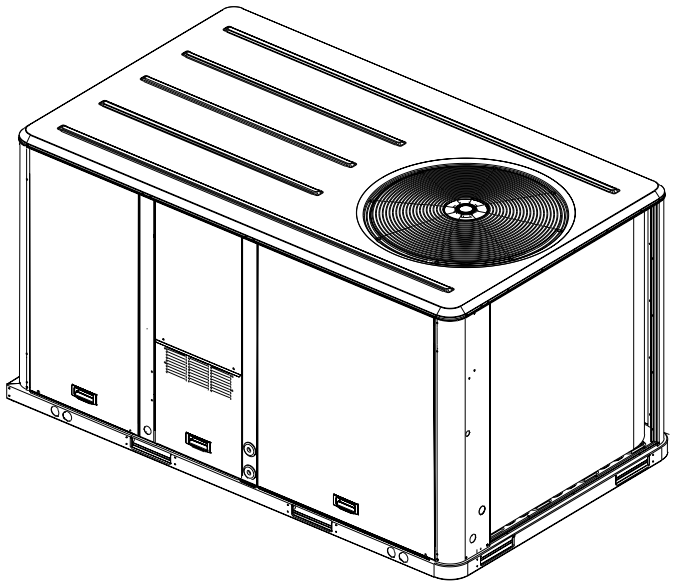
Y_C-SVE002B-EN

Wiring Manual

Packaged Gas/Electric with ReliaTel™ Controls

3 - 10 Tons



Models:
(60 Hz)
YSC036A*R - YSC120A*R
YHC033A*R - YHC120A*R

November 2004

Introduction

Literature Change History

Y_C-SVE-002A-EN (Nov. 2003)
Updated wiring diagrams.

Y_C-SVE-002B-EN (Nov. 2004)
Updated wiring diagrams.

Overview of Manual

This manual provides wiring diagrams for unit models listed on the front page. Refer to the Table of Contents for proper wiring diagrams.

NOTICE:

Warnings and Cautions appear at appropriate sections throughout this manual. Read these carefully.

⚠ WARNING– Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.

⚠ CAUTION – Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

CAUTION – Indicates a situation that may result in equipment or property-damage-only accidents.

Contents

Contents

Model Number Description

Y	S	C	036	A	3	R	L	A	**	C	0	0	0	C	1	0	0	0	1	A	1
1	2	3	4,5,6	7	8	9	10	11	12,13	14	15	16	17	18	19	20	21	22	23	24	25

DIGIT 1 - Unit Function

Y = DX Cooling, Gas Heat

DIGIT 2 - Efficiency

S = Standard Efficiency
H = High Efficiency

DIGIT 3 - Airflow

C = Convertible

DIGITS 4,5,6 - Nominal Gross Cooling Capacity (MBh)

033 = 3-Ton
036 = 3-Ton
043 = 4-Ton
048 = 4-Ton
060 = 5-Ton
063 = 5-Ton
072 = 6-Ton
090 = 7½-Ton, Single Compressor
092 = 7½-Ton, Dual Compressors
102 = 8½-Ton
120 = 10-Ton

DIGIT 7 - Major Design Sequence

A = First

DIGIT 8 - Unit Voltage

1 = 208-230/60/1
3 = 208-230/60/3
4 = 460/60/3
W = 575/60/3
K = 380/60/3

DIGIT 9 - Unit Controls

E = Electromechanical
R = ReliaTel™ Microprocessor

DIGIT 10 - Heating Capacity

L = Low
M = Medium
H = High
X = Low, Stainless Steel Heat Exchanger
Y = Medium, Stainless Steel Heat Exchanger
Z = High, Stainless Steel Heat Exchanger

DIGIT 11 - Minor Design Sequence

A = First Sequence

DIGITS 12, 13 - Service Sequence

** = Factory Assigned

DIGIT 14 - Fresh Air Selection

0 = No Fresh Air
A = Manual Outside Air Damper 0-50%
B = Motorized Outside Air Damper 0-50%
C = Economizer, Dry Bulb 0-100% without Barometric Relief
D = Economizer, Dry Bulb 0-100% with Barometric Relief
E = Economizer, Reference Enthalpy 0-100% without Barometric Relief
F = Economizer, Reference Enthalpy 0-100% with Barometric Relief
G = Economizer, Comparative Enthalpy 0-100% without Barometric Relief
H = Economizer, Comparative Enthalpy 0-100% with Barometric Relief

DIGIT 15 - Supply Fan/Drive Type/Motor

0 = Standard Drive
1 = Oversized Motor
2 = Optional Belt Drive Motor

DIGIT 16 - Hinged Service AccessFilters

0 = Standard Panels/Standard Filters
A = Hinged Access Panels/Standard Filters
B = Standard Panels/2" Pleated Filters
C = Hinged Access Panels/2" Pleated Filters

DIGIT 17 - Condenser Coil Protection

0 = Standard Coil
1 = Standard Coil with Hail Guard
2 = Epoxy Coated Condenser Coil
3 = Epoxy Coated Condenser Coil with Hail Guard

DIGIT 18 - Through the Base Provisions

0 = NoThrough the Base Provisions
A = Through the Base Electric
B = Through the Base Gas Piping
C = Through the Base Electric and Gas Piping

DIGIT 19 - Disconnect/Circuit Breaker (3 phase only)

0 = No Disconnect or Circuit Breaker
1 = Non-Fused Disconnect
2 = Circuit Breaker

DIGIT 20 - Convenience Outlet

0 = No Convenience Outlet
A = Unpowered Convenience Outlet
B = Powered Convenience Outlet (3 phase only)

DIGIT 21 - Communications Options

0 = No Communications Interface
1 = Trane Communications Interface
2 = LonTalk® Communications Interface
3 = Novar 2024 Controls
4 = Novar 3051 Controls

DIGIT 22 - Refrigeration System Option

0 = Standard Refrigeration System
A = Thermal Expansion Valve (TXV)
B = Dehumidification (Hot Gas Reheat Coil)

DIGIT 23 - Refrigeration Controls

0 = No Refrigeration Control
1 = High Pressure Control
2 = Frostat
3 = Crankcase Heater
4 = High Pressure Control and Frostat
5 = High Pressure Control and Crankcase Heater
6 = Frostat and Crankcase Heater
7 = High Pressure Control, Frostat and Crankcase Heater

