

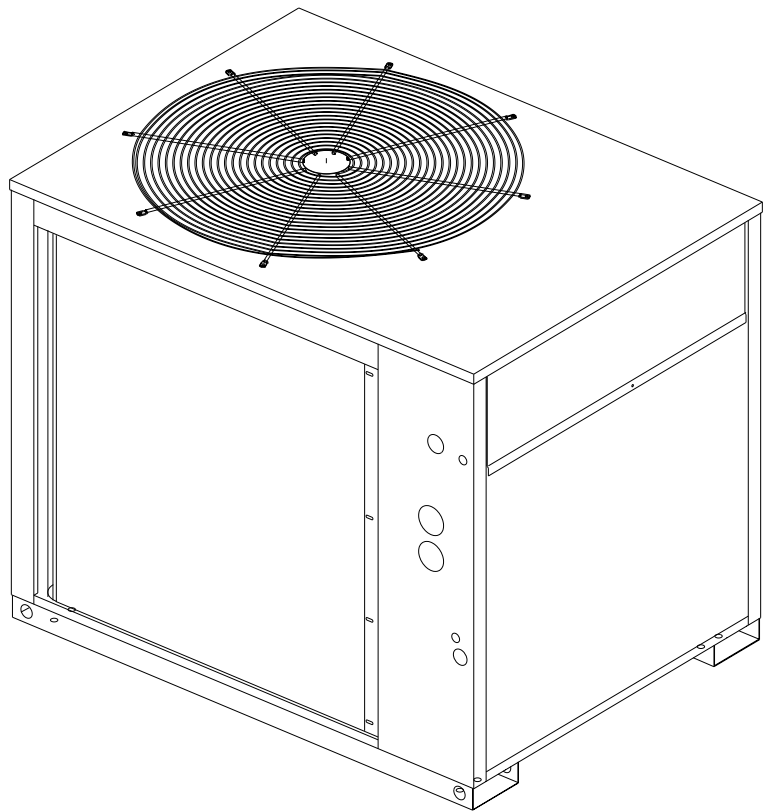


Wiring

CGA-W-4C

Library	Service Literature
Product Section	Refrigeration
Product	Scroll Liquid Chillers - A/C Cold Generators
Model	CGA
Literature Type	Unit Wiring
Sequence	4C
Date	May 2003
File No.	SV-RF-CG-CGA-W-4C 5/03
Supersedes	CGA-W-4B

10 AND 15 ton Air-Cooled Cold Generators™



Models

CGA 100 B...F
CGA 120 B...F
CGA 150 B...D
CGA 180 B...D

CGA 100B, 120B, 150B AND 180B Unit Wiring Manual

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	CGA180BW (575V/60/3) Connection

Warnings and Cautions

Notice that Warnings and Cautions appear at appropriate intervals throughout this manual.

Warnings are provided to alert installing contractors and operating or service personnel to potential hazards that could result in personal injury or death, while Cautions are intended to alert personnel to conditions, that could result in equipment damage.

Your personal safety and proper operation of this system depend upon the strict observance of these precautions.

Model Number Description

All standard Trane products are identified by a multiple-character model number that precisely identifies a particular type of unit. An explanation of the alphanumeric identification codes used for CGA units is provided on this page. It's use will enable the owner/operator, installing contractors and service engineers to define the operation, components and options for any specific unit.

C G A 1 2 0 B 3 0 0 F A

1 2 3 4 5 6 7 8 9 10 11 12

Digits 1,2,3

Unit Model

CGA = Cold Generator

Digits 4,5,6

Nominal Capacity

100 = 8 Tons (50Hz)

120 = 10 Tons

150 = 12.5 Tons (50Hz)

180 = 15 Tons

Digit 7

Form or Configuration

(Number of Refrigerant Circuits/

Number of Compressors)

B = 2 Ref. Ckts/ 2 Comps.

