

PTAC CONTROL BOARD KIT RSKP0014

INSTALLATION INSTRUCTIONS

ATTENTION INSTALLING PERSONNEL

As a professional installer you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair it is possible to place yourself in a position which is more hazardous than when the unit is in operation.



Remember, it is **your** responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices... follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

DESCRIPTION

Control board installation procedures are described in detail in these instructions. Read and follow these instructions carefully before replacing the control board. Failure to do so may result in control board damage.

 WARNING	
HIGH VOLTAGE DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.	

IMPORTANT NOTE:

Damage to the control board can occur from failure to disconnect power supply or failure to set the master switch (located on the control board) to OFF before removing the low voltage terminal strip cover from an installed control board. Damage to this board by not following these instructions is considered misuse and not covered under either the standard unit warranty or any extended service contract.

IMPORTANT NOTE:

All warranty replaced boards must be returned to the parts source from which they were purchased to insure proper warranty credit.


ELECTROSTATIC DISCHARGE (ESD) PRECAUTIONS

Before removing the new control board from the static wrap, it is very important to discharge any static electricity. Discharging the static electricity can be accomplished by two methods: the servicer can wear a ground strap or by touching the metal chassis before replacing the board.

EXISTING BOARD REMOVAL PROCEDURE

1. Disconnect power to the unit by unplugging the power cord at the wall outlet or subbase, or disconnect power at the fuse box or circuit breaker.

RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION

 WARNING
Only personnel that have been trained to install, adjust, service or repair(hereinafter, "service") the equipment specified in this manual should service the equipment. The manufacturer will not be responsible for any injury or property damage arising from improper service or service procedures. If you service this unit, you assume responsibility for any injury or property damage which may result. In addition, in jurisdictions that require one or more licenses to service the equipment specified in this manual, only licensed personnel should service the equipment. Improper installation, adjustment, servicing or repair of the equipment specified in this manual, or attempting to install, adjust, service or repair the equipment specified in this manual without proper training may result in product damage, property damage, personal injury or death.

PROP 65 WARNING FOR CALIFORNIA CONSUMERS
 WARNING
Cancer and Reproductive Harm - www.P65Warnings.ca.gov
<small>0140M00517-A</small>

19001 Kernier Rd., Waller, TX 77484

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IO-905B

01/2020

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- If the cabinet front is screwed to the chassis, remove the 1/4" screw (or screws) located behind the inlet grille. Pull the inlet grille forward from the top of the grille to access screw(s).

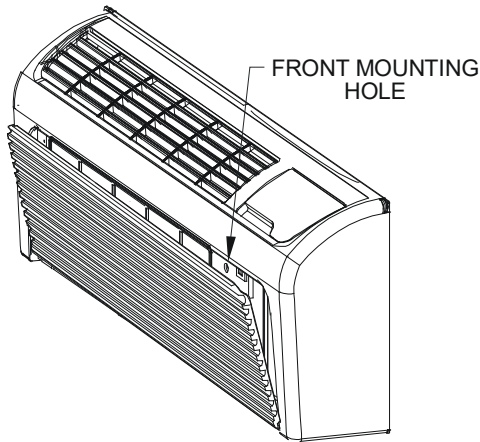


FIGURE 1

- Remove cabinet front from chassis by tilting the bottom of the front forward, lifting slightly up and forward.
- If a remote thermostat or any low voltage accessory is being used, remove the low voltage pin connector from the low voltage terminal strip. If a previous version board is being replaced, remove wires from the low voltage terminal strip.

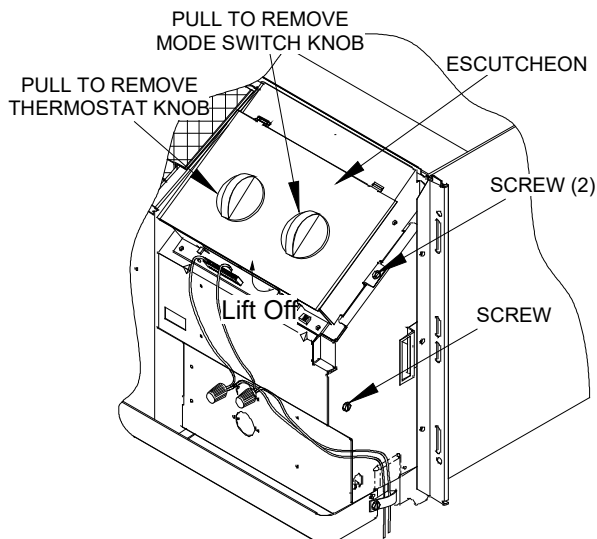


Figure 2

- Remove knobs and escutcheon.
- Remove the two mounting screws, one on each side of control board cover. Some models may have a screw on the lower right side of the control panel that will need to be removed. Tilt control panel out and remove cover.
- Remove the wires from the board in the unit, including Thermistor Sensors if they plug into the board.
- Remove the four screws holding the board and remove the old board.

NEW CONTROL BOARD INSTALLATION PROCEDURES

- If existing unit has a remote mounted "off board" transformer for board power, proceed to Step 13.
 - Lift the control panel up so the control panel is free of its hinges. Orient the control panel so there is easy access for mounting components to the inside of the control panel.
 - Using the two #8 screws that are provided, screw the transformer that was provided with the kit to the control panel in the transformer mounting holes provided in the panel. See Figure 3.
 - The external transformer will come with the Black wires connected to the LOAD terminal of the transformer (LOAD terminals are the low voltage terminals) and the Gray wire connected to the COM terminal on the transformer. The additional Gray wire will need to be connected to the 230 or 265 volt tap on the transformer. Place the control panel back on its hinges.
- NOTE:** Refer to the serial plate for voltage information.
- Install the new board and reinstall the screws removed in step # 8.

IMPORTANT NOTE: Refer to appropriate wiring diagram beginning on page 11 for proper wiring.

IMPORTANT NOTE: If unit has a 2 speed relay, Remove the relay and all wires associated with it from the unit.

- Using the insulated terminals connect the two (2) Black wires from the Load terminals on the transformer to the "24VAC Transformer" terminals on the control board. See Figure 4.
- Connect the Gray wire from the COM terminal on the transformer to line 2 on the control board. Connect the additional Gray wire from the 230 or 265 volt tap on the transformer to line 1 on the control board.

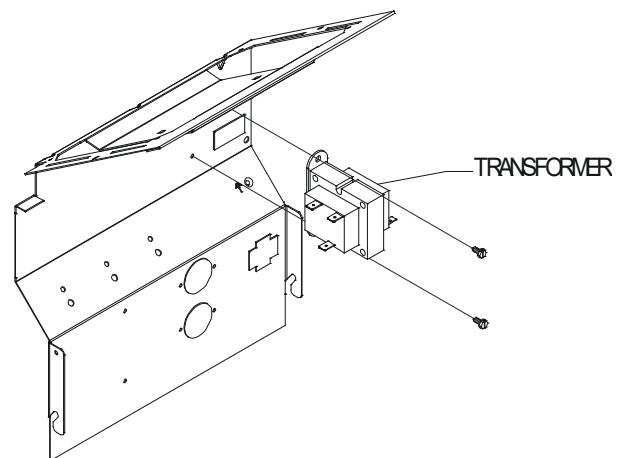


Figure 3

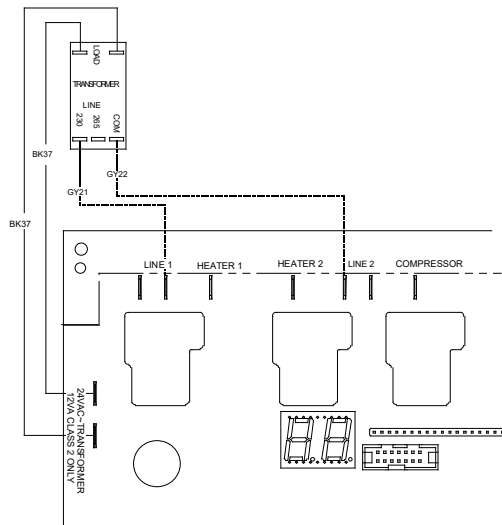


Figure 4

16. Thermistor Temperature Sensors Installation

A. It is recommended that the Indoor Discharge Thermistor (with the YELLOW wires) be installed but it is optional. If you choose not to install this sensor, the green status light will remain illuminated continuously. For status light functionality, the YELLOW thermistor MUST be installed. Instructions are as follows:

A1. Carefully cut and remove the gasket on the left and right sides of discharge screen. Remove the two (2) 5/16" screws holding the indoor exhaust screen above the indoor coil. Remove the indoor exhaust screen.

Remove the two (2) 1/4" screws connecting the heater panel to the evaporator coil.

Remove the two (2) screws mounting the air baffle to the top of the heater panel and remove and discard the air baffle.

A2. Install the new air baffle. Route the yellow thermistor probe from right to left through the wiring tube enclosure. Mount the black tip of the yellow thermistor probe in the plastic clip provided. Hold the plastic clamp in place and secure the clamp to the left end of heater panel using one of the original screws. Replace the screw on the right end of the air baffle being careful not to damage the wiring insulation on the probe.

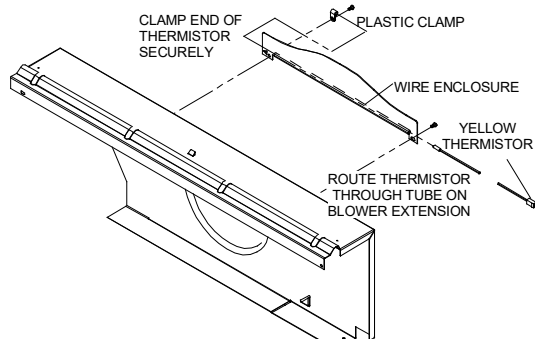


Figure 5

A3. Replace the heater panel, routing the yellow wire around the right end of the heater panel and into the control panel pulling snug to prevent the wire from being entangled in the blower wheel or being visible from above. Replace the two screws mounting the heater panel to the evaporator coil.

A4. Replace the exhaust grille and two mounting screws.

A5. Connect the yellow wire using the plug-on connector to the new board on the IDT (yellow) terminals.

B. If the existing Indoor Ambient Thermistor (with the BLACK wires) was connected to the board by a plug-on connector, reconnect it to the new board on the IAT (black) terminals. If the existing Indoor Coil Thermistor was soldered to the previous board, install the new black thermistor per Figure 6 and connect as above.