DIGIT 24 - Smoke Detector

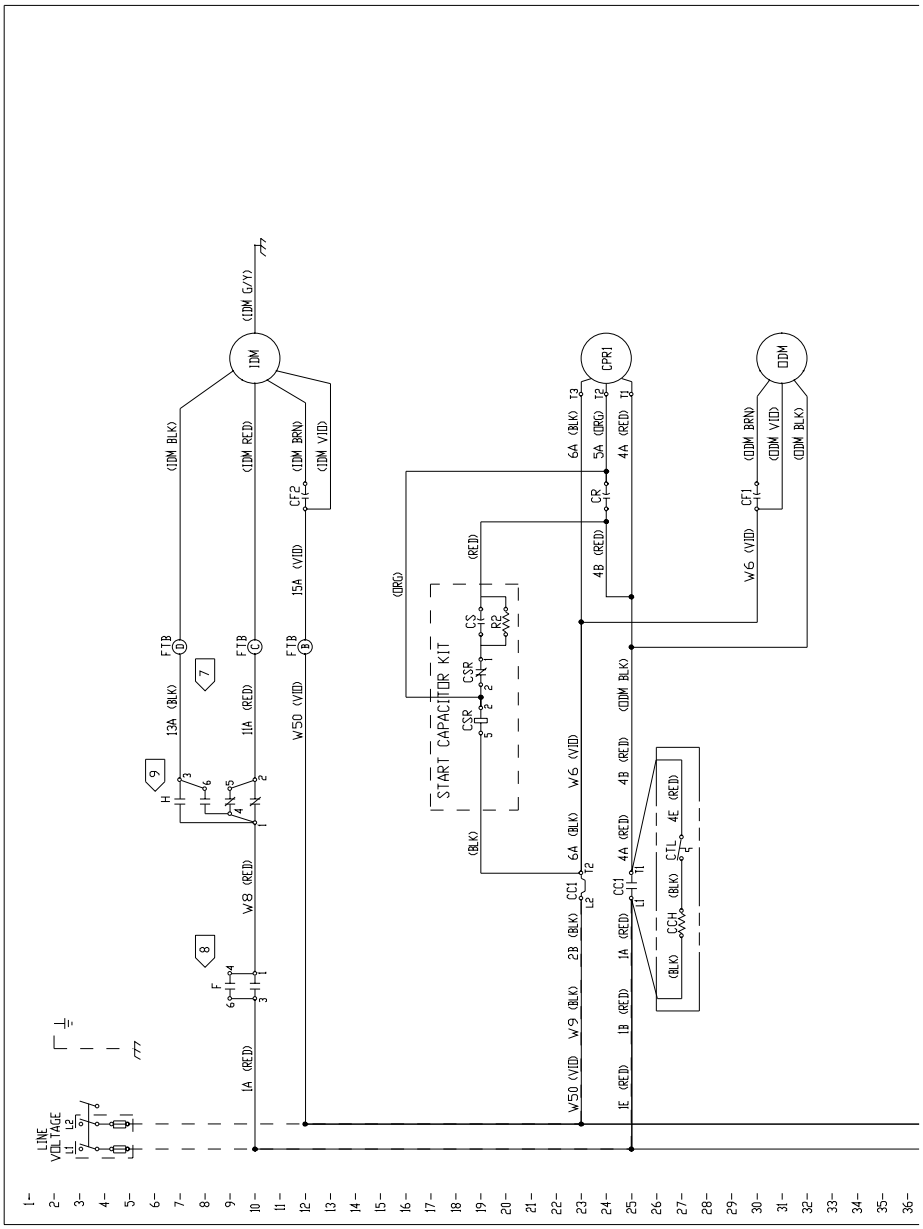
0 = No Smoke Detector
A = Return Air Smoke Detector
B = Supply Air Smoke Detector
C = Supply and Return Air Smoke Detectors

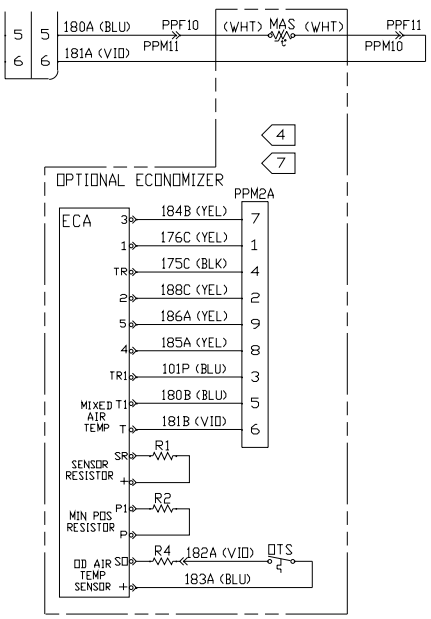
DIGIT 25 - Monitoring Controls

0 = No Monitoring Control
1 = Clogged Filter Switch
2 = Fan Failure Switch
3 = DischargeAir Sensing Tube
4 = Clogged Filter Switch and Fan Fail Switch
5 = Clogged Filter Switch and Discharge Air Sensing Tube
6 = Fan Fail Switch and Discharge Air Sensing Tube
7 = Clogged Filter and Fan Fail Switches and Discharge Air Sensing Tube
8 = Novar Return Air Sensor

Diagram 1

Power Schematic - 230v/60hz/1ph
3 - 5 Ton Single Stage Gas Heat / Direct Drive Motor
4366-1002





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	106
ECA	ECONOMIZER ACTUATOR	117-131
F	FAN RELAY	101
FD	FLAME DETECTOR	88
FOS	FROSTAT	106
FR	FLAME ROLLOUT	93
GV	GAS VALVE	89-90
H	HEAT RELAY	83
HPC1	HIGH PRESSURE CUTOUT	106
IGN	IGNITION MODULE	86-101
IP	IGNITER	99
LPC1	LOW PRESSURE CUTOUT	106
MAS	MIXED AIR SENSOR	110
OTS	OD AIR TEMP SWITCH	130
PS	PRESSURE SWITCH	93
R1	RESISTOR 750 OHM (RED)	126
R2	RESISTOR 130 OHM (GRN)	128
R4	RESISTOR 620 OHM (WHT)	130
TCO1	TEMPERATURE LIMIT SWITCH	96
TCO2	TEMPERATURE LIMIT SWITCH	96
TNS1	LOW VOLTAGE TRANSFORMER	80

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25° C (77° F) AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.

