Remote Supply Sensor	
23- UI23		Not used	
24- UI24		Not used	

Terminal Identification for an Electronically Commutated Motor (ECM) Fan System

Table 2: Terminal Identification and Function for an ECM Fan Type System.

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 Vac ~ Hot	24 Vac ~ Hot	24 Vac ~ Hot	24 Vac ~ Hot
6- C / 24 Vac ~ Com	24 Vac ~ Com	24 Vac ~ Com	24 Vac ~ 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- Scm		Common	
19- UI19		UI19 Function	
20- UI20		Remote Room Sensor	
21- Scm		Common	
22- UI22		Remote Supply Sensor	
23- UI23		Not used	
24- UI24		Not used	

TERMINAL IDENTIFICATION AND FUNCTION FOR MS8650

Table 3: Terminal Identification and Function.

Description / Application	Used in Applications: Indoor Air Quality, Heat Pump, and Rooftop Unit
Internal Temperature	X
1- BO1	Aux
2- BO2	Y2
3- BO3	Y1
4- BO4	G
5- RC	RC (24 Vac)
6- C	Common
7- RH	RH
8- BO8	W1
9- UO9	W2 / OB
10- UO10	Econo (0-10 Vdc)
11- UO11	Heat (0-10 Vdc)
12- UO12	Dehumidification output (24 Vac On/Off)
13- RS485 +	BACnet (+)
14- RS485 -	BACnet (-)
15- RS485 Ref	BACnet Ref.
16- UI16	UI16 (multifunction input)
17- UI17	UI17 (multifunction input)
18- Scom	Common
19- UI19	CO2 (0-10 Vdc input)
20- UI20	RS (Remote sensor input 10K thermistor)
21- Scom	Common
22- UI22	SS (Supply sensor input 10K thermistor)
23- UI23	OS (Outside sensor input 10K thermistor)
24- UI24	Airflow (0-10 Vdc input)

WIRING FOR MS8350

Wiring

⚠ WARNING

All electric work must be performed by a licensed electrician and conform to local building codes or, in the absence of local codes, with the National Electrical Code, and the instructions given in this manual.
 If the power source capacity is inadequate or the electric work is not performed properly, it may result in fire, electric shock, physical injury or death.

Figure 5: Wiring - Single or Multispeed Motor.

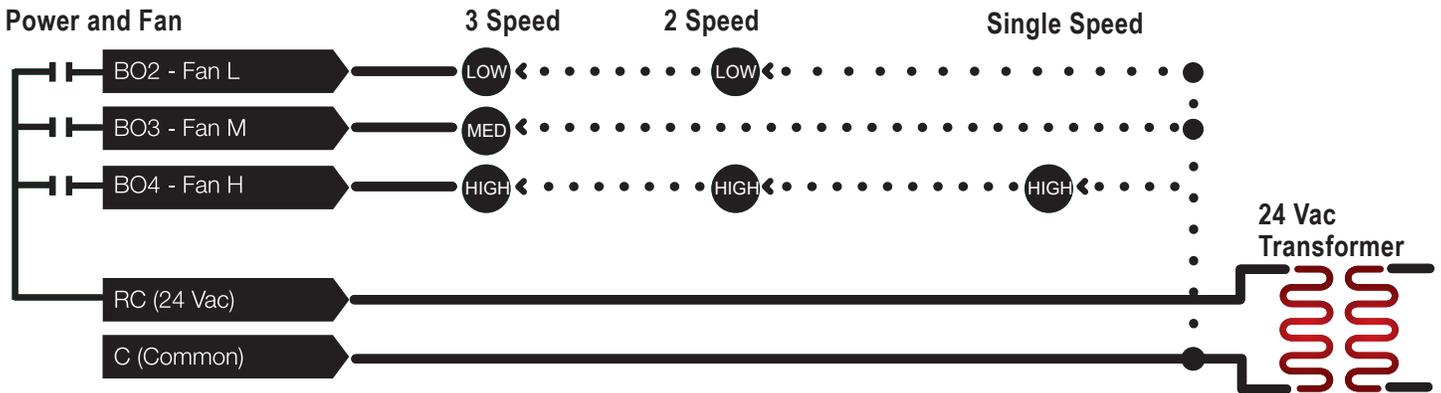


Figure 6: BO8 Auxiliary Output Wiring.

