



# Installation Instructions

Part Number 38AP-900---022

## CONTENTS

<b>SAFETY CONSIDERATIONS</b> .....	1
<b>GENERAL</b> .....	1
<b>INSTALLATION</b> .....	1-10
<b>Install Harness and Make Wire Connections</b> .....	5
<b>Controls Configuration for EMM Options</b> .....	6

## SAFETY CONSIDERATIONS

Installation of this accessory can be hazardous due to system pressures, electrical components, and equipment location (such as a roof or elevated structure).

Only trained, qualified installers and service technicians should install, start up, and service this equipment.

When installing this accessory, observe precautions in the literature, labels attached to the equipment, and any other safety precautions that apply.

- Follow all safety codes.
- Wear safety glasses and work gloves.
- Use care in handling and installing this accessory.

### WARNING

Electrical shock can cause personal injury and death. Shut off all power to this equipment during installation. There may be more than one disconnect switch. Tag all disconnect locations to alert others not to restore power until work is completed.

## GENERAL

The energy management module (EMM) accessory (Fig. 1) package is required for additional temperature reset, demand limit, and remote set point features of the *ComfortLink* controls for 30MP, 30RAP and 38AP units. Chilled water temperature reset by return water, outside air or space temperature do NOT require the addition of this accessory. The following additional features are supported by this accessory:

- temperature reset by 4 to 20 mA field-supplied signal.
- demand limit control via field-supplied two-step switch input.
- demand limit control by 4 to 20 mA field-supplied signal.
- support of unoccupied operation for ice making through field-supplied contacts (30MP, 30RAP only).
- cooling set point control by 4 to 20 mA field-supplied signal.

## ACCESSORY PACKAGE CONTENTS

ITEM	PART NO.	QUANTITY
<b>Energy Management Module</b>	30GT515218	1
<b>Harness (38APD,S025-060)</b>	38APHLSBCE-A00	1
<b>Harness (38APD,S065-130)</b>	38APHLSLCE-A00	1
<b>Harness, EMM to LVT (30RAP, 30MP)</b>	38APHSCALE-A00	1
<b>Harness, EMM to MBB/EXV (Power - 30RAP, 30MP)</b>	38APHSCALECA10	1
<b>Harness, EMM to MBB/EXV (Comm. - 30RAP, 30MP)</b>	38APHSCALECA00	1
<b>Harness, EMM to AUX (Comm. - 30RAP, 30MP)</b>	38APHSCALXCA00	1
<b>Screw, no. 6, 1-in. long</b>	AL56AU130	1
<b>Wire Tie</b>	—	4

### LEGEND

- EXV** — Electronic Expansion Valve  
**LVT** — Low Voltage Terminal  
**MBB** — Main Base Board

## INSTALLATION

### WARNING

Before beginning installation of this equipment, be sure all power to the unit is disconnected, and that tags are properly placed to alert others. Electrical shock can cause personal injury and death.

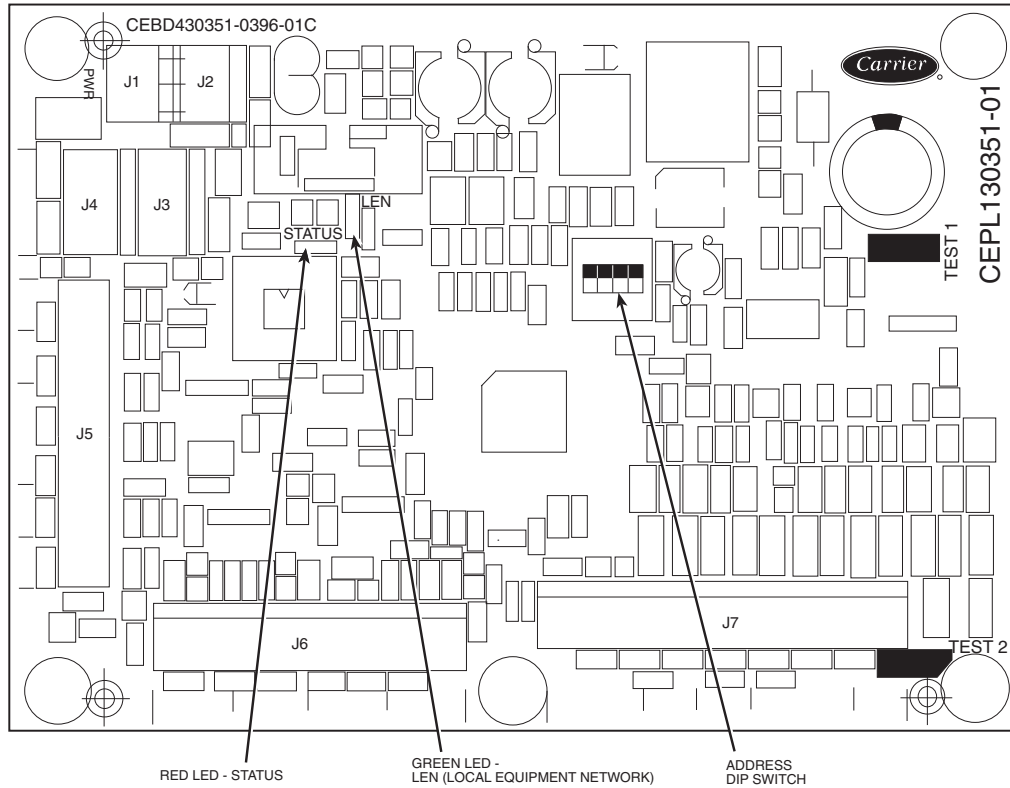
NOTE: Component arrangement drawings and wiring diagrams show available options that may not be applicable to your unit.

1. Inspect the package contents for missing or damaged parts. File a claim with shipping agency if parts are damaged. Notify your Carrier representative if any items are missing.
2. Open and tag all electrical disconnects.
3. Access control box:
  - a. Model 30RAP010-030, 30MP015-045 and 38AP025-030 units: Open control box door and remove inner cover.
  - b. Model 30RAP035-150 and 38AP040-130 units: Open center control box door.
4. For 30RAP and 38AP units, loosen the four screws securing the scrolling marquee display bracket. Lift the bracket up and slide it in the holding slots at the top of its mounting bracket.