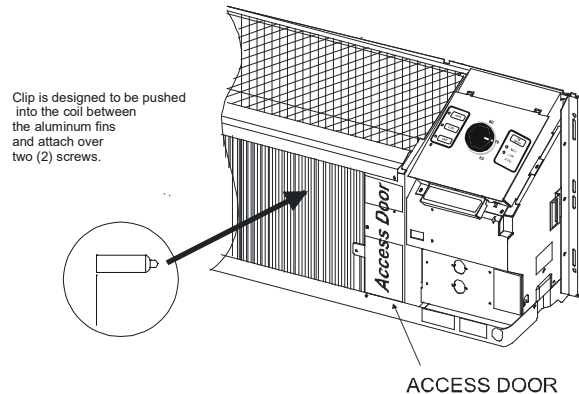


Figure 6

C. If the existing Indoor Coil Thermistor (with the RED wires) was connected to the board by a plug-on connector, reconnect it to the new board on the ICT (red) terminals. If the previous board used indoor coil bi-metals, remove and discard the bi-metal devices. The access door will need to be removed on the indoor coil to gain access to the bi-metal. See Figure 6. The Indoor Coil Thermistor will need to clip on the vertical section of the 90-degree bend of the inlet line to the indoor coil. See Figure 7. Connect the Indoor Coil Thermistor to the board as noted above.

D. If the existing Outdoor Coil Thermistor (with the BLUE wires) was connected to the board by a plug-on connector, reconnect it to the new board on the OCT (blue) terminals. If the previous board used indoor coil bi-metals, remove and discard the bi-metal devices. The Indoor Coil Thermistor will need to clip on the crossover tube shown in Figure 8. There will be two clips supplied in the kit for the Blue Thermistor. One clip as supplied on the sensor will fit 5/16" tubing used on the bent coil, and an additional clip (loose in the bag) will fit 3/8" tubing used on the flat slab coil. If you have a slab coil, you will need to remove the 5/16" clip from the sensor and replace it with the 3/8" tube clip. Connect the Outdoor Coil Thermistor to the board as noted above. Outdoor Coil Thermistors are only used on Heat Pump models; DO NOT INSTALL THIS SENSOR IF THE UNIT IS NOT A HEAT PUMP.

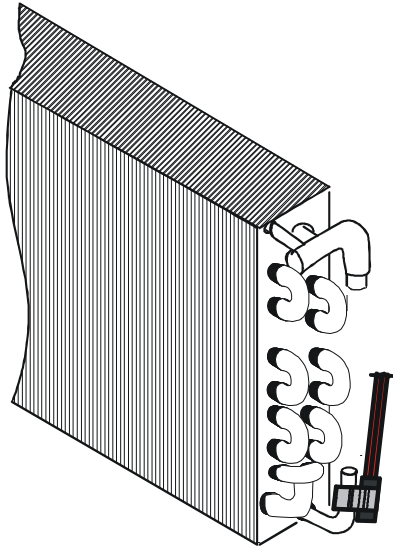


Figure 7
INDOOR COIL THERMISTOR - RED
 All Units
 Connect to ICT on Control Board

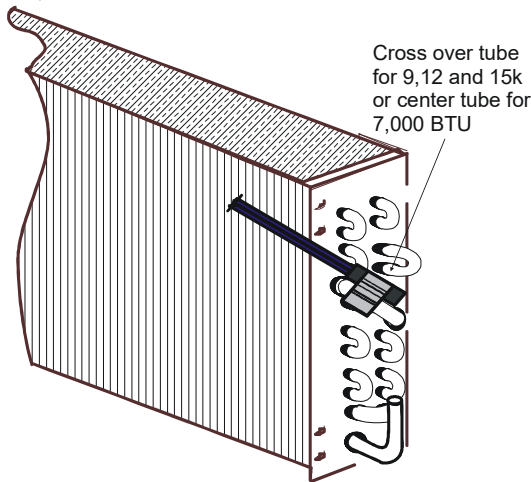


Figure 8
OUTDOOR COIL THERMISTOR - Blue
 Heat Pumps Only
 Connect to OCT on Control Board

17. The control board cover is now ready to be installed. The ribbon for the touch pad will need to be connected to the control board. **Take caution not to bend or fold the ribbon.**

(See Figure 10 for ribbon connection).

Ensure that no wires are pinched or caught between the cover and the panel and then reinstall the screws removed in Step 5.

If a remote thermostat or any low voltage accessory is being used connect the low voltage pin connector to low voltage terminal strip.

If replacing a previous version board you will need to use the 10 pin connector supplied with the board for low voltage accessories. Wires supplied with this kit have terminal ends on the wires. Insert the terminal end into the correctly labeled slot, push in and it will lock in place. After loading pin connector use the wire nuts supplied with the kit to wire nut the new wires onto the existing wires supplied for low voltage accessories. See Figure 9 on page 5.

18. Set the master switch to ON. Restore electrical power and verify unit functionality.

19. Replace the front in reverse order as removed in Steps 2 and 3.

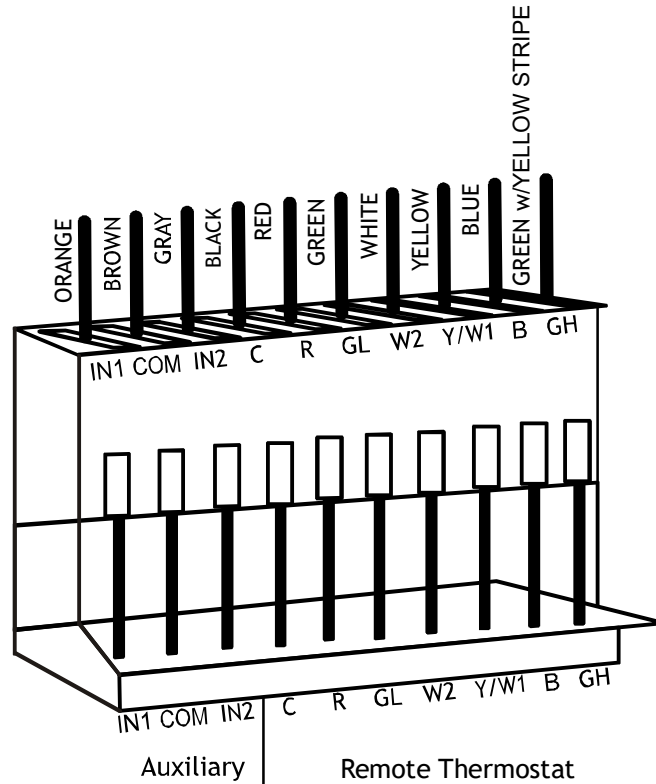
CRITICAL STEP

This service control **will not operate** until it has been configured to control a heat pump or cooler. As long as the display shows **EO**, the unit **will not operate**.

Follow the directions on Pages 6 and 7 to set feature codes C3 and "dd". Failure to set "C3" and "dd" configuration codes correctly will cause the unit to not operate properly.

For C3, select option H if the unit is a heat pump or option C if the unit is a cooler with or without electric heat.

For HE* and 32* models, configuration code "dd" must be set to correct cooling capacity: 7,000, 9,000, 12,000 15,000 or 17,000 btu's.



*Only load wires needed for accessories attached to unit.

Figure 9

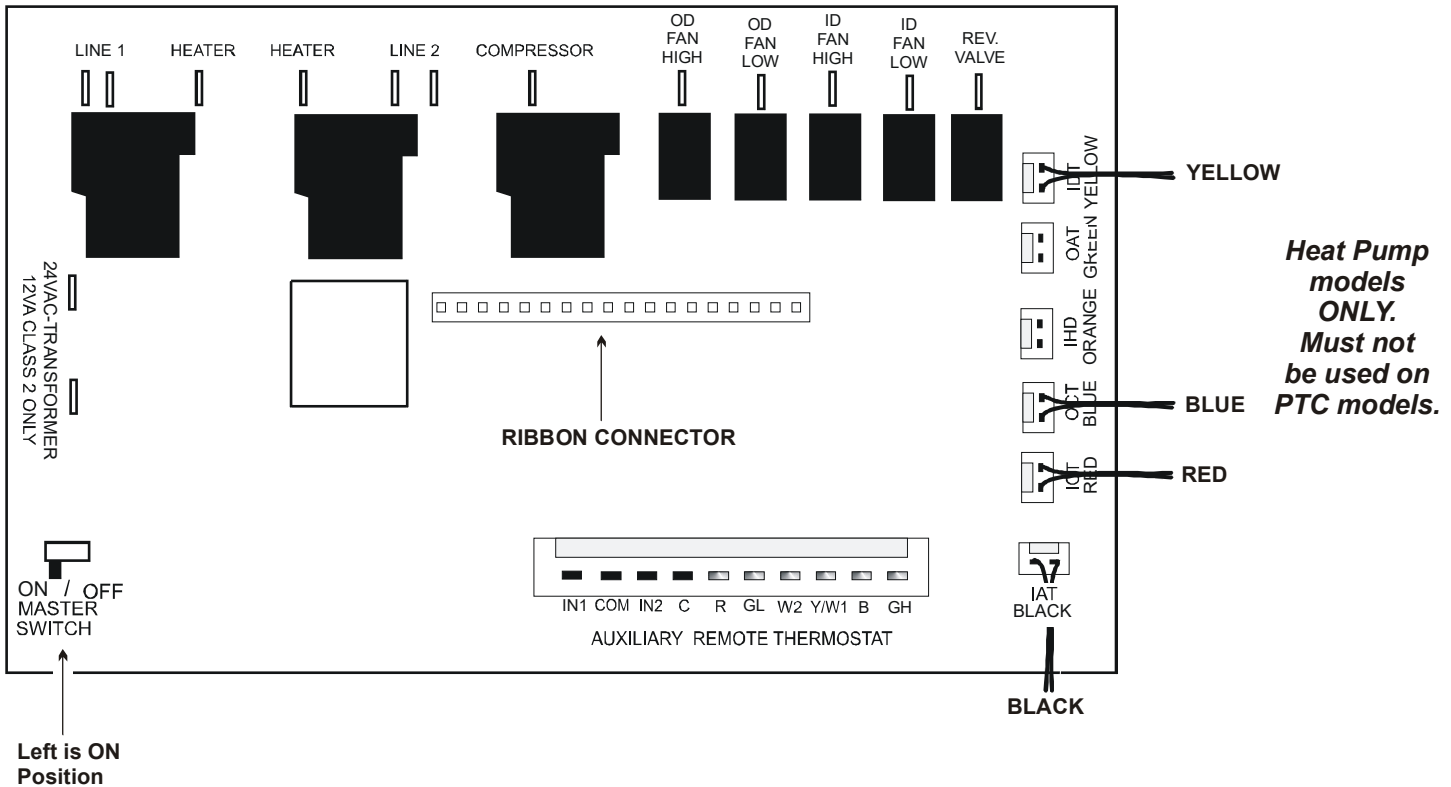


Figure 10

INITIAL BOARD PROGRAMMING

Press and **continue to hold down** the plus (+) and minus (-) keys at the same time. While holding the keys down, push the **OFF** button **two (2) times, within a two (2) second time frame**. The display will show two (2) dash lines and a flashing dot (- - .).