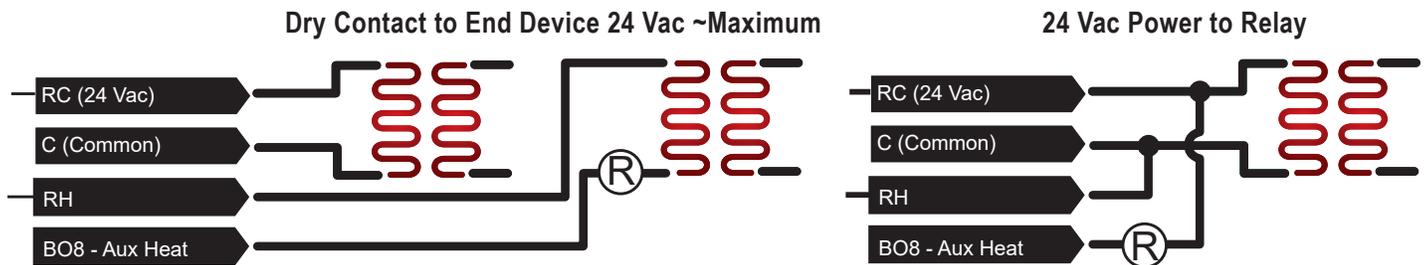
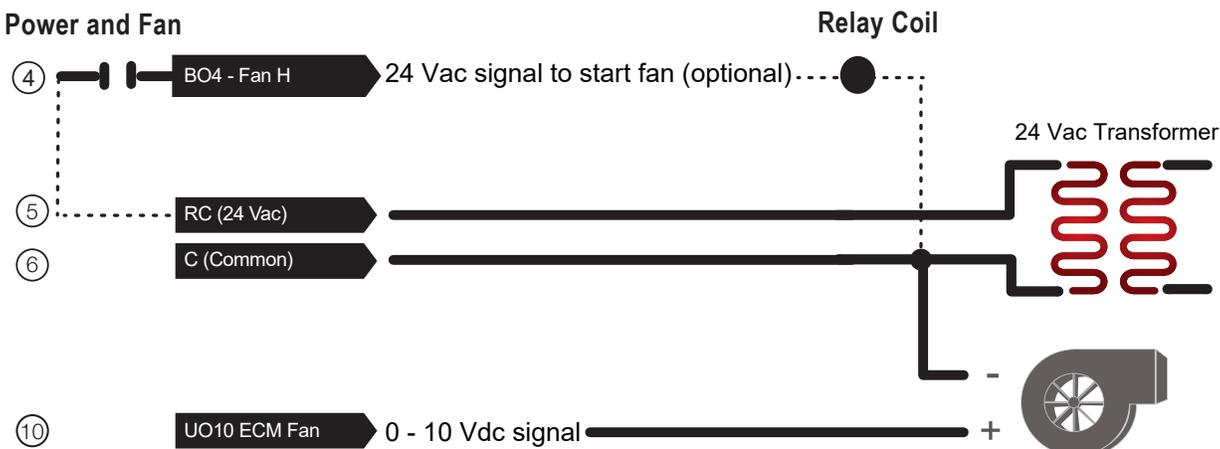
