INSTALLATION   INSTRUCTIONS

LOW VOLTAGE CONTROL CIRCUIT WIRING

MODELS

W**A	W**L
W**A*D	W**L*D
WA*S*	WL*S*

Bard
SINCE 1914
CLIMATE CONTROL SOLUTIONS

Contents

TABLE 1 — DIAGRAM TO USE WITH UNIT AND VENTS

Vent		NONE		CRV, ERV, MFAD		CRVMP	ECONOMIZER		ECONWM*	CS2000A*
Vent Code		X		R,M,V,P		C	E		T,W	
Thermostat		Programmable		Programmable		ALL	Programmable		ALL	ALL
System Type	**Model Series**	No	Yes	No	Yes	ALL	No	Yes	ALL	All
Air Conditioner	W**A, W**L	1	1	3	2	N/A	4	4	17	11
Air Conditioner w/Dehumidification Sequence	W**A*D W**L*D	6	5	8	7	N/A	9	10	N/A	11
2-Stage Air Conditioner	WA*S* WL*S*	12	12	13	14	16	15	15	18	11

WIRING – LOW VOLTAGE WIRING

230/208V, 1 phase and 3 phase are equipped with dual primary voltage transformers. All equipment leaves the factory wired on 240V tap. For 208V operation, reconnect from 240V to 208V tap. The acceptable operating voltage range for the 240V and 208V taps are:

TABLE 2
OPERATING VOLTAGE RANGE

TAP	RANGE
240V	253 – 216
208V	220 – 187

NOTE: The voltage should be measured at the field power connection point in the unit and while the unit is operating at full load (maximum amperage operating condition).

An 18 gauge copper, color-coded thermostat cable is recommended. The connection points are shown in this Manual. See Table below.

Low Voltage Connection

These units use a 24-volt AC low voltage circuit.

The "R" terminal is the *hot* terminal and the "C" terminal is *grounded*.

"G" terminal is the *fan input*.

"Y" terminal is the *compressor input for cooling*
             1-Stage units only

"Y1" terminal is the *1st Stage compressor input for cooling*
             2-Stage units only

"Y2" terminal is the *2nd Stage compressor input for cooling*
             2-Stage units only

"W1" terminal is the *1st stage electric heat*.

"W2" terminal is the *2nd stage heat* (if equipped).

"A" terminal is the *ventilation input*. This terminal energizes any factory installed ventilation option.

"3" terminal is the dehumidification input. If installed, this terminal energizes any factory installed dehumidification option.

NOTE: *On models with "J" or "M" Control Module, "3" terminal is used along with "1" and "2" for the alarm relay. "J" or "M" modules are not used in conjunction with dehumidification units.*

LOW VOLTAGE CONNECTIONS FOR DDC CONTROL		
	1-Stage Units	**2-Stage Units**
Fan Only	Energize G	Energize G
1st Stage Cooling Mode	Energize Y, G	Energize Y1, G
2nd Stage Cooling Mode		Energize Y1, Y2, G
1st Stage Heating	Energize W1	Energize W1
2nd Stage Heating (if employed)	Energize W1, W2	Energize W1, W2
Ventilation	Energize G, A	Energize G, A
Dehumidification (if employed)	Energize 3	Energize 3

TABLE 3
WALL THERMOSTAT

Part Number	Predominate Features
8403-057 (TH3110D1040)	1 stage Cool, 1 stage Heat Electronic Non-Programmable Auto or Manual changeover
8403-058 (TH5220D1151)	2 stage Cool, 2 stage Heat Electronic Non-Programmable HP or Conventional Auto or Manual changeover
8403-060 (1120-445)	3 stage Cool; 3 stage Heat Programmable/Non-Programmable Electronic HP or Conventional Auto or Manual changeover Dehumidification Output

TABLE 4
HUMIDITY CONTROLS

Part Number	Predominate Features
8403-038 (H600A1014)	SPDT switching, pilot duty 50VA @ 24V Humidity range 20-80% RH
8403-047 (H200-10-21-10)	Electronic dehumidstat SPST closes-on-rise Humidity range 10-90% with adjustable stops

TABLE 5
CO2 CONTROLLER

Part Number	Predominate Features
8403-056 (C7232A1008)	Normally Open SPST relay closes-on-rise 24V with automatic background calibration Default setting is 800ppm, adjustable to 1000 or 1200, on-off differential is 100ppm 0-2000ppm range, with display
8403-067	Normally Open SPST relay closes-on-rise 24V dual wave length sensor. Default setting 950ppm, adjustable to 0-2000ppm Default off setting 1000ppm, adjustable to 0-200 ppm can be calibrated

TABLE 6
THERMOSTAT WIRE SIZE

Transformer VA	FLA	Wire Gauge	Maximum Distance In Feet
55	2.3	20 gauge 18 gauge 16 gauge 14 gauge 12 gauge	45 60 100 160 250

FIGURE 1
BASIC A/C with OPTIONAL ELECTRIC HEAT
NO ECONOMIZER or VENTILATION PACKAGES
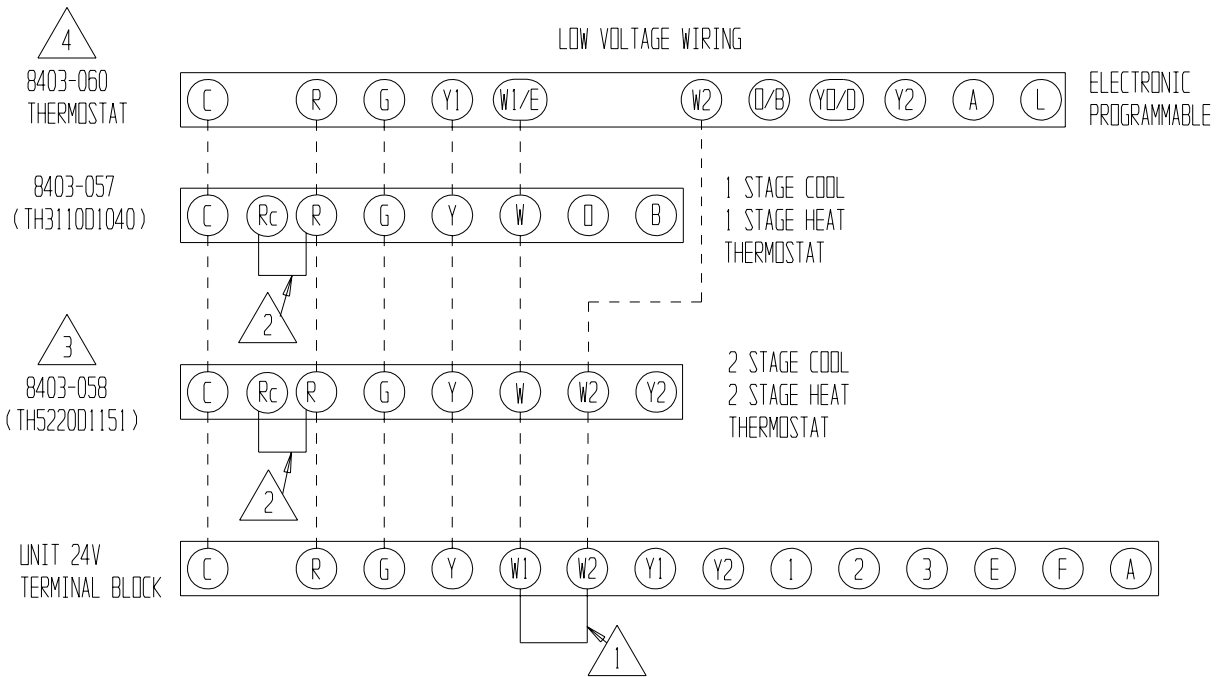
LOW VOLTAGE WIRING

⟨4⟩
8403-060
THERMOSTAT

| C | | R | G | Y1 | W1/E | | W2 | O/B | YO/D | Y2 | A | L | ELECTRONIC PROGRAMMABLE |

8403-057
(TH3110D1040)

| C | Rc | R | G | Y | W | O | B | 1 STAGE COOL 1 STAGE HEAT THERMOSTAT |

⟨2⟩

⟨3⟩
8403-058
(TH5220D1151)

| C | Rc | R | G | Y | W | W2 | Y2 | 2 STAGE COOL 2 STAGE HEAT THERMOSTAT |

⟨2⟩

UNIT 24V
TERMINAL BLOCK

| C | | R | G | Y | W1 | W2 | Y1 | Y2 | 1 | 2 | 3 | E | F | A |

⟨1⟩

⟨1⟩ REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

⟨2⟩ FACTORY INSTALLED JUMPER

⟨3⟩ CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP) TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

⟨4⟩ CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL.

