MC SERIES OCCUPANCY SENSOR
Supplemental Installation Manual for Accessories

MC-C (Ceiling Mount)
MC-W (Wall Mount)

MC-C Ceiling Mount

MC-W Wall Mount

TABLE OF ILLUSTRATIONS

1.0 OVERVIEW

1.1 SPECIFICATIONS

- Passive infared sensor
- Adjustable time-off delay to 30 minutes
- 24VAC power requirement
- Ceiling mount or directable wall mount
- Coverage floor space
    - Ceiling mount: 1500 sq. ft.
    - Wall mount: 2500 sq. ft.
- Major motion area
    - Ceiling mount: 50 ft. diameter
    - Wall mount: 68 x 50 ft.

Model	Volts	Current	Isolated Relay	Coverage Area	Suggested Mounting Height
MC-C	15-28VAC	30 mA	1 A @ 30 VAC/DC	1500 sq. ft.	8-10 ft.
MC-W	15-28VAC	30 mA	1 A @ 30 VAC/DC	2500 sq. ft.	8-10 ft.

2.0 INSTALLATION

2.1 MC-C CEILING MOUNT

See the Leviton installation instructions provided in the original box for in-details or for more options.
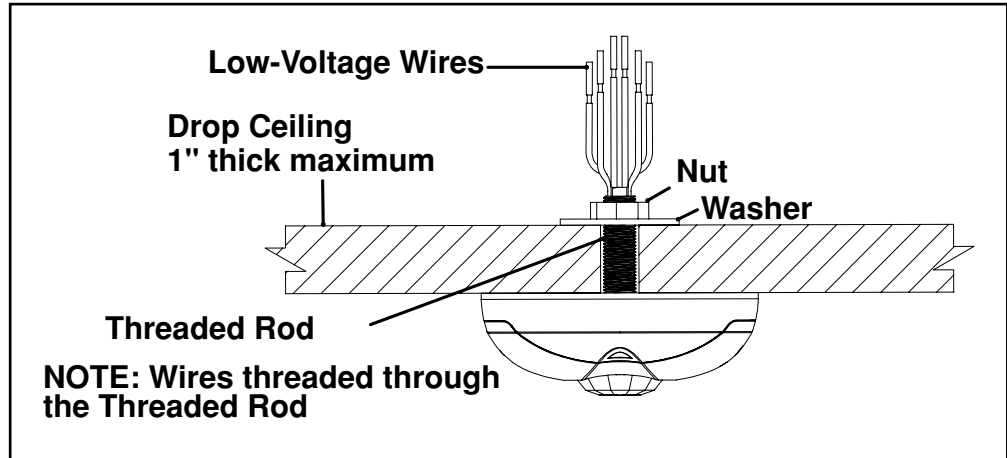
FIGURE 2.1.0 MC-C CEILING MOUNT INSTALLATION