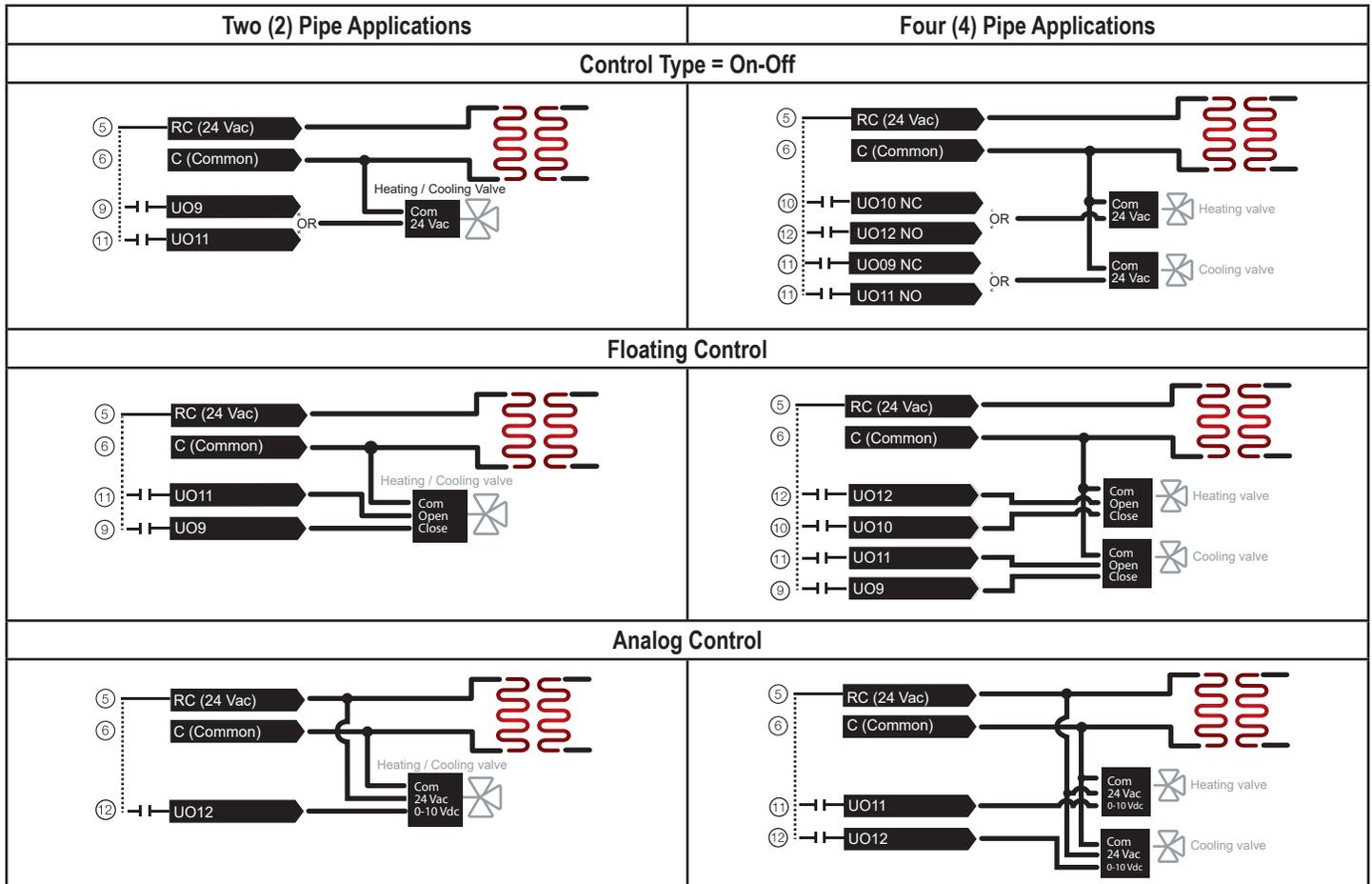


