INSTALLATION INSTRUCTIONS
RXAU-A02 MINIMUM RUN TIMER
FOR SAWL-120, 125, 150, 180 AND 240

⚠ Recognize this symbol as an indication of Important Safety Information!

⚠ WARNING

THESE INSTRUCTIONS ARE INTENDED AS AN AID TO QUALIFIED SERVICE PERSONNEL FOR PROPER INSTALLATION, ADJUSTMENT, AND OPERATION OF THIS KIT. READ THESE INSTRUCTIONS THOROUGHLY BEFORE ATTEMPTING INSTALLATION, ADJUSTMENT, OR OPERATION. FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN IMPROPER INSTALLATION, ADJUSTMENT, SERVICE OR MAINTENANCE, POSSIBLY RESULTING IN FIRE, ELECTRICAL SHOCK, PROPERTY DAMAGE, PERSONAL INJURY, OR DEATH.

PARTS LIST		
DESCRIPTION	**PART NUMBER**	**QTY.**
MINIMUM RUN TIMER (TMIN)	42-105273-01	1
RELAY (BR)	42-101208-04	1
STRAIN RELIEF BUSHING	45-17055-16	1
WIRE NUT	45-18058-01	1
WASHER SZ10 FLAT	63-17180-01	1
SCREW - #8-18 X 1/2 TYPE B	63-22153-01	2
SCREW - #6-20 X 1 1/2 TYPE B	63-24368-02	1
WIRE TIE	64-17606-03	1
WIRING DIAGRAM (SAWL-120)	90-42663-12	1
WIRING DIAGRAM (SAWL-180)	90-42663-11	1
18 GA RED 2/64 18”	AS-50202-25-AE	1
18 GA YELLOW 2/64 32”	AS-50205-33-AE-Y1	1
18 GA BROWN 2/64 10”	AS-50207-17-EE	1
18 GA BROWN 2/64 18”	AS-50207-25-AD	1
18 GA YELLOW/BLUE 2/64 4”	AS-52880-05-EE	1
18 GA YELLOW/BLUE 2/64 12”	AS-52880-19-DD	1
18 GA YELLOW/BLUE 2/64 15”	AS-52880-22-EE	1
18 GA GRAY 2/64 32”	AS-53386-33-AJ-G	1
18 GA GREEN/BLACK 2/64 32”	AS-58286-33-AE-IBM	1

⚠ WARNING

BEFORE BEGINNING ANY MODIFICATION, BE SURE MAIN DISCONNECT SWITCH IS IN THE “OFF” POSITION. FAILURE TO DO SO CAN CAUSE ELECTRICAL SHOCK RESULTING IN PROPERTY DAMAGE, PERSONAL INJURY OR DEATH. TAG DISCONNECT WITH A SUITABLE WARNING LABEL.

TOOLS/SUPPLIES REQUIRED

A. 5⁄16” nut driver.

B. ¼” nut driver.

C. Pliers.

D. Box Cutter (to open packaging).

The purpose of this accessory is to force the condensing unit and air handler to run a minimum of 200 seconds whenever there is a call for cooling. Short run times tend to pump oil out of the compressor on startup. On split systems with ultra-long refrigerant line sets it is important that the compressor runs long enough to circulate refrigerant oil through the system and back to the compressor before the cooling call expires.

TIMER INSTALLATION PROCEDURE

A. Remove parts from box and compare to parts list.

B. Remove control panel cover from condensing unit.

C. Install the minimum run timer (TMIN) in the control box using the single #6 screw and washer. Set the “Delay on Make” knob to 1 second. Set the “Delay on Break” knob to 200 seconds (minimum run time).

D. Install the indoor blower relay (BR) using the two #8 screws.

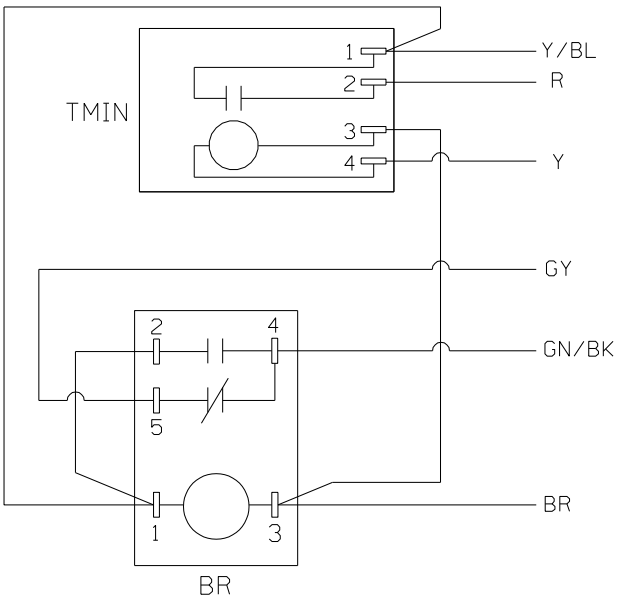
E. Reference the attached wiring diagram(s) to perform the following installation and wiring steps.