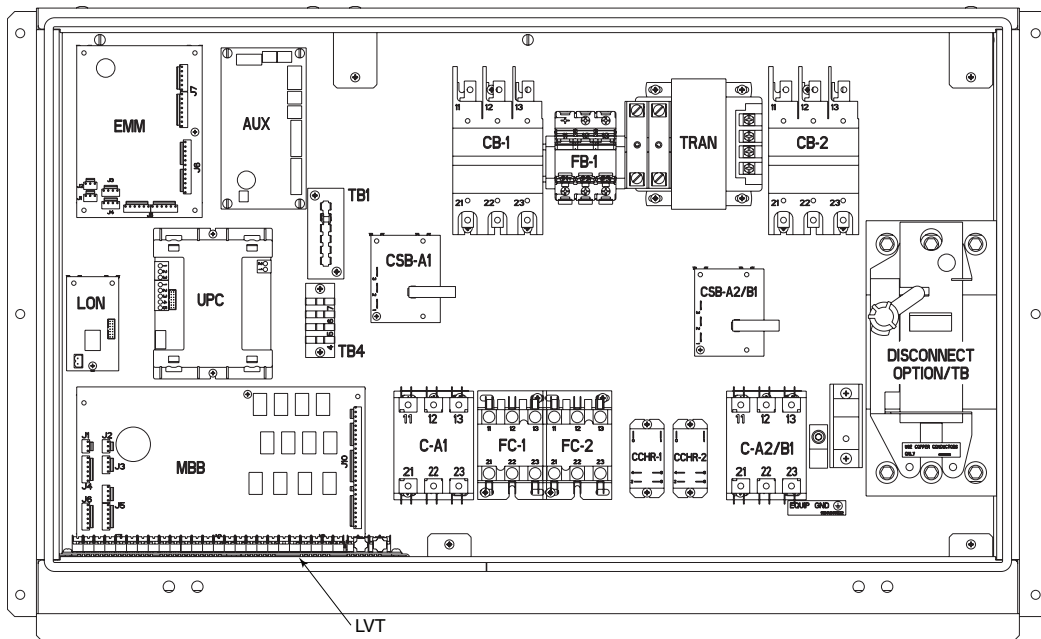
For 30MP units, carefully suspend the display bracket from the wiring harness.

5. Using the no. 6 screw provided and the existing retaining clips in the control box, mount the EMM module to the back of the control box. See Fig. 2-8 for the mounting location of each unit.