Figure 7: Wiring - ECM Motor.



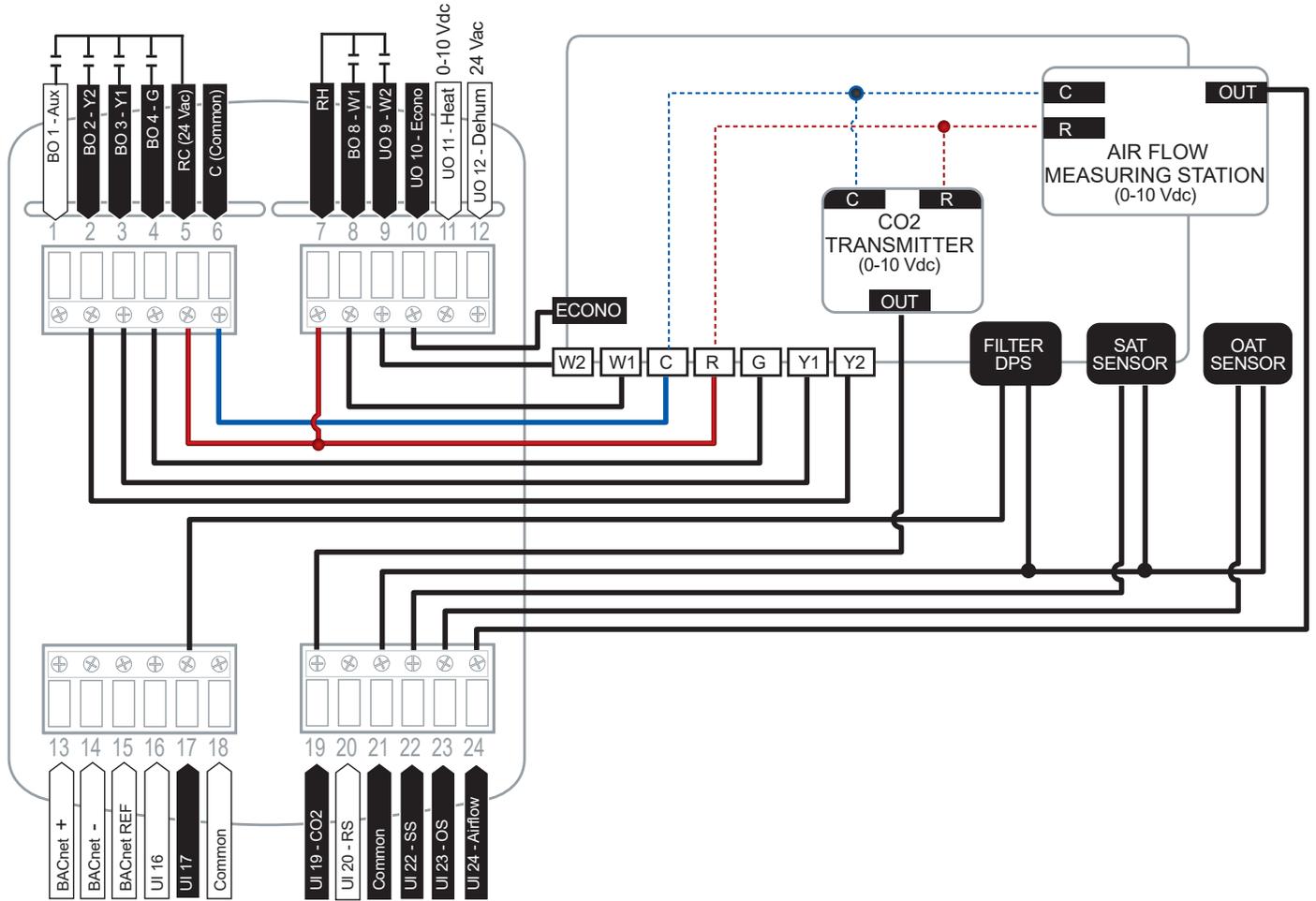
WIRING FOR MS8350

Figure 8: Main Outputs Wiring.