2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.

3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.

4 WHEN INSTALLING OPTIONAL ECONOMIZER, REMOVE CONFIG PLUG PPM2, AND CONNECT ECONOMIZER PLUG PPM2A TO PPF2, AND CONNECT MAS TO WIRES 180A AND 181A.

5 (FUTURE) CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. WHEN SINGLE-STAGE GAS HEAT IS REQUIRED, WIRE 102B IS REMOVED, WIRES 101NN AND 174A ARE NOT CONNECTED TO IGN, AND WIRE 123A IS NOT CONNECTED TO GV.

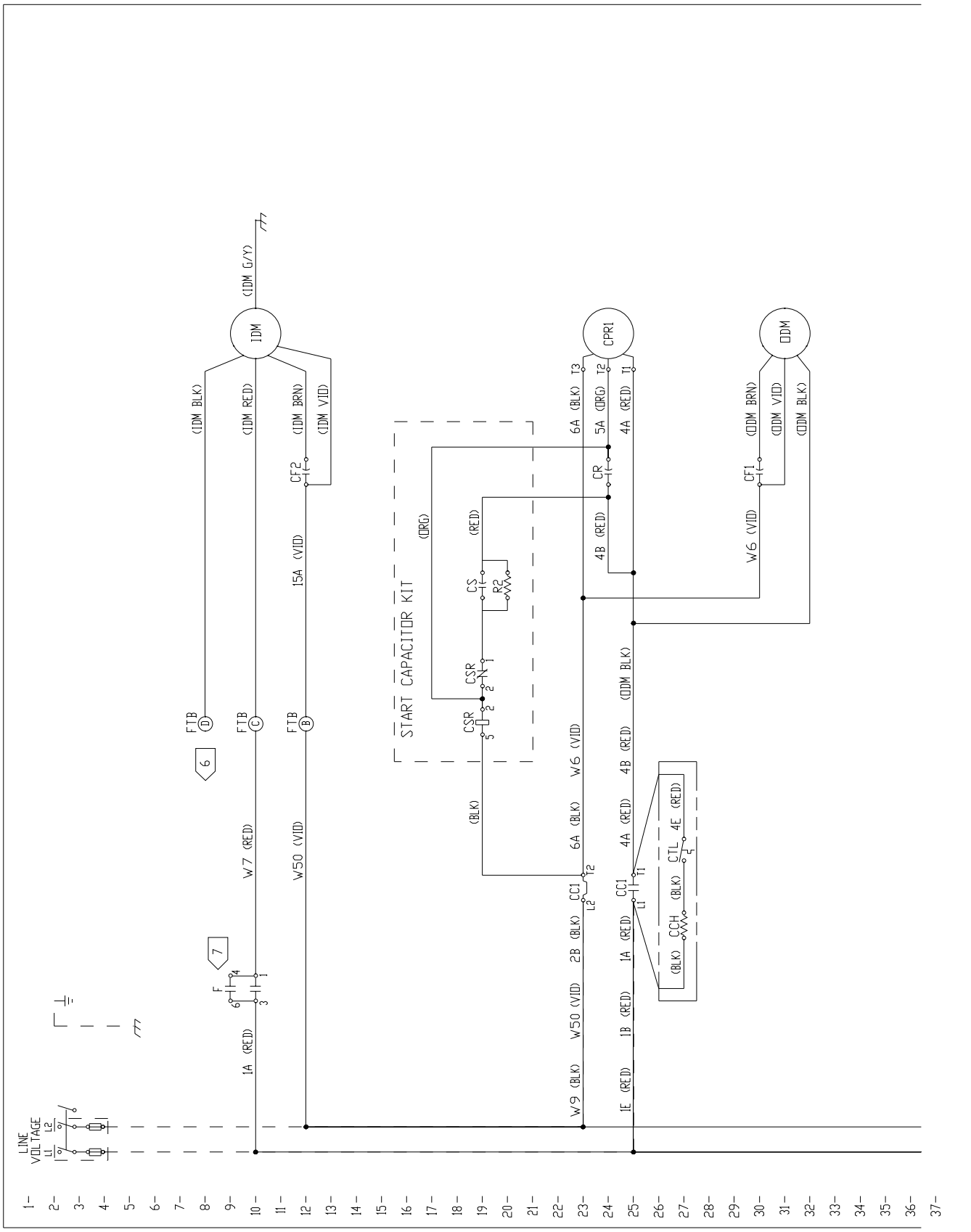
6 CONNECTIONS SHOWN INCLUDE OPTIONAL FOS AND HPC1. IF NEITHER OPTION IS INSTALLED, CONNECT PPM7 TO PPF7. IF FOS ONLY IS INSTALLED, CONNECT PPM9 TO PPF7. IF HPC1 ONLY IS INSTALLED, CONNECT PPF3 TO PPM7.

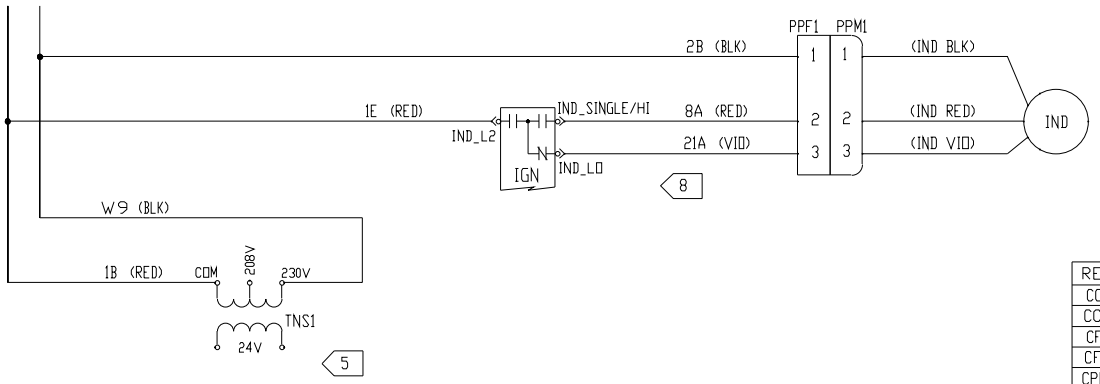
7 FOR MOTORIZED OUTSIDE AIR DAMPER, OPTIONAL MAS AND OTS (AND ASSOCIATED WIRING) ARE NOT USED, AND R4 IS REMOVED BETWEEN SO AND +.

