



## CMC to DXM CONVERSION INSTALLATION INSTRUCTIONS

**\* IMPORTANT \* READ AND UNDERSTAND ALL INSTALLATION INSTRUCTIONS BEFORE BEGINNING CONVERSION. INSTALLATION OF THE NEW DXM CONTROL BOARD SHOULD ONLY BE ATTEMPTED BY A QUALIFIED TECHNICIAN.**

- 1) Disconnect power supply(s) to heatpump unit. Failure to disconnect power supply may result in damage, serious injury, or death.
- 2) Remove old CMC control board(s) and mounting standoffs from unit control box. Insert wires into new retro-harness as disconnected, or label wires are removed for easier identification during installation.
- 3) Drill (4) 1/8" diameter holes for each board in unit control box for new mounting screws using drawing provided. Install the new DXM control board(s) using the screws provided.
  - **IMPORTANT:** Electrical grounding for the DXM control board(s) is provided via the metal standoffs of the board. **ALL MOUNTING SCREWS MUST BE INSTALLED FOR PROPER BOARD OPERATION.**
  - **NOTE:** If the DXM control board is being installed in a unit with high voltage connections to the L1 and L2 terminals of the CMC board, the terminal connector provided with the kit will also need to be installed in the unit control box.
  - **NOTE:** If the relays on the CMC control board are being used for direct high voltage switching for the fan and compressor motors, the new relay and compressor contactor provided in the kit must be installed in the unit control box. If the relays on the CMC control board are being used for switching of the 24 V control circuit, use the outputs on the new control board for the compressor relay/contactor control. Use the fan enable and/or fan speed relays on the new control board for control of the fan motor. Refer to the DXM manual for operation of the fan relays.
- 4) Install the FP-1 and FP-2 sensors in the proper location (if used). See refrigerant piping detail for proper sensor location.
  - **NOTE:** The existing freezestat can be used in place of the FP-1 sensor, and the FP-2 sensor can be omitted, however the DXM UPS feature will be inoperative and **must** be disabled. **Both sensors must be installed in the proper location for the UPS feature to operate properly.** If the FP-2 sensor is not used, the violet jumper wire must be installed in the retro wiring harness at the FP-2 pins **and** the UPS feature **must** be disabled. To disable the UPS feature move dip 1.1 to the "OFF" position.
- 5) Connect the wiring from the unit safeties and sensors to the retro-harness if not done in step 2. Plug the retro-harness connector onto the new DXM board(s) in the proper location. Connect the thermostat, transformer, compressor contactor, fan motor wiring, and any accessory wiring to the new DXM board 1 to the proper terminals. Connect high voltage wiring to the terminal block connector if required. **REFER TO THE NEW WIRING DIAGRAM PROVIDED FOR PROPER WIRING OF THE NEW DXM CONTROL BOARD(S).**
  - Note: The thermostat wiring terminal block may be removed from the DXM board for easier access to the wiring connections. The shutdown and accessory relay terminal blocks are non-removable.