WIRING FOR MS8650

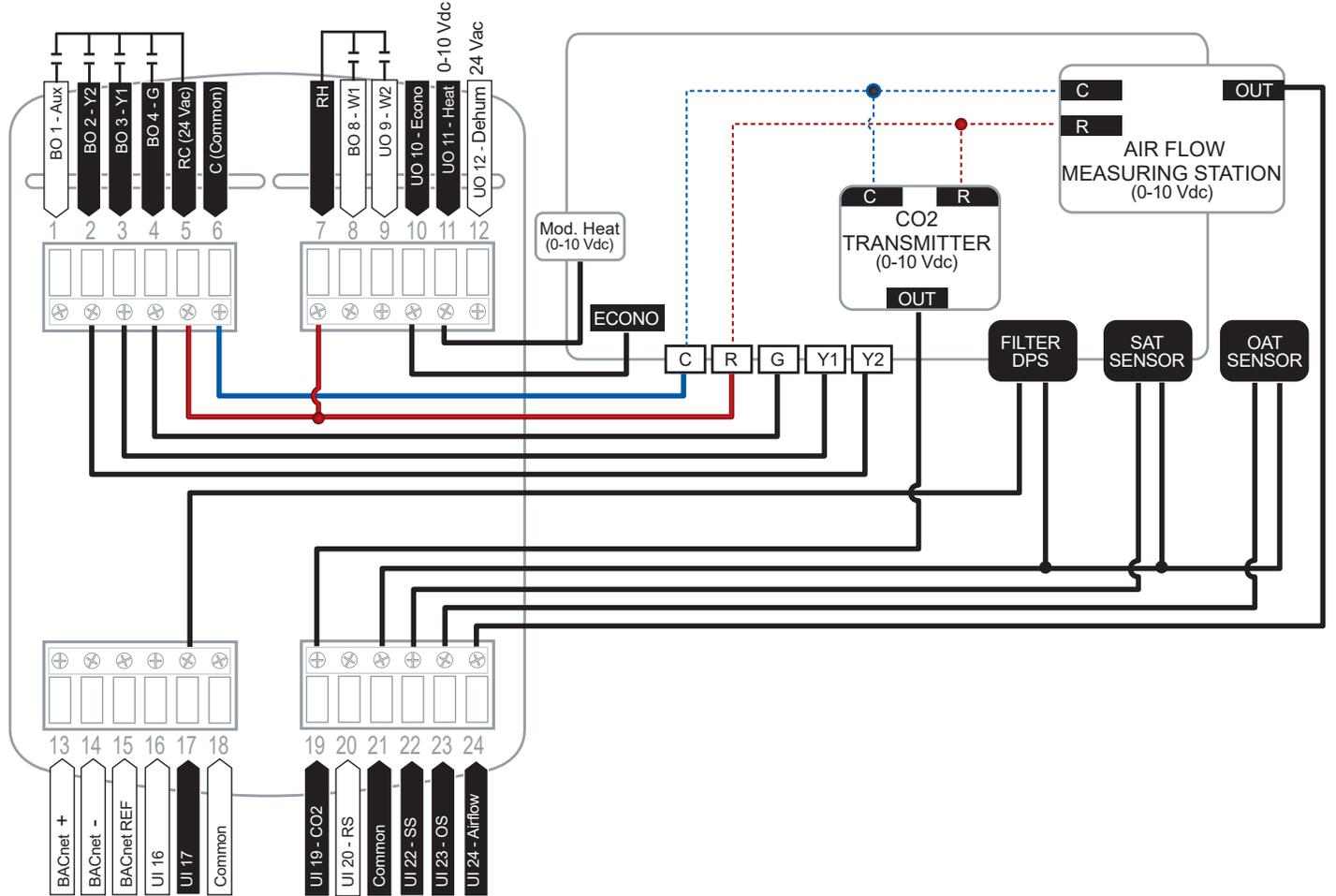
Figure 9: Wiring - Rooftop Unit: Two (2) Heating Stages / Two (2) Cooling Stages.