MIS-2478 A

FIGURE 2
OPTIONAL MFAD, CRV or ERV VENTILATION PACKAGES
with PROGRAMMABLE THERMOSTAT (RECOMMENDED)

LOW VOLTAGE WIRING
AC WITH PROGRAMMABLE THERMOSTAT
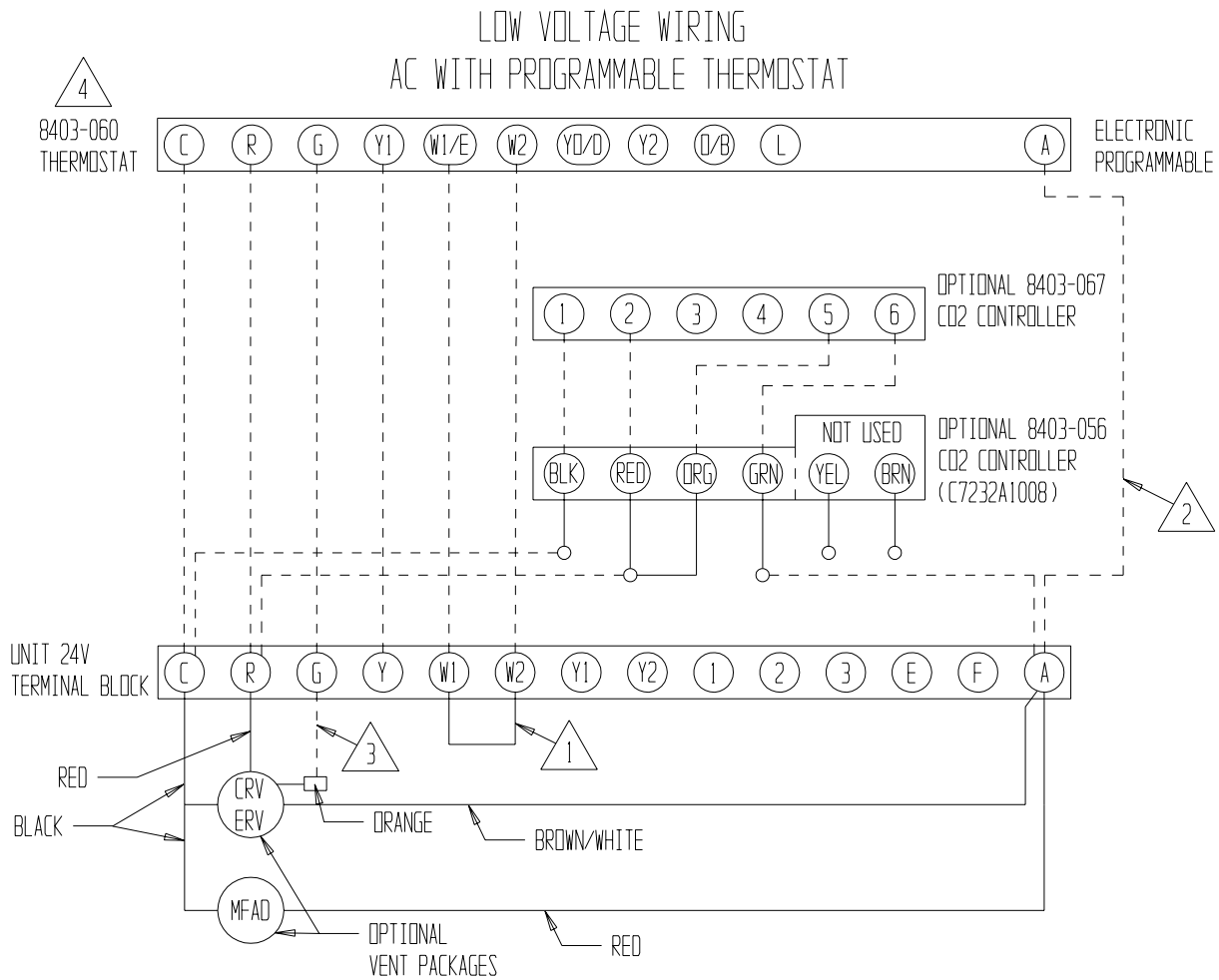
MIS-2479 C

△1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS
WITH 15 OR MORE KW

△2 DO NOT CONNECT "A" FROM 8403-060 IF OPTIONAL CO2
CONTROLLER IS USED

△3 CONNECT ORANGE WIRE TO "G" ONLY
IF OPTIONAL CO_2 CONTROLLER IS USED

△4 CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL.
MUST BE CONFIGURED TO PROGRAMMABLE AND FAN SET TO PROGRAMMED
FAN FOR THE "A" OUTPUT TO FUNCTION DURING SCHEDULED OCCUPIED PERIODS.

FIGURE 3
OPTIONAL MFAD, CRV or ERV VENTILATION PACKAGES
with NON-PROGRAMMABLE THERMOSTAT

LOW VOLTAGE WIRING
AC WITH NON-PROGRAMMABLE THERMOSTAT

8403-057
(TH3110D1040)

C Rc R G Y W O B

1 STAGE COOL
1 STAGE HEAT
THERMOSTAT

1 2 3 4 5 6

OPTIONAL 8403-067
CO2 CONTROLLER

△5

8403-058
(TH5220D1151)

C Rc R G Y W W2 Y2

2 STAGE COOL
2 STAGE HEAT
THERMOSTAT

BLK RED ORG GRN YEL BRN

NOT USED

OPTIONAL 8403-056
CO2 CONTROLLER
(C7232A1008)

△3

△3

UNIT 24V
TERMINAL BLOCK

C R G Y W1 W2 Y1 Y2 1 2 3 E F A

△1

△4

RED

CRV
ERV

BLACK

ORANGE △6

BROWN/WHITE

MFAD

OPTIONAL
VENT PACKAGES

RED

△2

MIS-2480 C

△1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS
WITH 15 OR MORE KW

△2 OPTIONAL VENT OPTION SUGGESTED HOOK UP

△3 FACTORY INSTALLED JUMPER

△4 ADD JUMPER IF OPTIONAL CO2 CONTROLLER IS NOT USED,
VENT WILL RUN WHILE BLOWER IS ENERGIZED. DO NOT
INSTALL JUMPER IF OPTIONAL CO2 CONTROLLER INSTALLED,
AND SEE NOTE 6.

△5 CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP)
TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

△6 CONNECT ORANGE WIRE TO "G" ONLY IF
OPTIONAL CO2 CONTROLLER IS INSTALLED.

FIGURE 4
A/C with ECONOMIZER
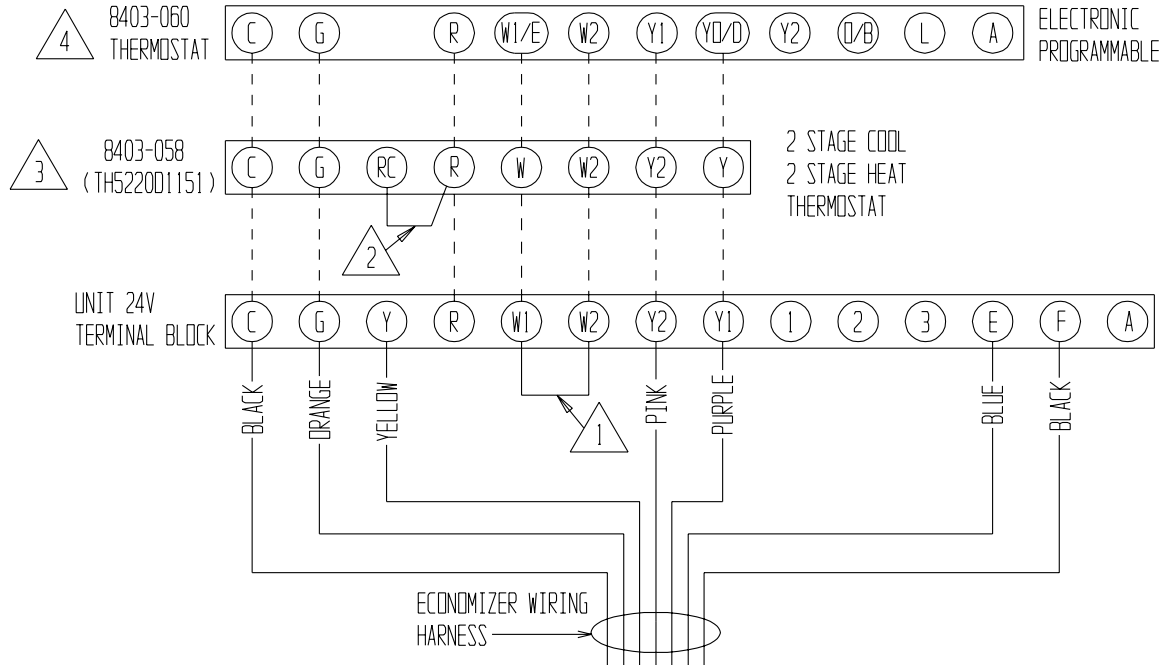
OPTIONAL ECONOMIZER LOW VOLTAGE WIRING

⟨4⟩ 8403-060 THERMOSTAT

(C) (G) (R) (W1/E) (W2) (Y1) (YO/D) (Y2) (O/B) (L) (A)   ELECTRONIC PROGRAMMABLE

⟨3⟩ 8403-058 (TH5220D1151)

(C) (G) (RC) (R) (W) (W2) (Y2) (Y)   2 STAGE COOL 2 STAGE HEAT THERMOSTAT

⟨2⟩

UNIT 24V TERMINAL BLOCK

(C) (G) (Y) (R) (W1) (W2) (Y2) (Y1) (1) (2) (3) (E) (F) (A)

BLACK   ORANGE   YELLOW   PINK   PURPLE   BLUE   BLACK

⟨1⟩

ECONOMIZER WIRING HARNESS

⟨1⟩ REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

⟨2⟩ FACTORY INSTALLED JUMPER

⟨3⟩ CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP) TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