Release the plus (+) and minus (-) keys and press the **HEAT** button three (3) times. The display will alternate between **C3** and **O**.

Press the plus (+) or minus (-) key until the display reads H (for models PTH*) or **C** (for models PTC*). Please check the serial plate of the PTAC to make sure you select the correct code. Once **H** or **C** is selected, press the **OFF** key to exit the programming.

CONFIGURATION SETTINGS

The control can be configured to operate a wide range of options. The options listed below with the * are the factory default settings. If these are acceptable, then the unit does not require any additional configuration and is fully operable. To configure the unit, first select the configuration feature code setting and then an option code to change from the factory default setting.

To enter configuration feature mode:

1. **Press and continue to hold** the up and down arrow keys and quickly **press** the **OFF** key **twice within a two (2) second time frame**. The display will show two (2) dash lines and a flashing dot (- - .).

Release the plus (+) and minus (-) keys and press the **HEAT** button one (1) time to get to the first setting, **C1**.

To select a configuration **feature code**, press the **HEAT** key until the desired configuration comes up. To scroll to a previously viewed configuration codes press the **COOL** key.

Once you have scrolled to the correct feature, then to select the **option code** for your desired configuration, press either the up or down key to scroll through the options of the selected feature code.

To exit configuration mode:

1. **Press** the **OFF** key. Configuration feature mode will also exit if **no keys are pressed** for a period of **two (2) minutes**.

CONFIGURATION SETTINGS CHART

Configuration Code	Configuration Feature	Option Code	Option
C1	Interface	0 *	Chassis Membrane *
		L5	Wired Thermostat
		rE	Wireless Stat & 7-Button
		L0	Locked Membrane
C2	ID Fan Operation	Au	<i>do not use</i>
		On	<i>do not use</i>
		bP	Button present
		bA*	Revert to Cyclic
		A	Always run fan (even if Off)
		C	<i>do not use</i>
		bC	Revert to Continuous
C3	Model Prefix	C	PTC (Standard Cooler)
		H*	PTH (Standard Heat Pump)
		0	Service No Operation "Eo"
		dC	DRY (Dehumidification Cooler)
		dH	<i>do not use</i>
		uC	<i>do not use</i>
		uH	<i>do not use</i>
		AC	PMC (Cooler w/ Make-up Air)
		AH	PMH (Heat Pump w/ Make-up Air)
		EC	HEC (High Efficiency Cooler)
		EH	HEH (High Efficiency Heat Pump)
		3C	32C (R-32 Cooler)
3H	32H (R-32 Heat Pump)		
C4	Room I.D. Digit 1 & 2	00* - 99	00* - 99
C5	Room I.D. Digit 3 & 4	00* - 99	00* - 99
C6	Wired Occupancy	0*	Off*
		1	On
		18	18 Hour Automatic Entry
C8	Temp. Limiting Cool	60* - 80	60* - 80
C9	Temp. Limiting Heat	68 - 90, 80*	68 - 90, 80*
C0	T-stat B/O Term.	8*	B*
		0	O
c3	Un-rent Cooling Temp.	45 - 95, 79*	45 - 95, 79*
c4	Un-rent Heating Temp.	45 - 95, 63*	45 - 95, 63*
CA	Wireless Twin Unit	0*	Not Twinned*
		5	Twinned
Cd	English / Metric Temp	F*	Fahrenheit Scale*
		C	Celsius Scale
CE	Freeze Protection	L*	On, Low Fan*
		H	On, High Fan
		0	Off
d6	Sensorless Un-Occ. Time	1 - 32, 18*	1 - 32, 18*
d7	1st Un-Occ. Set Back Temp.	1 - 16, 2*	1 - 16, 2*
d8	1st Un-Occ. Set Back Time	.1, .5*, 1 - 24	.1, .5, 1 - 24, .5*
d9	2nd Un-Occ. Set Back Temp.	1 - 16, 3*	1 - 16, 3*
dA	2nd Un-Occ. Set Back Time	.5, 1* - 24	(d8) - 24, 1*
db	3rd Un-Occ. Set Back Temp.	1 - 16, 6*	1 - 16, 6*
dC	3rd Un-Occ. Set Back Time	1 - 24, 3*	(dA) - 24, 3*
dd	Cooling Capacity	5 - 24	5,000 - 24,000 BTU
dF	Platform Group Code	00* - 99	00* - 99
dH	Electric Heater Size	00*, 15, 20, 25, 35, 50	00*, 15, 20, 25, 35, & 50
dJ	Operating Voltage	2, 3*, 4, 5	2, 3*, 4, 5
r4	Room Prefix	00* - 99	00* - 99
r5	Room Suffix	00* - 99	00* - 99
u3	Heat Protection	0*	Dis-enabled*
		78 - 99	78 - 99

*Indicates factory default

See manufacturer for additional configuration options.

CONFIGURATION SETTINGS CHART (CONT.)


Configuration Code	Configuration Feature	Option Code	Option
P0	Smart Vent Operation	0	Off
		1*	On only when ID fan runs
		2	On when ID fan runs & room occupied
		3	Runs continuously
		4	On when room is occupied
		E	Economizer
		EP	Economizer with compressor assist
P2	Vent Dehumid Make-up Air Kit Operation	0	Off
		1*	May be on anytime
		2	Allowed on except in Off mode
		3	Allowed on when indoor fan runs
		4	Allowed on if room is occupied
		5	Allowed on if room is not occupied
		6	Allowed on when indoor humidity is high
u8	Input Pins UN1 & COM	0*	Door Switch
		1	Motion Sensor
		2	Front Desk
		3	Wired Un-rented Set Back
		4	Emergency Hydronic
		5	Load Shedding
		6	Alarm Sensor
u9	Input Pins UN2 & COM	0*	Door Switch
		1	Motion Sensor
		2	Front Desk
		3	Wired Un-rented Set Back
		4	Emergency Hydronic
		5	Load Shedding
		6	Alarm Sensor
ub	Indoor Humidity Activation	0	Not used
		15-80, 25*	% RH above which kit may run
un	Vent Dehumid Outdoor Humidity Level	0	Not used
		15-60, 25*	% RH above which kit may run
uu	Vent Dehumidification Kit Fan Force	0	No affect on indoor fan
		1*	Indoor fan forced to run with Kit
uL	Config. Security Code	00* - 99	00* - 99

DIAGNOSTIC MAINTENANCE & STATUS REPORT

The Diagnostic Maintenance & Status Report provides detailed information on PTAC control operation and operational status including present modes, failures, airflow restriction warnings, operating temperatures, and past failures. The lower right hand dot on the center display flashes in this mode. In some cases the green LED located in the lower left hand corner of the touchpad below the OFF key will also be lit. This Green LED "Status Light" only illuminates if there is an status code that has been activated and should be reviewed. In most cases, this light indicates that the indoor room filter is dirty should be cleaned or replaced. **NOTE:** Dirty filters cause the unit to consume more energy than normally needed to condition a room. Once the filter has been cleaned or replaced, the LED should go out. If the LED is still illuminated after the filter has been cleaned, activate the Diagnostic and Status mode to view any active codes. The unit may need additional cleaning or maintenance of the evaporator or condenser coils. Please perform this step before calling a servicer. **A servicer should be called only if cleaning the filter or coils does not clear the status code or the code indicates that servicer should be called.**

DIAGNOSTIC STATUS REPORT MODE.





To enter Diagnostic Status Report mode, press and hold the up and down arrows and, while holding, quickly press the COOL key  twice.




Active Failures.

- If there are no active failures or lockouts, the display will show a double dash, "- -". If there is a code listed, see the unit "Diagnostic Codes" chart for a list of definitions.


Operating Temperatures.

- If not in Diagnostic Status Report Mode, enter as instructed above and press the Fan Speed  key.
- If already in Diagnostic Status Report mode, press the Fan Speed  key. The display will show the temperature of the desired set point, **SP**; the temperature at the wireless thermostat, **rL**; the indoor ambient temperature behind the filter, **IA**; the indoor coil temperature, **IC**; the indoor discharge air temperature, **Id**; the outdoor coil temperature, **OC**; the outdoor ambient temperature, **OA**; and the spare probe temperature, **IH**. If any of the probes are not populated the display will show the corresponding failure code.

Past Failure Log

- If not in Diagnostic Status Report Mode, enter as instructed above and press the Fan Speed  key twice.
- If already in Diagnostic Status Report mode, press the Fan Speed  key. While the display is showing operating temperatures, the last 10 failure codes active or past can be requested by pressing the Fan Speed  key again. The codes are displayed last entry first followed subsequently by each preceding code.

Note that modes F1 and Fd are also displayed in the normal control operation (see "Diagnostic Codes" chart).

To exit Diagnostic Status Report mode, press the OFF  key.

