



Installation Instructions

Part No.: 00EFN900004700A

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- 24 vac discrete output signal for field-supplied relay indication of running status
- Second step demand limit control via field-supplied two-step switch input
- Demand limit control by 4 to 20 mA field-supplied signal
- 24 vac discrete output signal for field-supplied relay indication of compressor A run status
- 24 vac discrete output signal for field-supplied relay indication of compressor B run status

SAFETY CONSIDERATIONS

Installing, starting up, and servicing air-conditioning equipment can be hazardous due to system pressures, electrical components, and equipment location.

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

When working on air-conditioning equipment, observe precautions in the literature, on tags, stickers, and labels attached to the equipment.

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

⚠ WARNING

Be sure power to equipment is shut off before performing maintenance, service, or installing this equipment. Lock out and safety-tag all disconnects. Be aware that there may be more than one disconnect. Failure to do so could result in serious personal injury from electric shock.

GENERAL

The standard *ComfortLink™* control software provided on all 30XW chillers is programmed to accept various accessory temperature reset options that reset the leaving chilled water temperature (LCWT). The energy management module (EMM) accessory is required for the 4 to 20 mA or second step demand limit control. (The first step demand limit control is available via the main base board as a standard feature.) Chilled water temperature reset (by return water or cooler delta T) does NOT require the addition of the EMM accessory.

The following features are supported by this accessory:

- Temperature reset by space temperature
- Temperature reset by 4 to 20 mA field-supplied signal
- Occupancy override by field-supplied switch input
- Remote chiller lockout by field-supplied switch input
- Unoccupied operation for ice making through field-supplied switch input
- 0 to 10 vdc analog output indicating percent total chiller running capacity
- 24 vac discrete output signal for field-supplied relay indication of shutdown status

INSTALLATION

Examine the package contents for correct part numbers. If any of the components are damaged, file a claim with the shipping company and notify a Carrier representative. See Table 1.

Table 1 — Accessory Package Contents

DESCRIPTION	PART NO.	QTY
Energy Management Board	00PSN500038300A	1
Terminal Block (TB6)	HY84HA101	1
Wiring Harness (EMM to TB6)	HA-XW-211743	1
Terminal Block Mounting Screws, #8	A6X10004352	2
EMM Board Mounting Spacers (30XW150-300)	A6X10004434, 1/2 in. long	6
EMM Board Mounting Spacers (30XW325-400)	A6X10004424, 1 1/2 in. long	4
EMM Board Mounting Screws	A6X10004352	2
EMM Board Mounting Lock Washers	YK-021-01133-000	2

LEGEND

EMM — Energy Management Module

1. Disconnect unit power.
2. Locate the EXV1 board (sizes 150-300) or the CPM-A board (sizes 325-400) directly behind the display area on a sub-plate.

30XW150-300 Units

1. Carefully remove the wiring from the EXV1 board. Loosen and remove the 4 corner screws securing the board and remove it from the panel. Save the board, screws and lock washers for reinstallation.
2. Remove the spacers installed and save for re-use. Install six new 1/2 in. long spacers provided in the kit into the panel nuts.
3. Install the new energy management board onto the 6 spacers. The 2-pin power connector (J1) should be in the upper right corner.
4. Install the 2 screws and lock washers provided in the kit into the spacers closest to the main base board to keep the board in place.
5. Locate the harness provided with the kit and make all EMM board connections. See Fig. 1. Route the remainder of the harness toward the right side of the display plate.

- Install the 4 original 1½ in. long spacers through the 4 remaining EMM board mounting holes.
- Reposition the EXV1 board over the EMM board on the 4 threaded studs. Replace the lock washers and screws, then secure the EXV1 board and reconnect all wiring.
- Locate the TB6 board and mounting screws supplied in the kit. Mount the TB6 board to the right of the TB5 board on the display plate in the same orientation as TB5. See Fig. 2.
- Route other end of EMM harness to back side of TB6 and make all connections.

Installation of the accessory components is now complete. Customer interface wiring to the EMM board can now be connected to the front (screw terminal) side of TB6. Refer to Fig. 1 for wiring connections to TB6 and the EMM board. Refer to Fig. 2 for component layout.