Digit 8

Voltage

1 = 208-230V/60/1*

3 = 208-230V/60/3

4 = 460V/60/3

W = 575V/60/3

D = 380-415V/50/3

* = Not Available on CGA180 Units

Digit 9

Factory Installed Options

O = No Options

H = Hot Gas Bypass

C = Black Epoxy Coil

K = Hot Gas Bypass and Black Epoxy Coil

Digit 10

Expansion Valve

O = Standard Expansion Valve

V = Low Leaving Water Temp. Expansion Valve

Digit 11

Major Design Sequence

F

Digit 12

Service Digit/Minor Design Change

Figure 1
CGA120B1
(208-230V/60/1) Schematic Diagram

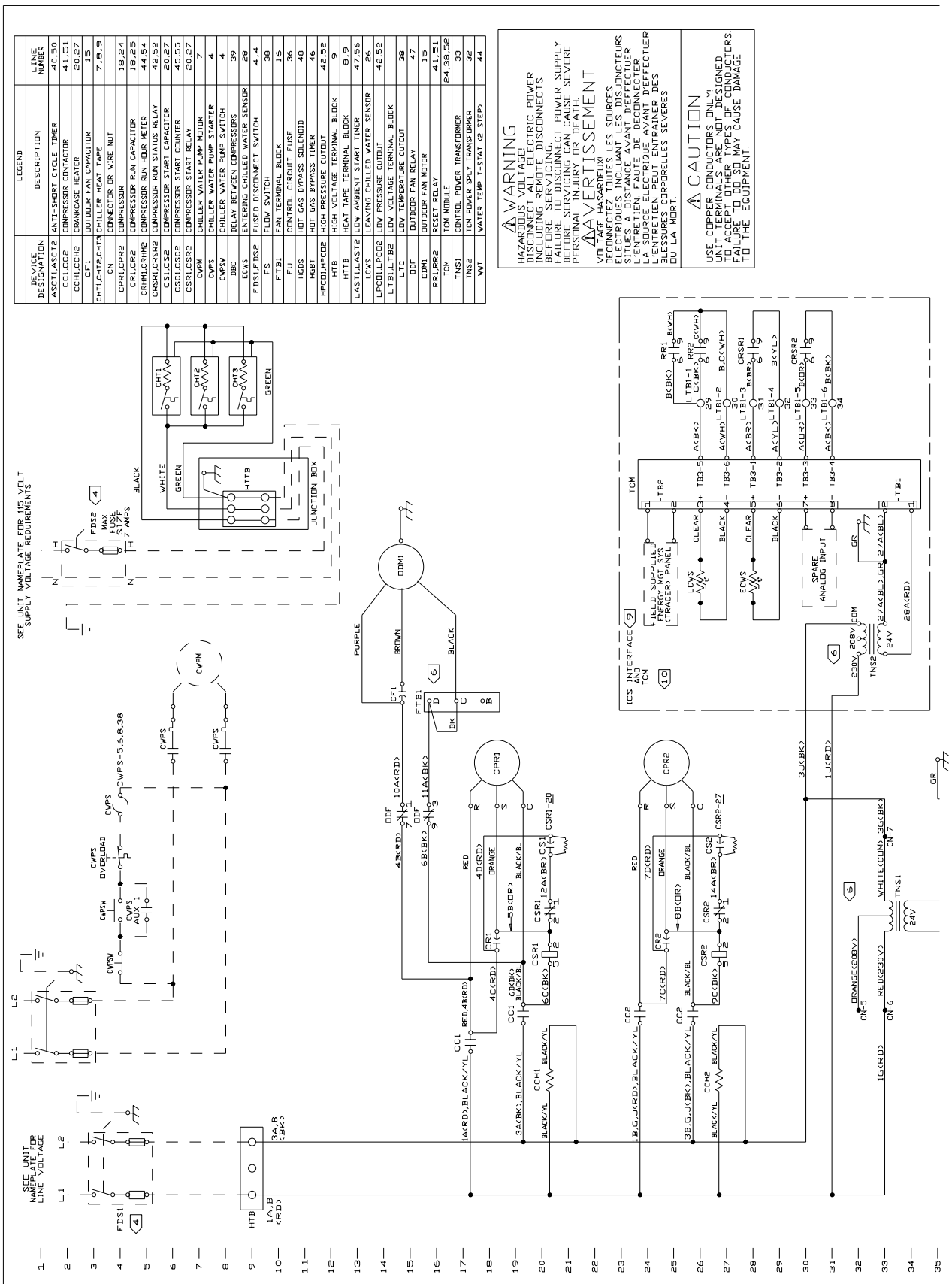
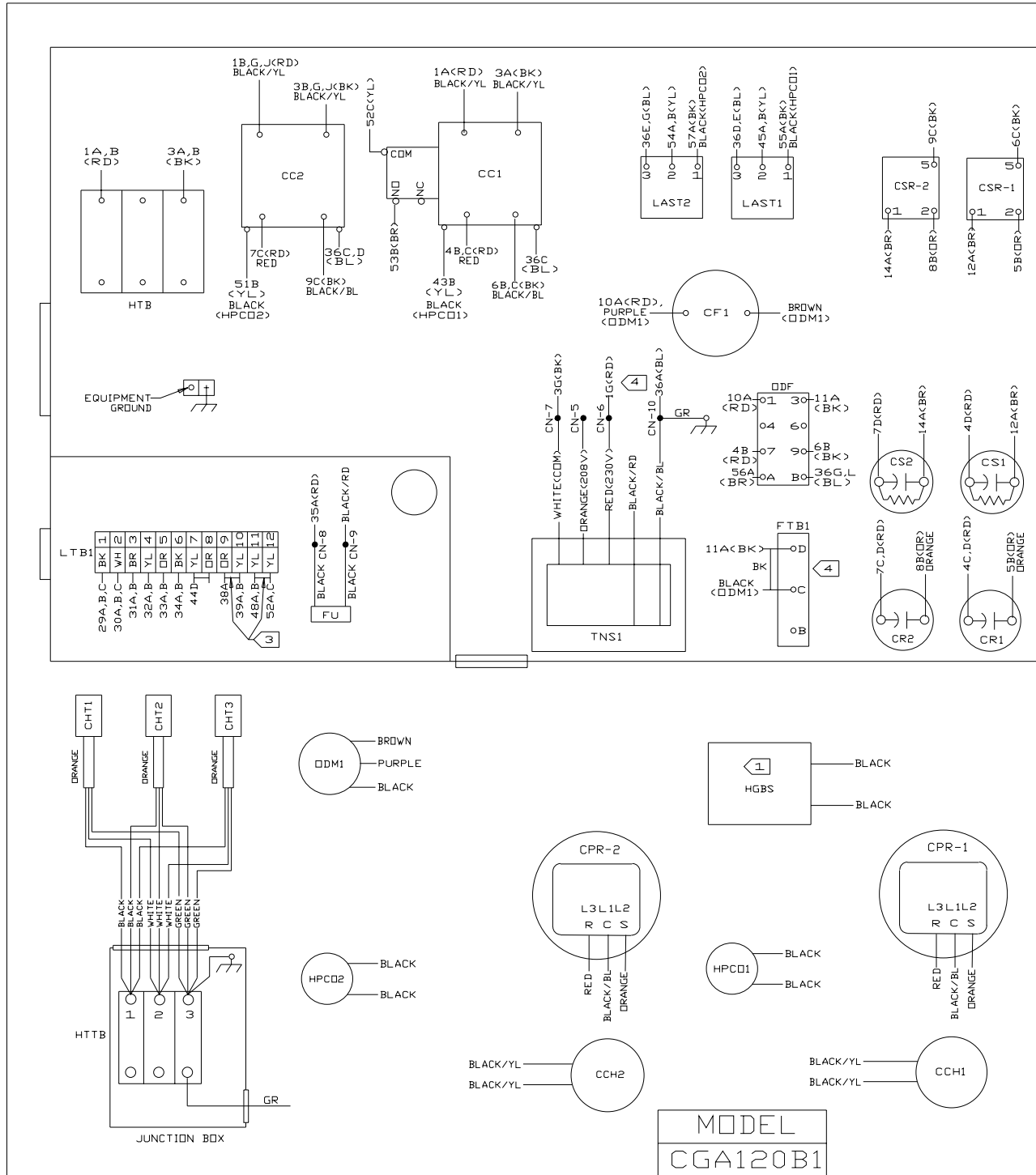
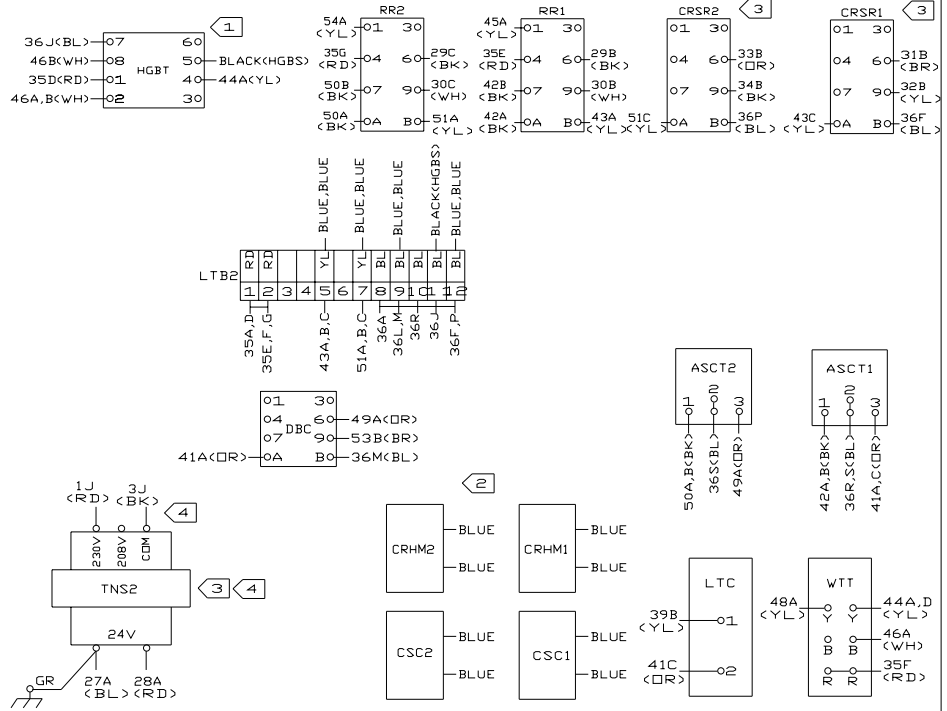


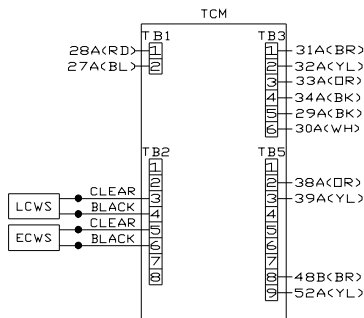
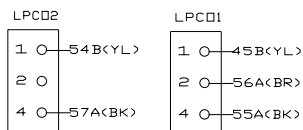
Figure 2
CGA120B1
(208-230V/60/1) Connection Diagram





NOTES:

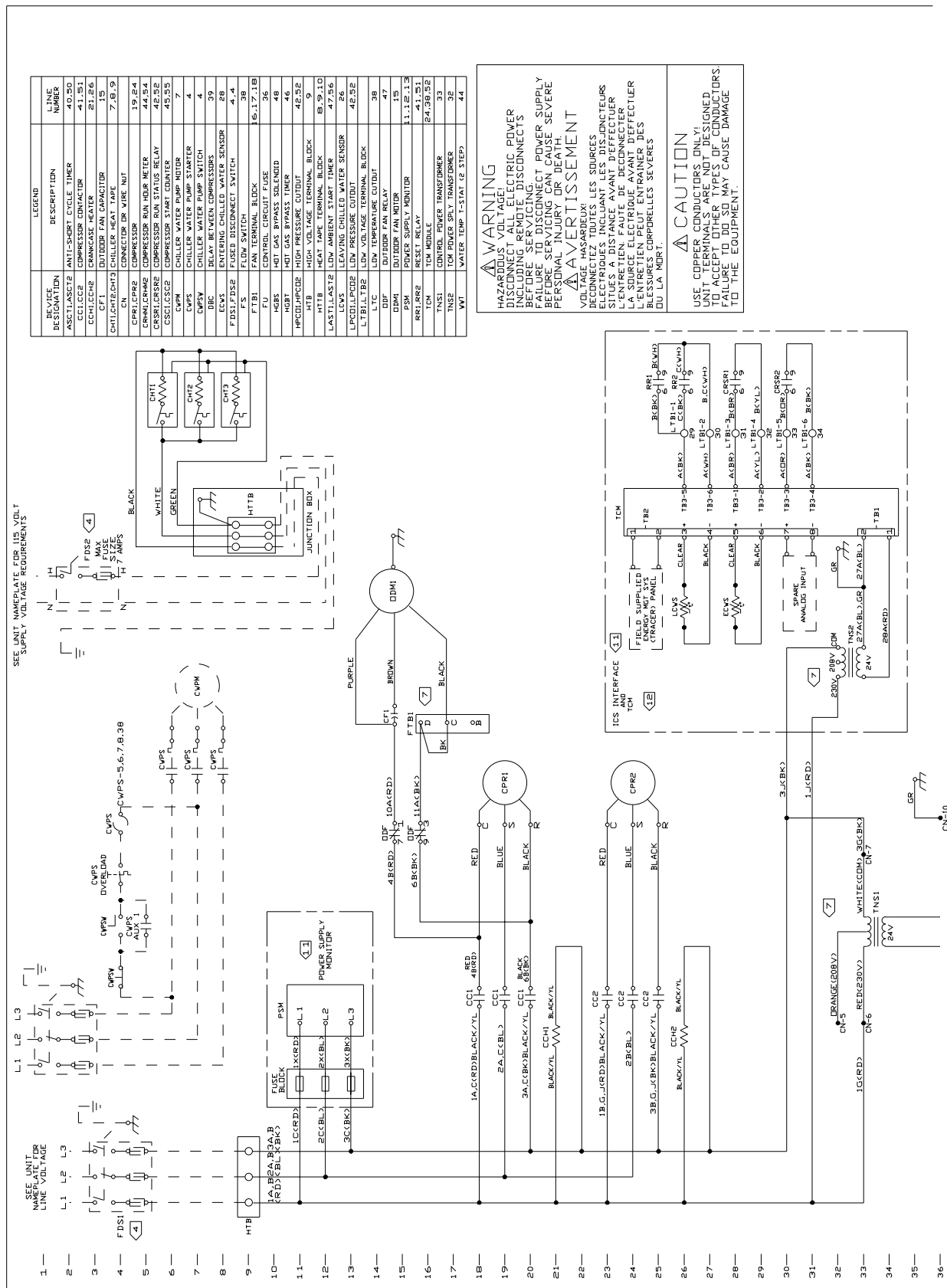
- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING (FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED ELAPSED TIME METER AND START COUNTER ACCESSORIES.
- 3 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 4 CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND AT TRANSFORMER TNS1. INSULATE TNS1 RED WIRE LEAD TO AVOID ACCIDENTLY SHORTING. AT TRANSFORMER TNS2, SWITCH WIRE 1J(RD) FROM TERMINAL 230V TO TERMINAL 208V.



<p>⚠ WARNING</p> <p>HAZARDOUS VOLTAGE ! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING.</p> <p>FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.</p>	<p>⚠ AVERTISSEMENT</p> <p>VOLTAGE HASARDEUX ! DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.</p> <p>FAUTE DE DECONNECTER LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.</p>
<p>⚠ CAUTION</p> <p>USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.</p>	

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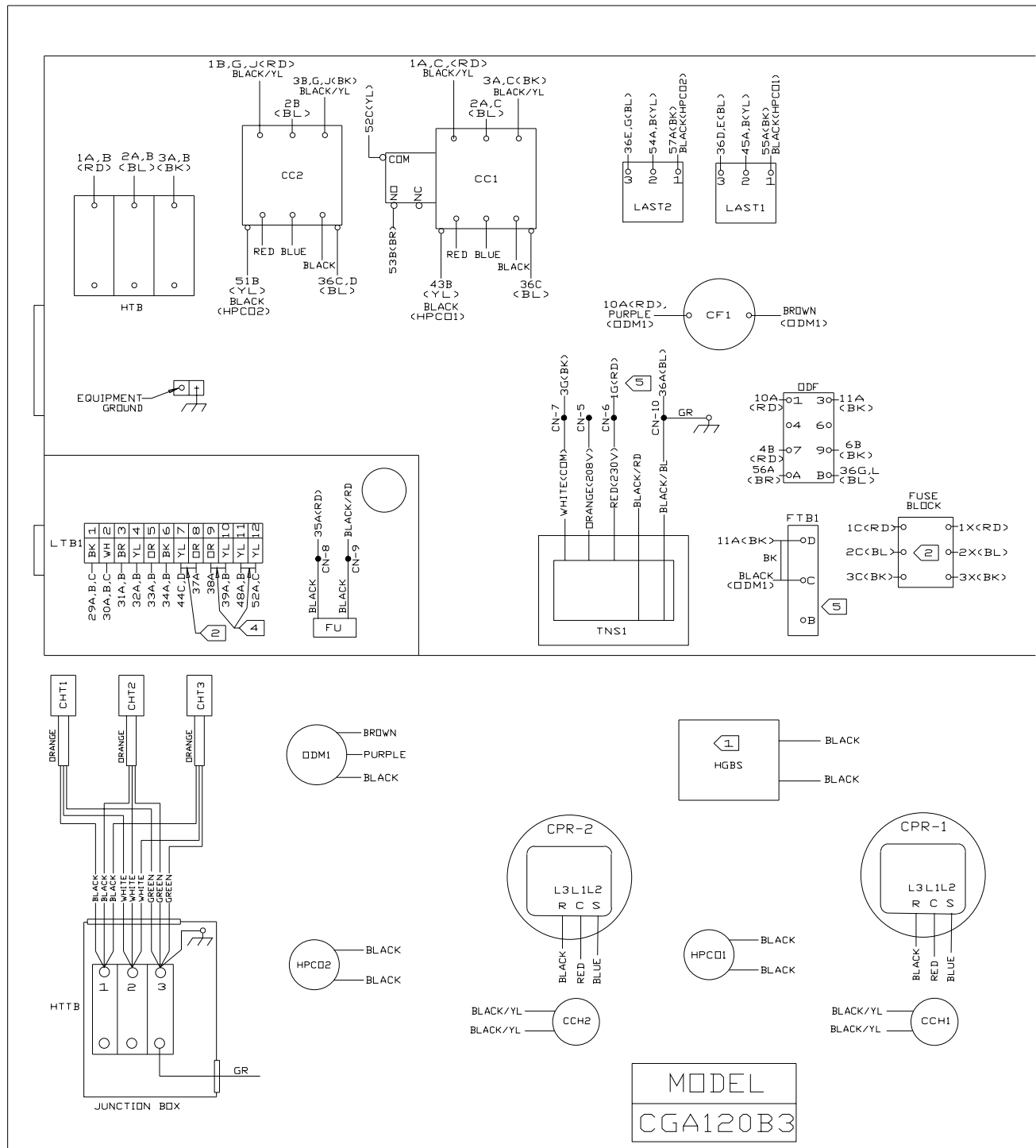
Figure 3
CGA120B3
(208-230V/60/3) Schematic Diagram