6. The board address is set through a 4-position DIP switch. All switches should be set to ON.



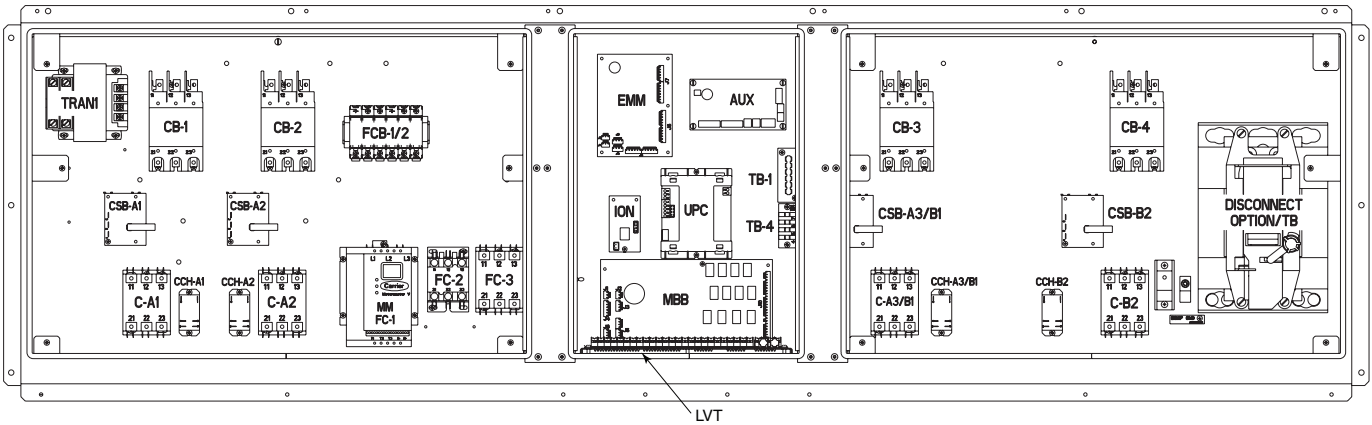
**Fig. 1 — EMM Board**



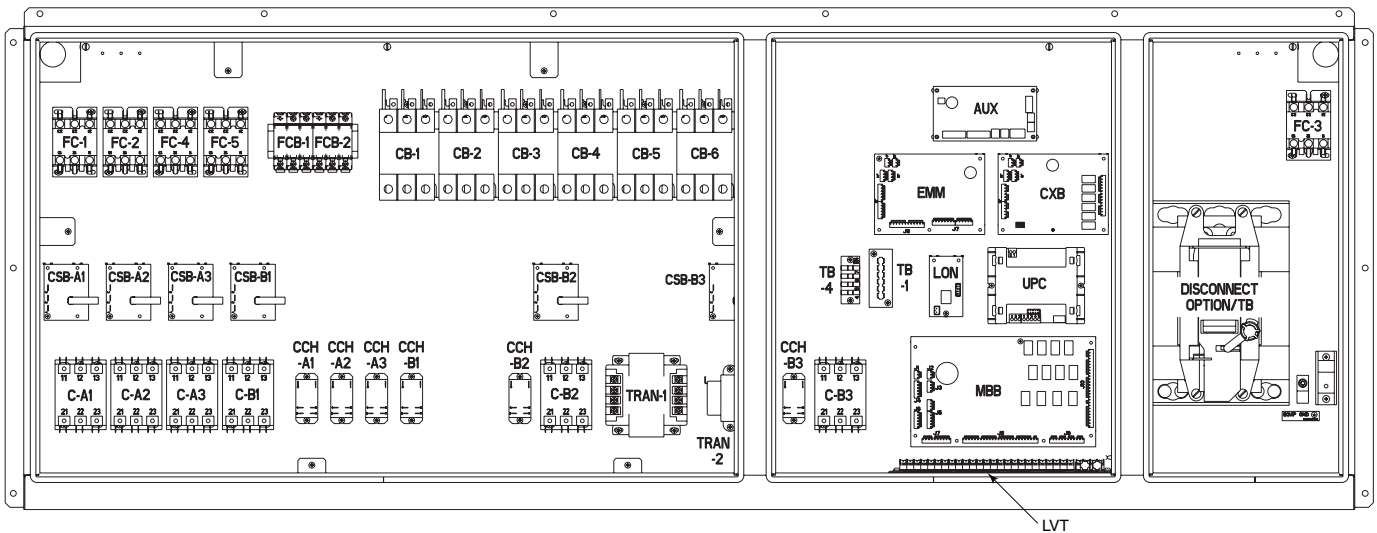
**LEGEND**

- |                                       |   |
|---------------------------------------|---|
| <b>CB</b> — Circuit Breaker           | <b>TB</b> — Terminal Block  |
| <b>EMM</b> — Energy Management Module | <b>TRAN</b> — Transformer   |
| <b>EQUIP</b> — Equipment              |  Terminal Block Connection |
| <b>GND</b> — Ground                   |   |
| <b>LVT</b> — Low Voltage Terminal     |   |
| <b>MBB</b> — Main Base Board          |   |

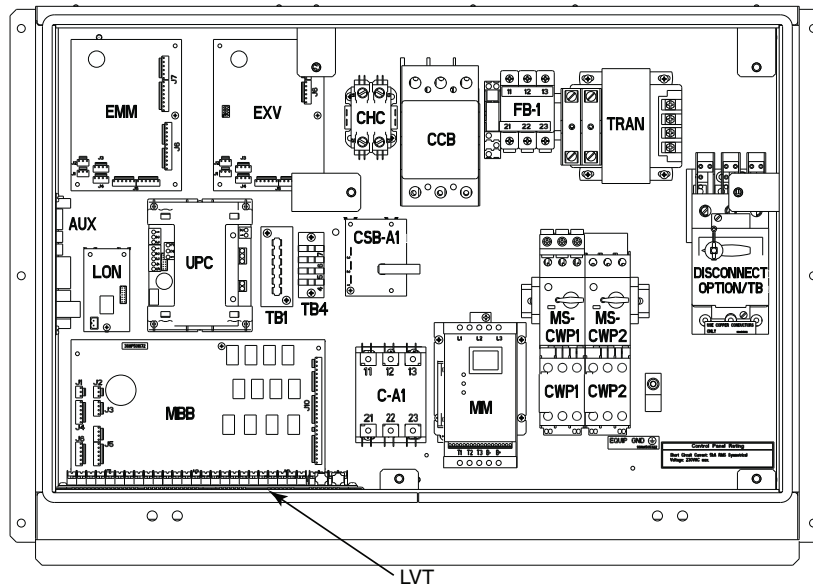
**Fig. 2 — Mounting EMM — 38AP025-030 Units**



**Fig. 3 — Mounting EMM — 38AP040-060 Units**




**Fig. 4 — Mounting EMM — 38AP065-130 Units**



**Fig. 5 — Mounting EMM — 30RAP010 and 015 Units**

LEGEND FOR FIG. 3-5

- |              |                              |   |                           |
|--------------|------------------------------|---|---------------------------|
| <b>CB</b>    | — Circuit Breaker            | <b>MBB</b>  | — Main Base Board         |
| <b>CCB</b>   | — Compressor Circuit Breaker | <b>TB</b>   | — Terminal Block          |
| <b>CXB</b>   | — Compressor Expansion Board | <b>TRAN</b>   | — Transformer             |
| <b>EMM</b>   | — Energy Management Module   |  | Terminal Block Connection |
| <b>EQUIP</b> | — Equipment                  |   |                           |
| <b>GND</b>   | — Ground                     |   |                           |
| <b>LVT</b>   | — Low Voltage Terminal       |   |                           |