DIAGNOSTIC CODES

CODE	STATUS	DISPLAY	ERROR LIGHT	SUGGESTED ACTION	
MODES	FP	Freeze Protection Engaged. The room temperature measured by the wireless remote thermostat or indoor ambient thermistor active sensor falls below 40°F.	Y	N	No Action required. This setting will disengage when the room temperature rises above 43°F.
	Fd	Front Desk switch is closed. All outputs are switched off.	Y	N	Open front desk switch to allow occupant unit operation.
	Eo	Un-Configured Service Board - All operation held awaiting configuration	Y	Y	Enter Configuration Menu and set "C3" to "C" for coolers with electric heat or "H" for heat pumps.
	EH	Emergency Hydronic Engaged. The EHH switch is closed. Compressor is switched off.	Y	N	Open front emergency hydronic switch to allow occupant unit operation.
	LS	Load Shedding Engaged. The LS switch is closed. Compressor and Electric heat is switched off.	Y	N	Open load shedding switch to allow occupant unit operation.
	On	Control is configured to respond to a wired thermostat	Y	N	No action if a wired thermostat is being used. Otherwise, see Configuration Settings.
	oP	Open Door Lockout (DS1 & DS2 open; wireless)	Y	Y	Close Room Door. Unit will not condition space with door open.
	nP	Window Switch Lockout - (LS & INN open)	Y	Y	Close Room Door or Window. Unit will not condition space with door or window open.
	HP	Heat Sentinel - (WIAT > u3)	Y	N	No action required. This setting will disengage when the room temperature falls.
UR	Un-Rented Status (EHH & INN or wireless)	Y	N	Front Desk needs to set to Rented mode (if applicable).	
MODES	F1	Indoor Ambient Thermistor reads outside the range -20°F to 200°F & the wireless thermostat is not communicating to the unit control or	Y	Y	Replace black Indoor Ambient Thermistor or Wireless Remote Thermostat.
		Indoor Ambient Thermistor (IAT) without a wireless remote thermostat reads outside the range -20°F to 200°F.			
	F2	Wireless Remote Thermostat failure	N	N	Replace Wireless Thermostat.
	F3	Indoor Ambient Thermistor reads outside the range -20°F to 200°F	Y	N	Replace black Indoor Ambient Thermistor.
	F4	Indoor Coil Thermistor either above or below operating tolerances.	N	Y	Replace Red Indoor Coil Thermistor.
	F5	Wireless Thermostat failure.	N	Y	Attempt to rebind Wireless Thermostat or Replace Wireless Thermostat.
	F6	Indoor Discharge Thermistor either above or below operating tolerances.	N	Y	Replace Yellow Indoor Discharge Thermistor.
	Fb	Low Remote Battery Warning.	N	Y	Replace Batteries in Wireless Devices.
	H1	High Voltage Protection engaged. Power supply voltage is too high.	Y	N	Check for incoming power at correct voltage.
br	Brown Out Protection engaged. Power was lost or voltage is low.	N	N	Check for incoming power at correct voltage.	
MODES	L6	Discharge Air Too Hot.	N	Y	Clean Filter or Remove Air Blockage.
	LC	Outdoor Coil Thermistor temperature high.	N	Y	Clean Condenser Coils, Check Fan for fault. Code will reset after cleaning.
	C2	Indoor Air Recirculation. Large delta between thermostat and return.	N	Y	Clean Filter or Remove Air Blockage or Close Vent Door or Improve indoor to outdoor seal.
	C5	Outdoor Coil temperature too high for outdoor ambient temperature.	N	Y	Check for Blocked Outdoor Air or Clean Coil.
MODES	C1	Indoor Coil is freezing up.	N	Y	Clean filter, Check for fan and blower operation, Check for Refrigerant loss or Restricted capillary tube.
	C3	Indoor Coil is freezing up.	N	Y	Clean filter, Check for fan and blower operation, Check for Refrigerant loss or Restricted capillary tube.
	C4	Indoor Coil froze up.	N	Y	Clean filter, Check for fan and blower operation, Check for Refrigerant loss or Restricted capillary tube.
	C6	Poor Unit Performance.	N	Y	Check for blower motor, compressor, or electric heat operation.
	C7	Indoor Freezing Lockout (ICT - IAT > 20) +10 Min	N	Y	Clean filter, Check for fan and blower operation, Check for Refrigerant loss or Restricted capillary tube.

SINGLE MOTOR

REMOTE THERMOSTAT OPERATION			
COOLING UNIT W/ELECTRIC HEAT		HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:	FUNCTION	CONNECT R TO:
OFF	----	OFF	----
FAN	G	FAN	G
COOL	G, Y/W1	COOL	G, Y/W1
HEAT	G, W2 OR G,B,Y/W1 *	1ST STAGE HEAT	G,B,Y/W1
		2ND STAGE HEAT	G, W2

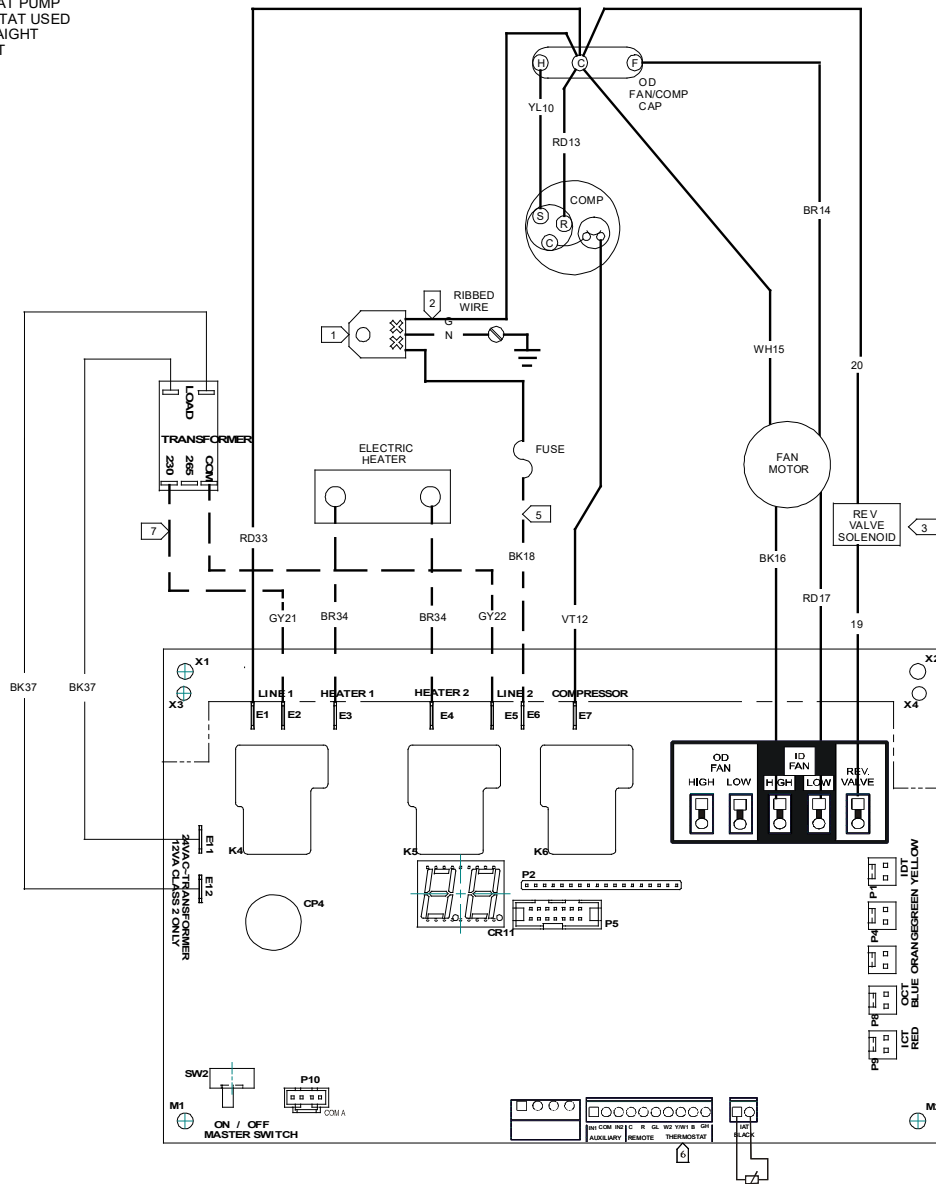
1ST STAGE ANTICIPATOR CURRENT: .1
2ND STAGE ANTICIPATOR CURRENT: .1

* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT

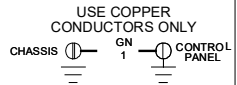


HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

WARNING

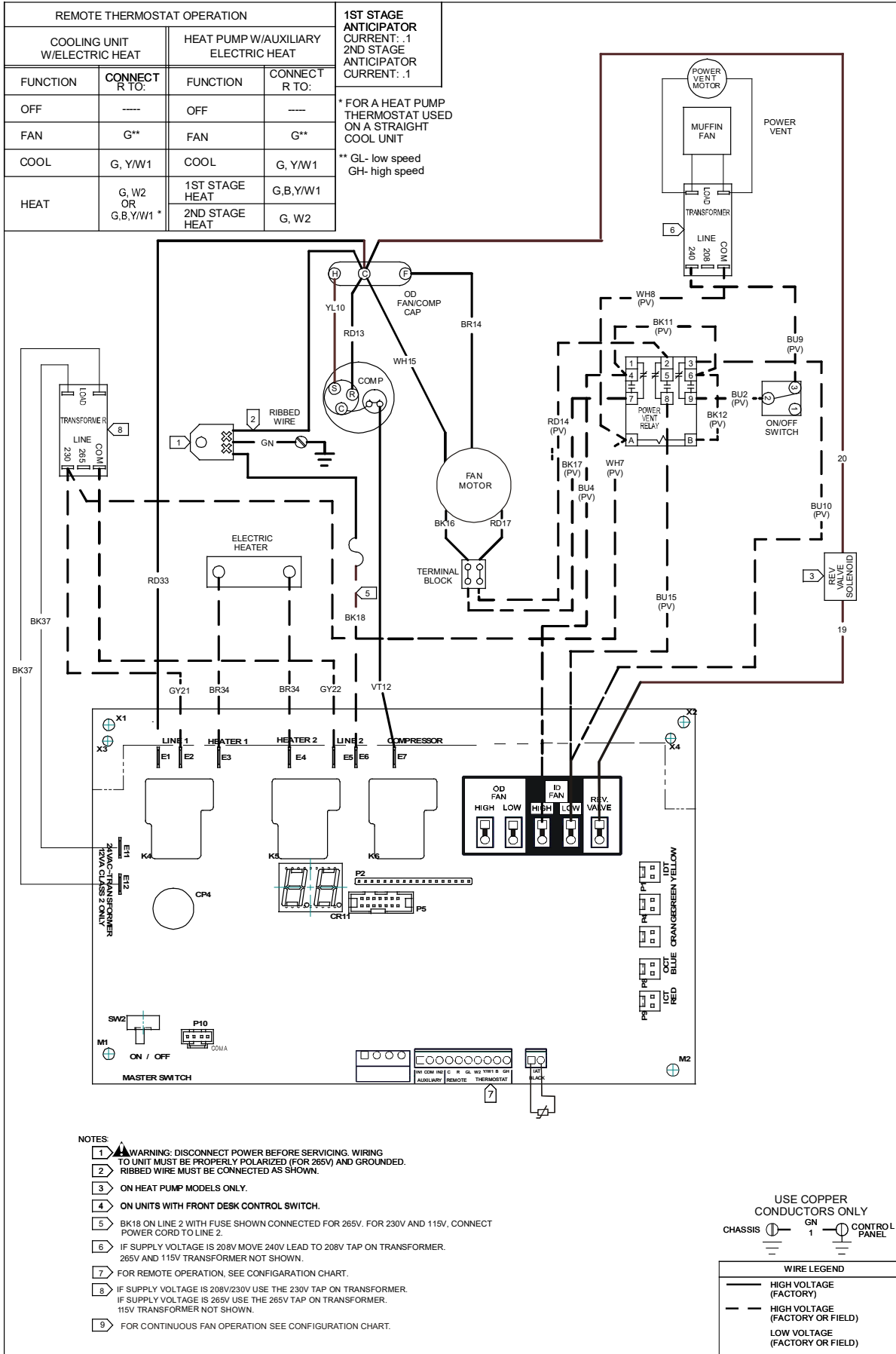


- NOTES:
- 1 **WARNING:** DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
 - 2 RIBBED WIRE MUST BE CONNECTED AS SHOWN
 - 3 ON HEAT PUMP MODELS ONLY.
 - 4 ON UNITS WITH FRONT DESK CONTROL SWITCH.
 - 5 BK18 ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V & 115V, CONNECT POWER CORD TO LINE 2.
 - 6 FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
 - 7 IF SUPPLY VOLTAGE IS 208V/230V USE THE 230V TAP ON TRANSFORMER. IF SUPPLY VOLTAGE IS 265V USE THE 265V TAP ON TRANSFORMER. 115V TRANSFORMER NOT SHOWN.
 - 8 FOR CONTINUOUS FAN OPERATION SEE CONFIGURATION CHART.