30XW325-400 Units

- Carefully remove the wiring from the CPM-A board. Loosen and remove the 4 corner screws securing the board and remove it from the panel. Save the board, screws and lock washers for reinstallation. Leave the spacers installed.
- Install the new energy management board onto the 4 spacers. The 2 pin power connector (J1) should be in the lower right corner.
- Install the four 1½ in. long spacers provided in the kit to secure the board in place.
- Locate the harness provided with the kit and make all EMM board connections. See Fig. 1. Route the remainder of the harness toward the left side of the display plate.
- Reposition the CPM-A board over the EMM board on the 4 spacers. Replace the lock washers and screws, then secure the CPM-A board and reconnect all wiring.
- Locate the TB6 board and mounting screws supplied in the kit. Mount the TB6 board to the right of the TB5 board on the circuit breaker plate in the same orientation as TB5. This plate is behind the left side (circuit B) panel. See Fig. 3.
- Route other end of EMM harness through split loom tubing across center power entry section and to back side of TB6 and make all connections.

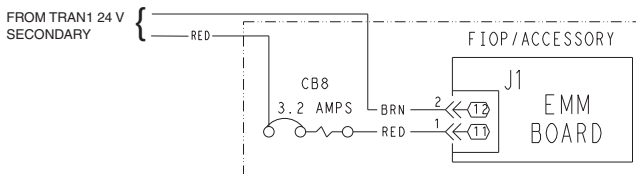
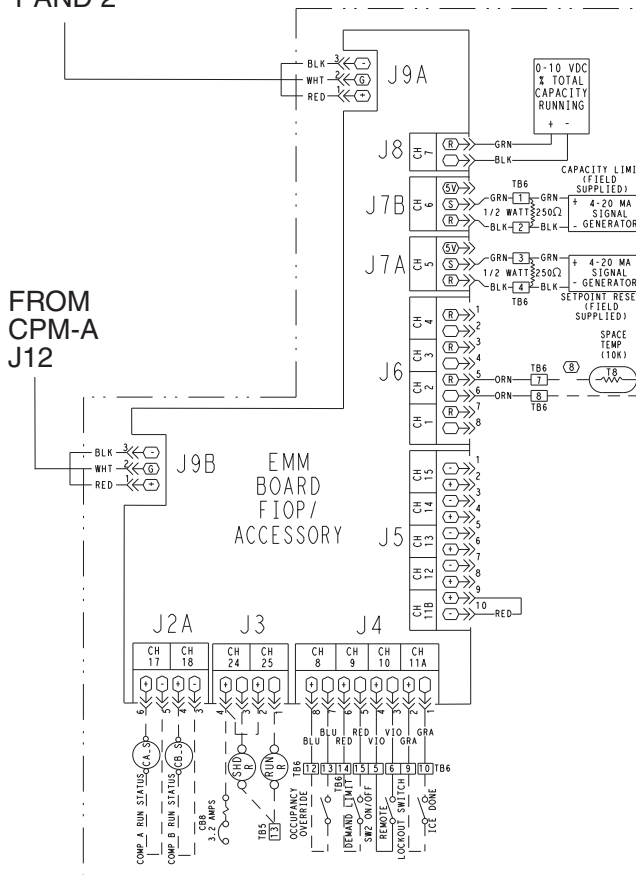
Installation of the accessory components is now complete. Customer interface wiring to the EMM board can now be connected to the front (screw terminal) side of TB6. Refer to Fig. 1 for wiring connections to TB6 and the EMM board. Refer to Fig. 3 for component layout.

Configuration — The controls must be configured to recognize the EMM board. The Navigator™ module or Touch Pilot™ display may be used to do this.

To enable the EMM board with the Navigator module:

- Press **[ESCAPE]** until the screen shows one of the top level mode LED descriptions.
- Use the arrow keys to select the Configuration mode LED.
- Press **[ENTER]**, then the down arrow key, and then **[ENTER]** again. TYPE is now displayed.
- Press the down arrow key until EMM is displayed.
- Press **[ENTER]** and the display will show PASS then WORD. Use the arrow key to change the first one to a zero, then press **[ENTER]** four times to confirm the password. If the password is different from the default, 0111, use the arrow keys as needed. The NO value will now be flashing.

TO EXV
BOARDS
1 AND 2



LEGEND

- CPM — Compressor Protection Module
- CB — Circuit Breaker
- EMM — Energy Management Module
- EXV — Electronic Expansion Valve
- FIOP — Factory-Installed Option
- TB — Terminal Block






*Communication wiring path varies according to boards installed.

Fig. 1 — Typical 30XW Unit EMM Board Wiring

- Press the up arrow key to change the value to YES and **[ENTER]** to accept the change.
- Press **[ESCAPE]** twice and cycle the control power before continuing. Password entry will be required again before changing any other parameters.