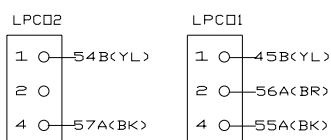
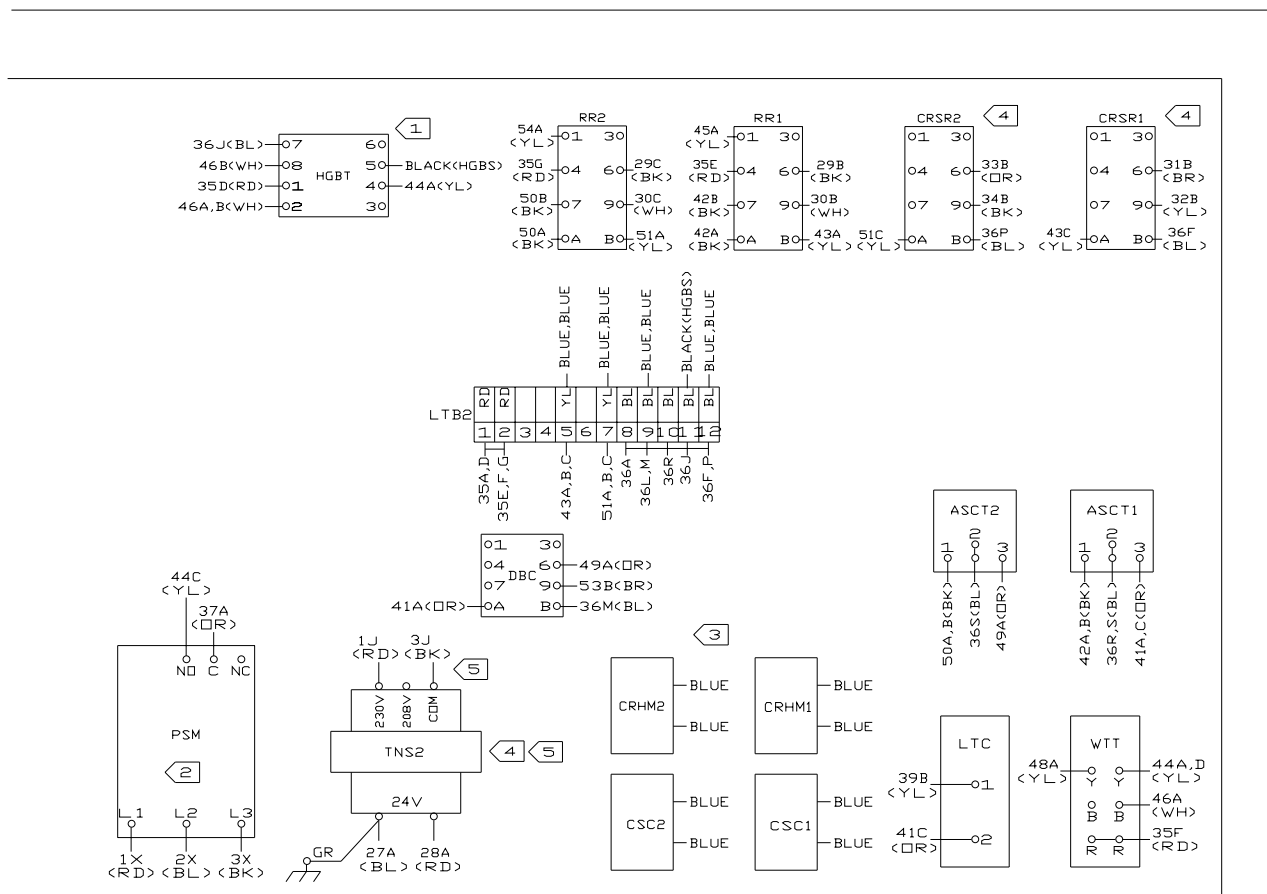




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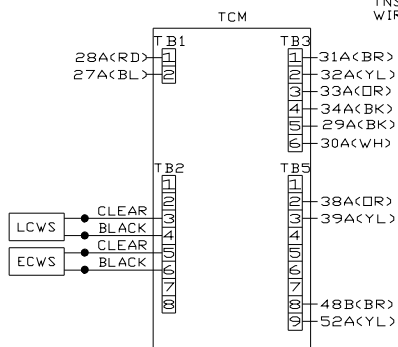
Figure 4
CGA120B3
(208-230V/60/3) Connection Diagram





NOTES:

- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING (FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8 WHEN INSTALLED.
- 3 FIELD INSTALLED ELAPSED TIME METERS AND START COUNTER ACCESSORIES.
- 4 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 5 CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND AT TRANSFORMER TNS1. INSULATE TNS1 RED WIRE LEAD TO AVOID ACCIDENTLY SHORTING. AT TRANSFORMER TNS2, SWITCH WIRE 1J<RD> FROM TERMINAL 230V TO TERMINAL 208V.



<p>⚠ WARNING</p> <p>HAZARDOUS VOLTAGE ! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.</p>	<p>⚠ AVERTISSEMENT</p> <p>VOLTAGE HASARDEUX ! DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN. FAUTE DE DECONNECTER LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.</p>
<p>⚠ CAUTION</p> <p>USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.</p>	

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CGA120BW (575V/60/3) Schematic Diagram

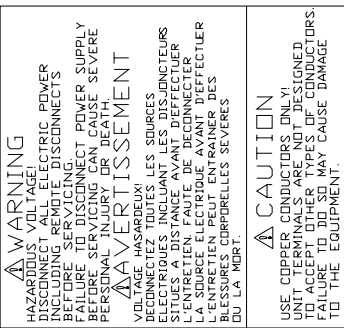
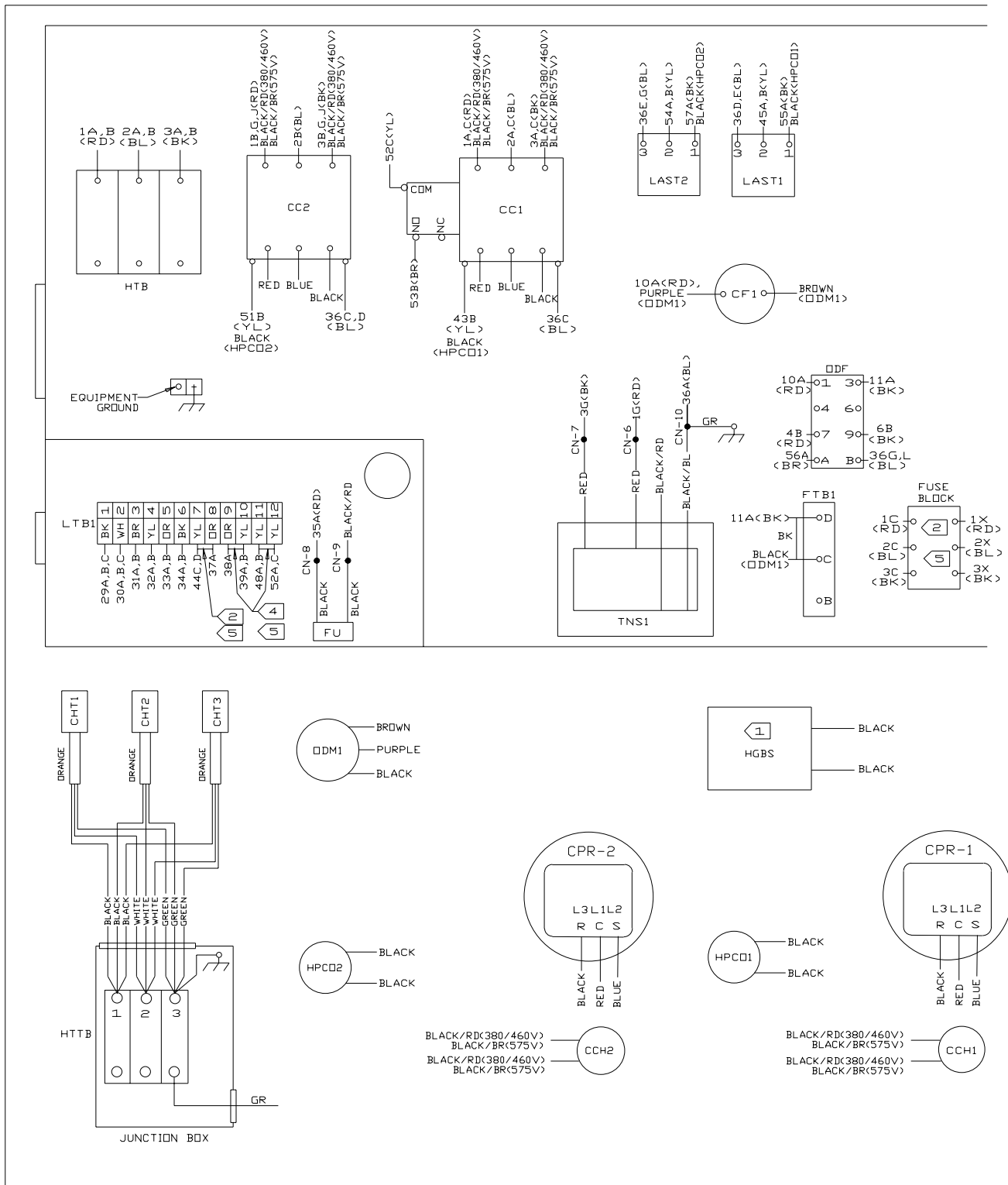