F. Remove the wire nut (WN1) securing the brown transformer wire to the ground connection. Add the 18” brown wire from the Blower Relay (BR) to the 24 VAC control transformer brown wire and reinstall the wire nut.

G. Remove the wire nut (WN2) securing the red transformer wire to the red (R) pigtail wire inside the control box. Add the red wire from terminal 3 of the minimum run timer (TMIN) and reinstall the wire nut.

H. Using pliers remove and discard the strain relief bushing from thermostat wire “pigtails”.

FIGURE 1
OPTIONAL MINIMUM RUN TIMER



I. FOR (-)AWL-120 models only:

1. Remove the ¼" quick connect terminal on the yellow/blue wire and strip to accept a wire nut.
2. Connect the yellow/blue wire from terminal 1 of the minimum run timer (TMIN) to the existing yellow (Y1) pigtail wire using a wire nut.
3. The new yellow (Y1) pigtail wire from terminal 4 on the minimum run timer (TMIN) is now the thermostat connection point.
4. Move all pigtail wires to adjacent larger hole and use pliers to install new larger strain relief bushing to secure pigtail wires.

J. FOR (-)AWL-125, 150, 180 models only:

1. Discard the yellow (Y1) pigtail wire and replace it with the new yellow (Y1) pigtail wire from terminal 4 on the minimum run timer (TMIN).
2. Connect the yellow/blue wire from terminal 1 of the minimum run timer (TMIN) to terminal 3 of the existing relay.
3. Move all pigtail wires to adjacent larger hole and use pliers to install new larger strain relief bushing to secure pigtail wires.

K. Connect the new yellow (Y1) pigtail wire to the thermostat "Y" terminal (first stage cooling).

L. Connect the Gray wire to the thermostat "G" or indoor fan signal.

M. Connect the Green wire with Black stripe (IBM) to the indoor fan contactor 24 VAC coil terminal on the air handler.

N. Secure wires together inside control box using included wire tie.

O. Paste over existing wiring diagram with new wiring diagram included with this accessory.

P. If the refrigerant lines are connected and the rest of the system is capable of running, test the minimum timer by first putting the thermostat in the "OFF" position, momentarily connecting the red (R) pigtail outside of the control box to the new yellow (Y1) pigtail. The compressor and the indoor fan should start and run for a minimum of 200 seconds and then both should stop. Momentarily connect and disconnect Gray wire "G" to Red wire. The indoor fan connected to IBM should turn on and off as "G" is connected and disconnected from the Red wire. If any other action occurs, please recheck the wiring.