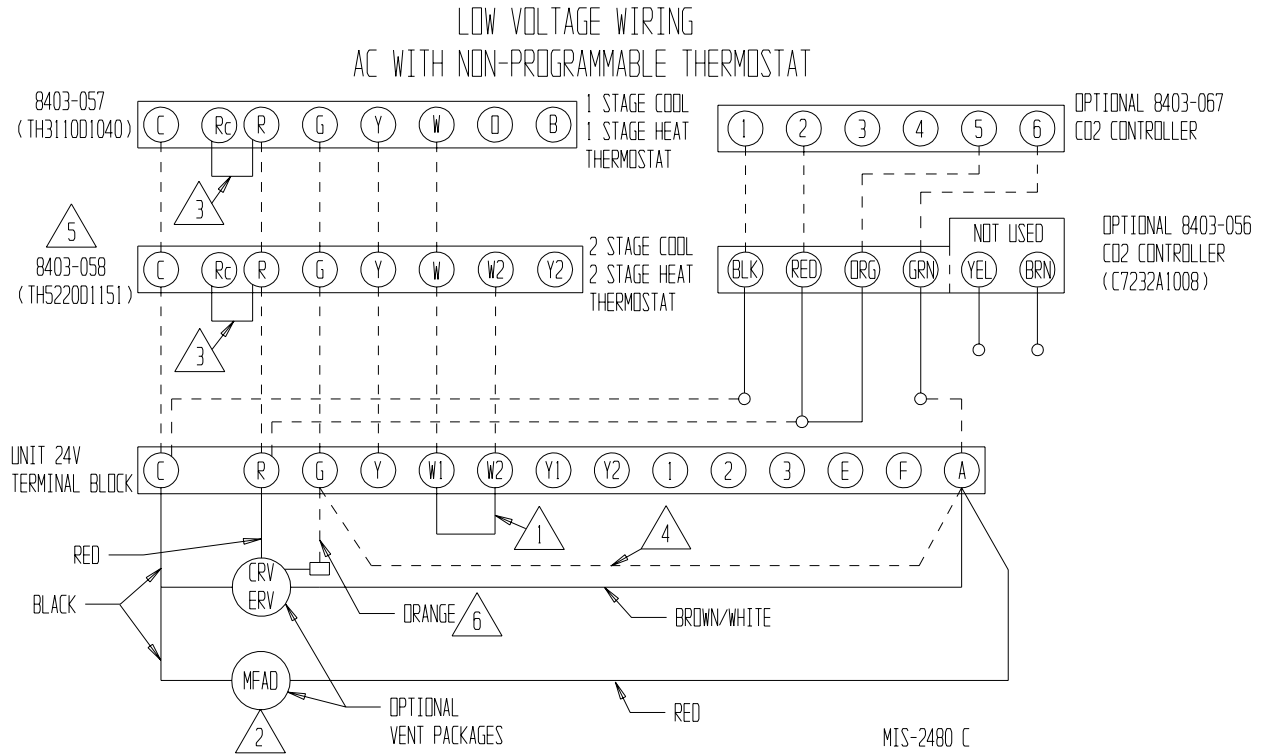⟨4⟩ CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL, AND MUST BE CONFIGURED FOR ECONOMIZER FOR YO/D OUTPUT TO BE ACTIVE AS FIRST STAGE COOLING.

MIS-2481 A

FIGURE 5
A/C with DEHUMIDIFICATION SEQUENCE
& NO VENTILATION PACKAGE USING
8403-060 COMBINATION TEMPERATURE and HUMIDITY CONTROLLER

LOW VOLTAGE WIRING

⚠2 8403-060 THERMOSTAT
(C) (R) (G) (Y1) (W1/E) (W2)   (Y2) (O/B)   (YO/O) (L) (A)   ELECTRONIC PROGRAMMABLE

UNIT 24V TERMINAL BLOCK
(C) (R) (G) (Y) (W1) (W2) (Y1) (Y2) (1) (2) (3) (E) (F) (A)

⚠1

⚠1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

⚠2 CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL, AND MUST BE CONFIGURED FOR "NO ECONOMIZER" TO MAKE YO/O OUTPUT ACTIVE FOR HUMIDITY CONTROL

MIS-2482 A

FIGURE 6
A/C with DEHUMIDIFICATION SEQUENCE
& NO VENTILATION PACKAGE USING SEPARATE
TEMPERATURE and HUMIDITY CONTROLS

LOW VOLTAGE WIRING

8403-057
(TH3110D1040)

| C | Rc | R | G | Y | W | D | B |

1 STAGE COOL
1 STAGE HEAT
THERMOSTAT

△4

△3

8403-058
(TH5220D1151)

| C | Rc | R | G | Y | W | W2 | Y2 |

2 STAGE COOL
2 STAGE HEAT
THERMOSTAT

△3

UNIT 24V
TERMINAL BLOCK

| C | R | G | Y | W1 | W2 | Y1 | Y2 | 1 | 2 | 3 | E | F | A |

△1

△2

8403-047

| 6 | 5 | 3 ⊢⊢ 4 |

ELECTRONIC HUMIDISTAT

RED

YELLOW

8403-038

| ◯ ⊢⊢ ◯ |

MECHANICAL HUMIDISTAT

△1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS
WITH 15 OR MORE KW

△2 JUMPER NEEDS TO BE ADDED

△3 FACTORY INSTALLED JUMPER

△4 CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP)
TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

MIS-2483 A
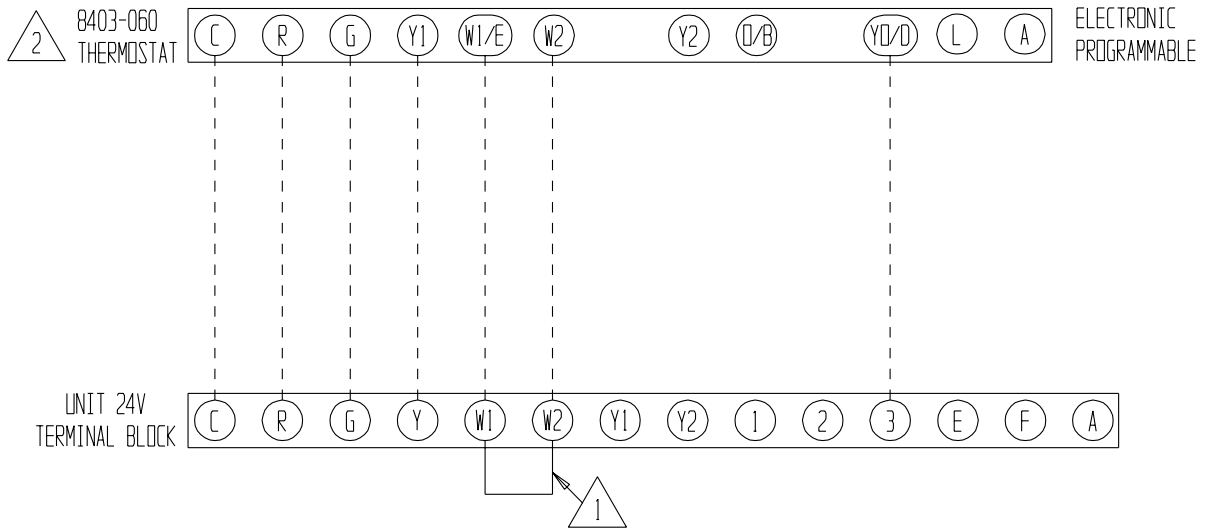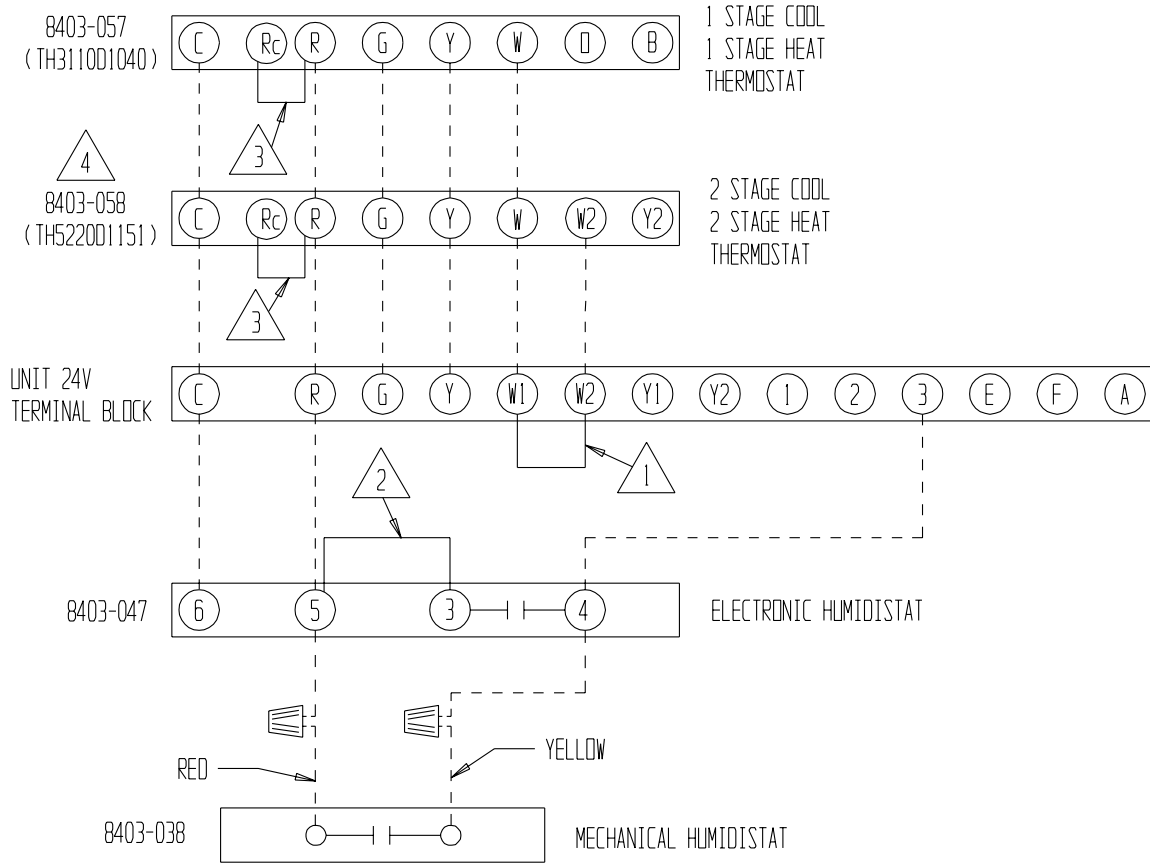
FIGURE 7
A/C with DEHUMIDIFICATION SEQUENCE
with VENTILATION PACKAGE USING
8403-060 COMBINATION TEMPERATURE & HUMIDITY CONTROLLER
and 8403-067 CO$_2$ CONTROLLER

LOW VOLTAGE WIRING

/2\ 8403-060 THERMOSTAT — C R G Y1 W1/E W2 Y2 O/B YO/D L A — ELECTRONIC PROGRAMMABLE

OPTIONAL 8403-067 CO2 CONTROLLER — 1 2 3 4 5 6

/3\

OPTIONAL 8403-056 CO2 CONTROLLER (C7232A1008) — BLK RED ORG GRN YEL BRN / NOT USED

UNIT 24V TERMINAL BLOCK — C R G Y W1 W2 Y1 Y2 1 2 3 E F A

CRV ERV

MFAD

BLACK
ORANGE
BROWN/WHITE
OPTIONAL VENT PACKAGES
RED

/1\ REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

/2\ CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL, AND SET TO "NO ECONOMIZER" TO MAKE YO/D OUTPUT ACTIVE FOR HUMIDITY CONTROL. MUST BE CONFIGURED TO PROGRAMMABLE AND FAN SET TO PROGRAMMED FAN FOR THE "A" OUTPUT TO FUNCTION DURING SCHEDULED OCCUPIED PERIODS.