Figure 6
CGA100BD (380-415V/50/3)
CGA120B4 (460V/60/3)
CGA120BW (575V/60/3) Connection Diagram



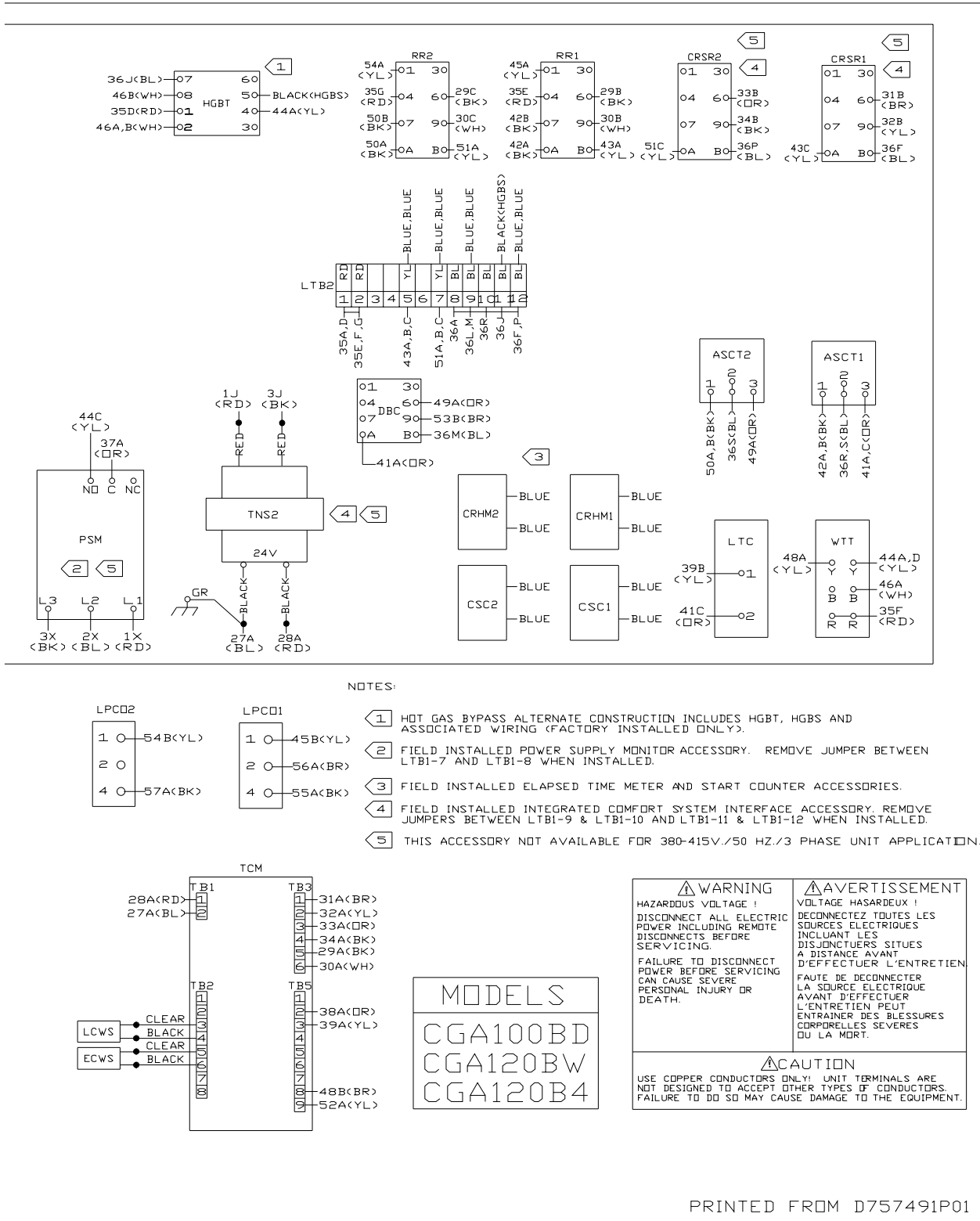


Figure 7
CGA180B3