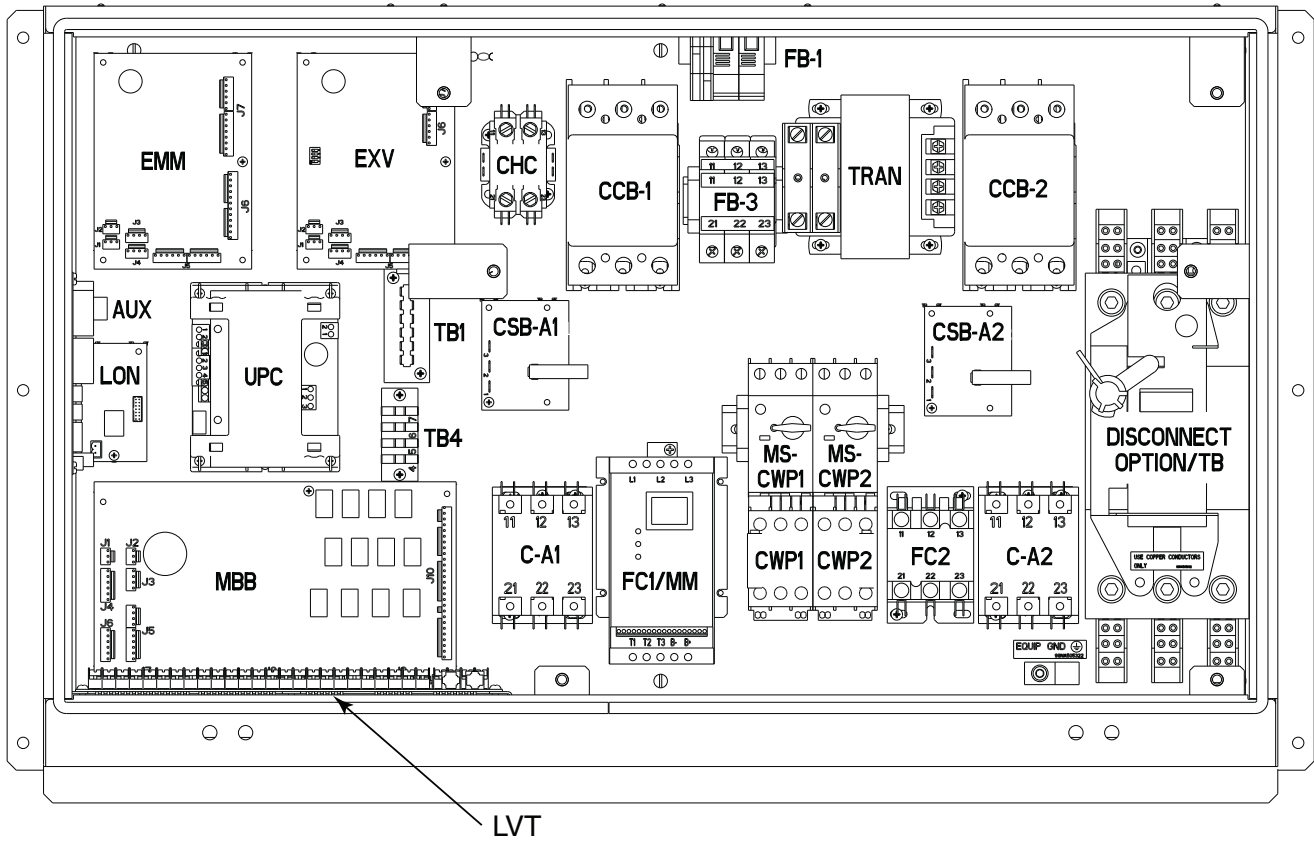


Fig. 6 — Mounting EMM — 30RAP018-030 Units

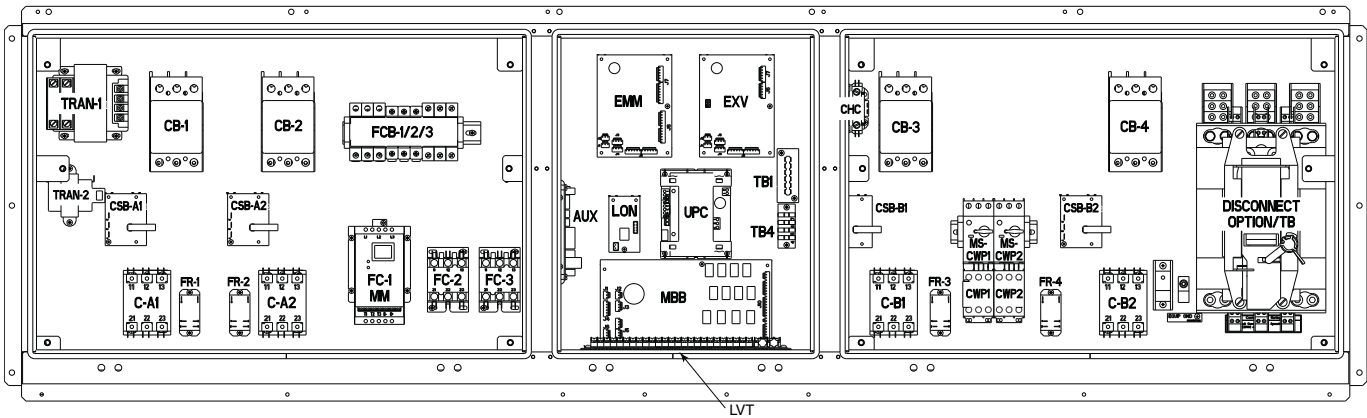

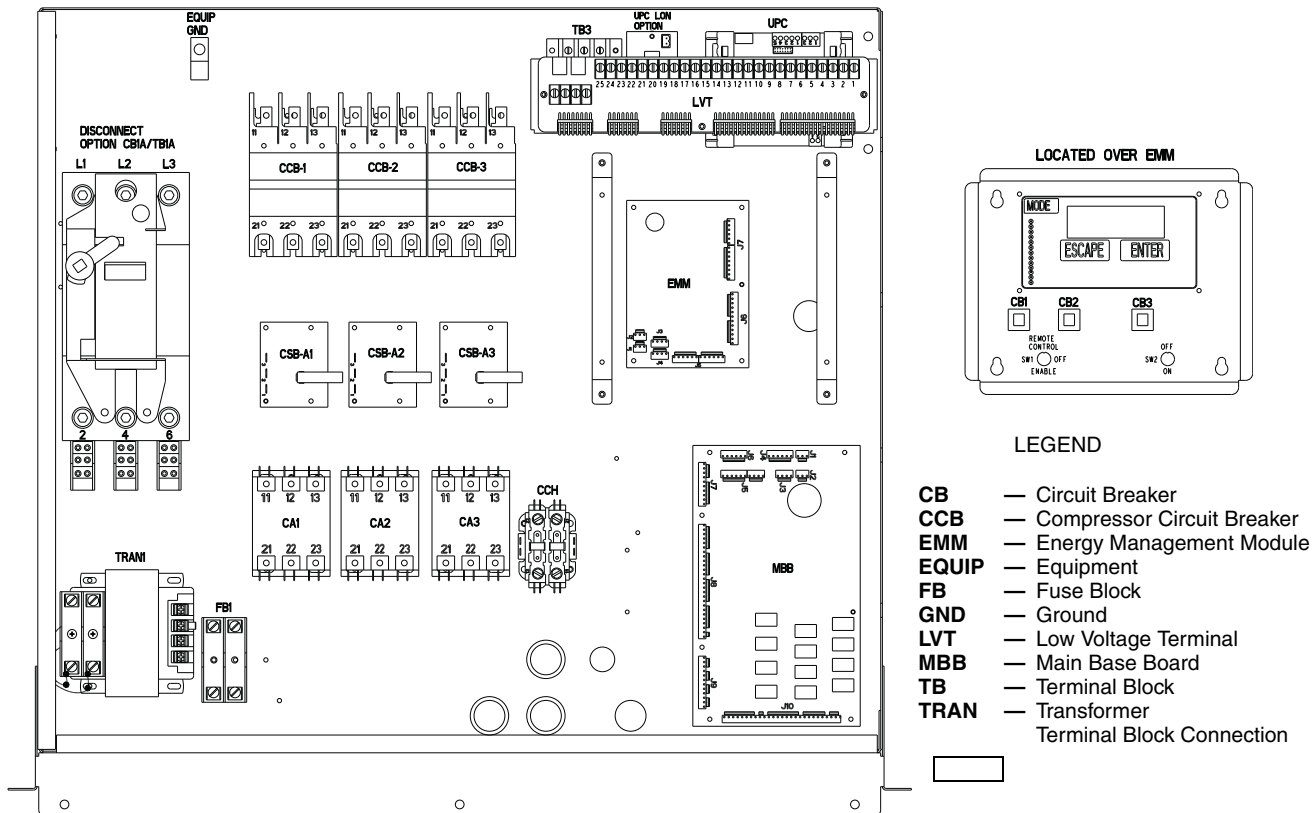


Fig. 7 — Mounting EMM — Typical 30RAP035-150 Units, 035-060 Shown

LEGEND FOR FIG. 6 AND 7

- |              |                              |   |                           |
|--------------|------------------------------|---|---------------------------|
| <b>CB</b>    | — Circuit Breaker            | <b>TB</b>   | — Terminal Block          |
| <b>CCB</b>   | — Compressor Circuit Breaker | <b>TRAN</b>   | — Transformer             |
| <b>EMM</b>   | — Energy Management Module   |  | Terminal Block Connection |
| <b>EQUIP</b> | — Equipment                  |   |                           |
| <b>GND</b>   | — Ground                     |   |                           |
| <b>LVT</b>   | — Low Voltage Terminal       |   |                           |
| <b>MBB</b>   | — Main Base Board            |   |                           |



**Fig. 8 — Mounting EMM — 30MP015-45 Units**

### Install Harness and Make Wire Connections

**38AP025-060 UNITS WITH AUX BOARD** — Perform the following procedure to install the harness and make the wiring connections. See Fig. 9 for wiring.

1. Disconnect the MBB-J3 connector and plug it into the EMM-J3 connector.
2. Install the new harness 38APHLSBCE-A00 provided.
  - a. Install plug labeled MBB-J3 to MBB-J3 and other end labeled EMM-J4 to EMM-J4.
  - b. Install plug labeled MBB-J2 connector to MBB-J2 and other end labeled EMM-J1 to EMM-J1.
  - c. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

**38AP025-060 UNITS WITHOUT AUX BOARD** — Perform the following procedure to install the harness and make the wiring connections. See Fig. 9 for wiring.

Install the new harness 38APHLSBCE-A00 provided.

1. Install plug labeled MBB-J3 to MBB-J3 and other end labeled EMM-J4 to EMM-J4.
2. Install plug labeled MBB-J2 connector to MBB-J2 and other end labeled EMM-J1 to EMM-J1.
3. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

**38AP065-130 UNITS WITH AUX BOARD** — Perform the following procedure to install the harness and make the wiring connections. See Fig. 10 for wiring.

1. Disconnect the CXB connector J4 and plug it into the EMM connector J3.
2. Install the new harness 38APHLSLCE-A00 provided.
  - a. Install plug labeled CXB-J4 to CXB-J4 and other end labeled EMM-J4 to EMM-J4.

- b. Install plug labeled CXB-J2 connector to CXB-J2 and other end labeled EMM-J1 to EMM-J1.

- c. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

**38AP065-130 UNITS WITHOUT AUX BOARD** — Perform the following procedure to install the harness and make the wiring connections. See Fig. 10 for wiring.

Install the new harness 38APHLSLCE-A00 provided.