WIRE LEGEND	
	HIGH VOLTAGE (FACTORY)
	HIGH VOLTAGE (FACTORY OR FIELD)
	LOW VOLTAGE (FACTORY OR FIELD)

SINGLE MOTOR POWER VENT DOOR



WARNING
 HIGH VOLTAGE!
 DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

- NOTES:
- 1 **WARNING**. DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
 - 2 RIBBED WIRE MUST BE CONNECTED AS SHOWN.
 - 3 ON HEAT PUMP MODELS ONLY.
 - 4 ON UNITS WITH FRONT DESK CONTROL SWITCH.
 - 5 BK18 ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V AND 115V, CONNECT POWER CORD TO LINE 2.
 - 6 IF SUPPLY VOLTAGE IS 208V MOVE 240V LEAD TO 208V TAP ON TRANSFORMER. 265V AND 115V TRANSFORMER NOT SHOWN.
 - 7 FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
 - 8 IF SUPPLY VOLTAGE IS 208V/230V USE THE 230V TAP ON TRANSFORMER. IF SUPPLY VOLTAGE IS 265V USE THE 265V TAP ON TRANSFORMER. 115V TRANSFORMER NOT SHOWN.
 - 9 FOR CONTINUOUS FAN OPERATION SEE CONFIGURATION CHART.

USE COPPER CONDUCTORS ONLY

CHASSIS ⓪ GN 1 ⓪ CONTROL PANEL

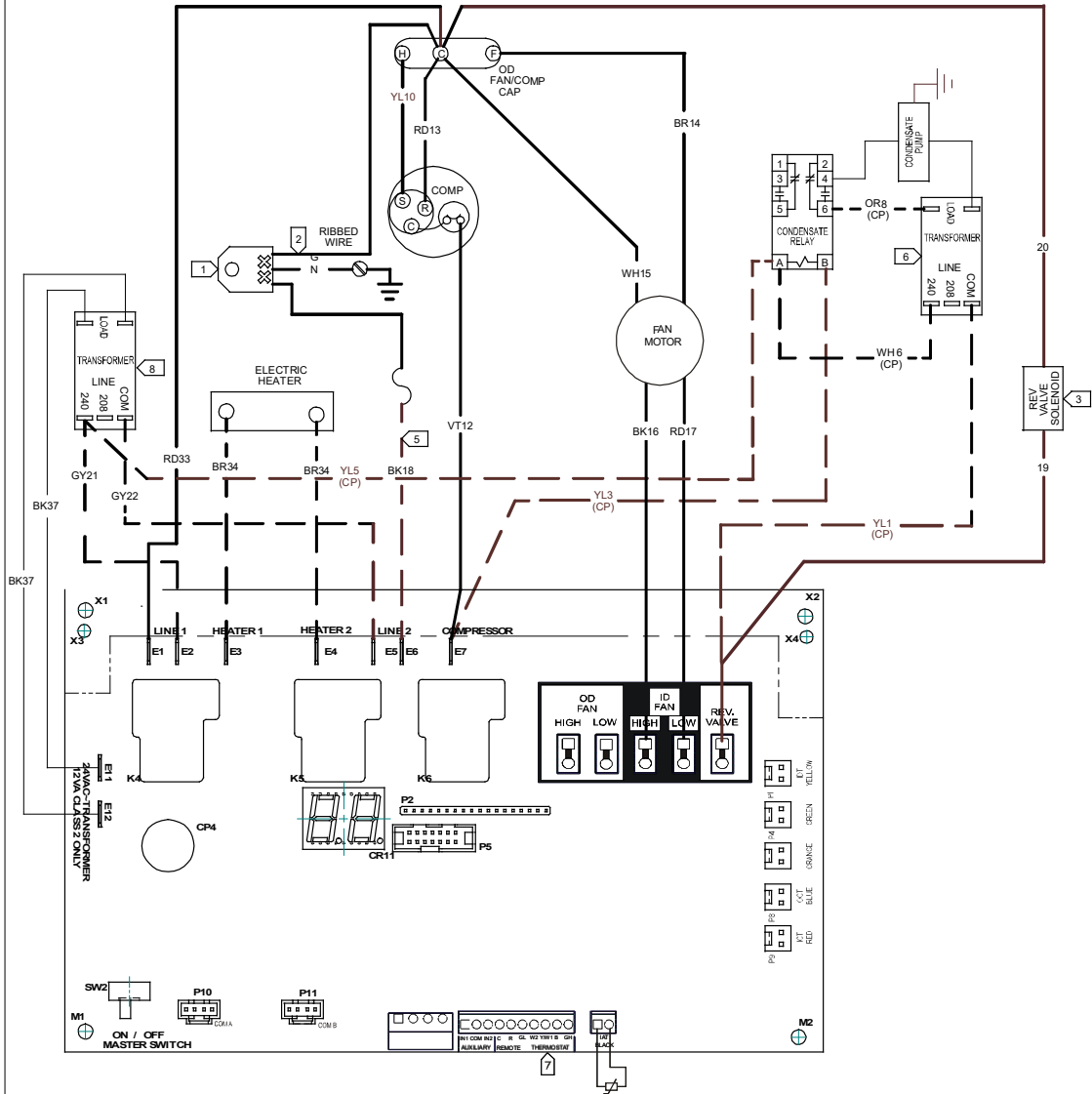
WIRE LEGEND	
	HIGH VOLTAGE (FACTORY)
	HIGH VOLTAGE (FACTORY OR FIELD)
	LOW VOLTAGE (FACTORY OR FIELD)

SINGLE MOTOR CONDENSATE PUMP

REMOTE THERMOSTAT OPERATION			
COOLING UNIT W/ELECTRIC HEAT		HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:	FUNCTION	CONNECT R TO:
OFF	----	OFF	----
FAN	G	FAN	G
COOL	G, Y/W1	COOL	G, Y/W1
HEAT	G, W2 OR G,B,Y/W1 *	1ST STAGE HEAT	G,B,Y/W1
		2ND STAGE HEAT	G, W2

* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT

WARNING
 HIGH VOLTAGE!
 DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



- NOTES
- 1 **WARNING:** DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
 - 2 RIBBED WIRE MUST BE CONNECTED AS SHOWN.
 - 3 ON HEAT PUMP MODELS ONLY.
 - 4 ON UNITS WITH FRONT DESK CONTROL SWITCH.
 - 5 BK18 ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V. FOR 230V AND 115V, CONNECT POWER CORD TO LINE 2.
 - 6 IF SUPPLY VOLTAGE IS 208V MOVE 240V LEAD TO 208V TAP ON TRANSFORMER. 265V AND 115V TRANSFORMER NOT SHOWN.
 - 7 FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
 - 8 IF SUPPLY VOLTAGE IS 208V, MOVE 204V LEAD TO 208V TAP ON TRANSFORMER. 265V AND 115V TRANSFORMER NOT SHOWN.
 - 9 FOR CONTINUOUS FAN OPERATION SEE CONFIGURATION CHART.

USE COPPER CONDUCTORS ONLY

CHASSIS GN 1 CONTROL PANEL

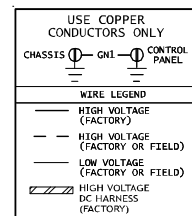
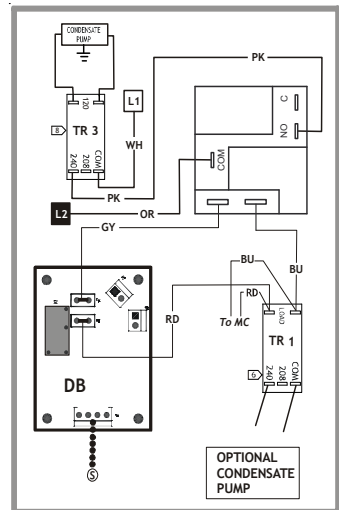
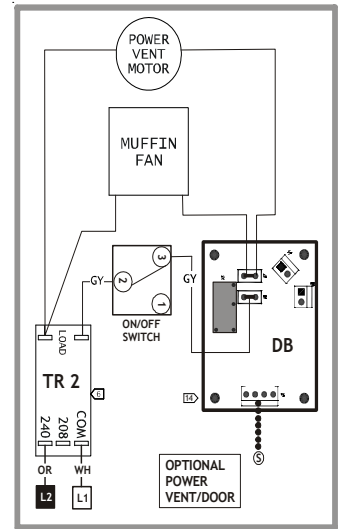
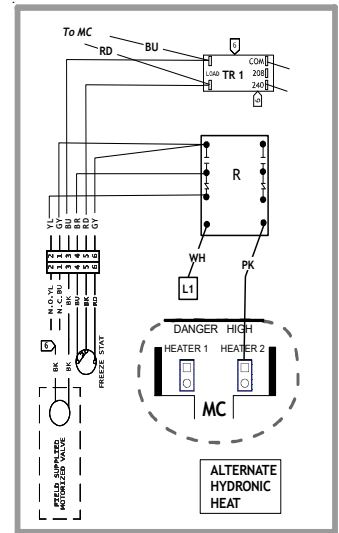
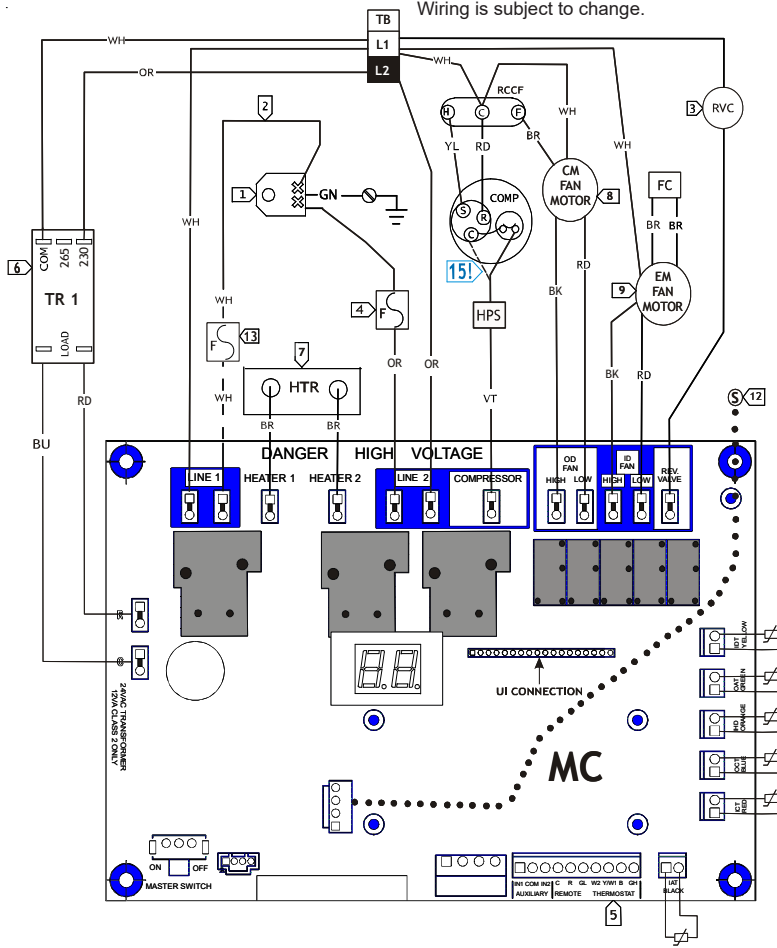
WIRE LEGEND