/3\ DO NOT CONNECT "A" FROM 8403-060 IF OPTIONAL CO2 CONTROLLER IS USED

/4\ CONNECT ORANGE WIRE TO "G" ONLY IF OPTIONAL CO2 CONTROLLER IS USED.

MIS-2484 C

FIGURE 8
A/C with DEHUMIDIFICATION SEQUENCE
with VENTILATION PACKAGE USING
NON-PROGRAMMABLE THERMOSTAT
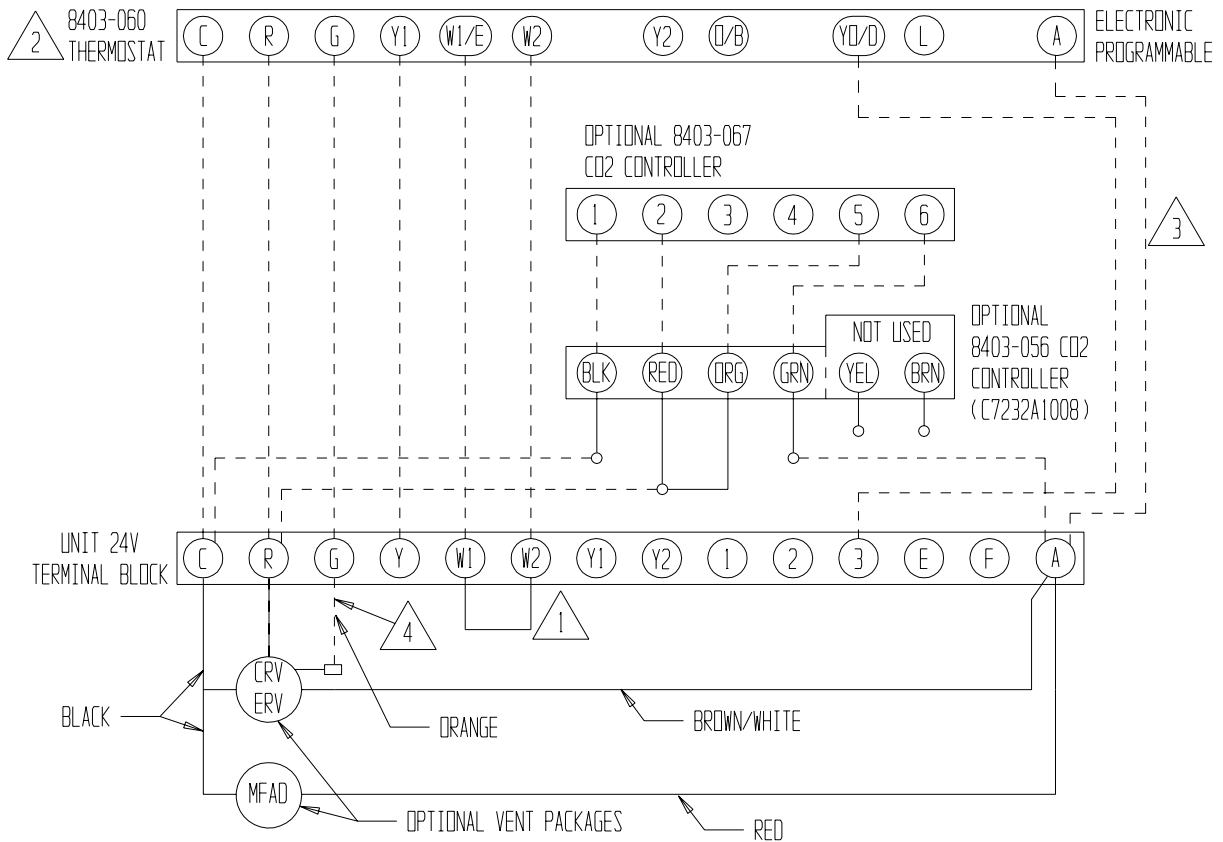## and SEPARATE HUMIDITY CONTROLLER

LOW VOLTAGE WIRING

△1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

△2 JUMPER NEEDS TO BE ADDED

△3 FACTORY INSTALLED JUMPER

△4 ADD JUMPER IF OPTIONAL CO2 CONTROLLER IS NOT USED. VENT WILL RUN WHILE BLOWER IS ENERGIZED, IF CO2 CONTROLLER IS INSTALLED, DO NOT ADD JUMPER AND SEE NOTE 6.

△5 CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP) TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

△6 CONNECT ORANGE WIRE TO "G" ONLY IF OPTIONAL CO2 CONTROLLER IS INSTALLED.

MIS-2485 C

FIGURE 9
A/C with DEHUMIDIFICATION SEQUENCE
& ECONOMIZER with 8403-058 THERMOSTAT
and 8403-038 or 8403-047 HUMIDISTAT
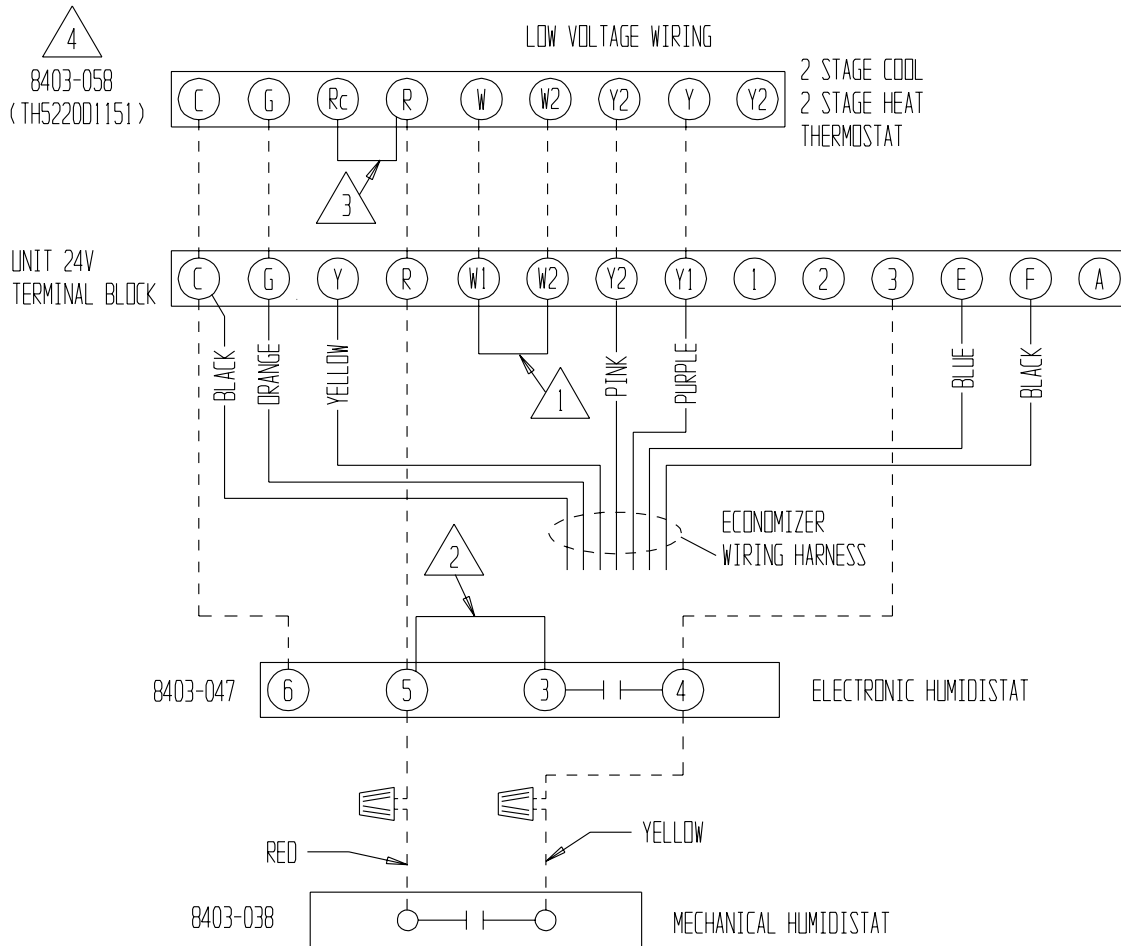
⚠️4
8403-058
(TH5220D1151)

LOW VOLTAGE WIRING

2 STAGE COOL
2 STAGE HEAT
THERMOSTAT

Thermostat terminals: C G Rc R W W2 Y2 Y Y2

⚠️3 (FACTORY INSTALLED JUMPER)