1. Install plug labeled CXB-J4 to CXB-J4 and other end labeled EMM-J4 to EMM-J4.
2. Install plug labeled CXB-J2 connector to CXB-J2 and other end labeled EMM-J1 to EMM-J1.
3. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

**30RAP010-060 UNITS WITH AUX BOARD** — Perform the following procedure to install the harness and make the wiring connections. See Fig. 11 for wiring.

1. Disconnect the EXV connector J4 and plug it into the EMM connector J4.
2. Install the new harness 38APHSCALECA00. Install plug labeled EXV-J4 to EXV-J4 and other end labeled EMM-J3 to EMM-J3.
3. Install the new harness 38APHSCALECA10. Disconnect MBB connector J2 and plug it into the EMM-J2. Install plug labeled MBB/EXV-J2 to MBB-J2 and other end labeled EMM-J1 to EMM-J1.
4. Install the new harness 38APHSCALE-A00. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.
5. Install the new harness 38APHSCALEXCA00 provided. Install plug labeled EMM-J3 to EMM-J3 and other end labeled AUX-J9 to AUX-J9.

30RAP010-060 UNITS WITHOUT AUX BOARD — Perform the following procedure to install the harness and make the wiring connections. See Fig. 11 for wiring.

1. Install the new harness 38APHSCALECA00. Install plug labeled EXV-J4 to EXV-J4 and other end labeled EMM-J3 to EMM-J3.
2. Install the new harness 38APHSCALECA10. Install plug labeled MBB/EXV-J2 to MBB-J2 and other end labeled EMM-J1 to EMM-J1.
3. Install the new harness 38APHSCALE-A00. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

30RAP070-150 UNITS WITH AUX BOARD — Perform the following procedure to install the harness and make the wiring connections. See Fig. 12 for wiring.

1. Disconnect the CXB connector J4 and plug it into the EMM connector J4.
2. Install the new harness 38APHSCALECA00. Install plug labeled EXV-J4 to CXB-J4 and other end labeled EMM-J3 to EMM-J3.
3. Install the new harness 38APHSCALECA10. Install plug labeled MBB/EXV-J2 to CXB-J2 and other end labeled EMM-J1 to EMM-J1.
4. Install the new harness 38APHSCALE-A00. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

30RAP070-090 UNITS WITHOUT AUX BOARD — Perform the following procedure to install the harness and make the wiring connections. See Fig. 11 for wiring.

1. Install the new harness 38APHSCALECA00. Install the plug labeled EXV-J4 to CXB-J4 and other end labeled EMM-J3 to EMM-J3.
2. Install the new harness 38APHSCALECA10. Install plug labeled MBB/EXV-J2 to CXB-J2 and other end labeled EMM-J1 to EMM-J1.
3. Install the new harness 38APHSCALE-A00. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and other end labeled LVT-J10 to LVT terminal strip.

30MP015-045 UNITS WITH AUX BOARD — Perform the following procedure to install the harness and make the wiring connections. See Fig. 13 for wiring.