Q. Reinstall control box cover.

FIGURE 2

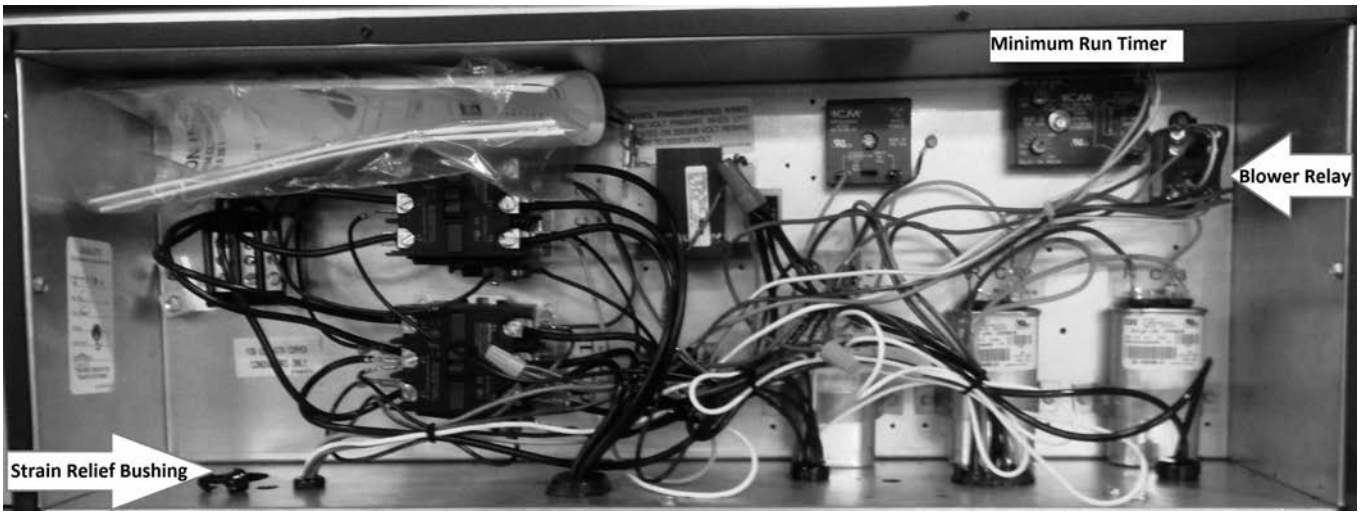