UNIT 24V TERMINAL BLOCK: C G Y R W1 W2 Y2 Y1 1 2 3 E F A

BLACK ORANGE YELLOW ⚠️1 PINK PURPLE BLUE BLACK

⚠️2

ECONOMIZER WIRING HARNESS

8403-047: 6 5 3 ——|——|— 4   ELECTRONIC HUMIDISTAT

RED   YELLOW

8403-038   ○ ——|——|— ○   MECHANICAL HUMIDISTAT

⚠️1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

⚠️2 JUMPER NEEDS TO BE ADDED

⚠️3 FACTORY INSTALLED JUMPER

⚠️4 CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP) TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

MIS-2497 A

FIGURE 10
A/C with DEHUMIDIFICATION SEQUENCE
& ECONOMIZER with 8403-060
COMBINATION TEMPERATURE and HUMIDITY CONTROL

LOW VOLTAGE WIRING
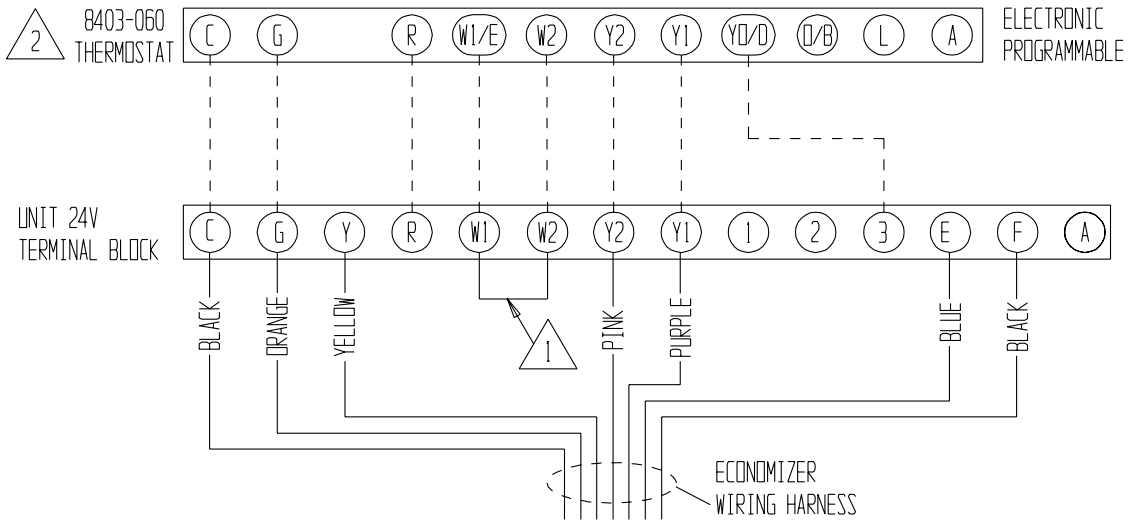
⚠2 8403-060 THERMOSTAT — C G R W1/E W2 Y2 Y1 YO/O O/B L A — ELECTRONIC PROGRAMMABLE

UNIT 24V TERMINAL BLOCK — C G Y R W1 W2 Y2 Y1 1 2 3 E F A

BLACK ORANGE YELLOW ⚠1 PINK PURPLE BLUE BLACK

ECONOMIZER WIRING HARNESS

⚠1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

⚠2 CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL, AND MUST BE CONFIGURED FOR NO ECONOMIZER AND MULTI-STAGE FOR Y1 OUTPUT TO BE ACTIVE AS FIRST STAGE COOLING AND YO/O TO BE ACTIVE FOR HUMIDITY CONTROL

MIS-2486 A

FIGURE 11

AIR CONDITIONER WITH CS2000

DO NOT CONNECT "L" UNTIL AFTER 8403-060 CONTROLLER IS CONFIGURED TO CS2000 = YES

TEMPERATURE/HUMIDITY CONTROLLER BARD P/N 8403-060
R C G Y1 W1/E W2 Y2 L YO/D

THERMOSTAT TH5220D1151 BARD P/N 8403-058
NOTE: MUST BE CONFIGURED FOR HEAT/COOL
C G Y1 W W2 Y2 R RC

YELLOW
8403-038 H600A1014 HUMIDITY CONTROLLER
BLUE RED

6 5 4 3
8403-047 H200-10-21-10 DEHUMIDSTAT

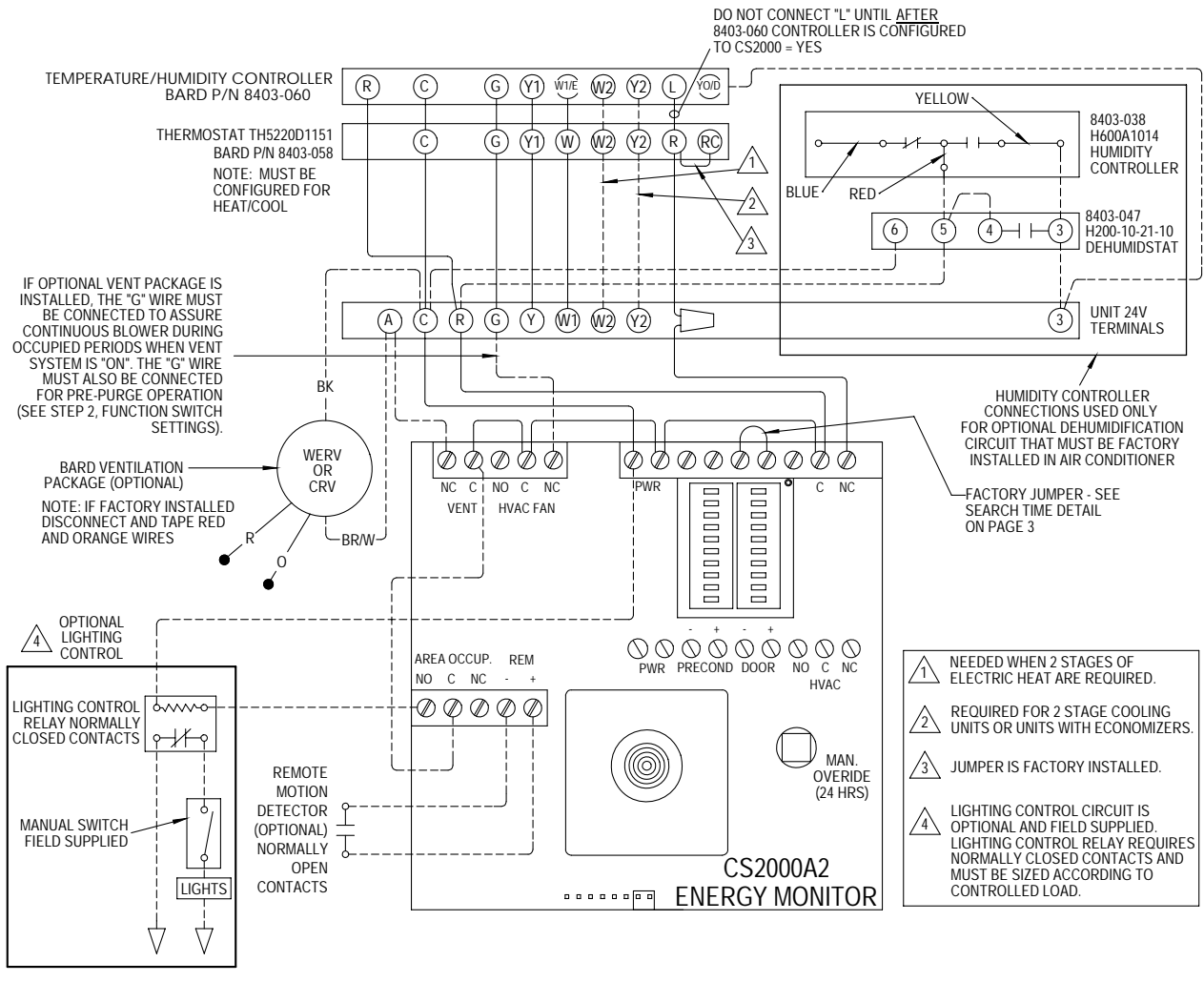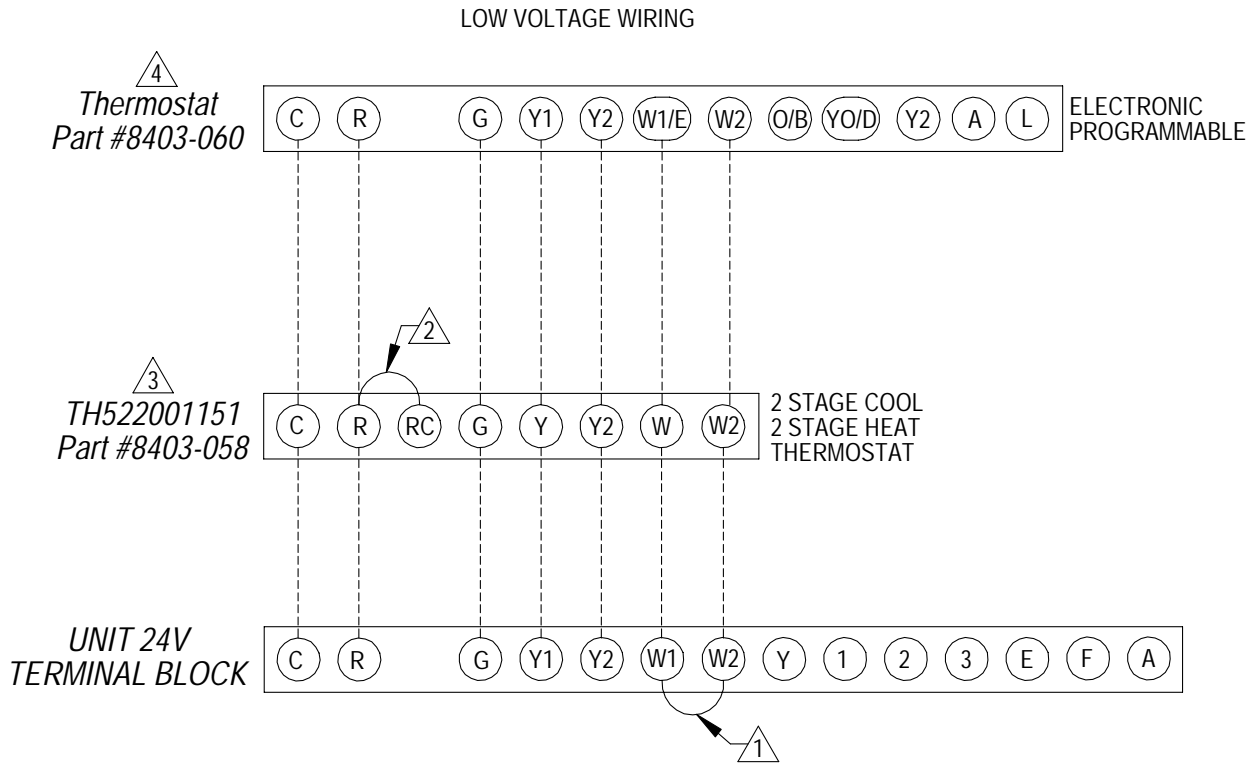IF OPTIONAL VENT PACKAGE IS INSTALLED, THE "G" WIRE MUST BE CONNECTED TO ASSURE CONTINUOUS BLOWER DURING OCCUPIED PERIODS WHEN VENT SYSTEM IS "ON". THE "G" WIRE MUST ALSO BE CONNECTED FOR PRE-PURGE OPERATION (SEE STEP 2, FUNCTION SWITCH SETTINGS).