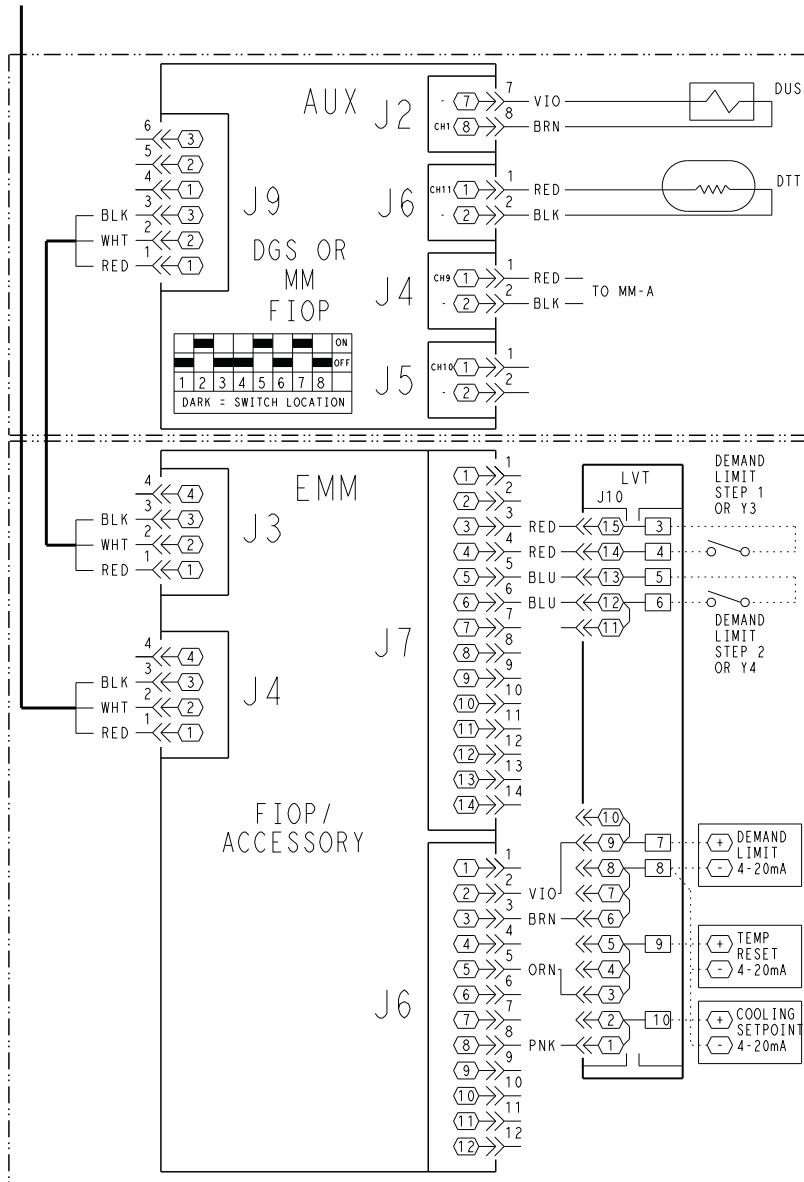
1. Disconnect the MBB connector J3 and plug it into the EMM connector J3.
2. Install the new harness 38APHSCALECA00. Install one end of the harness in MBB connector J3 and the other end in EMM connector J4.
3. Install the new harness 38APHSCALECA10. Install plug labeled MBB/EXV-J2 to MBB-J2 and other end labeled EMM-J1 to EMM-J1.
4. Install the new harness 38APHSCALE-A00. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and the other end labeled LVT-J10 to J10 of the LVT terminal strip.
5. Install the new harness 38APHSCALXCA00 provided. Install plug labeled EMM-J3 to EMM-J3 and other end labeled AUX-J9 to AUX-J9.

30MP015-045 UNITS WITHOUT AUX BOARD — Perform the following procedure to install the harness and make the wiring connections. See Fig. 13 for wiring.

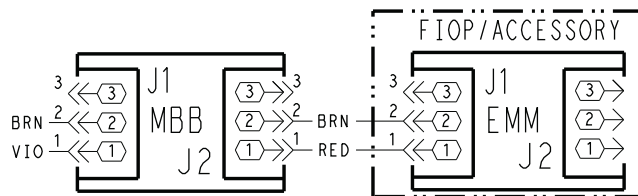
1. Install the new harness 38APHSCALECA00. Install one end of the harness in MBB connector J3 and the other end in EMM connector J4.
2. Install the new harness 38APHSCALECA10. Install plug labeled MBB/EXV-J2 to MBB-J2 and other end labeled EMM-J1 to EMM-J1.
3. Install the new harness 38APHSCALE-A00. Install plugs labeled EMM-J6 and J7 to EMM-J6 and J7 and the other end labeled LVT-J10 to J10 of the LVT terminal strip.

FIELD WIRING CONNECTIONS — Refer to Fig. 9-13 for field wiring interfaces with the LVT terminal strip.

**Controls Configuration for EMM Options —** Refer to the 38AP controls and troubleshooting manual for split system configuration of controls. Refer to the 30RAP controls and troubleshooting manual for Aquasnap® configuration of controls. Refer to the 30MP controls and troubleshooting manual for configuration of controls.