MultiSITE MS8000 Series Room Controllers

WIRING FOR MS8650

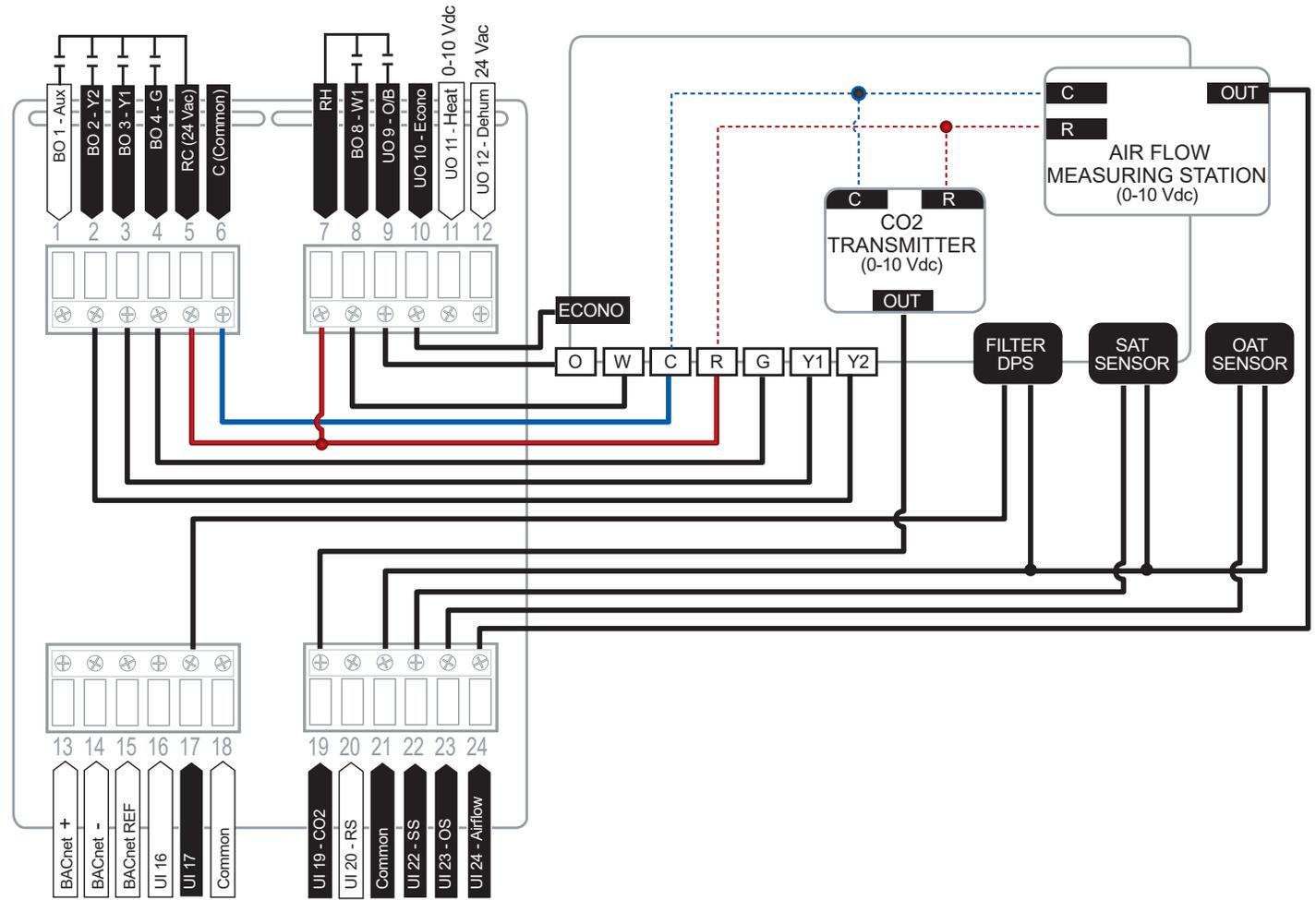
Figure 10: Wiring - Rooftop Unit: Two (2) Cooling Stages / Modulating Heat.