4366-1001G

Diagram 2

Power Schematic - 230v/60hz/1ph
2 - 5 Ton Single Stage Gas Heat / Oversize Motor
4366-1018





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	23,25
CCH	CRANKCASE HEATER	27
CF1	OD MOTOR CAPACITOR	30
CF2	ID MOTOR CAPACITOR	12
CPR1	COMPRESSOR	24
CR	CPR RUN CAPACITOR	24
CS	CPR START CAPACITOR	19
CSR	CPR START RELAY	19
CTL	COIL TEMP LIMIT SWITCH	27
F	FAN RELAY	9,10
FTB	FAN TERMINAL BLOCK	8,10,12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	40,41
IND	INDUCER MOTOR	40
ODM	OD FAN MOTOR	31
R2	CPR START RESISTOR	20
TNS1	LOW VOLTAGE TRANSFORMER	45

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25° C (77° F) AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 230V/60HZ/1PH UNITS. WHEN 208V/60HZ/1PH OPERATION IS REQUIRED, MOVE WIRE W9 (BLK) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR LOW SPEED OPERATION. WHEN HIGH SPEED OPERATION IS REQUIRED, MOVE WIRE W7 FROM FTB-C TO FTB-D.

7 CONNECTIONS SHOWN ARE FOR 4 AND 5 TON UNITS. FOR 3 TON UNITS (AND BELOW), THERE ARE NO FAN RELAY (F) JUMPERS FROM PIN 3 TO PIN 6 OR FROM PIN 1 TO PIN 4.

8 (FUTURE) CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. IF SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO IGN AND WIRE (IND VIO) IS NOT PRESENT.

⚠ WARNING

HAZARDOUS VOLTAGE!

DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.

FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT

VOLTAGE HASARDEUX!

DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ 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.

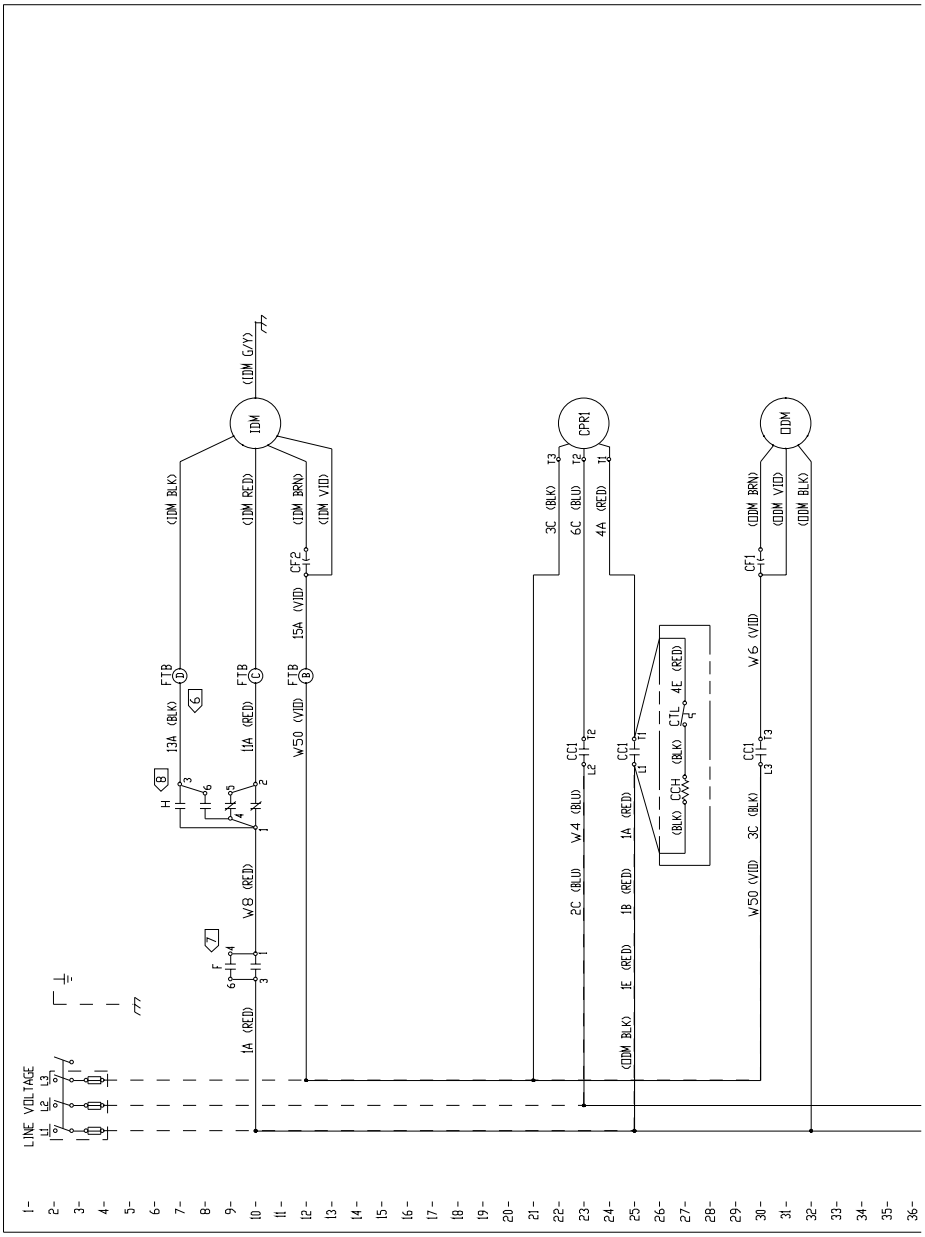
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

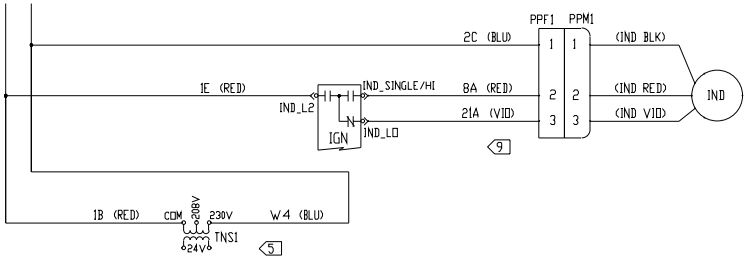
IMPORTANT!

DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.

Diagram 3

Power Schematic - 230v/60hz/3ph
2 - 5 Ton Single Stage Gas Heat / Direct Drive Motor
4366-1000





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	23,25,30
CCH	CRANKCASE HEATER	27
CF1	OD MOTOR CAPACITOR	30
CF2	ID MOTOR CAPACITOR	12
CPR1	COMPRESSOR	23
CTL	COIL TEMP LIMIT SWITCH	27
F	FAN RELAY	9,10
FTB	FAN TERMINAL BLOCK	7,10,12
H	HEAT RELAY	7-10
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	40
IND	INDUCER MOTOR	40
ODM	OD FAN MOTOR	31
TNS1	LOW VOLTAGE TRANSFORMER	45

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25° C (77° F) AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR LOW SPEED OPERATION (COOLING) AND HIGH SPEED OPERATION (HEATING). WHEN HIGH SPEED COOLING IS REQUIRED, MOVE WIRE 11A FROM FTB-C TO FTB-D.

7 CONNECTIONS SHOWN ARE FOR 4 AND 5 TON UNITS. FOR 3 TON UNITS (AND BELOW), THERE ARE NO FAN RELAY (F) JUMPERS FROM PIN 1 TO PIN 4 OR FROM PIN 3 TO PIN 6.

8 CONNECTIONS SHOWN ARE FOR 4 AND 5 TON UNITS. FOR 3 TON UNITS (AND BELOW), THERE ARE NO HEAT RELAY (H) JUMPERS FROM PIN 1 TO PIN 4, PIN 3 TO PIN 6, OR PIN 2 TO PIN 5.

9 (FUTURE) CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS OPERATION. WHEN SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A (VID) IS NOT CONNECTED TO IGN, AND WIRE (IND VID) IS NOT PRESENT.

⚠ WARNING
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⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

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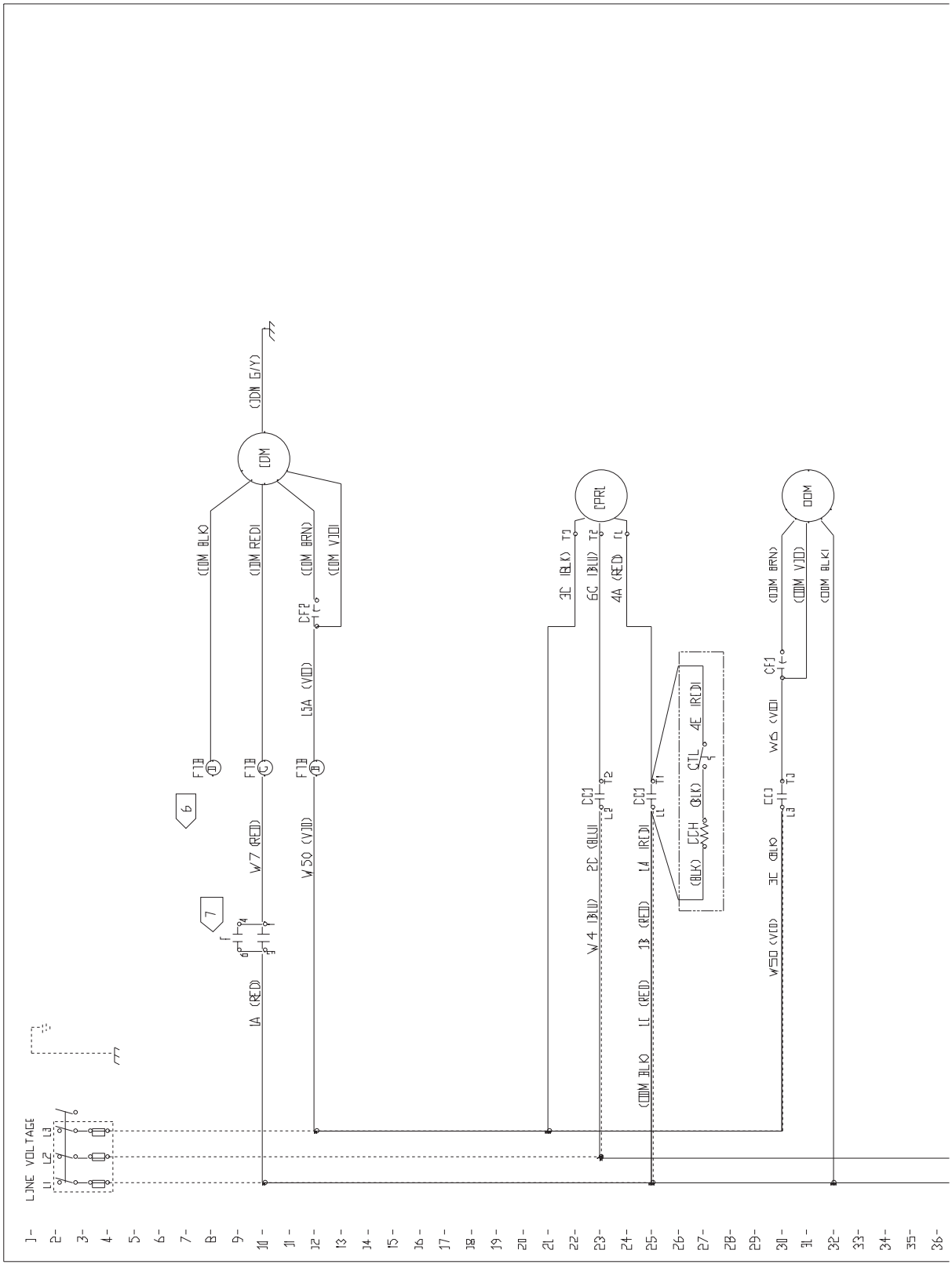
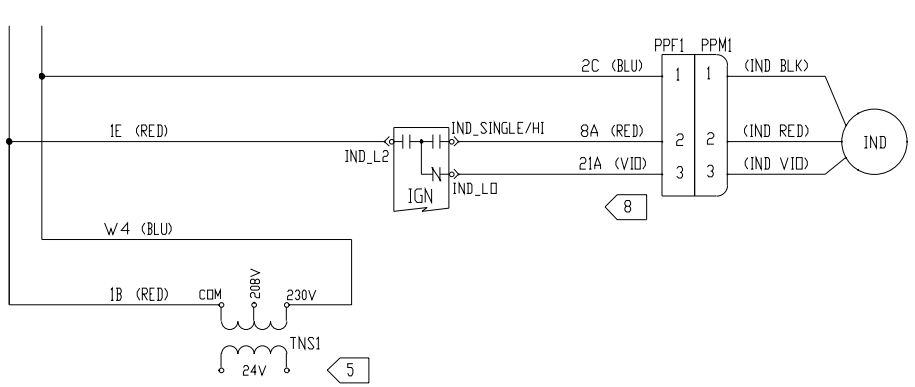
4366-1000 E