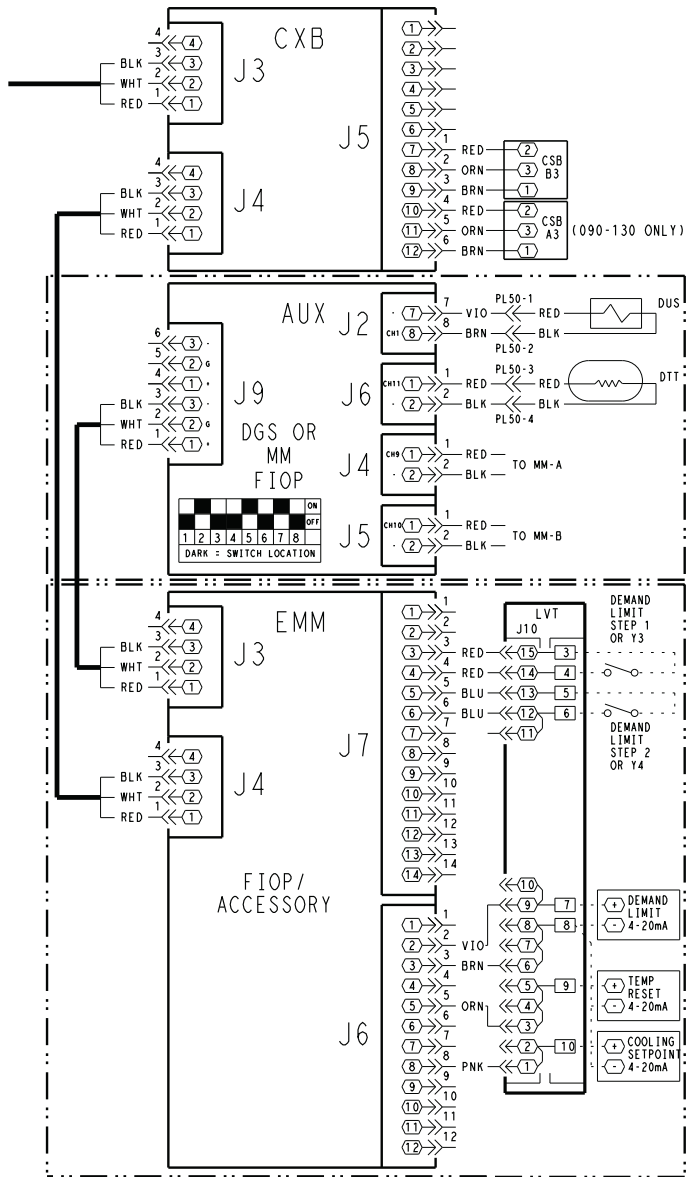
24-V POWER CONNECTION



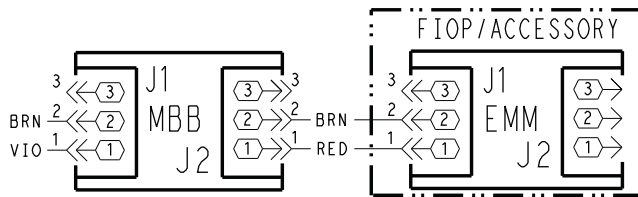
LEGEND

- EMM — Energy Management Module
- FIOP — Factory-Installed Option
- LVT — Low Voltage Terminal
- MBB — Main Base Board
- Field Wiring

Fig. 9 — Typical Wiring Connections (38AP025-060 Units)



24-V POWER CONNECTION

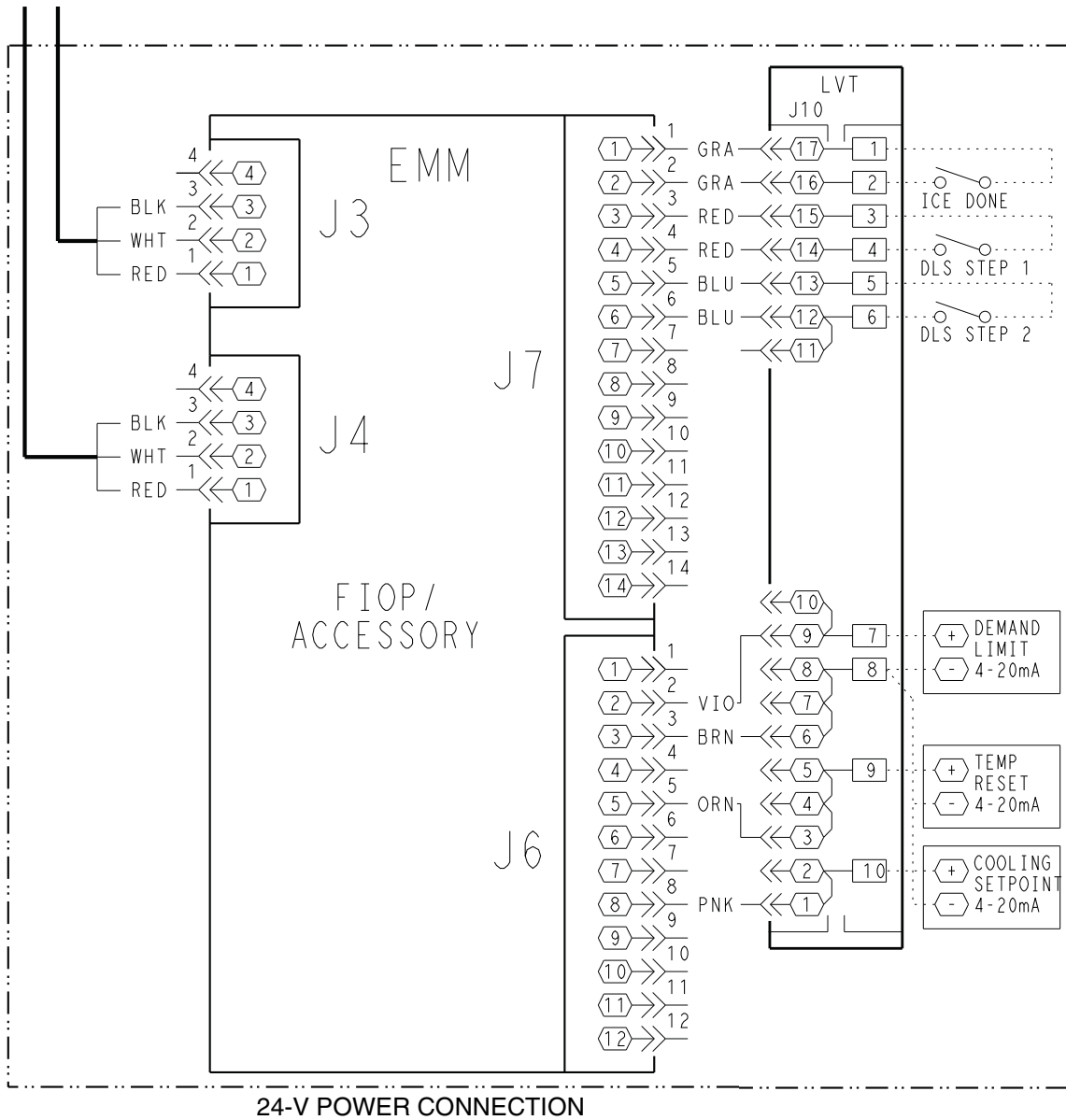


LEGEND

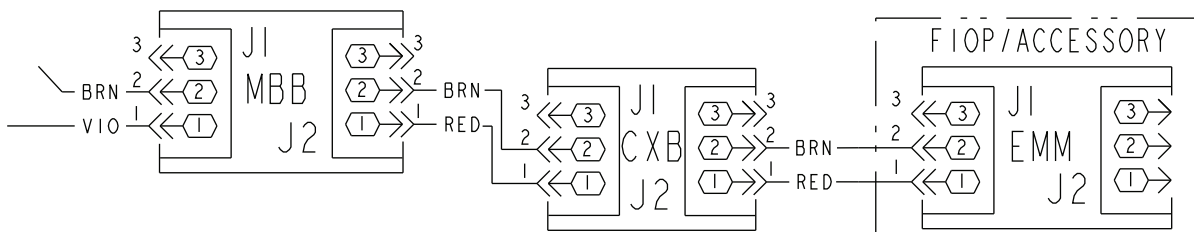
- CXB** — Compressor Expansion Board
- EMM** — Energy Management Module
- FIO/** — Factory-Installed Option
- MBB** — Main Base Board
- Field Wiring