FIGURE 3

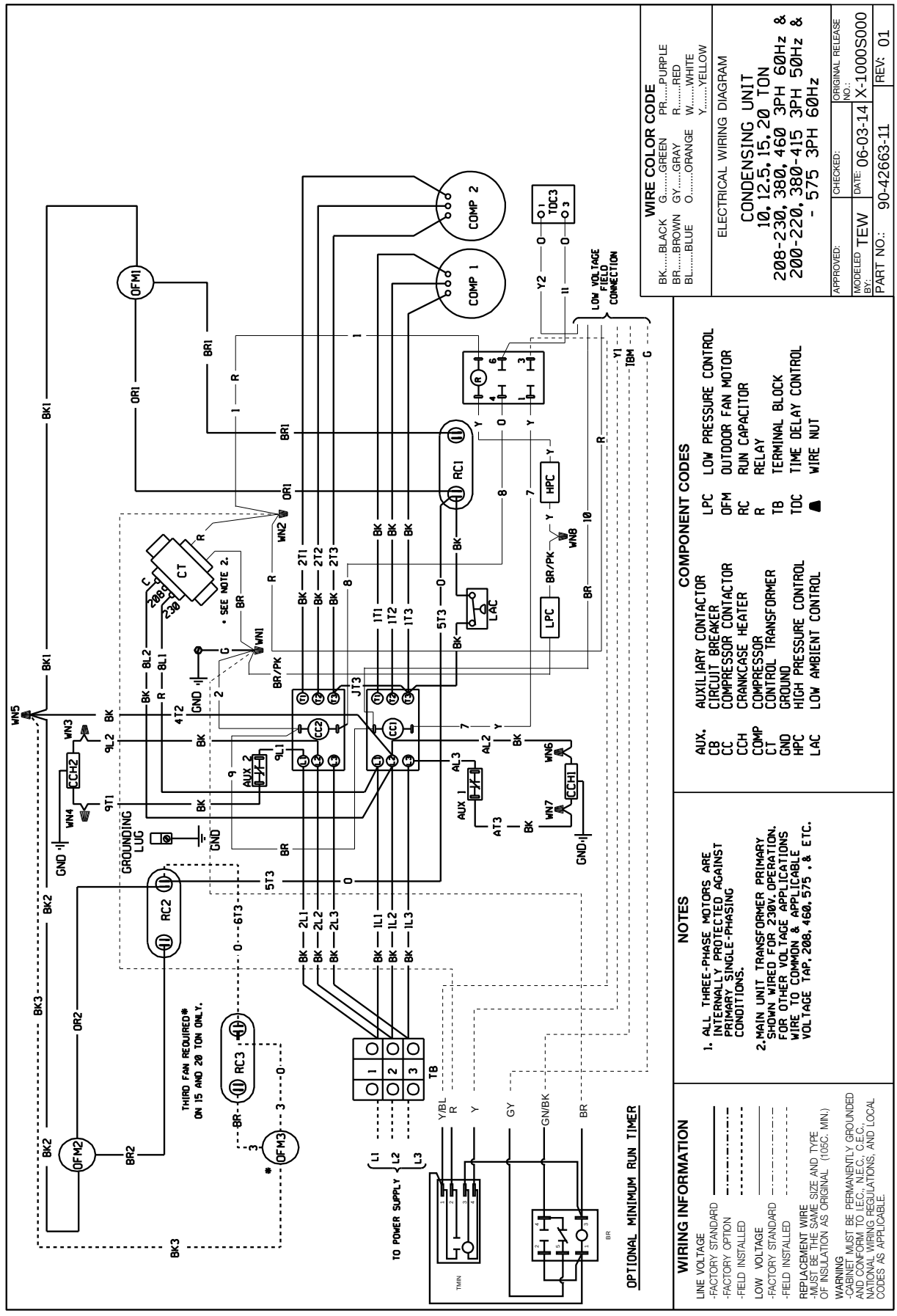
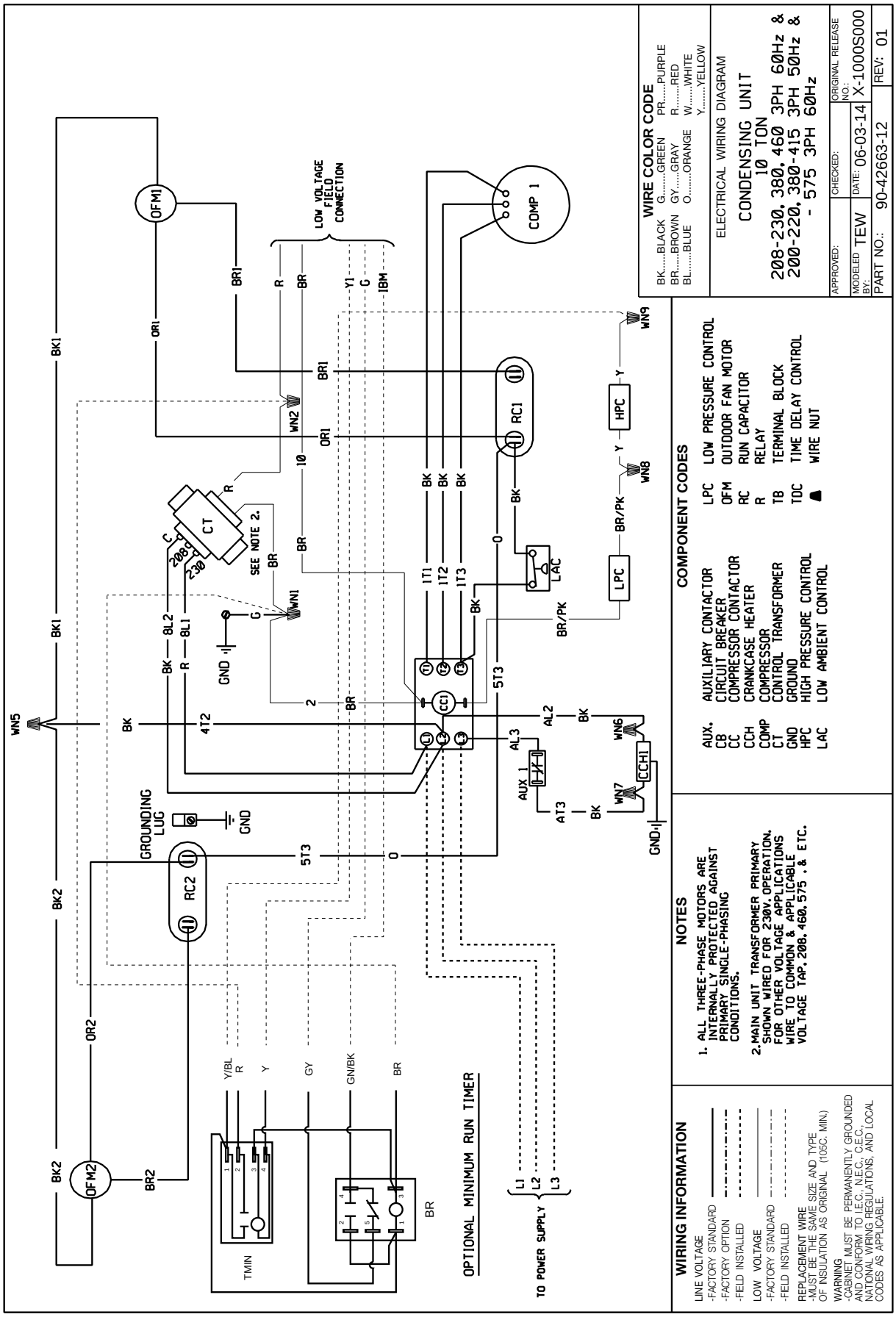