Diagram 4

Power Schematic - 230v/60hz/3ph
2 - 5 Ton Single Stage Gas Heat / Oversize Motor
4366-1017





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5 CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.

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REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	23,25,30
CCH	CRANKCASE HEATER	27
CF1	OD MOTOR CAPACITOR	30
CF2	ID MOTOR CAPACITOR	12
CPR1	COMPRESSOR	23
CTL	COIL TEMP LIMIT SWITCH	27
F	FAN RELAY	9,10
FTB	ID FAN TERMINAL BLOCK	8,10,12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	40,41
IND	INDUCER MOTOR	40
ODM	OD FAN MOTOR	31
TNS1	LOW VOLTAGE TRANSFORMER	45

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

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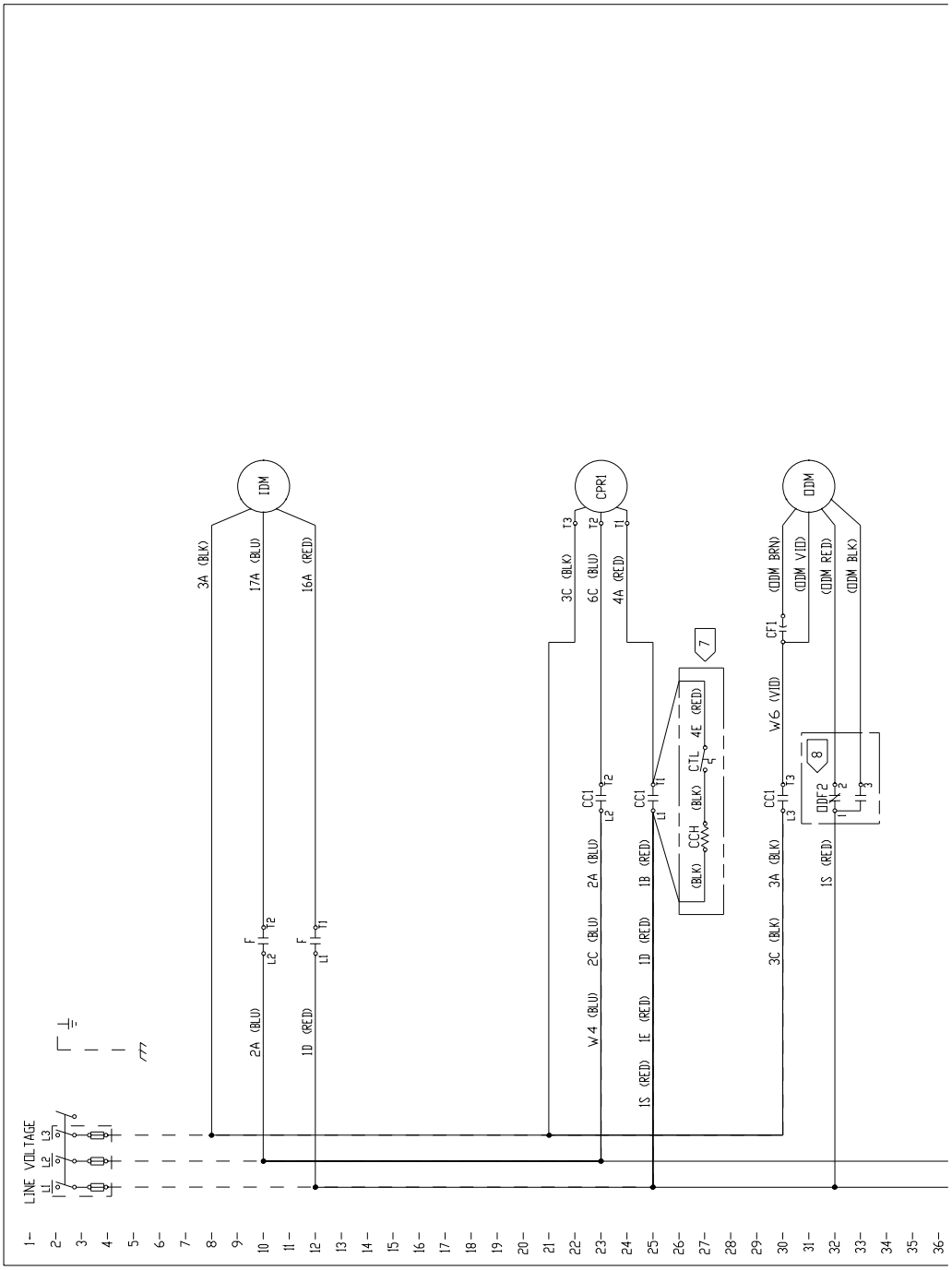
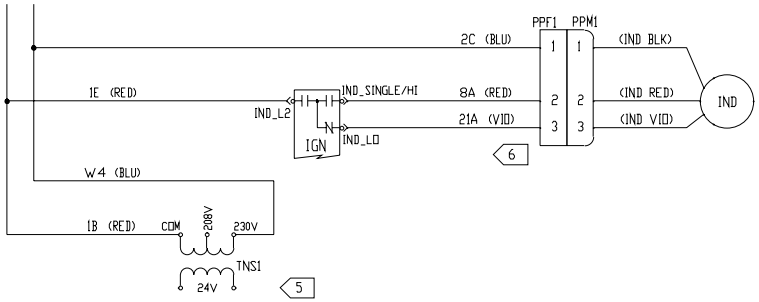
Diagram 5