2.2 MC-W WALL MOUNT
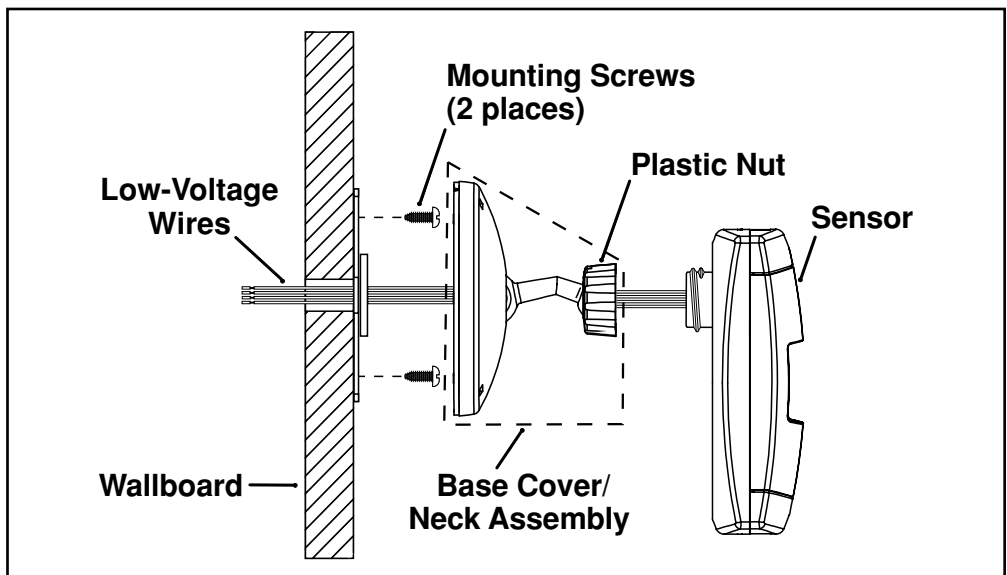
FIGURE 2.2.0 MC-W WALL MOUNT INSTALLATION

3.0 SETTINGS

3.1 ADJUSTMENT KNOBS

KNOB COLOR	SYMBOL	FUNCTION	KNOB SETTING	FACTORY DEFAULT SETTING	
Red		Sets the infrared range	Range Setting Full CCW = min. (OFF) Full CW = max.	75%	
Black		Delayed-Off Time	Full CCW = min. (30 sec.) Full CW = max. (30 min.)	50% (10 min.)	

FIGURE 3.1.0 KNOB ADJUSTMENT TABLE
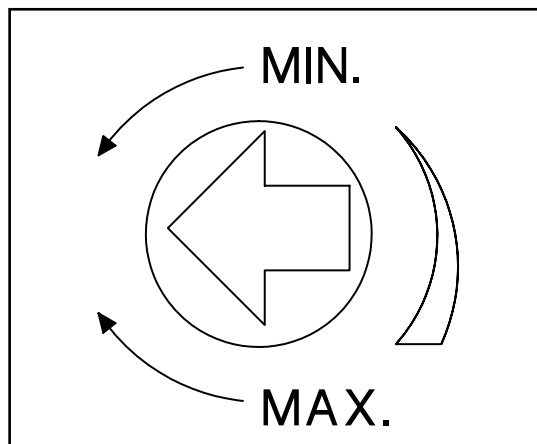
FIGURE 3.1.1 INFRARED RANGE ADJUSTMENT
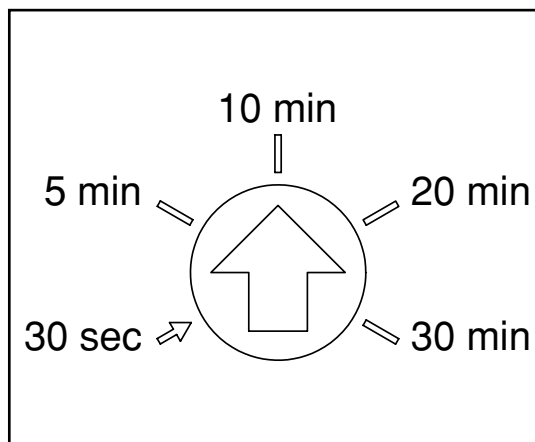
FIGURE 3.1.2 DELAYED—OFF TIME ADJUSTMENT

3.2 DIP SWITCHES

Switch	Switch Functions	Switch Settings	
	Bank A	OFF	ON
A1	N/A	N/A	N/A
A2	N/A	N/A	N/A
A3	Manual Mode	Auto Adapting Enabled	Auto Adapting Disabled
A4	Walk-Through Disabled	Walk-Through Enabled	Walk-Through Disabled
	Bank B	OFF	ON
B1	Override to ON	Auto Mode	Lights Forced ON
B2	Override to OFF	Auto Mode	Lights Forced OFF
B3	Test Mode	OFF ¢ ON ¢ OFF = Enter/Exit Test Mode	
B4	LEDs Disabled	LEDs Enabled	LEDs Disabled