Installation Manual

WIRING FOR MS8650

Figure 11: Wiring - Heat Pump Unit: Two (2) Compressors, Auxiliary Heat and Economizer.

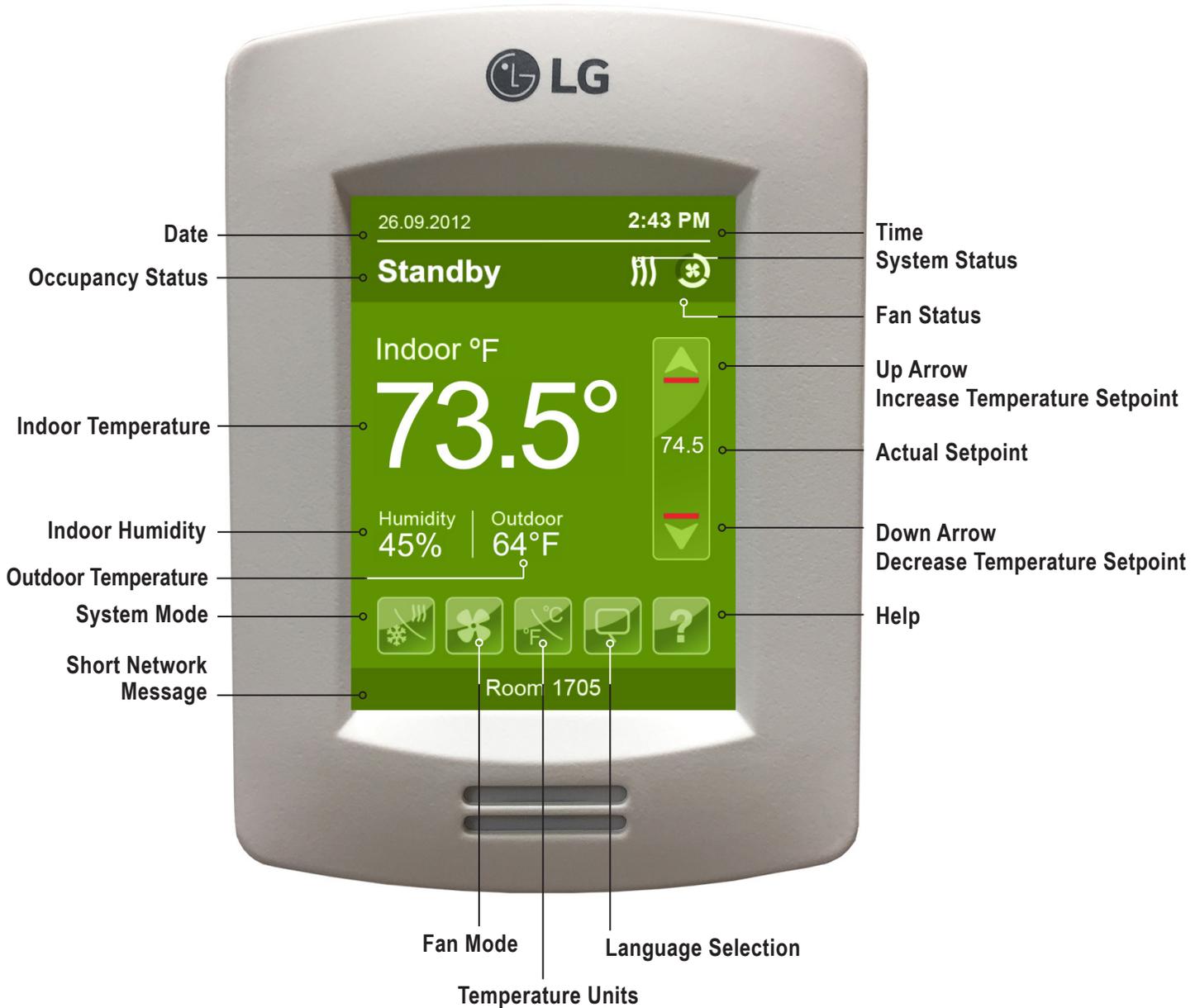


MultiSITE MS8000 Series Room Controllers

HOME SCREEN DISPLAY FOR MS8350 AND MS8650

Home Screen Display

Figure 12: Home Screen Display with MS8350 Hospitality User Interface Shown.



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.

SET-UP SCREEN FOR MS8350 AND MS8650

How to Enter the Set-up Screen

Figure 13: Entering the Set-up Screen.



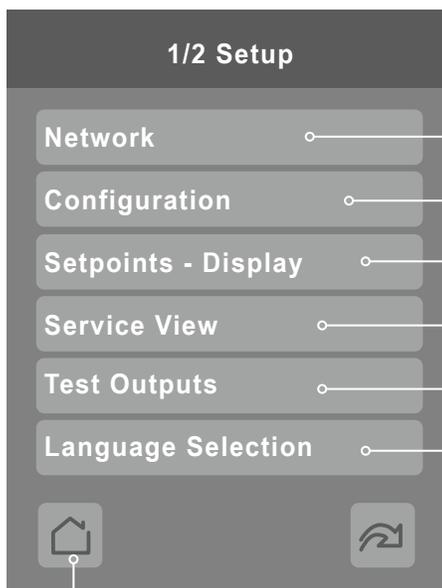
Touch and hold this point for three (3) seconds to enter set-up mode.

Note:

If a configuration/installer password is activated to prevent unauthorized access to the configuration menu parameters, a password entry prompt shows to prevent access to device configuration components.

For more information on using and configuring the functions of the HMI, refer to the LG MultiSITE MS8000 Series Room Controller User Manual.

Figure 14: Set-up Screen Display.



Enter BACnet® and ZigBee® Network Settings

Enter Parameter Configuration Menu

Enter Setpoint and Display Settings

Enter Status and Service View

Enter Output Testing Mode

Enter Language Selection

Return to Home Screen

Note:



Adjustable Parameter

Nonadjustable Parameter

POWER OUTAGE CLOCK RESET

Power Outage Clock Reset

In the event of a power outage, the Room Controllers retain the correct time as long as the duration of the power outage is not prolonged. Depending on the duration of the power outage, the Room Controller internal clock may need to be updated or reset completely. The following table gives an indication of the expected clock performance after a power outage.

Table 4: Controller Clock Operation After a Power Outage.

Outage Duration	Controller Operation
0 - 24 hours	Clock functions are normal
24 - 36 hours	Clock accuracy not guaranteed, time may need to be adjusted
36 - 72 hours	Clock no longer increments and must adjusted when power is restored
72+ hours	Clock functions are fully reset, and must be re-initialized as per a new installation

MAIN SPECIFICATIONS FOR MS8350 AND MS8650

Table 5: Main Specifications Table for MS8350 and MS8650.