(208-230V/60/3) Schematic Diagram

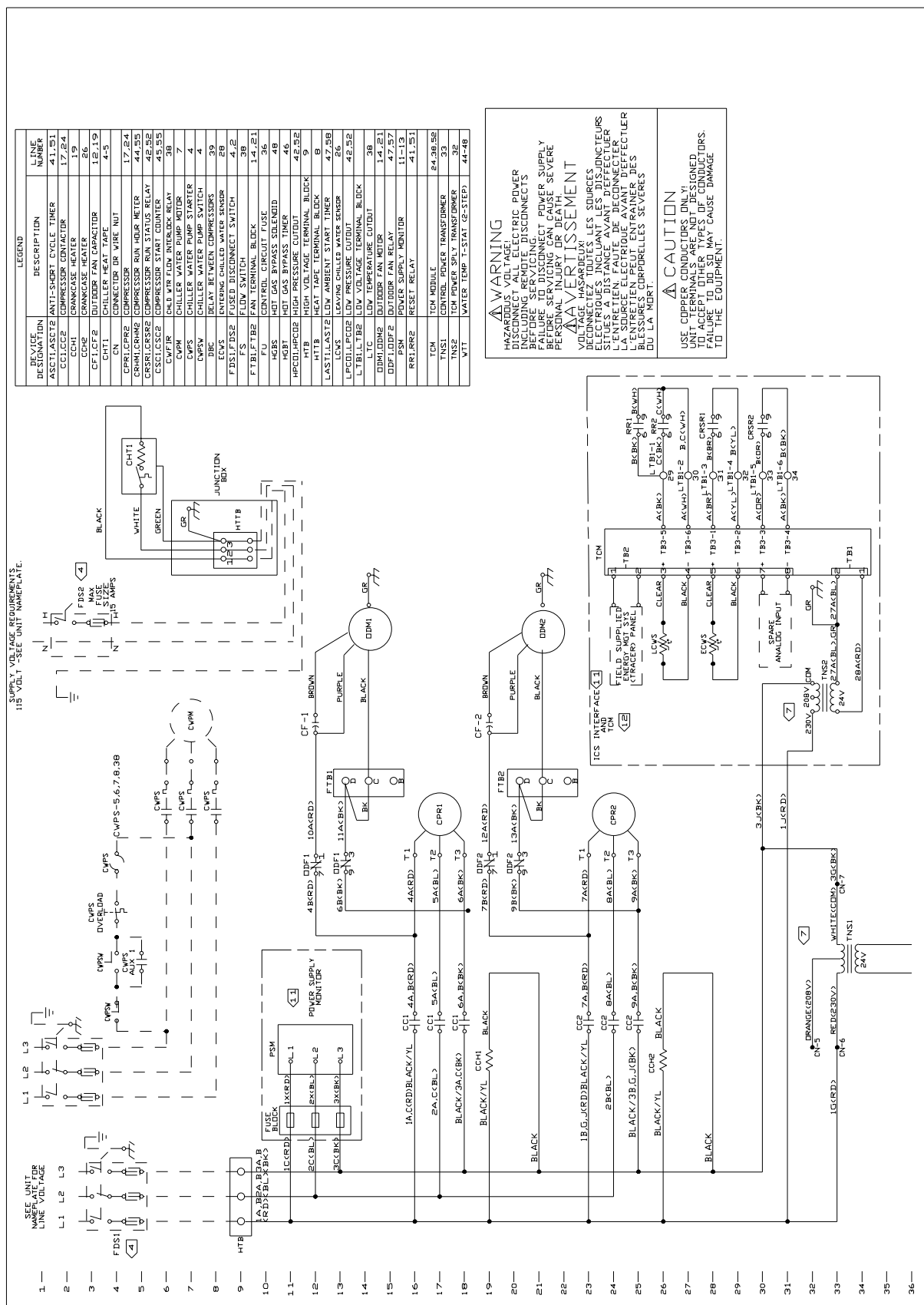
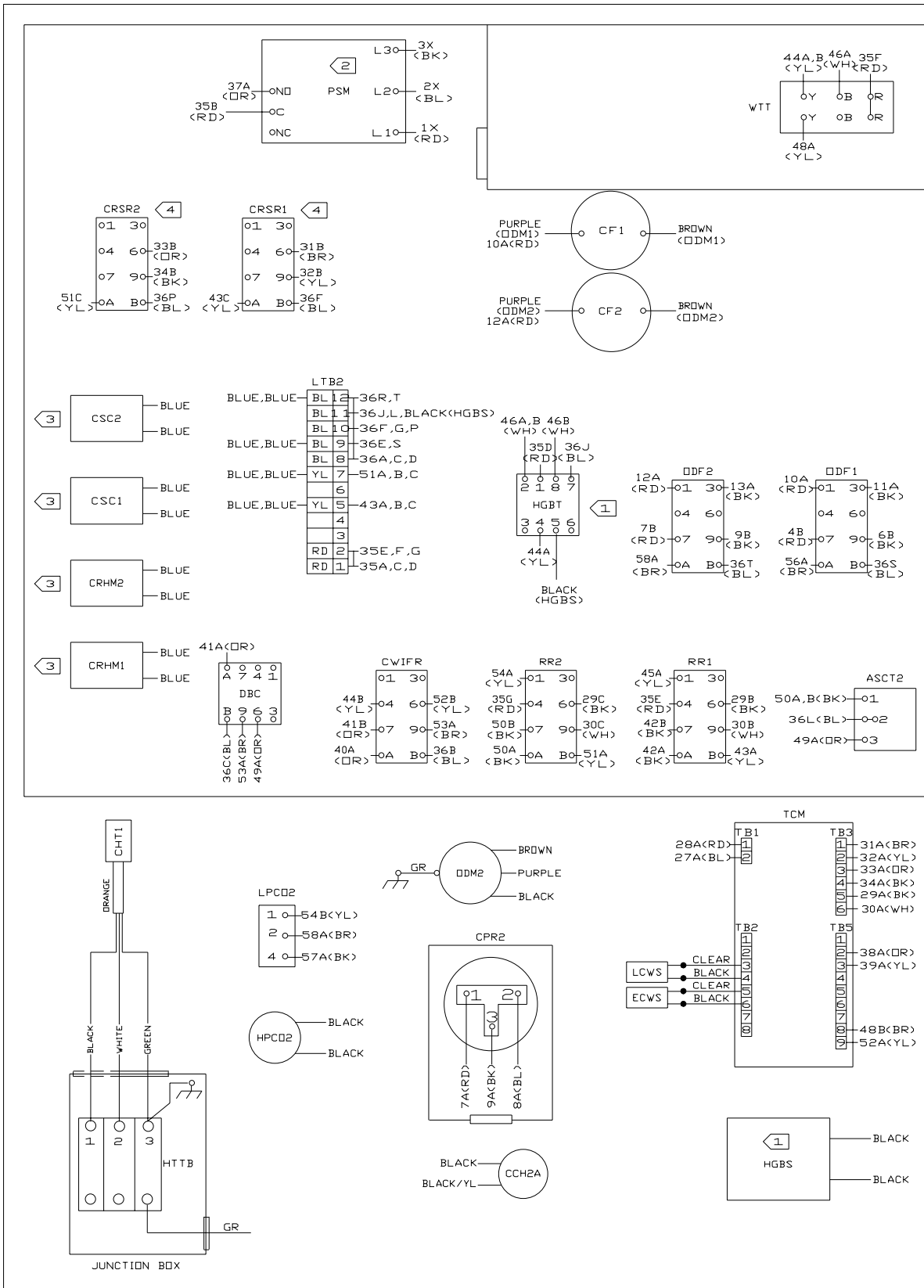
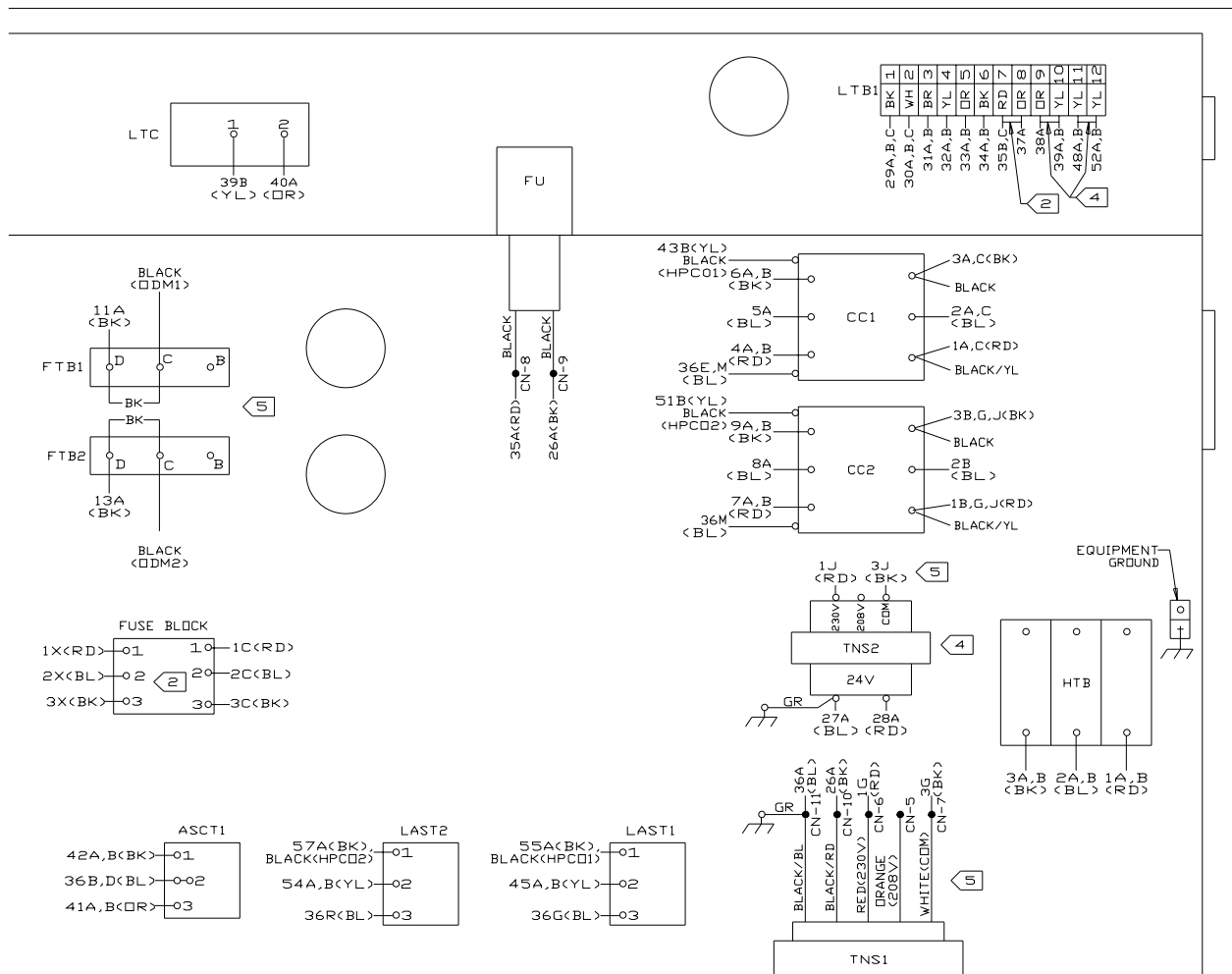