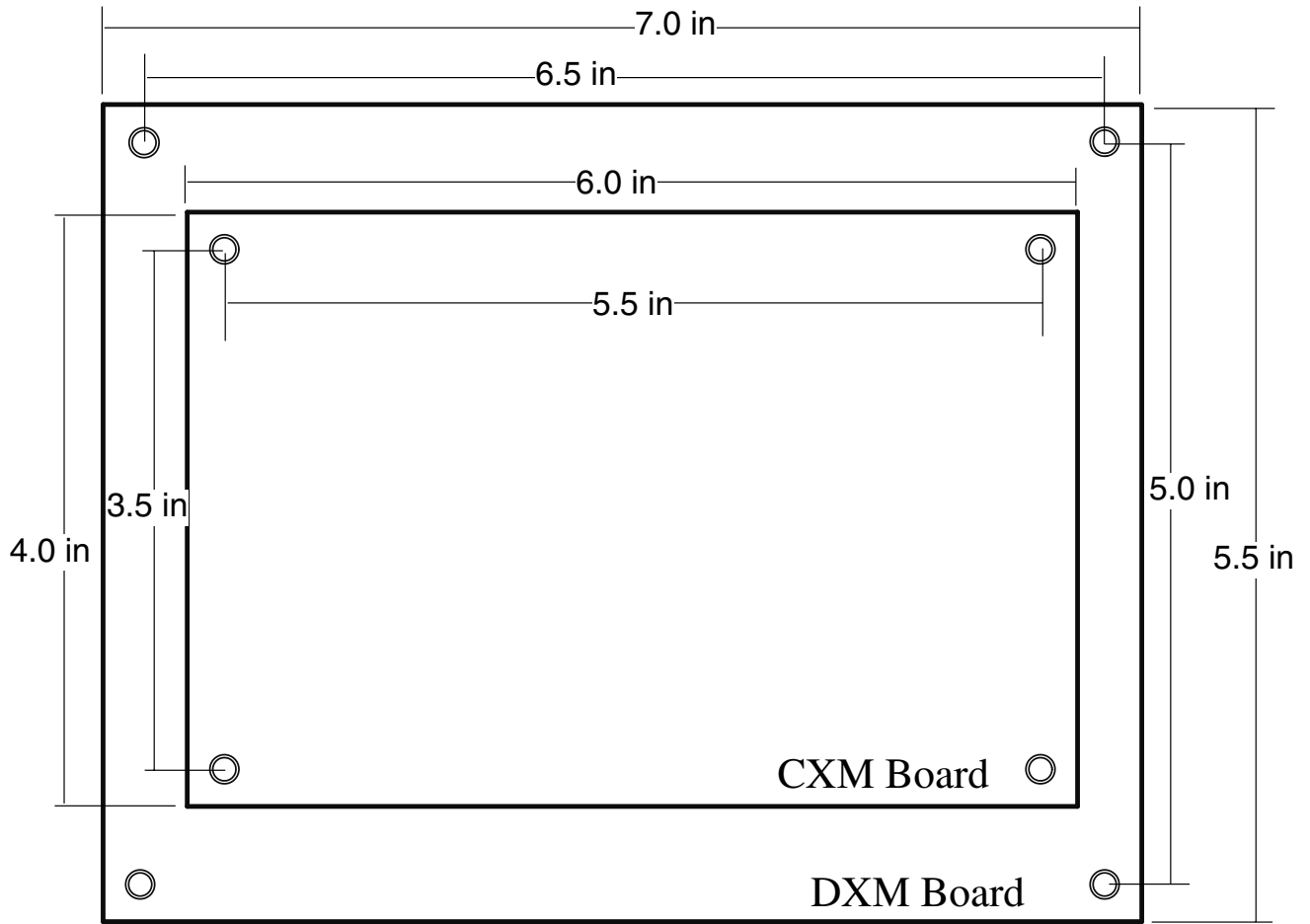
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- 6) Install a new wall thermostat if desired. The DXM control board will not require a new thermostat be installed, however the wiring and setting the dip 1.3 must be correct for the type of control the thermostat is providing (heatpump vs. heat/cool logic) Refer to the IOM provided for a complete explanation of the dipswitch settings and functions. **All ClimateMaster DXM control boards will energize the reversing valve in the cooling mode. Use the “O” terminal on the thermostat if using a heatpump type thermostat.**
  - **Two stage (dual compressor) units only.** Install the provided COM2 wiring harness from board 1 COM2 connector to the board 2 COM2 connector. Set board 1 dip 1.2 to the “ON” position for stage one operation. Set board 2 dip 1.2 to the “OFF” position for stage 2 operation. Board 1 is designated as the board with the thermostat and accessory connections.
- 7) **IMPORTANT: All external wiring connections with the exception of the COM2, CC2 and retro harness must be connected to the board 1 for proper unit operation. DO NOT CONNECT ANY WIRING TO THE P1, P2, OR P3 TERMINAL BLOCKS ON THE DXM2 CONTROL BOARD.**
- 8) Check all remaining dipswitch settings and adjust as needed. Refer to the IOM provided for proper dipswitch settings and functions. Determine the proper operating temperature and alarm parameters, check the board jumpers (JW1-4) and clip the board jumpers only if required AND if the new FP sensors have been installed.
  - **CAUTION: CLIPPING BOARD JUMPERS WILL CHANGE THE TEMPERATURE PROTECTION RANGE OF THE UNIT AND MAY LEAD TO EQUIPMENT DAMAGE AND MAY VOID ANY REMAINING WARRANTIES IF NOT PROPERLY DONE. ONLY CLIP THE JUMPERS IF YOU ARE SURE. DO NOT CLIP THE JUMPERS IF YOU ARE NOT SURE OF THE PROPER TEMPERATURE OPERATING RANGE OF THE UNIT.**
- 9) Recheck all wiring terminations for proper location and connection. Turn on power supply(s) to unit. Check voltage at R and C terminals. Voltage must be between 19 and 30 VAC. Adjust the thermostat and check the DXM control board through all stages and modes of operation.
- 10) NOTE: Shorting across the board test pins for one second will cause the board to enter the test mode. In the test mode, all time delays will be sped up by a factor of fifteen to aid in the checkout procedure. The DXM control board will revert to normal time delay functions after aprox. 20 minutes, or the test pins can be shorted for three seconds to exit the test mode. **USE CAUTION WHILE IN THE TEST MODE, SHORT CYCLING OF THE UNIT MAY LEAD TO COMPRESSOR DAMAGE OF FAILURE.**
- 11) Remove the old unit wiring diagram and install the proper new wiring diagram in its place. Note any changes or special features on the new wiring diagram. Install one conversion sticker in close proximity to the unit data plate and one conversion sticker close to the new wiring diagram. **THE NEW WIRING DIAGRAM AND CONVERSION STICKERS MUST BE INSTALLED TO AID IN FUTURE SERVICING AND PART ORDERING OF THE UNIT.**