To enable the EMM board with the Touch Pilot Display:

- Push the Main Menu button **≡** on the bottom line of the display, and then select Service → Factory to navigate to the factory table.
- Scroll down the screen by pushing the Scroll Down button **↓** or Page Down button **↵** until the Energy Management Module is displayed on the screen.

3. Push the Energy Management Module button to display the Point Data menu.
4. Push the Modify button . If the login menu is displayed, log in with the password. The default password is 3333.
5. Press the OK button  to confirm the input. The value of emm_nrcp will display.
6. Select Yes and press the OK button  to confirm the input.
7. Push the Home button  on the bottom line. A save confirmation menu will display.
8. Push the OK button  to confirm the action.

EMM Input Functions — A field-supplied set of dry contacts can be used to provide an occupancy override (TB6-12,13) signal, remote chiller lockout (TB6-5,6) or ice done signal (TB6-9,10) to the controls. The occupancy override switch can be used to put the chiller in an occupied mode during a normally scheduled unoccupied mode of operation. The remote chiller lockout function will disable the chiller when closed. With the ice mode configuration enabled and this contact open,

a brine chiller will be able to operate as desired during off peak times in conjunction with an ice storage system. Operation in ice mode ends when the contact closes. Refer to the Controls and Operation manual supplied with the chiller for more information on the correct configuration of these and all available EMM options.

EMM Output Functions — One analog and 4 discrete outputs are available from the EMM board. A 0 to 10 vdc analog output is available to linearly indicate the current total chiller capacity running. Connection for this output signal is made at 2 wires from plug J8. There are also 24 vac discrete outputs available from plug J3 (follow the wiring shown in Fig. 1). One of the outputs is turned on if the chiller is completely shut-down. The second output is a running relay output and it is turned on if the chiller capacity is anything greater than 0%. The third and fourth outputs are compressor run status outputs for each circuit. These outputs are turned on whenever a compressor in a circuit is running at greater than 0%. All 5 of these outputs are to assist with remote monitoring of the chiller operation. Refer to the Controls and Operation manual supplied with the chiller for more information on the correct configuration of these and all available EMM options.