FIGURE 3.2.0 DIP SWITCH SETTING TABLE
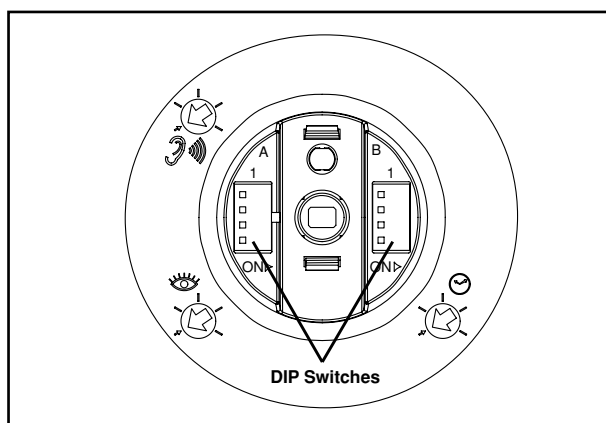
FIGURE 3.2.1 MC-C DIP SWITCHES
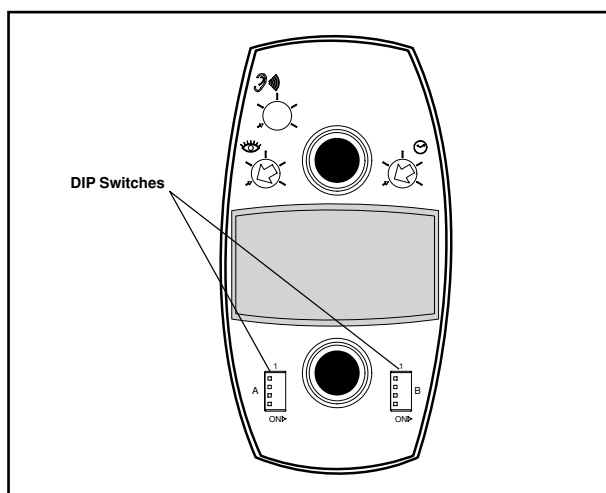
FIGURE 3.2.2 MC-W DIP SWITCHES

4.0 ELECTRICAL

4.1 WIRING SCHEMATICS

SEPARATE SOURCE OF 24VAC POWER REQUIRED

24VAC Class II Power Supply provided by other

BLUE

24VAC IN - RED

MPU

24VAC IN - BLACK

Control Terminals

N.C. - BROWN

Unit Internal Wiring

N.O. - BROWN/WHITE

COMMON - GREEN

EV90
EV90P
EV130
EV200
EV240
EV300

The Normally Open (N.O.) contacts of one or more additional Low Voltage Controls may be connected to ERV unit in parallel with the MC-C or MC-W.

FIGURE 4.1.0 EV90, EV90P, EV130, EV200, AND EV300 SCHEMATIC

In this example, Motion Control Occupancy Sensor turns Energy Recovery Ventilator (ERV) on at High speed when space is occupied.

Control Board

SF_ECM_SIGNAL

120COM

1
2
3

120VAC

COMMON – GREEN

N.C. – BROWN

SF_ECM_POWER

N.O. – BROWN/WHITE

24VAC

WHT 1

1
2

24 VAC – RED

HIGH

RD 2

MPU

COM

BK 3

24 VAC – BLACK

Occ Sensor

DAMPER

YL 4

EF_ECM_POWER   EF_ECM_SIGNAL

Unit Wiring Terminals

2 1   2 2 1

FIGURE 4.1.1 EV PREMIUM AND SL75 SCHEMATIC

FIGURE 4.1.2 HE1.5IN—STANDARD WIRING (NON-ECM) SCHEMATIC
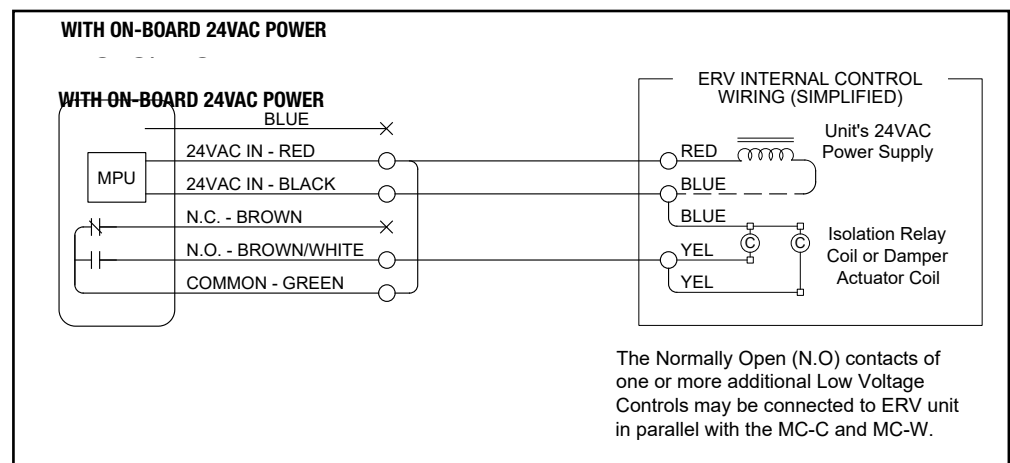
FIGURE 4.1.3 HE1.5IN—MOTORIZED DAMPER(S) OR INDEPENDENT BLOWER CONTROL SCHEMATIC