A C R G Y W1 W2 Y2

3 UNIT 24V TERMINALS

HUMIDITY CONTROLLER CONNECTIONS USED ONLY FOR OPTIONAL DEHUMIDIFICATION CIRCUIT THAT MUST BE FACTORY INSTALLED IN AIR CONDITIONER

BARD VENTILATION PACKAGE (OPTIONAL)
NOTE: IF FACTORY INSTALLED DISCONNECT AND TAPE RED AND ORANGE WIRES

BK
WERV OR CRV
R
O
BR/W

NC NO C NC
VENT HVAC FAN

PWR
C NC

FACTORY JUMPER - SEE SEARCH TIME DETAIL ON PAGE 3

OPTIONAL LIGHTING CONTROL

LIGHTING CONTROL RELAY NORMALLY CLOSED CONTACTS

MANUAL SWITCH FIELD SUPPLIED

LIGHTS

AREA OCCUP. REM
NO C NC - +

REMOTE MOTION DETECTOR (OPTIONAL) NORMALLY OPEN CONTACTS

- + - +
PWR PRECOND DOOR NO C NC
HVAC

MAN. OVERIDE (24 HRS)

CS2000A2 ENERGY MONITOR

1 NEEDED WHEN 2 STAGES OF ELECTRIC HEAT ARE REQUIRED.

2 REQUIRED FOR 2 STAGE COOLING UNITS OR UNITS WITH ECONOMIZERS.

3 JUMPER IS FACTORY INSTALLED.

4 LIGHTING CONTROL CIRCUIT IS OPTIONAL AND FIELD SUPPLIED. LIGHTING CONTROL RELAY REQUIRES NORMALLY CLOSED CONTACTS AND MUST BE SIZED ACCORDING TO CONTROLLED LOAD.

RECOMMENDED SWITCH SETTINGS SHOWN BELOW

FUNCTION SWITCHES		TEMPERATURE SWITCHES	
LEARN			90
PRE P			84
MODE			81
RATE			78
SEARCH-TIME			68
N/C			65
STAGE			62
AUX			58
DEMAND 2			54
DEMAND 1			48

4093-150 A

FIGURE 12
2-STAGE A/C with OPTIONAL ELECTRIC HEAT
NO ECONOMIZER or VENTILATION PACKAGES

LOW VOLTAGE WIRING

Thermostat
Part #8403-060

4 | C | R | G | Y1 | Y2 | W1/E | W2 | O/B | YO/D | Y2 | A | L | ELECTRONIC PROGRAMMABLE

TH522001151
Part #8403-058

3 | C | R | RC | G | Y | Y2 | W | W2 | 2 STAGE COOL / 2 STAGE HEAT THERMOSTAT

2 — FACTORY INSTALLED JUMPER (callout)

UNIT 24V TERMINAL BLOCK

C | R | G | Y1 | Y2 | W1 | W2 | Y | 1 | 2 | 3 | E | F | A

1 (callout)
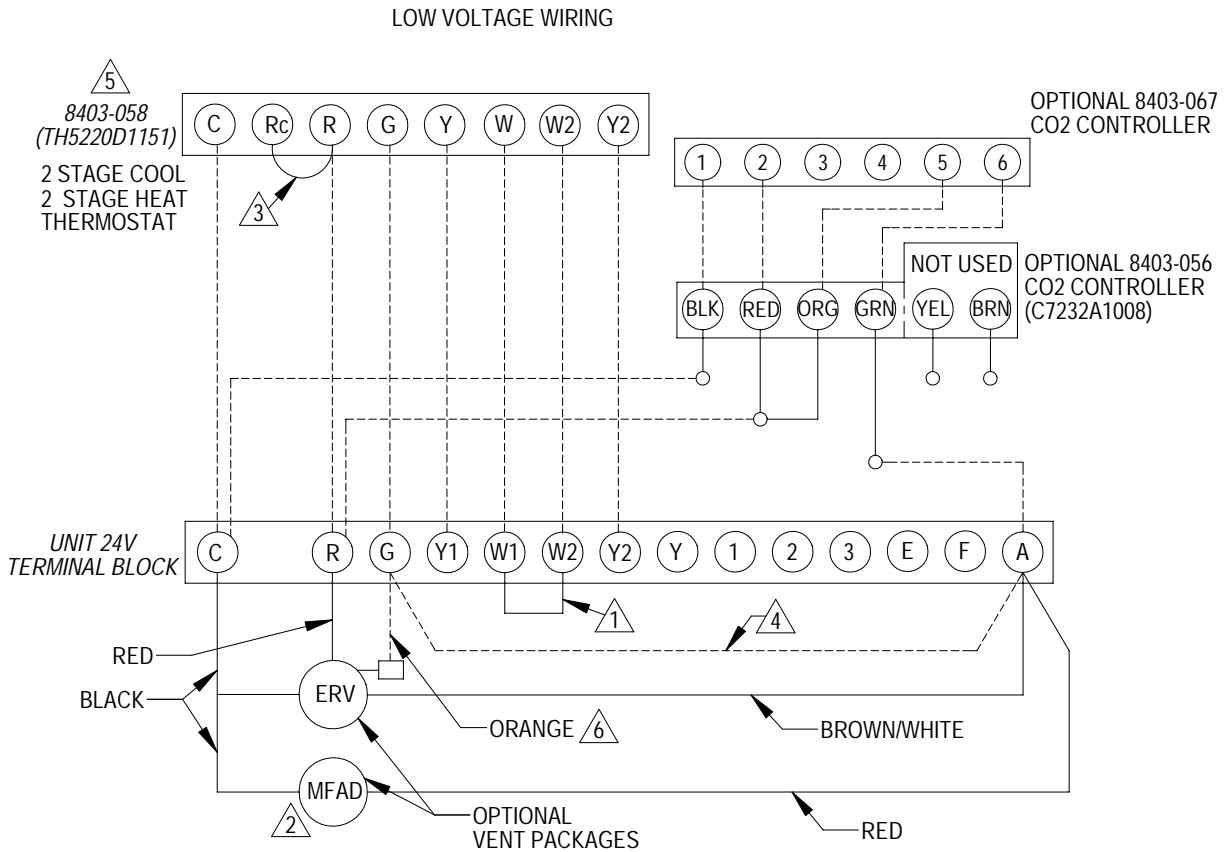
1 — REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

2 — FACTORY INSTALLED JUMPER

3 — CHANGE "SYSTEM TYPE". SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP) TO 6 (2 HEAT/ 2 COOL CONVENTIONAL).

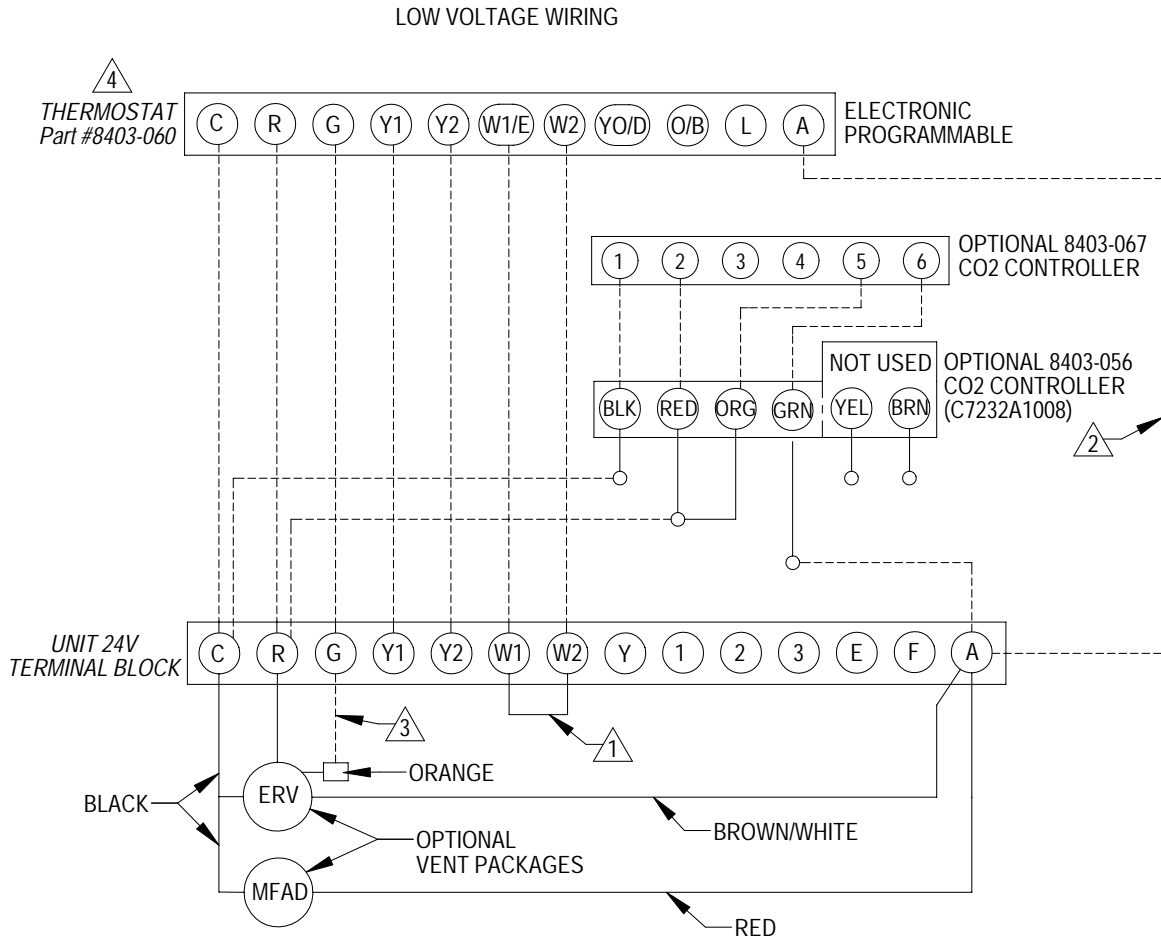4 — CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL

MIS-2868 A

FIGURE 13
2-STAGE A/C with OPTIONAL MFAD OR ERV VENTILATION PACKAGES
with NON-PROGRAMMABLE THERMOSTAT

LOW VOLTAGE WIRING

$\triangle$1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

$\triangle$2 OPTIONAL VENT OPTION SUGGESTED HOOK UP

$\triangle$3 FACTORY INSTALLED JUMPER

$\triangle$4 ADD JUMPER IF OPTIONAL CO2 CONTROLLER IS NOT USED, VENT WILL RUN WHILE BLOWER IS ENERGIZED. DO NOT INSTALL JUMPER IF OPTIONAL CO2 CONTROLLER INSTALLED, AND SEE NOTE 6.

$\triangle$5 CHANGE "SYSTEM TYPE", SET UP FUNCTION 1, FROM 5 (2 HEAT/ 1 COOL HEAT PUMP) TO 6 (2 HEAT / 2 COOL CONVENTIONAL).

$\triangle$6 CONNECT ORANGE WIRE TO "G" ONLY IF OPTIONAL CO2 CONTROLLER IS INSTALLED.

MIS-2867 C

FIGURE 14
2-STAGE A/C with OPTIONAL MFAD OR ERV VENTILATION PACKAGES
with PROGRAMMABLE THERMOSTAT (RECOMMENDED)

LOW VOLTAGE WIRING

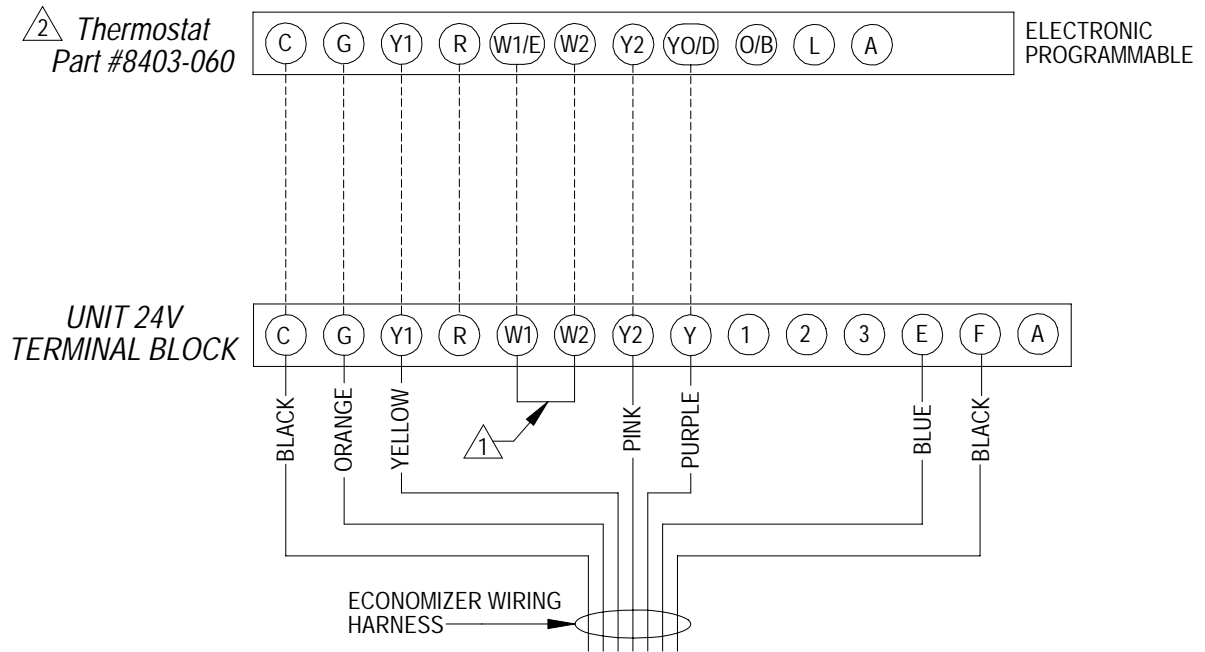△1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS
WITH 15 OR MORE KW

△2 DO NOT CONNECT "A" FROM 8403-060 IF OPTIONAL CO2
CONTROLLER IS USED

△3 CONNECT ORANGE WIRE TO "G" ONLY
IF OPTIONAL CO2 CONTROLLER IS USED

△4 CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL.
MUST BE CONFIGURED TO PROGRAMMABLE AND FAN SET TO PROGRAMMED
FAN FOR THE "A" OUTPUT TO FUNCTION DURING SCHEDULED OCCUPIED PERIODS.
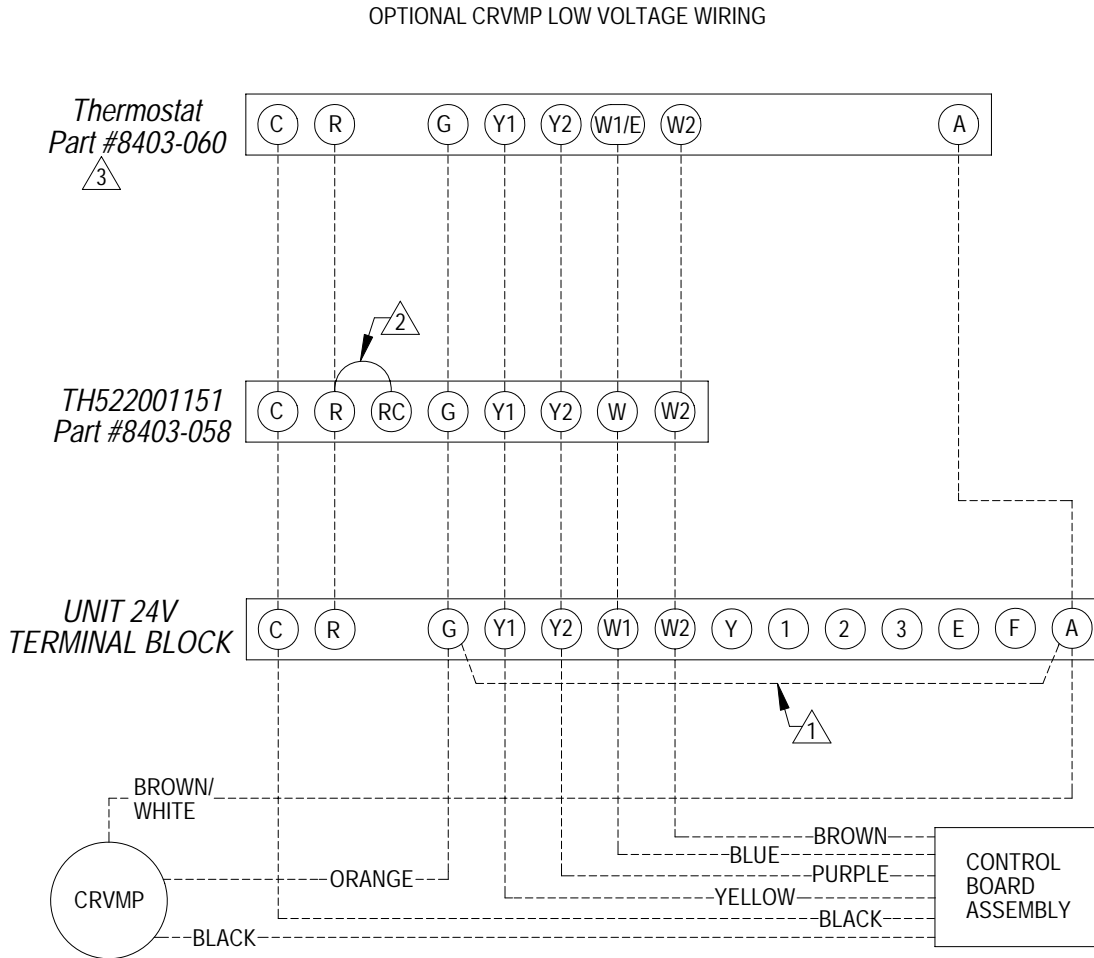
MIS-2866 C