- HIGH VOLTAGE (FACTORY)
- - - HIGH VOLTAGE (FACTORY OR FIELD)
- LOW VOLTAGE (FACTORY OR FIELD)

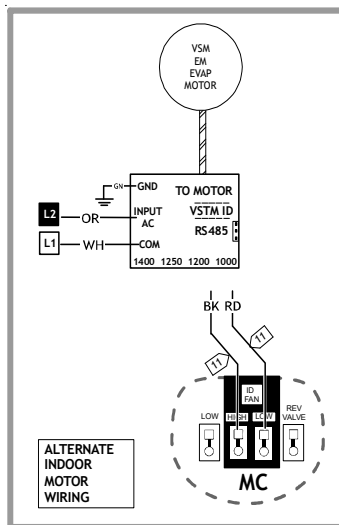
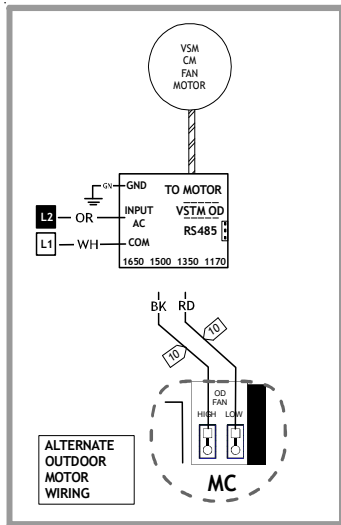
WIRING DIAGRAMS

DUAL MOTOR

Wiring is subject to change.



WARNING
 HIGH VOLTAGE!
 DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



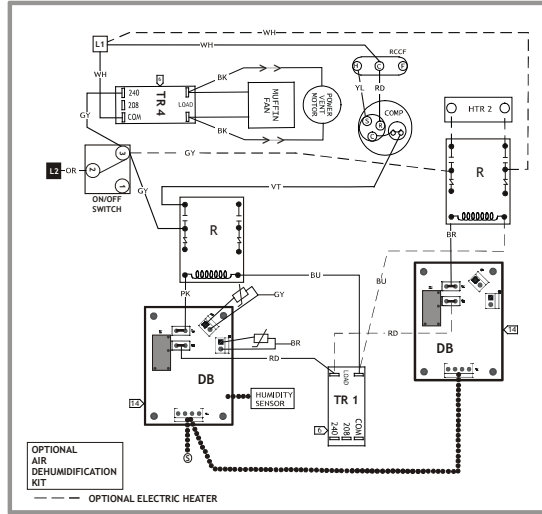
REMOTE THERMOSTAT OPERATION	
COOLING UNIT W/ELECTRIC HEAT	
FUNCTION	CONNECT TO:
ON	-----
OFF	-----
FAN	G ¹¹
COOL	G, Y/W ¹
HEAT	G, W ² OR G, B, Y/W ¹
HEAT PUMP W/AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT TO:
ON	-----
OFF	-----
FAN	G ¹¹
COOL	G, Y/W ¹
1ST STAGE HEAT	G, B, Y/W ¹
2ND STAGE HEAT	G, W ²

- NOTES:**
- WARNING:** DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
 - WHITE WIRE MUST BE CONNECTED AS SHOWN.
 - ON HEAT PUMP MODELS ONLY.
 - "OR" ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V, OPTIONAL FOR 230V & 115 V, CONNECT POWER CORD TO LINE 2.
 - FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
 - IF SUPPLY VOLTAGE IS 208V/230V, USE THE 230V OR 240V TAP ON TRANSFORMER. IF SUPPLY VOLTAGE IS 265V, USE THE 265V TAP ON TRANSFORMER. IF 115V TRANSFORMER IS USED (NOT SHOWN) USE THE 115V TAP. THIS APPLIES TO PTC-2 MODELS ONLY.
 - SEE OPTIONAL HYDRONIC HEAT DIAGRAM FOR HOT WATER STEAM HEAT.
 - SEE ALTERNATE WIRING FOR DC OUTDOOR MOTORS.
 - SEE ALTERNATE WIRING FOR DC INDOOR MOTORS.
 - SEE TABLE FOR OUTDOOR MOTOR SPEED SELECTION.
 - SEE TABLE FOR INDOOR MOTOR SPEED SELECTION.
 - SEE OPTIONAL WIRING DIAGRAMS FOR SERIAL CABLE CONNECTIONS.
 - OPTIONAL FOR 208/230V.
 - FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT.
 - GL - LOW SPEED
 - GH - HIGH SPEED
 - FOR 115V TRANSFORMER IS USED (NOT SHOWN) USE THE 115V TAP. THIS APPLIES TO PTC-2 MODELS ONLY.
 - SET DP SWITCHES PER TABLE.
 - PTC2070*BUX, NEG2071*BUX REQUIRE NO EXTERNAL OVERLOAD. HPS WILL WIRE STRAIGHT TO "C" TERMINAL ON COMPRESSOR

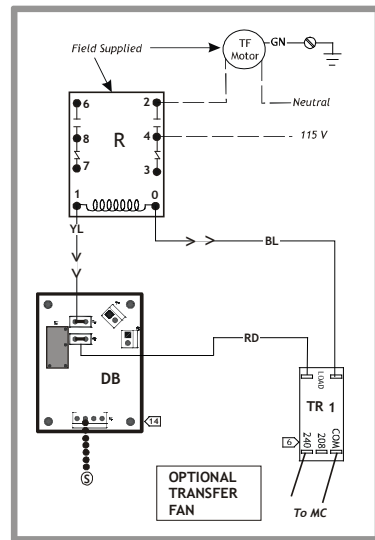
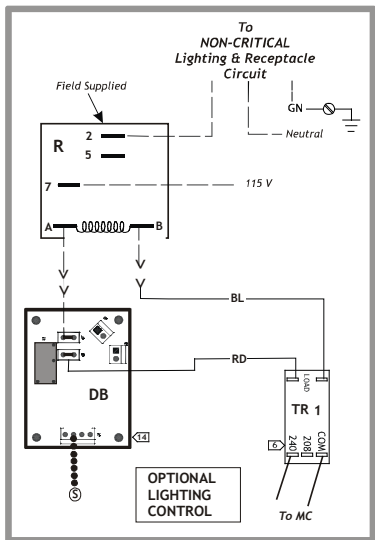
- CM OUTDOOR FAN MOTOR
- COMP COMPRESSOR
- DB DAUGHTER BOARD
- EM EVAPORATOR MOTOR
- FC FAN CAPACITOR
- F FUSE
- HPS HIGH PRESSURE SWITCH
- HTR HEATER ELEMENT
- MC MAIN CONTROL
- R RELAY
- RCCF RUN CAPACITOR FOR COMPRESSOR AND FAN
- RVC REVERSING VALVE
- TR TRANSFORMER
- TB TERMINAL BLOCK
- VSM VARIABLE SPEED MOTOR
- VSTM VARIABLE SPEED TERMINAL BOARD

WIRING DIAGRAMS

DUAL MOTOR (CONTINUED)



WARNING
 HIGH VOLTAGE!
 DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



10

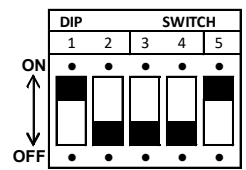
Outdoor Motor Speed Selection		
Model Starts With	High Speed VSTM Tap (Black Wire)	Low Speed VSTM Tap (Red Wire)
DRY093/DRY094	1350	1170
PTC173	1650	1450
HEC073/PTH073/PTH074	1350	1170
PMH094/HEC093/PTH093/PTH094	1350	1170
HEC123/PTH123/PTH124	1500	1350
PTH153/PTH154	1650	1500
PMH153/PMH154	1650	1500
PTC073/PTC074	1350	1170
PTC093/PTC094	1350	1170
PTC123/PTC124	1350	1170
PTC153/PTC154	1650	1500

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Indoor Motor Speed Selection		
Model Starts With	High Speed VSTM Tap (Black Wire)	Low Speed VSTM Tap (Red Wire)
PTH07*G (00 to 35)	1350	1170
PMH07*G (00 to 35)	1650	1450
PMC07*G (00 to 35)	1350	1170
PMC09*G (00 to 35)	1350	1170
PMC12*G (00 to 35)	1500	1350
PMH074/PTH073H/PTH074H (00 to 35)	1650	1500
PMH094/PTH093H/PTH094H (00 to 35)	1650	1500
PMH124/PTH123H/PTH124H (00 to 35)	1350	1170
PTH153H/PTH154H (00 to 35)	1350	1170
PMC154/PMH153G/PMH154G (00 to 35)	1350	1170
PTC072G/PTC092G (00 to 35)	1650	1500