FIGURE 4.1.4 HE1.5RT—STANDARD WIRING (NON-ECM OR VFD UNITS) SCHEMATIC

WITH ON-BOARD 24VAC POWER

ERV INTERNAL CONTROL
WIRING (SIMPLIFIED)

BLUE
24VAC IN - RED
24VAC IN - BLACK
N.C. - BROWN
N.O. - BROWN/WHITE
COMMON - GREEN

MPU

Unit's 24VAC
Power Supply

Isolation Relay Coil or
Damper Actuator Coil

The Normally Open (N.O.) contacts of one
or more additional Low Voltage Controls
may be connected to ERV unit's Terminals
1 & 4. Do not apply power to these
terminals.

FIGURE 4.1.5 HE1.5RT—MOTORIZED DAMPER(S) OR INDEPENDENT BLOWER CONTROL SCHEMATIC
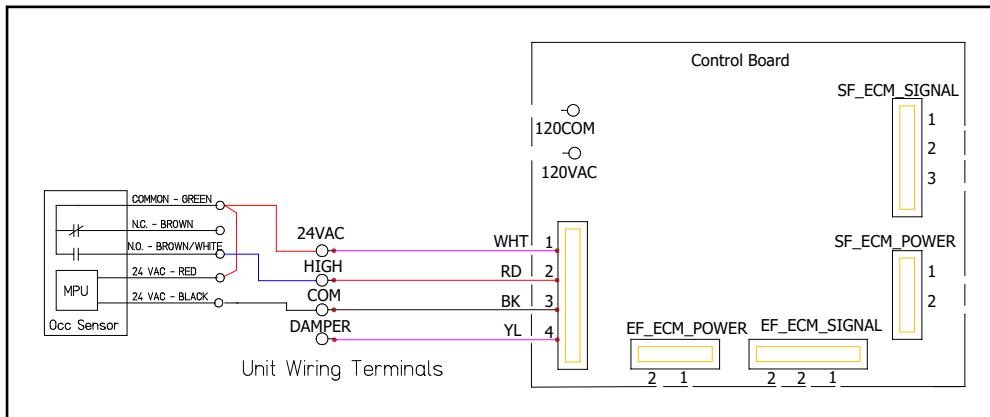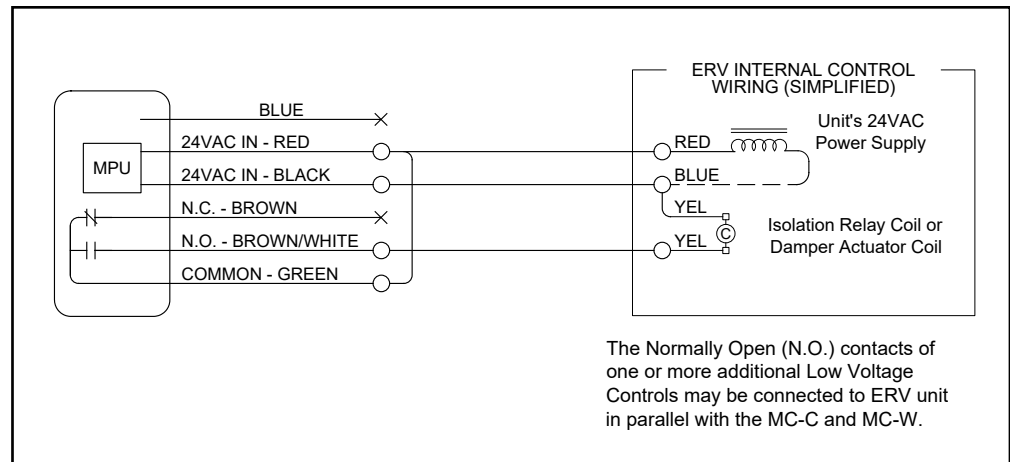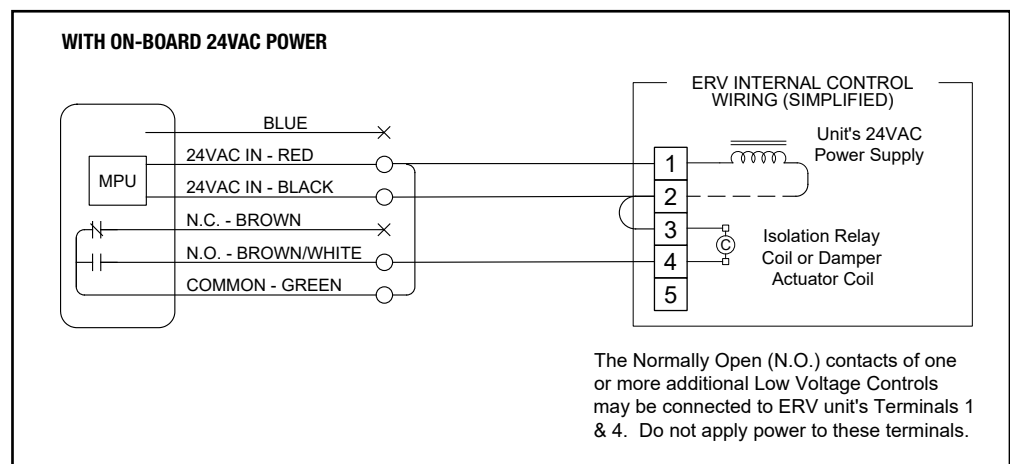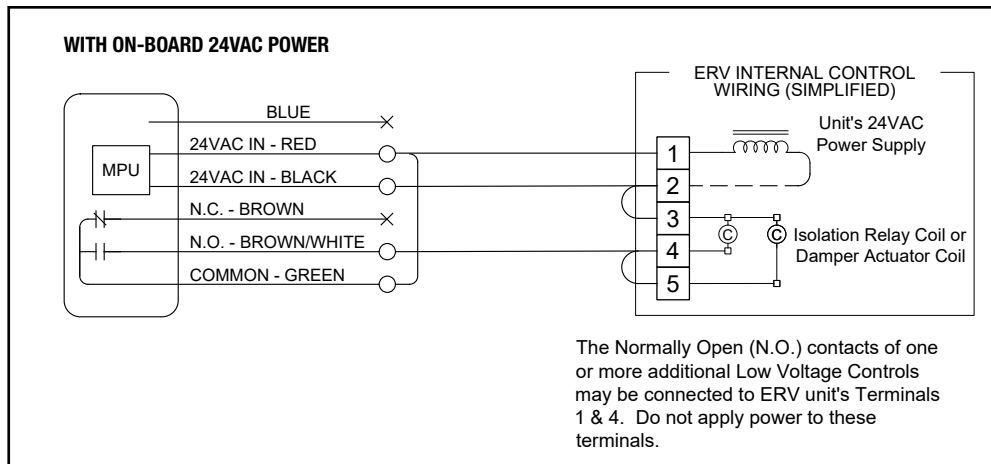
WITH ON-BOARD 24VAC POWER