Power Schematic - 230v/60hz/3ph
2 - 7.5 Ton Gas Heat / Belt Drive or Oversize Motor
4366-1016





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	23,25,30
CCH	CRANKCASE HEATER	27
CF1	OD MOTOR CAPACITOR	30
CPR1	COMPRESSOR	23
CTL	COIL TEMP LIMIT SWITCH	27
F	FAN CONTACTOR	10,12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	40,41
IND	INDUCER MOTOR	40
ODF2	OD FAN SPEED RELAY	32,33
ODM	OD FAN MOTOR	31
TNS1	LOW VOLTAGE TRANSFORMER	45

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

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5 CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS OPERATION. WHEN SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A (VIO) IS NOT CONNECTED TO IGN, AND WIRE (IND VIO) IS NOT PRESENT.

7 CONNECTIONS SHOWN ARE FOR 5-TON AND SMALLER UNITS. FOR UNITS GREATER THAN 5-TON, CTL AND WIRE 4E (RED) ARE NOT PRESENT, AND CCH WIRES ARE CONNECTED TO CC1-L1 AND CC1-T1.

8 CONNECTIONS SHOWN ARE FOR DEHUMIDIFICATION OPTION (2-SPEED ODM). FOR 1-SPEED ODM, WIRES 1S (RED), (ODM RED) AND COMPONENT ODF2 ARE NOT PRESENT AND (ODM BLK) IS CONNECTED TO CC1-L1.

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.

FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

⚠ CAUTION
USE COPPER CONDUCTORS ONLY!

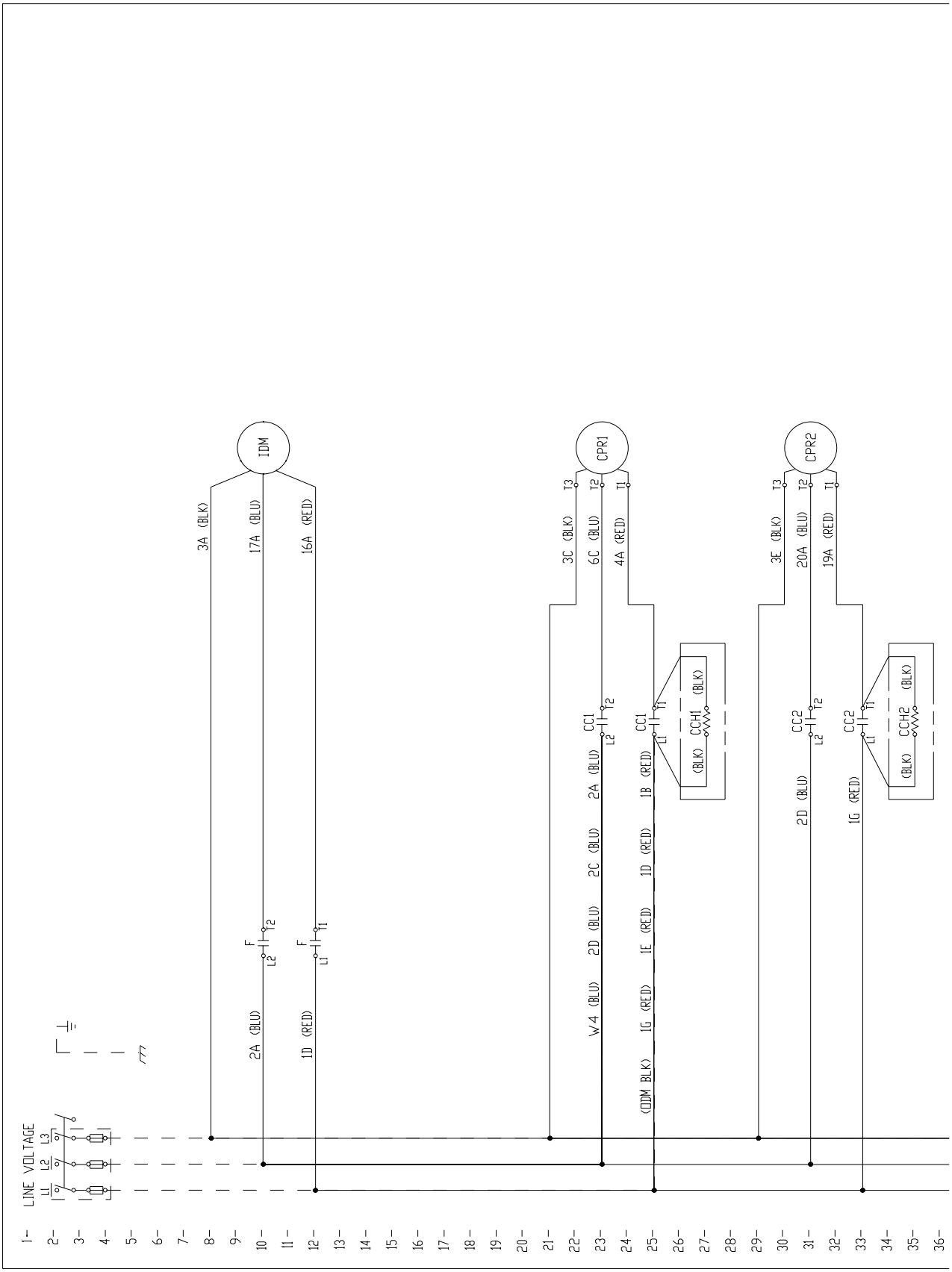
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