WIRE COLOR CODE
BK.....BLACK G.....GREEN PR.....PURPLE
BR.....BROWN GY.....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
ELECTRICAL WIRING DIAGRAM
CONDENSING UNIT
10, 12.5, 15, 20 TON
208-230, 380, 460 3PH 60Hz &
200-220, 380-415 3PH 50Hz &
- 575 3PH 60Hz
APPROVED:
CHECKED:
ORIGINAL RELEASE NO.:
MODELED BY: TEW
DATE: 06-03-14
X-1000S000
PART NO.: 90-42663-11
REV: 01
COMPONENT CODES
AUX. AUXILIARY CONTACTOR
CB CIRCUIT BREAKER
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
COMP COMPRESSOR
CT CONTROL TRANSFORMER
GND GROUND
HPC HIGH PRESSURE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
OFM OUTDOOR FAN MOTOR
RC RUN CAPACITOR
R RELAY
TB TERMINAL BLOCK
TDC TIME DELAY CONTROL
WIRE NUT
NOTES
1. ALL THREE-PHASE MOTORS ARE INTERNALLY PROTECTED AGAINST PRIMARY SINGLE-PHASING CONDITIONS.
2. MAIN UNIT TRANSFORMER PRIMARY SHOWN WIRED FOR 230V. OPERATION. FOR OTHER VOLTAGE APPLICATIONS WIRE TO COMMON & APPLICABLE VOLTAGE TAP, 208, 460, 575 , & ETC.
WIRING INFORMATION
LINE VOLTAGE
-FACTORY STANDARD
-FACTORY OPTION
-FIELD INSTALLED
LOW VOLTAGE
-FACTORY STANDARD
-FIELD INSTALLED
REPLACEMENT WIRE
-MUST BE THE SAME SIZE AND TYPE OF INSULATION AS ORIGINAL (105C. MIN.)
WARNING
-CABINET MUST BE PERMANENTLY GROUNDED AND CONFORM TO I.E.C., N.E.C., C.E.C., NATIONAL WIRING REGULATIONS, AND LOCAL CODES AS APPLICABLE.
OPTIONAL MINIMUM RUN TIMER
THIRD FAN REQUIRED* ON 15 AND 20 TON ONLY.
TO POWER SUPPLY
GROUNDING LUG
LOW VOLTAGE FIELD CONNECTION
COMP 1
COMP 2
OFM1
OFM2
OFM3
RC1
RC2
RC3
CT
LAC
LPC
HPC
TDC3
CC1
CC2
CCH1
CCH2
AUX 1
AUX 2
TB
TRANS
• SEE NOTE 2.

FIGURE 4


WIRE COLOR CODE
BK.....BLACK G.....GREEN PR.....PURPLE
BR.....BROWN GY.....GRAY R.....RED
BL.....BLUE O.....ORANGE W.....WHITE
Y.....YELLOW
ELECTRICAL WIRING DIAGRAM
CONDENSING UNIT
10 TON
208-230, 380, 460 3PH 60Hz &
200-220, 380-415 3PH 50Hz &
- 575 3PH 60Hz
APPROVED:
MODELED BY: TEW
CHECKED:
DATE: 06-03-14
ORIGINAL RELEASE NO.: X-1000S000
PART NO.: 90-42663-12
REV: 01
COMPONENT CODES
AUX. AUXILIARY CONTACTOR
CB CIRCUIT BREAKER
CC COMPRESSOR CONTACTOR
CCH CRANKCASE HEATER
COMP COMPRESSOR
CT CONTROL TRANSFORMER
GND GROUND
HPC HIGH PRESSURE CONTROL
LAC LOW AMBIENT CONTROL
LPC LOW PRESSURE CONTROL
OFM OUTDOOR FAN MOTOR
RC RUN CAPACITOR
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OPTIONAL MINIMUM RUN TIMER
TMIN
TO POWER SUPPLY
L1
L2
L3
OFM1
OFM2
COMP 1
RC1
RC2
CC1
CT
LAC
LPC
HPC
CCH1
AUX 1
GROUNDING LUG
GND
LOW VOLTAGE FIELD CONNECTION
SEE NOTE 2.
WN1
WN2
WN5
WN6
WN7
WN8
WN9
BK1
BK2
BR1
BR2
OR1
OR2
BK
BR
R
Y
G
IBM
Y1
Y/BL
GY
GN/BK
BR/PK
10
2
0
4T2
5T3
AL2
AL3
4T3
BL1
BL2
1T1
1T2
1T3
208
230