ERV INTERNAL CONTROL
WIRING (SIMPLIFIED)

BLUE
24VAC IN - RED
24VAC IN - BLACK
N.C. - BROWN
N.O. - BROWN/WHITE
COMMON - GREEN

MPU

Unit's 24VAC
Power Supply

Isolation Relay Coil or
Damper Actuator Coil

The Normally Open (N.O.) contacts of one
or more additional Low Voltage Controls
may be connected to ERV unit's Terminals
1 & 4. Do not apply power to these
terminals.
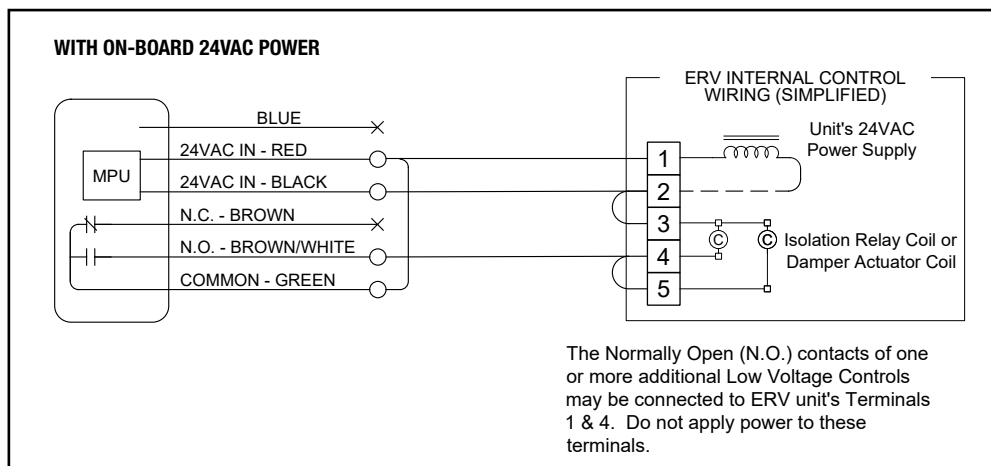
FIGURE 4.1.6 HE2X-8X, LE6X-10X—WITH STANDARD WIRING OR MOTORIZED DAMPER(S) SCHEMATIC