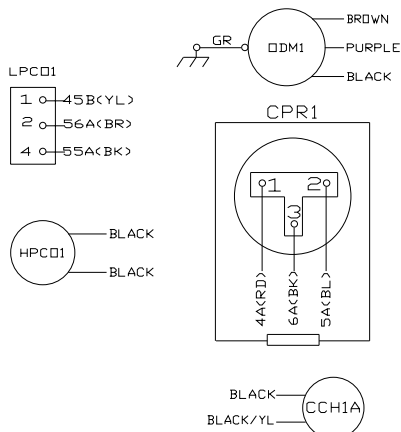
Figure 8
CGA180B3





NOTES:

- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGBT, HGBS AND ASSOCIATED WIRING.-(FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTB1-7 AND LTB1-8 WHEN INSTALLED.
- 3 FIELD INSTALLED ELAPSED TIME METER/ START COUNTER ACCESSORY.
- 4 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTB1-9 & LTB1-10 AND LTB1-11 & LTB1-12 WHEN INSTALLED.
- 5 CONNECTIONS SHOWN ARE FOR 230V OPERATION. WHEN 208V OPERATION IS REQUIRED REMOVE WIRE 11A(BK) FROM FTB1-D AND CONNECT TO FTB1-B AND REMOVE WIRE 13A(BK) FROM FTB2-D AND CONNECT TO FTB2-B. AT TRANSFORMER TNS1, SWITCH RED AND ORANGE TRANSFORMER LEADS AROUND. INSULATE TNS1 RED WIRE LEAD TO AVOID ACCIDENTLY SHORTING. AT TRANSFORMER TNS2, SWITCH WIRE 1J(RD) FROM TERMINAL 230V TO TERMINAL 208V.

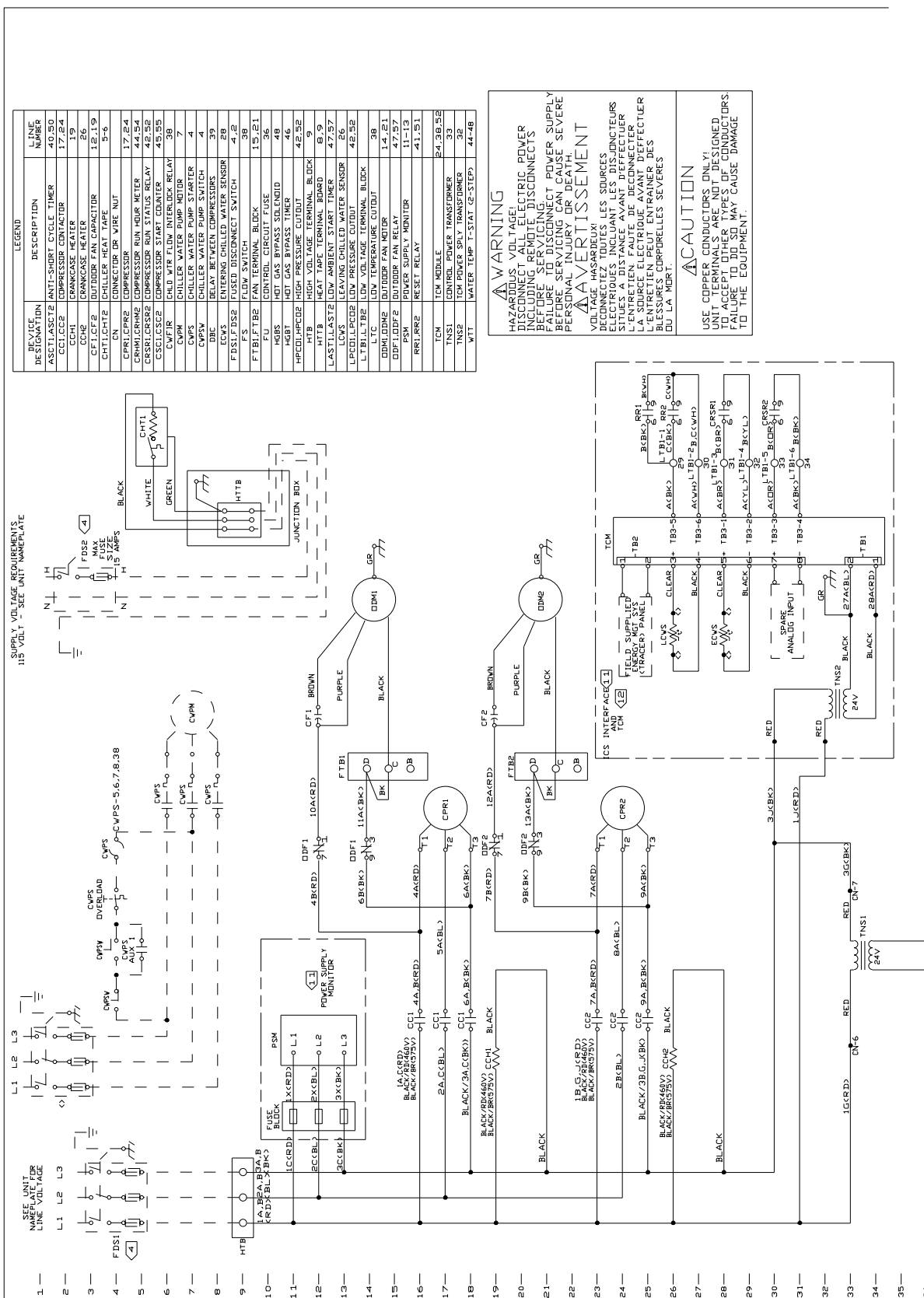


MODEL
CGA180B3

⚠ WARNING	⚠ AVERTISSEMENT
HAZARDOUS VOLTAGE ! DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING. FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.	VOLTAGE HASARDEUX ! DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN. FAUTE DE DECONNECTER LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.
CAUTION USE COPPER CONDUCTORS ONLY. UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.	