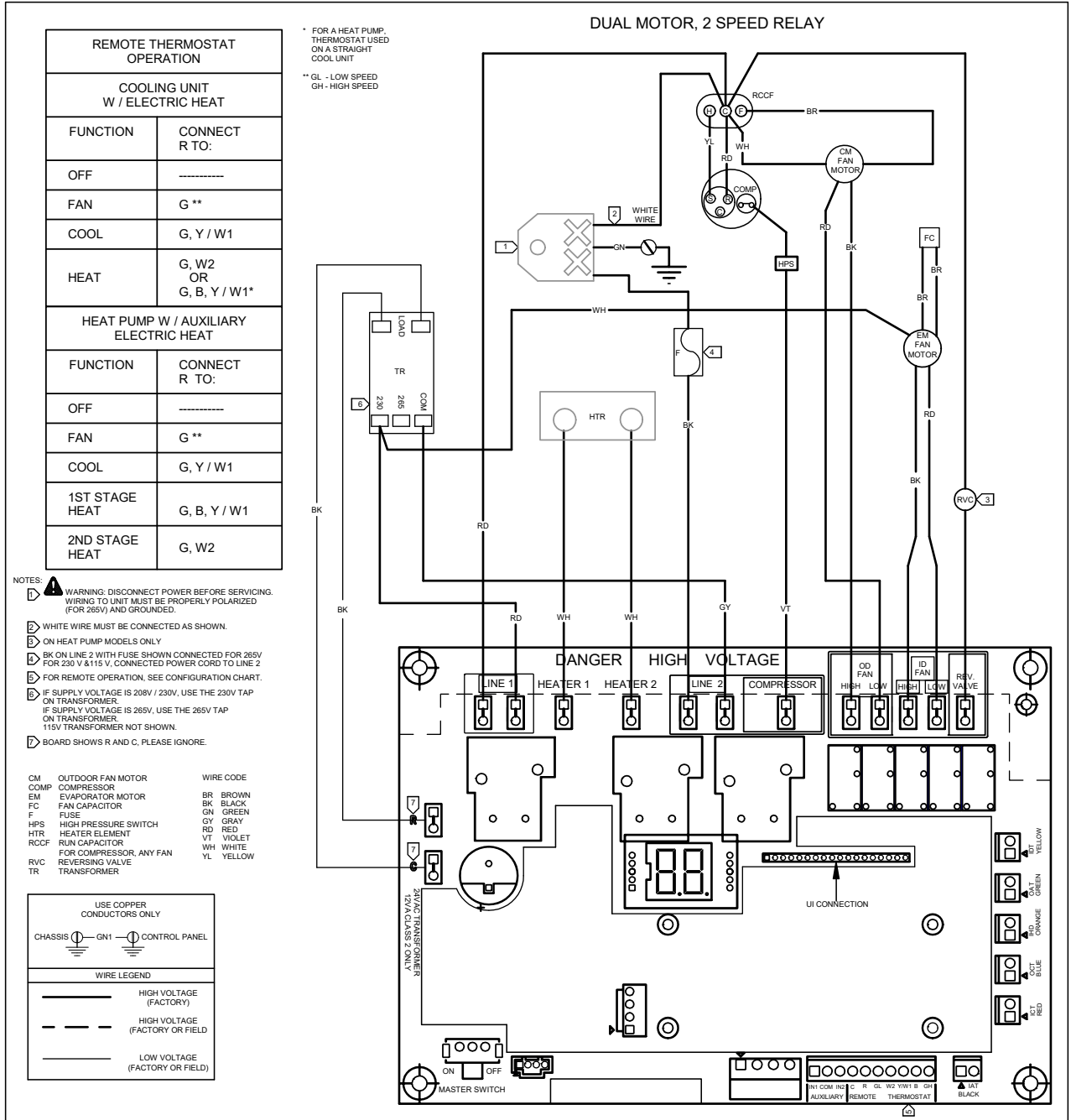
14

Daughter Board Device	Address	Switch 1	Switch 2	Switch 3	Switch 4	Switch 5
Smart Vent/Door operations for Power Door/Vent, Economizer and Economizer(+) Board	17	0	0	0	0	1
Transfer Fan	20	0	0	1	0	0
Condensate Pump	21	0	0	1	0	1
Lighting Control	24	0	1	0	0	0
DigiAIR™ Compressor	25	0	1	0	0	1
DigiAIR™ Heater	26	0	1	0	1	0
DigiAIR™ Fan	28	0	1	1	0	0



DUAL MOTOR, 2 SPEED RELAY

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.
WARNING



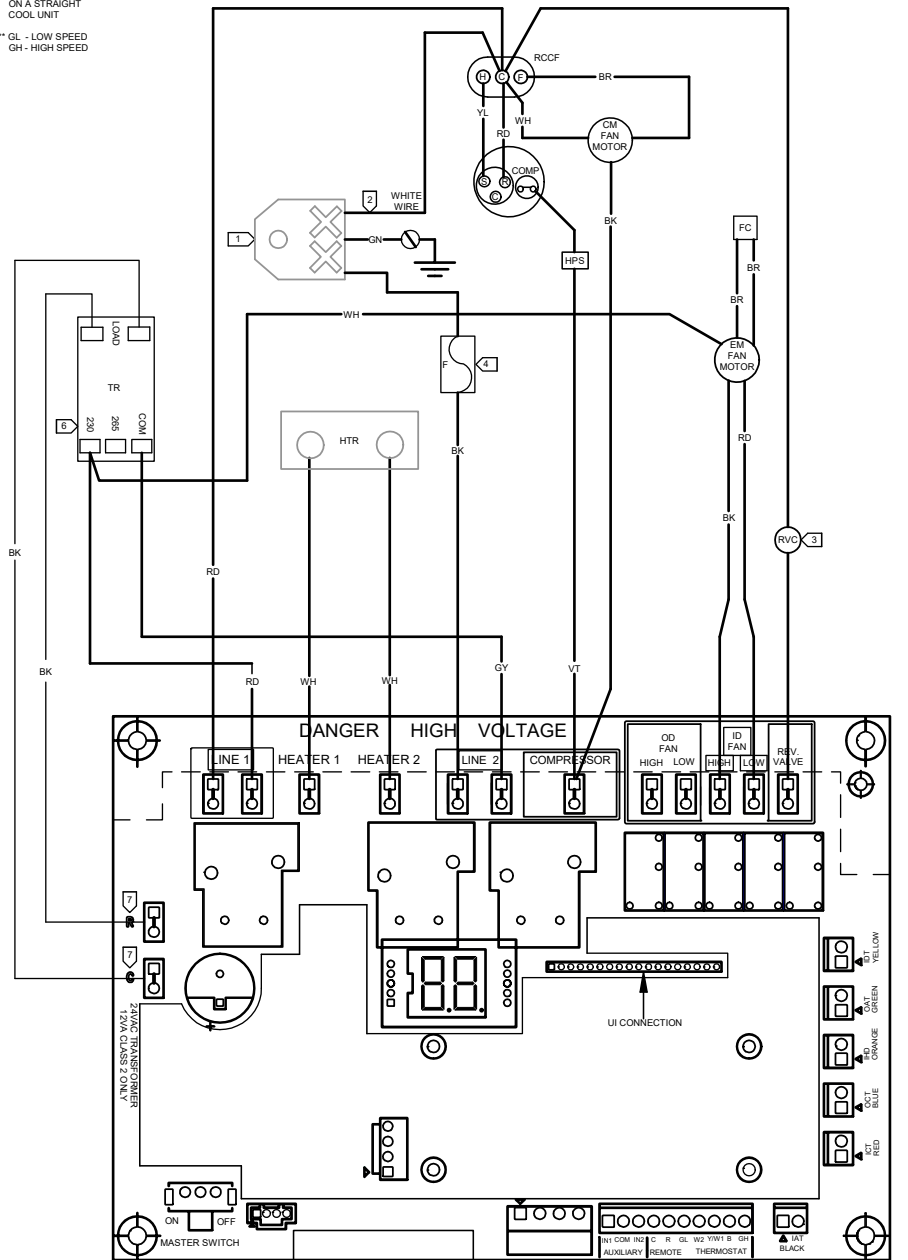
DUAL MOTOR NO SPEED RELAY SINGLE SPEED CONDENSER FAN

HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.
WARNING

REMOTE THERMOSTAT OPERATION	
COOLING UNIT W / ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G **
COOL	G, Y / W1
HEAT	G, W2 OR G, B, Y / W1*
HEAT PUMP W / AUXILIARY ELECTRIC HEAT	
FUNCTION	CONNECT R TO:
OFF	-----
FAN	G **
COOL	G, Y / W1
1ST STAGE HEAT	G, B, Y / W1
2ND STAGE HEAT	G, W2

* FOR A HEAT PUMP THERMOSTAT USED ON A STRAIGHT COOL UNIT
 ** GL - LOW SPEED
 GH - HIGH SPEED

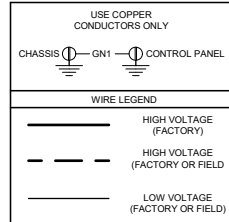
DUAL MOTOR, NO SPEED RELAY SINGLE SPEED CONDENSER FAN



NOTES:

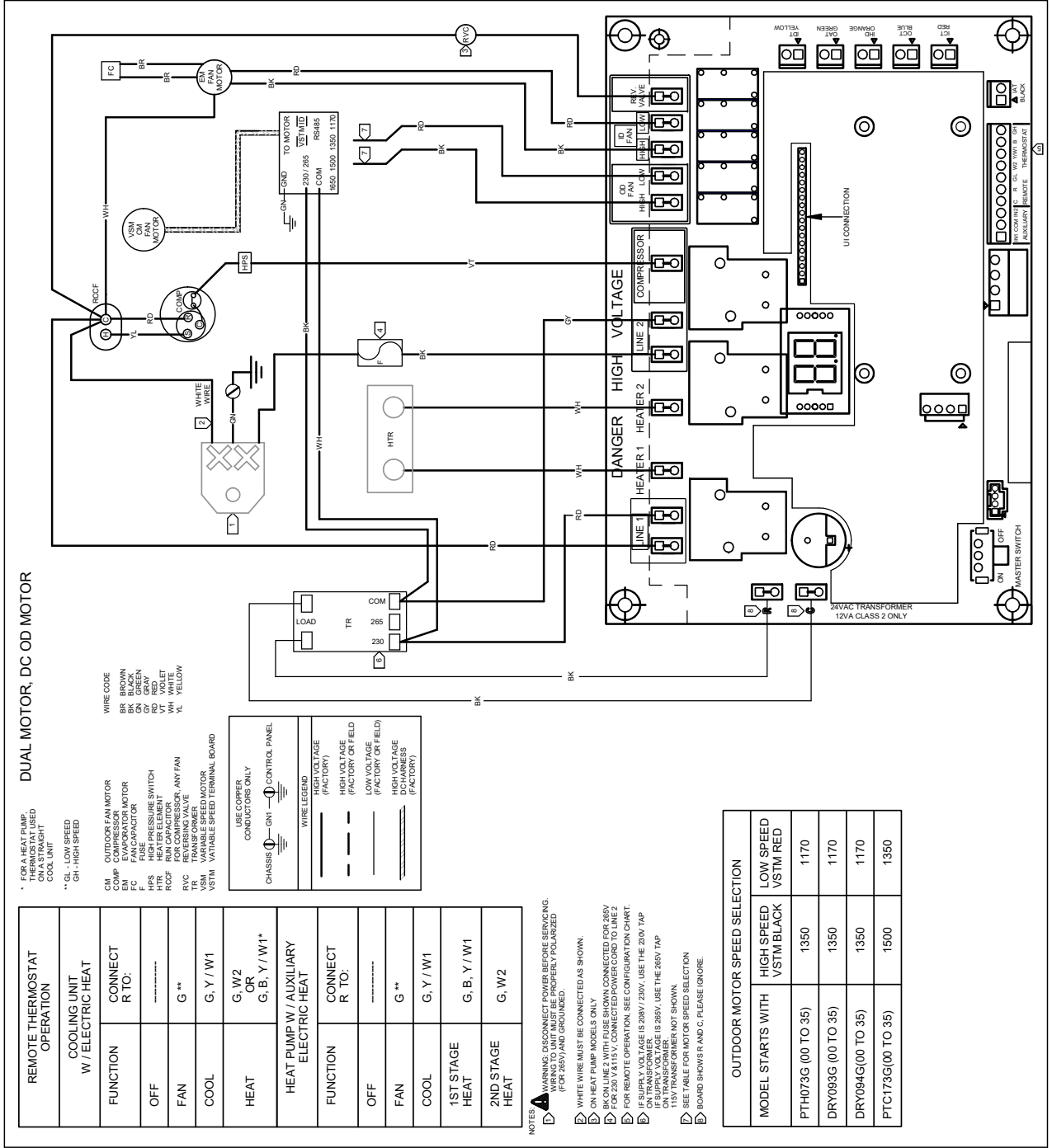
- ⚠ WARNING: DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
- Ⓛ WHITE WIRE MUST BE CONNECTED AS SHOWN.
- Ⓛ ON HEAT PUMP MODELS ONLY
- Ⓛ BK ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V FOR 230 V & 115 V, CONNECTED POWER CORD TO LINE 2
- Ⓛ FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
- Ⓛ IF SUPPLY VOLTAGE IS 208V/230V, USE THE 230V TAP ON TRANSFORMER.
- Ⓛ IF SUPPLY VOLTAGE IS 265V, USE THE 265V TAP ON TRANSFORMER.
- Ⓛ 115V TRANSFORMER NOT SHOWN.
- Ⓛ BOARD SHOWS R AND C, PLEASE IGNORE.

CM	OUTDOOR FAN MOTOR	BR	BROWN
COMP	COMPRESSOR	BK	BLACK
EM	EVAPORATOR MOTOR	GN	GREEN
FC	FAN CAPACITOR	GY	GRAY
F	FUSE	RD	RED
HPS	HIGH PRESSURE SWITCH	VT	VIOLET
HTR	HEATER ELEMENT	WH	WHITE
RCCF	RUN CAPACITOR FOR COMPRESSOR, ANY FAN	YL	YELLOW
RVC	REVERSING VALVE		
TR	TRANSFORMER		



DUAL MOTOR NO SPEED RELAY SINGLE SPEED CONDENSER FAN

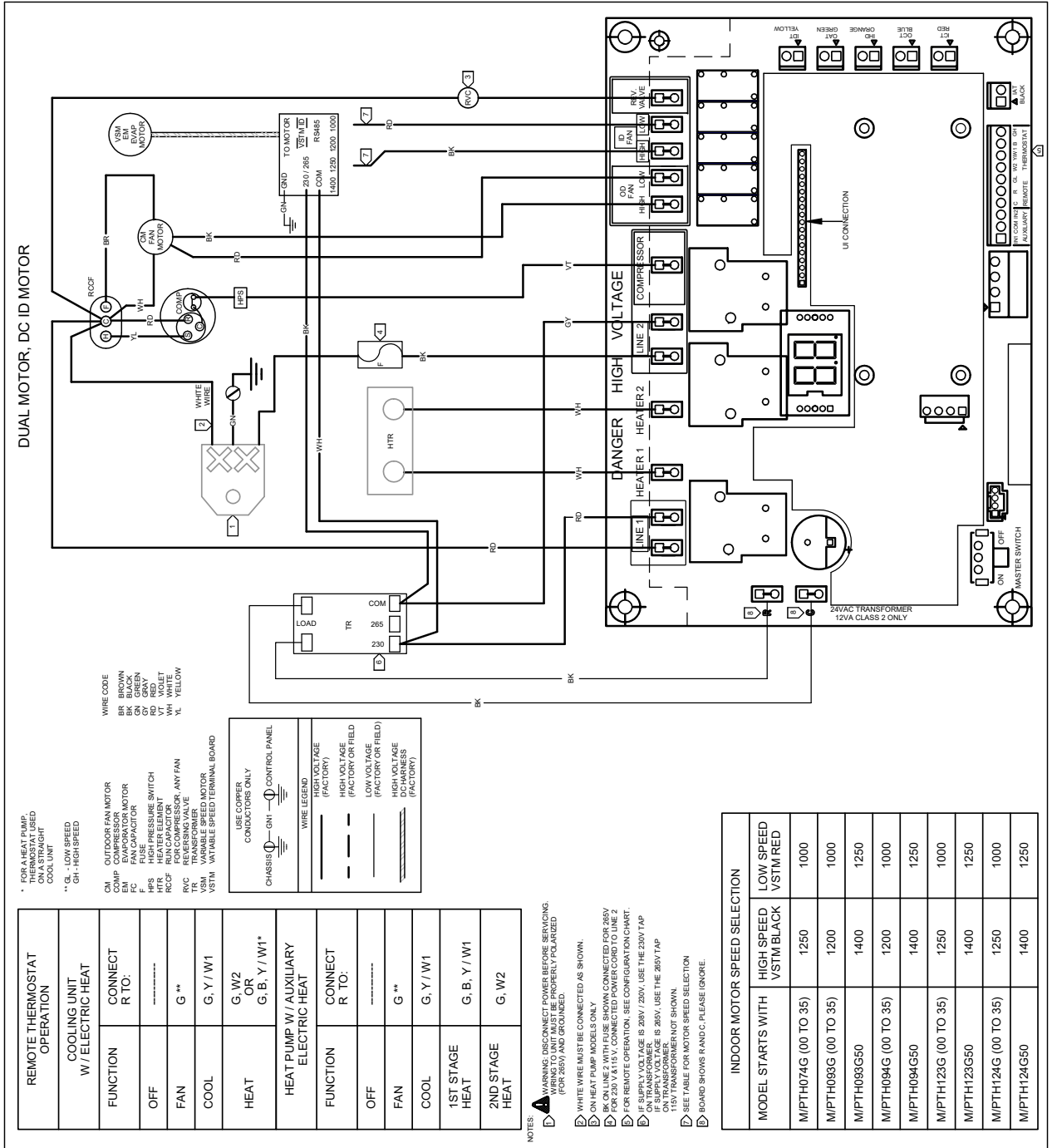
WARNING
HIGH VOLTAGE!
DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



DUAL MOTOR NO SPEED RELAY SINGLE SPEED CONDENSER FAN



WARNING
 HIGH VOLTAGE!
 DISCONNECT ALL POWER BEFORE SERVICING OR INSTALLING THIS UNIT. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DO SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.



DUAL MOTOR, DC ID MOTOR

WIRE CODE
 BK - BLACK
 GN - GREEN
 RD - RED
 WH - WHITE
 YL - YELLOW

USE CORNER CONDUCTORS ONLY

CHASSIS GND - GND - CONTROL PANEL

WIRE LEGEND	WIRE TYPE
---	HIGH VOLTAGE (FACTORY)
- - -	HIGH VOLTAGE (FACTORY OR FIELD)
---	LOW VOLTAGE (FACTORY OR FIELD)
---	HIGH VOLTAGE (FACTORY)
---	DC HARNESS (FACTORY)

REMOTE THERMOSTAT OPERATION	FUNCTION	CONNECT R TO:
COOLING UNIT W/ ELECTRIC HEAT	OFF	F
	FAN	RD
COOL	G, Y / W1	
	G, W2 OR G, B, Y / W1*	
HEAT PUMP W/ AUXILIARY ELECTRIC HEAT	OFF	F
	FAN	RD
COOL	G, Y / W1	
	1ST STAGE HEAT	G, B, Y / W1
2ND STAGE HEAT	G, W2	

- NOTES:
- ⚠ WARNING: DISCONNECT POWER BEFORE SERVICING. WIRING TO UNIT MUST BE PROPERLY POLARIZED (FOR 265V) AND GROUNDED.
 - ⚡ WHITE WIRE MUST BE CONNECTED AS SHOWN.
 - ⚡ ON HEAT PUMP MODELS ONLY.
 - ⚡ BK ON LINE 2 WITH FUSE SHOWN CONNECTED FOR 265V.
 - ⚡ FOR 230 V & 115 V, CONNECTED POWER CORD TO LINE 2.
 - ⚡ FOR REMOTE OPERATION, SEE CONFIGURATION CHART.
 - ⚡ IF SUPPLY VOLTAGE IS 280V / 230V, USE THE 230V TAP.
 - ⚡ IF SUPPLY VOLTAGE IS 265V, USE THE 265V TAP.
 - ⚡ 115V TRANSFORMER NOT SHOWN.
 - ⚡ SEE TABLE FOR MOTOR SPEED SELECTION.
 - ⚡ BOARD SHOWS R AND C, PLEASE IGNORE.

INDOOR MOTOR SPEED SELECTION		
MODEL STARTS WITH	HIGH SPEED VSTM BLACK	LOW SPEED VSTM RED
M1PT1074G (00 TO 35)	1250	1000
M1PT1083G (00 TO 35)	1200	1000
M1PT1093G50	1400	1250
M1PT1094G (00 TO 35)	1200	1000
M1PT1094G50	1400	1250
M1PT1123G (00 TO 35)	1250	1000
M1PT1123G50	1400	1250
M1PT1124G (00 TO 35)	1250	1000
M1PT1124G50	1400	1250

CUSTOMER FEEDBACK

We are very interested in all product comments.

Please fill out the feedback form on one of the following links:

Daikin Products: (<https://daikincomfort.com/contact-us>)

You can also scan the QR code on the right for the product brand you purchased to be directed to the feedback page.



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