WITH ON-BOARD 24VAC POWER

ERV INTERNAL CONTROL
WIRING (SIMPLIFIED)

TB
(EA/RA)

BLUE
24VAC IN - RED
24VAC IN - BLACK
N.C. - BROWN
N.O. - BROWN/WHITE
COMMON - GREEN

MPU

Unit's 24VAC
Power Supply

Isolation Relay
Coil or Damper
Actuator Coil

Isolation Relay
Coil or Damper
Actuator Coil

TB
(OA/FA)

The Normally Open (N.O.) contacts
of one or more additional Low
Voltage Controls may be connected
to ERV unit in parallel with the MC-C
and MC-W.

FIGURE 4.1.7 HE1.5—ECM WITH TERMINAL BLOCK (SPEED 1-LOW SPEED ON/OFF) SCHEMATIC

In this example, Motion Control Occupancy Sensor turns the ERV on at speed set by potentiometers when space is occupied.

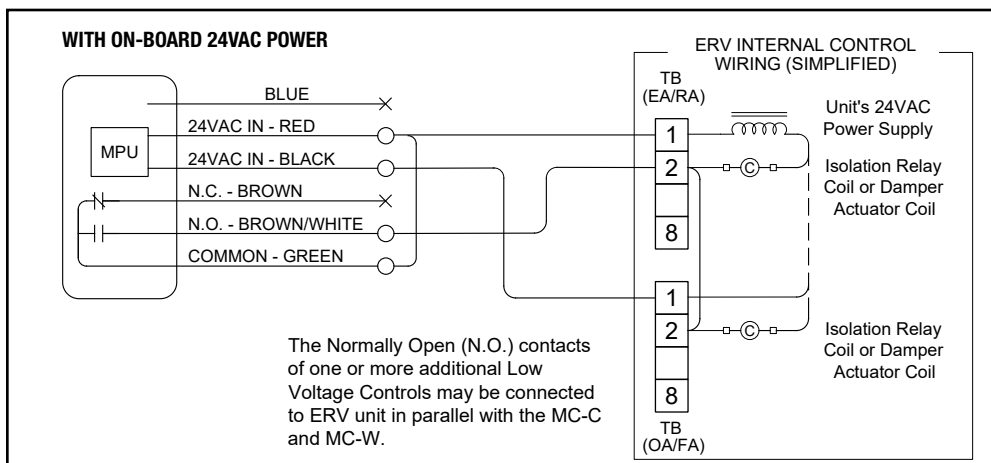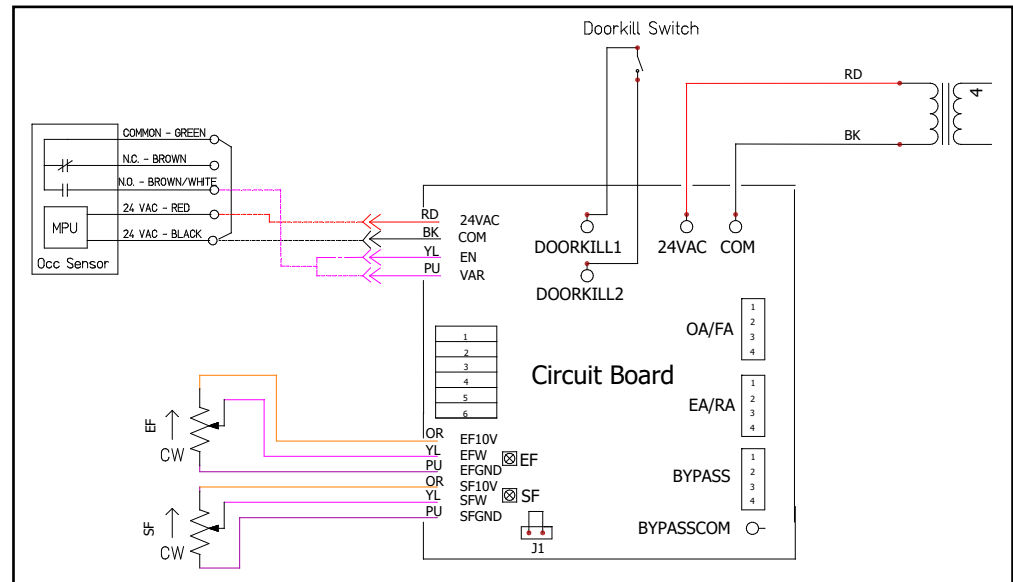**FIGURE 4.1.8 HE07, HE10, AND HE1.5—ECM WITH CIRCUIT BOARD (SPEED 1-LOW SPEED ON/OFF) SCHEMATIC**