Fig. 10 — Typical Wiring Connections (38AP065-130 Units)





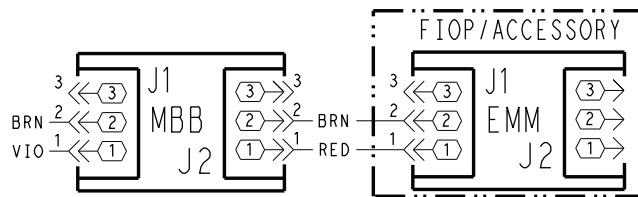
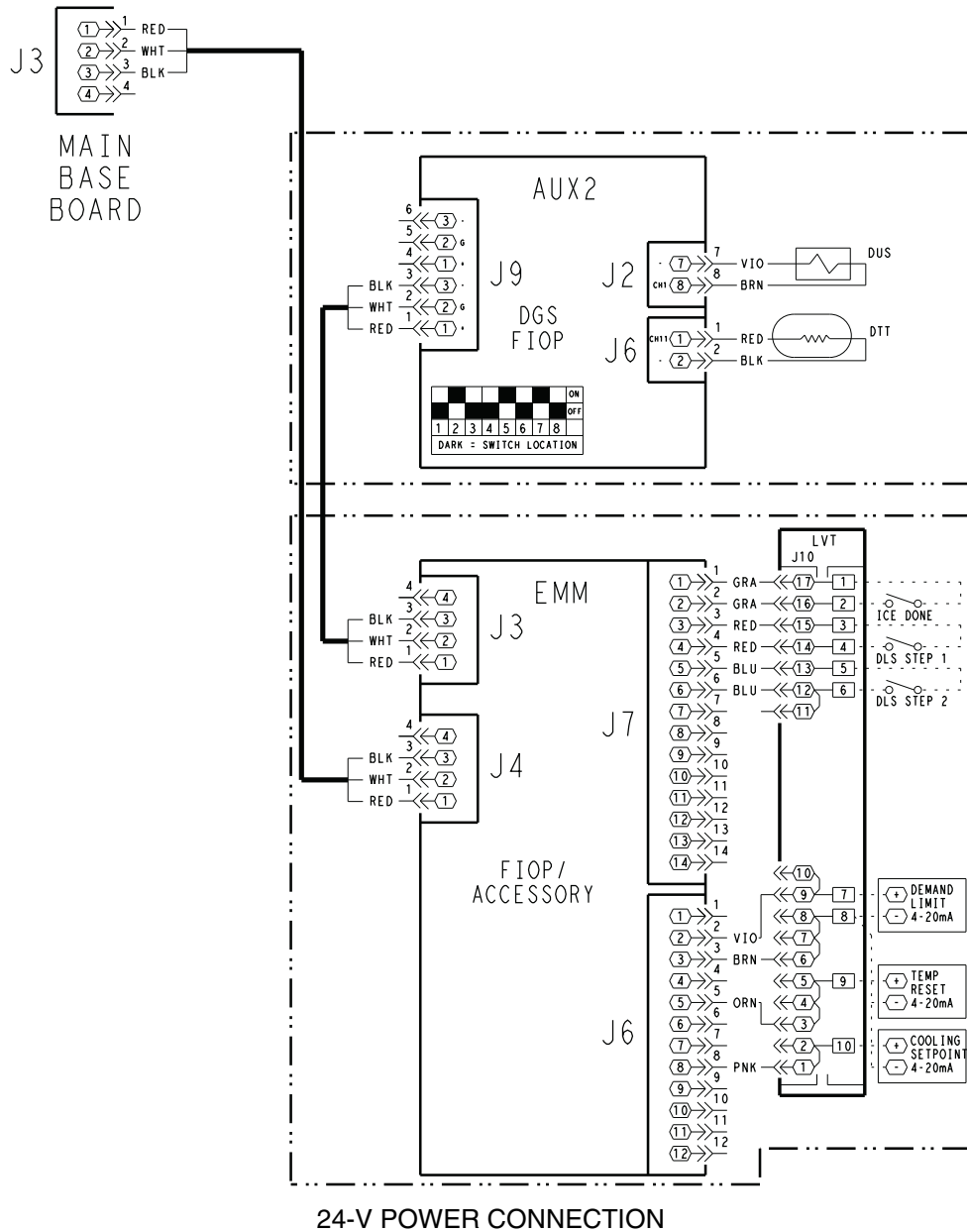
**Fig. 11 — Typical Wiring Connections (30RAP010-060 Units)**



**Fig. 12 — Typical Wiring Connections (30RAP070-150 Units)**

LEGEND FOR FIG. 11 AND 12

- |   |                                   |
|---|-----------------------------------|
| <b>CXB</b> — Compressor Expansion Board | <b>LVT</b> — Low Voltage Terminal |
| <b>EMM</b> — Energy Management Module   | <b>MBB</b> — Main Base Board      |
| <b>FIOP</b> — Factory-Installed Option  | --- Field Wiring                  |



**LEGEND**

- |  |                              |
|--|------------------------------|
| <b>EMM</b> — Energy Management Module  | <b>MBB</b> — Main Base Board |
| <b>FIOP</b> — Factory-Installed Option | --- Field Wiring             |
| <b>LVT</b> — Low Voltage Terminal      |                              |

**Fig. 13 — Typical Wiring Connections (30MP015-45 Units)**