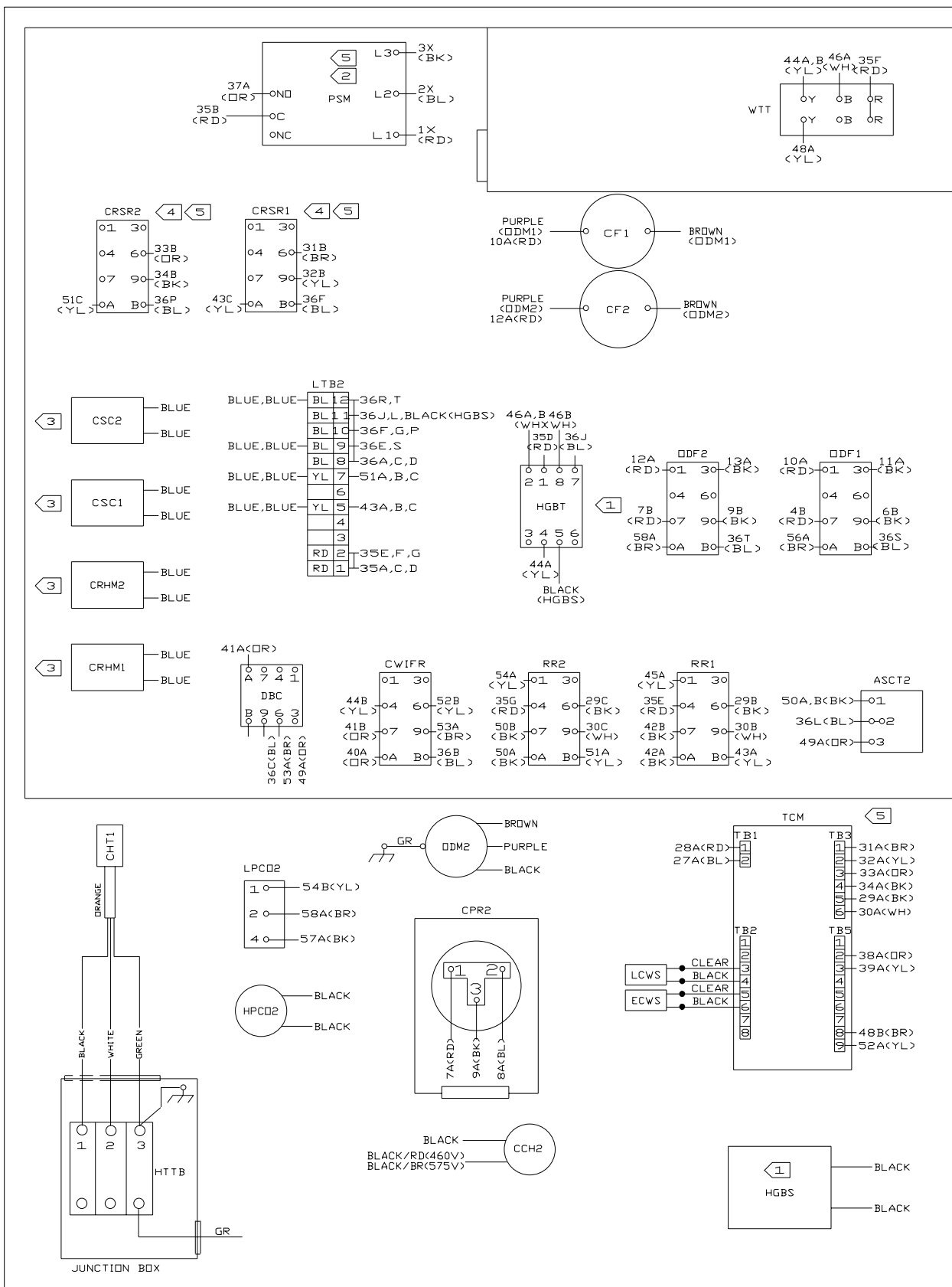
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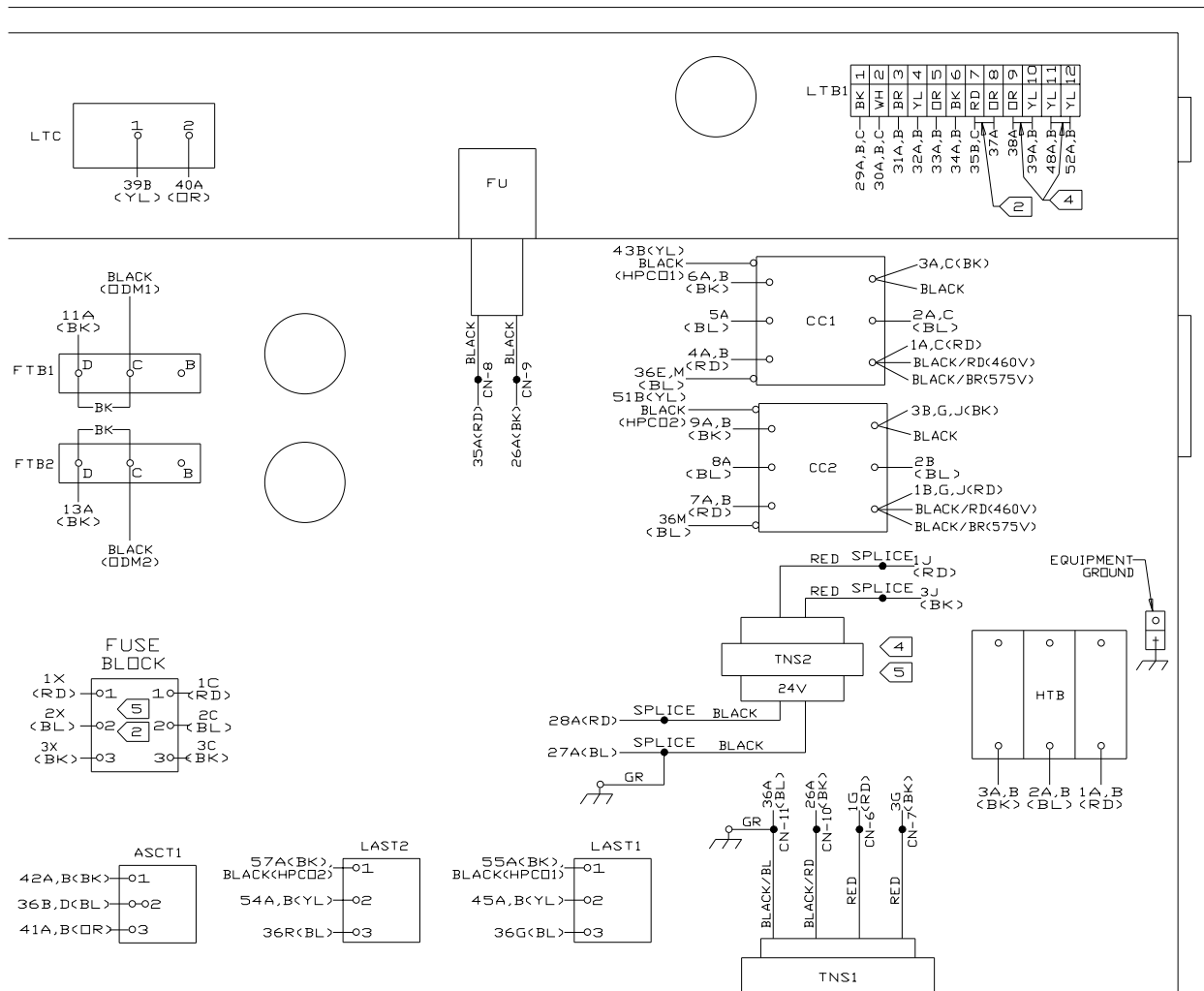
CGA180BW (575V/60/3 Schematic Diagram



⚠ WARNING
 HAZARDOUS VOLTAGE
 INCLUDING REPEATED
 DISCONNECTS
 BEFORE SERVICING
 TO AVOID SEVERE
 PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
 VOLTAGE HASARDEUX
 Y COMPRIS LES SOURCES
 ELECTRIQUES INCLINANT
 A DES DISJONCTEURS
 SITUES A DISTANCE AVANT
 DE REPARER. FAUTE DE
 DECONNEXION PREALABLE
 POUR ENTRETIEN PEUT
 ENTRAINER DES BLESSURES
 CORPORELLES SEVERES
 OU LA MORT.

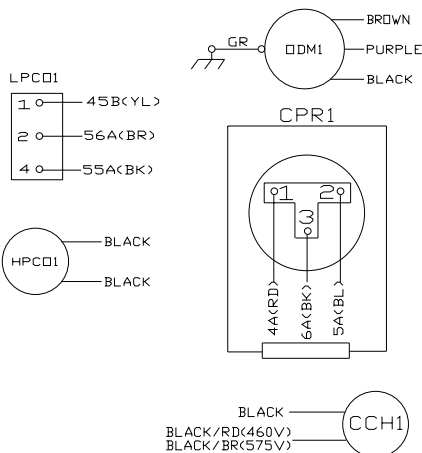
CGA180BW (575V/60/3) Connection Diagram





NOTES:

- 1 HOT GAS BYPASS ALTERNATE CONSTRUCTION INCLUDES HGHT, HGHS AND ASSOCIATED WIRING.-(FACTORY INSTALLED ONLY).
- 2 FIELD INSTALLED POWER SUPPLY MONITOR ACCESSORY. REMOVE JUMPER BETWEEN LTBI-7 AND LTBI-8 WHEN INSTALLED.
- 3 FIELD INSTALLED ELAPSED TIME METER/ START COUNTER ACCESSORY.
- 4 FIELD INSTALLED INTEGRATED COMFORT SYSTEM INTERFACE ACCESSORY. REMOVE JUMPERS BETWEEN LTBI-9 & LTBI-10 AND LTBI-11 & LTBI-12 WHEN INSTALLED.
- 5 THIS ACCESSORY NOT AVAILABLE FOR 380-415V/50 HZ/3 PH UNIT APPLICATION.



MODELS

CGA150BD
CGA180BW
CGA180B4

<p>WARNING</p> <p>HAZARDOUS VOLTAGE !</p> <p>DISCONNECT ALL ELECTRIC POWER INCLUDING REMOTE DISCONNECTS BEFORE SERVICING.</p> <p>FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.</p>	<p>AVERTISSEMENT</p> <p>VOLTAGE HASARDEUX !</p> <p>DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.</p> <p>FAUTE DE DECONNECTER LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAÎNER DES BLESSURES CORPORELLES SEVERES OU LA MORT.</p>
<p>CAUTION</p> <p>USE COPPER CONDUCTORS ONLY! UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS. FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT</p>	

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