Item	Description
Dimensions	4.72 in. (H) x 3.38 in. (W) x 1 in. (D) (12cm x 8.6cm x 2.5cm)
Power Requirements	Input: 24 Vac \pm 15%, 50 / 60 Hz
	Input: 24 - 28 Vac, 50 / 60 Hz (with CO ₂ sensor module; see note below)
	Device consumption: up to 12 Va
	Transformer maximum rating: 100 Va, 4.17 A
Output Ratings	Relay rating: 28 Vac, 50 / 60 Hz, 1.0 Amp., in-rush = 3.0
	Amps; pins 1, 2, 3, 4, 5, 8, 9
	Digital optomos output rating: 28 Vac, 50 / 60 Hz, 0.3 Amp., in-rush = 1.5 Amps; pins 9, 10, 11, 12
	Analog: 0 - 10 Vdc in 2 kilo-ohm resistance minimum load (maximum 5 mA); pins 9, 10, 11, 12
Operating Conditions	32°F to 122°F (0°C to 50°C)
	0% to 75% R.H. non-condensing
Storage Conditions	-22 °F to +122°F (-30°C to +50°C)
	0% to 75% R.H. non-condensing
Temperature Sensor	Local 10 K NTC type 2 thermistor
Temperature Sensor Resolution	\pm 0.2°F (\pm 0.1°C)
Temperature Control Accuracy	\pm 0.9°F @ 70 °F (\pm 0.5°C @ 21°C) typical calibrated
Humidity Sensor and Calibration	Single point calibrated bulk polymer type sensor
Humidity Sensor Precision	Reading range from 10-90% R.H. non-condensing
	10% to 20% precision: 10%
	20% to 80% precision: 5%
	80% to 90% precision: 10%
Humidity Sensor Stability	Less than 1.0% yearly (typical drift)
Dehumidification Setpoint Range	30% to 95% R.H.
Occ, Unocc and Standby Cooling Setpoint Range	54°F to 100°F (12.0°C to 37.5°C)
Occ, Unocc and Standby Heating Setpoint Range	40°F to 90°F (4.5°C to 32°C)
Room and Outdoor Air Temperature Display Range	-40°F to +122°F (-40°C to +50°C)
Proportional Band for Room Temperature Control	Cooling and Heating: Default: 3.2°F (1.8°C)
Analog Inputs	Modulating 0-10 Vdc across UI19 to Common
Binary Inputs	Dry contact across terminals UI16, UI17 and UI19 to Common
Remote Temperature Sensor Requirements	10 K NTC Type 2 thermistor
Wiring Gauges	Power supply: 18 gauge or larger,
	Communications: 24 gauge or larger
Shipping Weight	0.75 lb. (0.34 kg)

Note:

Room Controller Input Power

Usage of the CO₂ sensor module within the Room Controller draws additional power. It is recommended when using the CO₂ sensor module, the site transformer be capable to accommodate the additional power consumption. Room Controller power consumption of 12 VA and input voltage range of 24 - 28 VAC is required.

STANDARDS AND CERTIFICATIONS FOR MS8350 AND MS8650

Standards and Certifications

Safety Standards

- LV Directive 2014 / 35 / EU
- UL 60730-2-9
- UL 60730-2-13
- CAN / CSA-E60730-2-9
- IEC / EN 60730-1
- IEC / EN 60730-2-9
- IEC / EN 60730-2-13

EMC Standards

- EMC Directive 2014 / 30 / EU
- FCC 15 Subpart B
- ICES-003
- IEC / EN 60730-1
- IEC / EN 60730-2-9
- IEC / EN 60730-2-13

Radio Standards (Wireless Models)

- RE Directive 2014 / 53 / EU
- ETSI EN 300 328 V2.1.1
- ETSI EN 301 489-1 V1.9.2
- ETSI EN 301 489-17 V2.2.1
- FCC Part 15 Subpart C
- RSS 247

THIS DEVICE COMPLIES WITH PART 15 OF THE FCC RULES. OPERATION IS SUBJECT TO THE FOLLOWING TWO CONDITIONS: (1) THIS DEVICE MAY NOT CAUSE HARMFUL INTERFERENCE, AND (2) THIS DEVICE MUST ACCEPT ANY INTERFERENCE RECEIVED, INCLUDING INTERFERENCE THAT MAY CAUSE UNDESIRE OPERATION.

THE GRANTEE IS NOT RESPONSIBLE FOR ANY CHANGES OR MODIFICATIONS NOT EXPRESSLY APPROVED BY THE PARTY RESPONSIBLE FOR COMPLIANCE. SUCH MODIFICATIONS COULD VOID THE USER'S AUTHORITY TO OPERATE THE EQUIPMENT.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Industry Canada's licence-exempt RSSs. Operation is subject to the following two conditions:

1. This device may not cause interference; and
2. This device must accept any interference, including interference that may cause undesired operation of the device.

In order to comply with FCC/ISED RF Exposure requirements, this device must be installed to provide at least 7-7/8 inches (20cm) separation from the human body at all times.



Check with your local government for instruction on disposal of these products.

LIMITED WARRANTY (USA)

“The product’s full Limited Warranty terms and conditions and arbitration requirements are available at <https://www.lghvac.com>.”



LG Electronics, U.S.A., Inc.
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4300 North Point Parkway
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www.lghvac.com

IM_MultiSITE_RoomControllers_MS8000Series_02_24
Supersedes: IM_MultiSITE_RoomControllers_MS8000Series_10_19