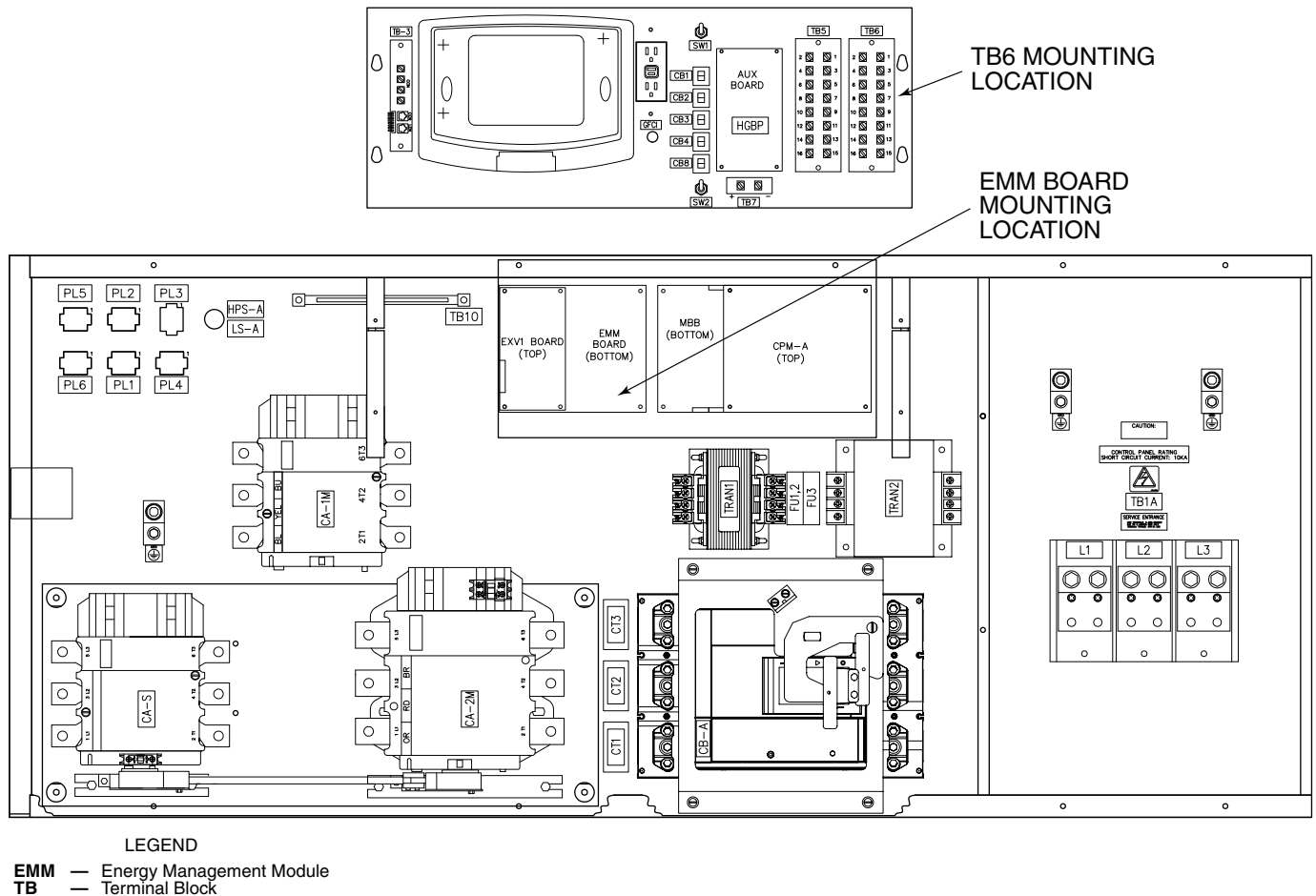
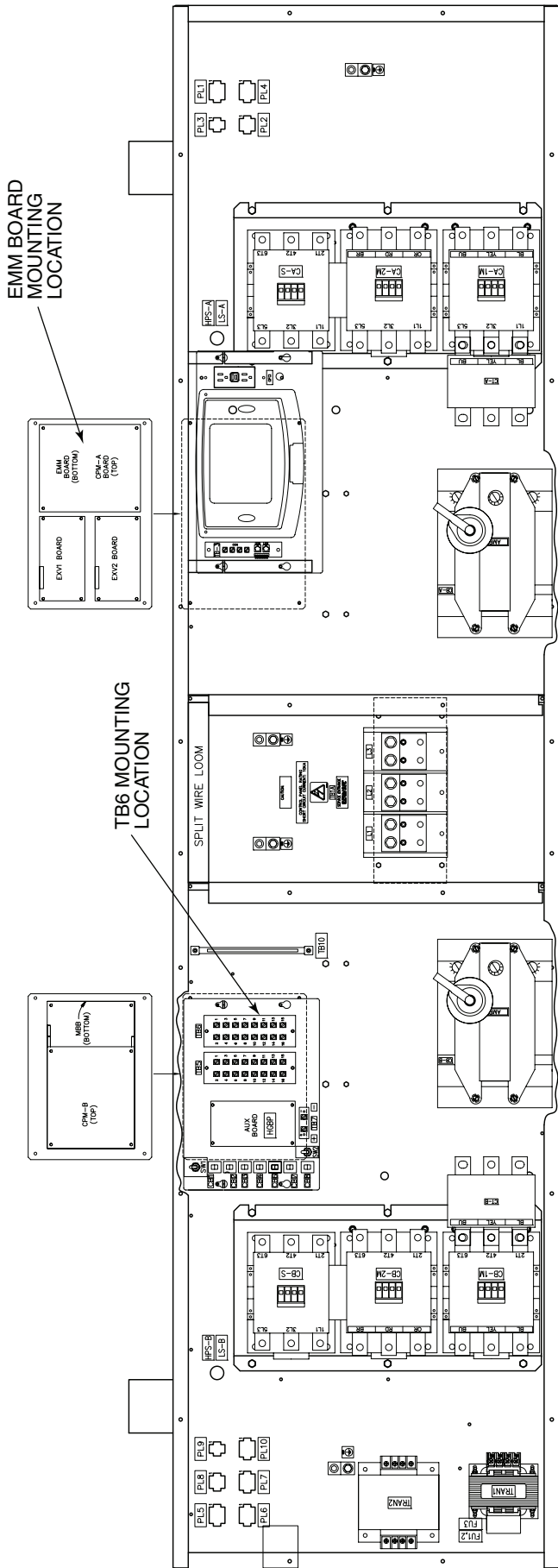


Fig. 2 — 30XW150-300 Unit Component Layout



LEGEND
 EMM — Energy Management Module
 TB — Terminal Block

Fig. 3 — 30XW325-400 Unit Component Layout