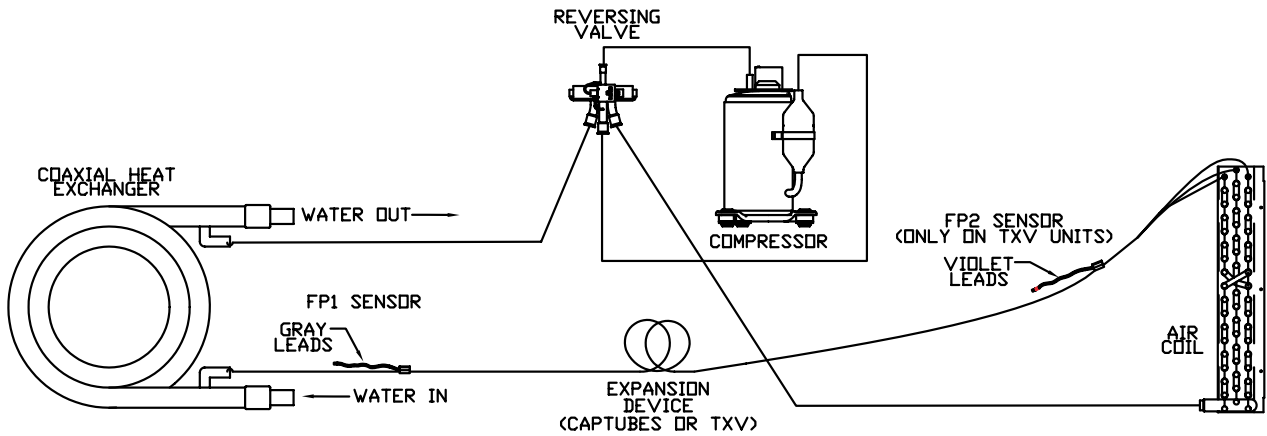
DXM WIRE CHART 1 & 2 STAGE UNITS

COLOR	GAUGE	INSTHK	LENGTH	TERMINAL1	TERMINAL2	FROM	TO
BLU	18	2/64	32	FLAG	INS. STRAIGHT	DXM2 (CC)	CC2(COIL)
BRN	18	2/64	30	FLAG	INS. STRAIGHT	DXM1 (C)	BC(COIL)
BRN	18	2/64	27	FLAG	INS. STRAIGHT	DXM1 (CCG)	CC1(COIL)
BRN	18	2/64	33	FLAG	INS. STRAIGHT	DXM2 (CCG)	CC2(COIL)
GRY	18	2/64	30	FLAG	INS. STRAIGHT	DXM1 (FAN N.O.)	BC(COIL)
RED	18	2/64	6	FLAG	FLAG	DXM1 (R)	DXM1(FAN COM)
YEL	18	2/64	26	FLAG	INS. STRAIGHT	DXM1 (CC)	CC1 (COIL)

**NOTE: FOR SINGLE STAGE UNIT USE ONLY WIRES FROM DXM1 CONNECTIONS.  
DISCARD UNUSED WIRES.**



Drawing not to scale



FP SENSOR INSTALLATION GUIDE



Part # 97B0012N01



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