FIGURE 15
2-STAGE A/C with ECONOMIZER

OPTIONAL ECONOMIZER LOW VOLTAGE WIRING

⚠️2 *Thermostat Part #8403-060*

ELECTRONIC PROGRAMMABLE

UNIT 24V TERMINAL BLOCK

ECONOMIZER WIRING HARNESS

⚠️1 REMOVE JUMPER FOR 2 STAGE ELECTRIC HEAT ON UNITS WITH 15 OR MORE KW

⚠️2 CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL, AND MUST BE CONFIGURED FOR ECONOMIZER FOR YO/D OUTPUT TO BE ACTIVE AS FIRST STAGE COOLING.
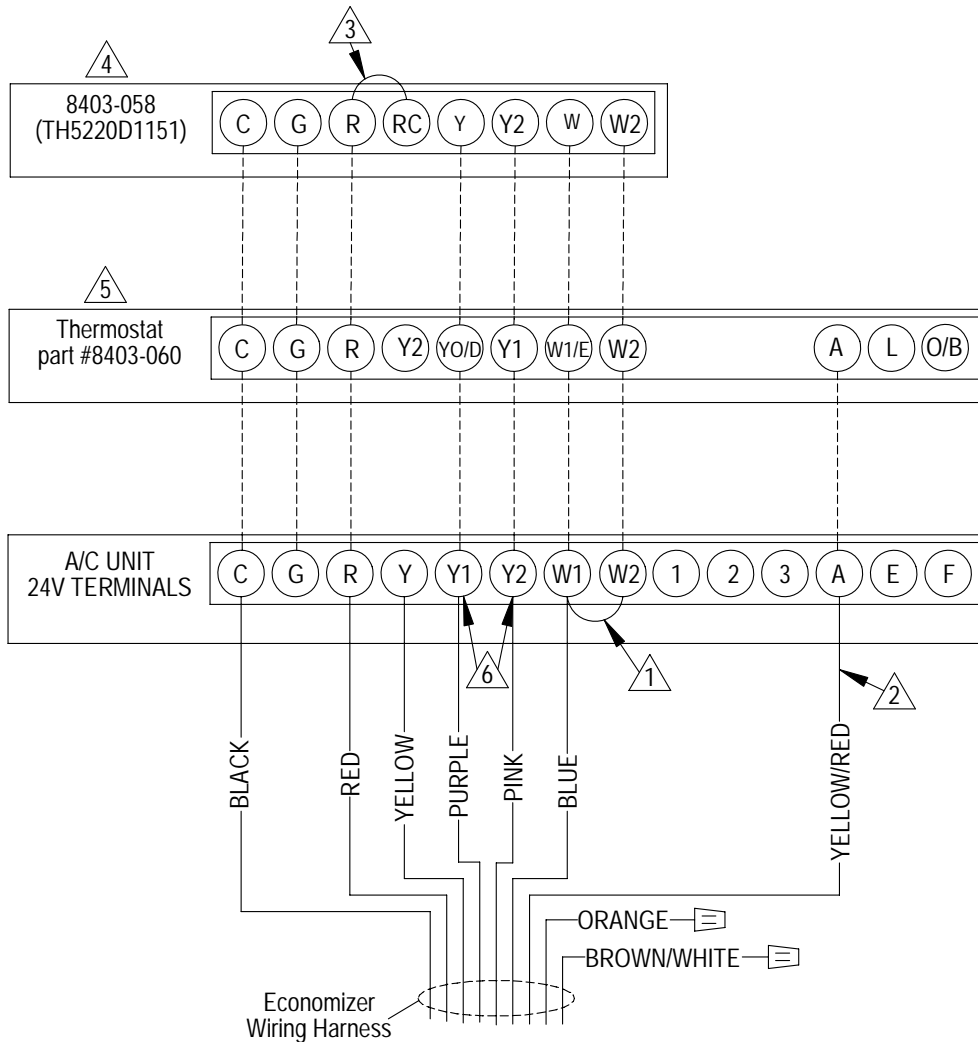
MIS-2865 A

FIGURE 16
2-STAGE A/C with OPTIONAL CRVMP LOW VOLTAGE WIRING

OPTIONAL CRVMP LOW VOLTAGE WIRING

△1 INSTALL JUMPER WHEN USING THERMOSTAT PART #8403-058

△2 FACTORY INSTALLED JUMPER

△3 CHANGE MODEL CONFIGURATION FROM HEAT PUMP TO HEAT/COOL.
MUST BE CONFIGURED TO PROGRAMMABLE AND FAN SET TO PROGRAMMED
FAN FOR THE "A" OUTPUT TO FUNCTION DURING SCHEDULED OCCUPIED PERIODS.

MIS-2863 B

FIGURE 17
1-STAGE A/C with OPTIONAL ELECTRIC HEAT
WITH ECONWM∗ STYLE ECONOMIZER

Factory installed jumper. Remove for 2-stage operation on units with 15 or more kw. ⚠️1

Must be energized to enable minimum position. NOTE: Economizer Control Default Setting is 10V (100%). Depending upon application may require setting to lower value. ⚠️2

Factory Jumper Installed. ⚠️3

Change "system type", set up function 1, from 5 (2 heat/ 1 cool heat pump) to 6 (2 heat/ 2 cool conventional). ⚠️4

Change model configuration from heat pump to heat/cool, and must be configured for economizer for YO/D output to be active as first stage cooling. ⚠️5

Older units may not have Y1 and Y2 connections on 24v terminal block. If not present wire nuts must be used. ⚠️6

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FIGURE 18
2-STAGE A/C with OPTIONAL ELECTRIC HEAT
WITH ECONWM∗ STYLE ECONOMIZER
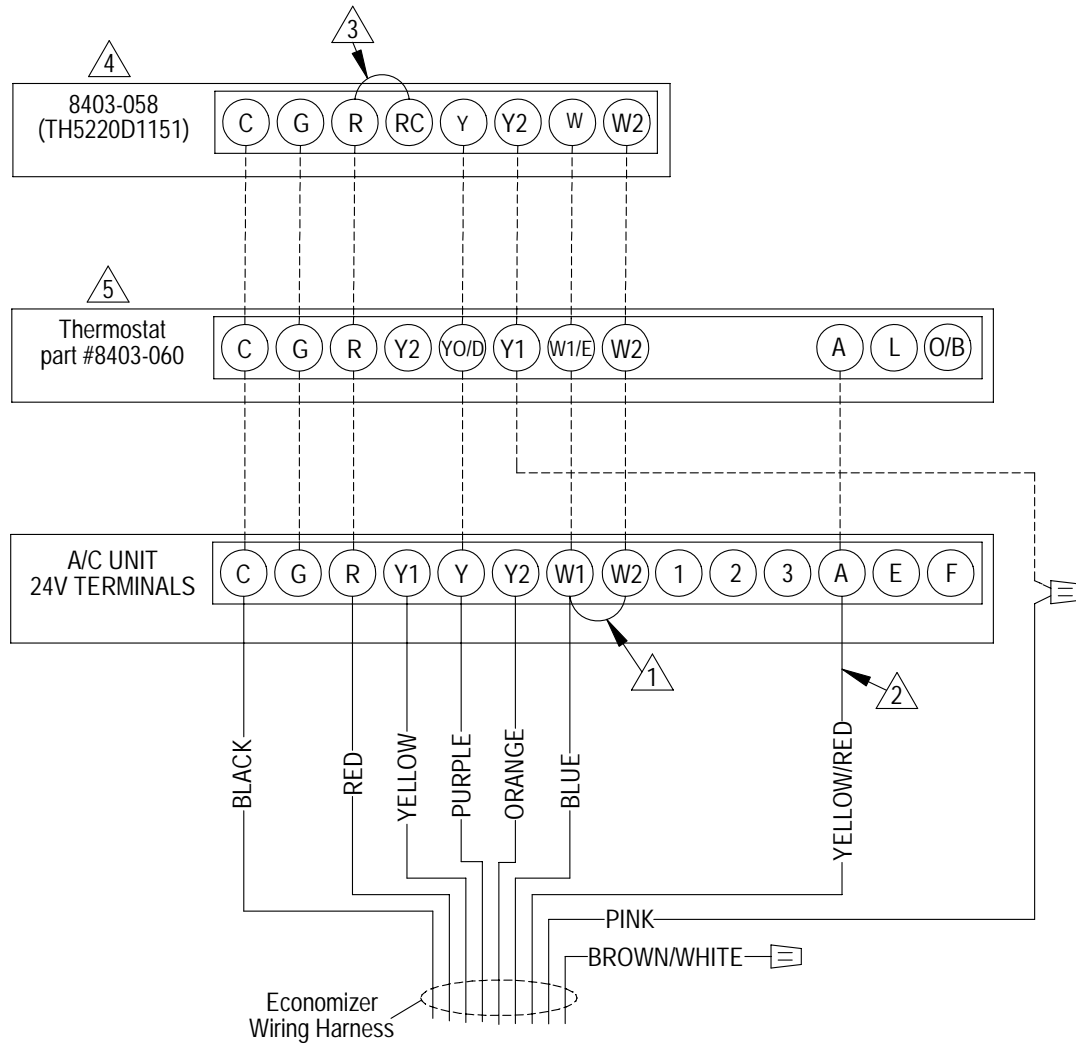
$\triangle$1 *Factory installed jumper. Remove for 2-stage operation on units with 15 or more kw.*

$\triangle$2 *Must be energized to enable minimum position. NOTE: Economizer Control Default Setting is 10V (100%). Depending upon application may require setting to lower value.*

$\triangle$3 *Factory Jumper Installed.*

$\triangle$4 *Change "system type", set up function 1, from 5 (2 heat/ 1 cool heat pump) to 6 (2 heat/ 2 cool conventional).*

$\triangle$5 *Change model configuration from heat pump to heat/cool, and must be configured for economizer for YO/D output to be active as first stage cooling.*

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