WITH ON-BOARD 24VAC POWER

When Normally Closed (N.C.) contacts open when occupied, the thermostat will operate in Comfort Mode. While unoccupied the contacts across RH-W Thermostat terminals will be closed and the thermostat will operate in Economy Mode which reduces the RH-W heater outlet set-point temperature by 8 degrees F.

FIGURE 4.1.9 RH-W HEATER ACCESSORY THERMOSTAT SCHEMATIC

5.0 FACTORY ASSISTANCE

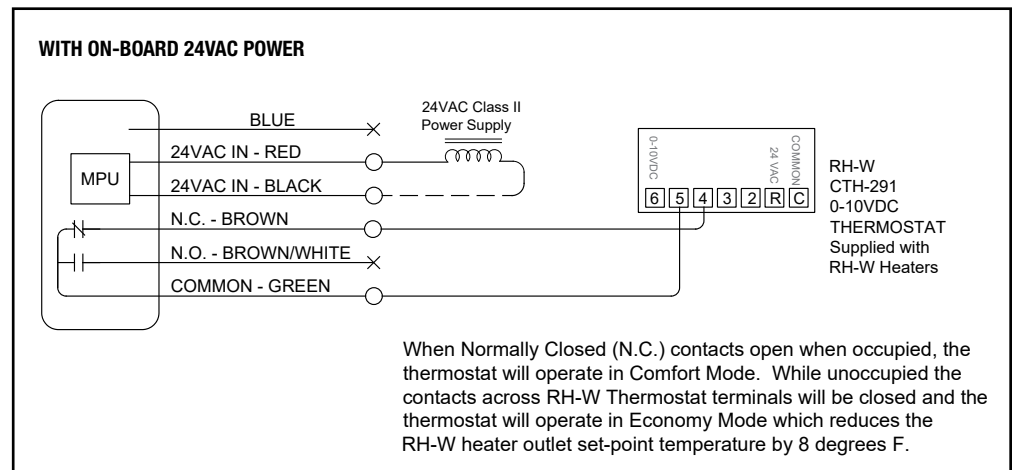In the unlikely event that you need assistance from the factory for a specific issue, make sure that you have the information called for in the Unit Records page in the Owner Information section of the unit manual. The person you speak with at the factory will need that information to properly identify the unit and the installed options.

To contact RenewAire Customer Service:

Call 800-627-4499

Email: RenewAireSupport@RenewAire.com

About RenewAire

For over 40 years, **RenewAire has been a pioneer in enhancing indoor air quality (IAQ)** in commercial and residential buildings of every size. This is achieved while maximizing sustainability through our fifth-generation, static-plate, enthalpic-core **Energy Recovery Ventilators (ERVs) that optimize energy efficiency**, lower capital costs via load reduction and decrease operational expenses by minimizing equipment needs, resulting in significant energy savings. Our ERVs are competitively priced, simple to install, easy to use and maintain and have a quick payback. They also enjoy the industry's best warranty with the lowest claims due to long-term reliability derived from innovative design practices, expert workmanship and **Quick Response Manufacturing (QRM)**.

As the pioneer of static-plate core technology in North America, RenewAire is the largest ERV producer in the USA. We're **committed to sustainable manufacturing** and lessening our environmental footprint, and to that end our Waunakee, WI plant is 100% powered by wind turbines. The facility is also one of the few buildings worldwide to be LEED and Green Globes certified, as well as having achieved ENERGY STAR Building status. In 2010, RenewAire joined the Soler & Palau (S&P) Ventilation Group in order to provide direct access to the latest in energy-efficient air-moving technologies. For more information, visit: renewaire.com

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Energy Recovery Ventilation