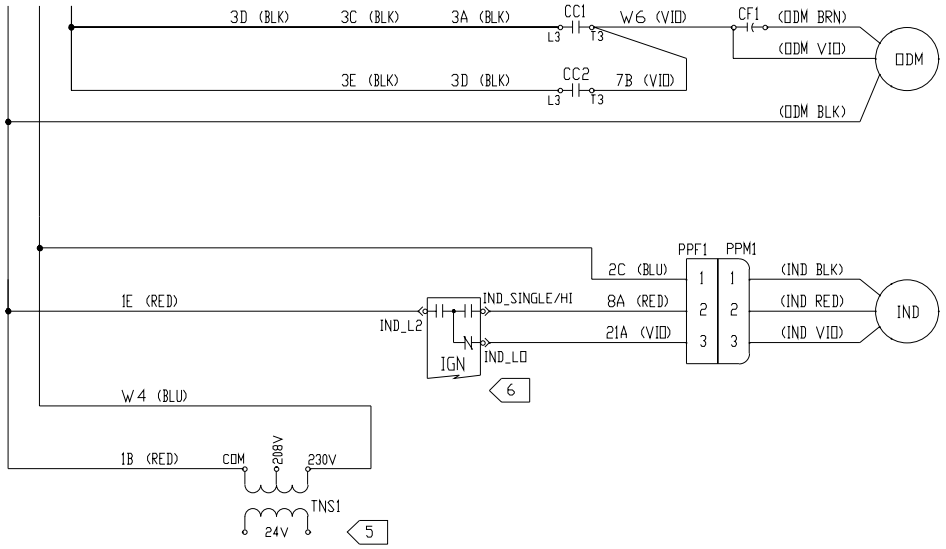
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.

Diagram 6

Power Schematic - 230v/60hz/3ph
7.5 - 10 Ton Gas Heat / Dual Compressor
4366-1033





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR 1	23,25,37
CC2	COMPRESSOR CONTACTOR 2	31,33,39
CCH1	CRANKCASE HEATER 1	27
CCH2	CRANKCASE HEATER 2	35
CF1	OD FAN CAPACITOR	37
CPR1	COMPRESSOR 1	23
CPR2	COMPRESSOR 2	31
F	FAN CONTACTOR	10,12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	46,47
IND	INDUCER MOTOR	46
ODM	OD FAN MOTOR	38
TNS1	LOW VOLTAGE TRANSFORMER	51

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25° C (77° F) AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS OPERATION. WHEN SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A (VIO) IS NOT CONNECTED TO IGN, AND WIRE (IND VIO) IS NOT PRESENT.

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.

FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

⚠ CAUTION
USE COPPER CONDUCTORS ONLY!

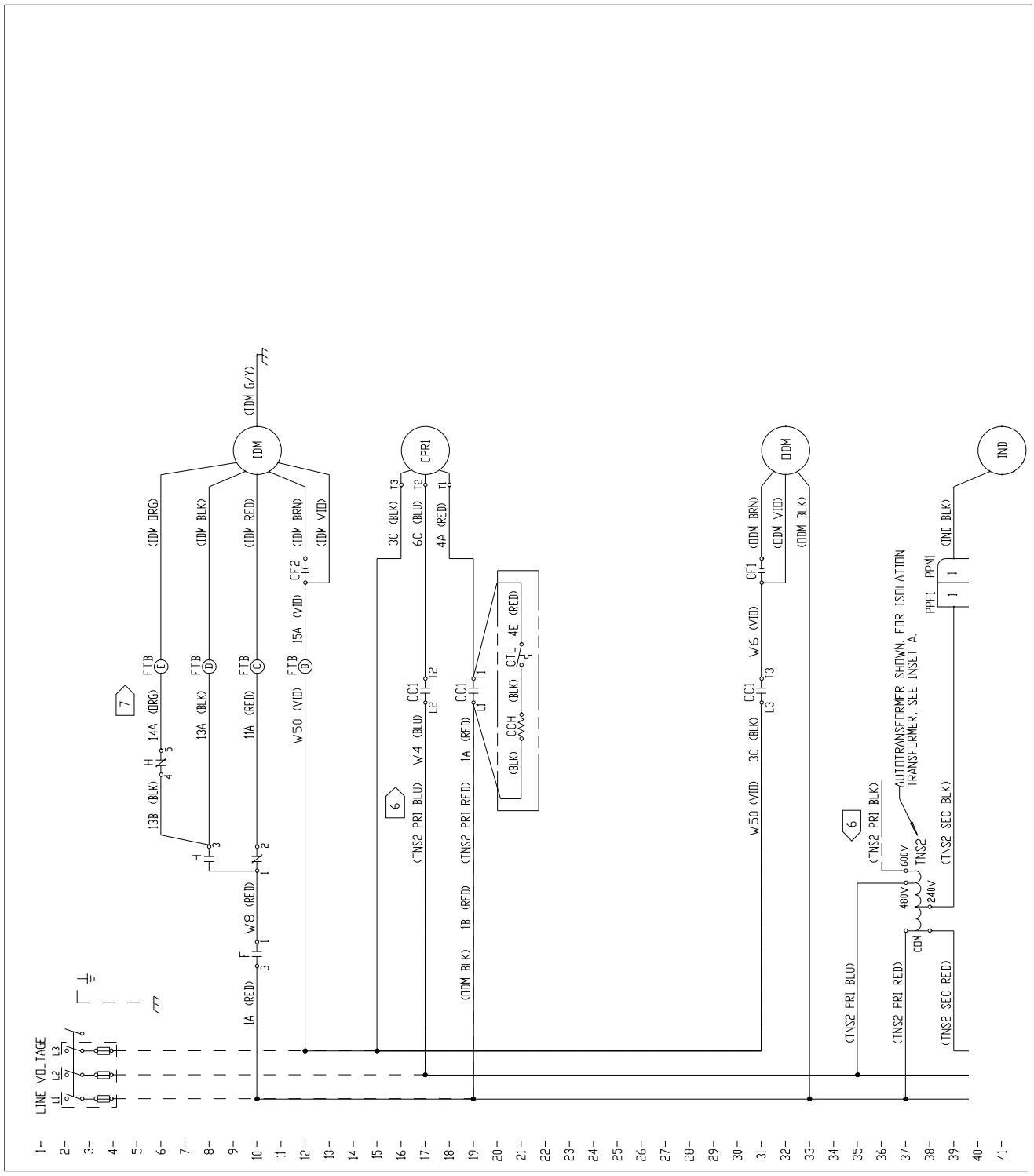
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.

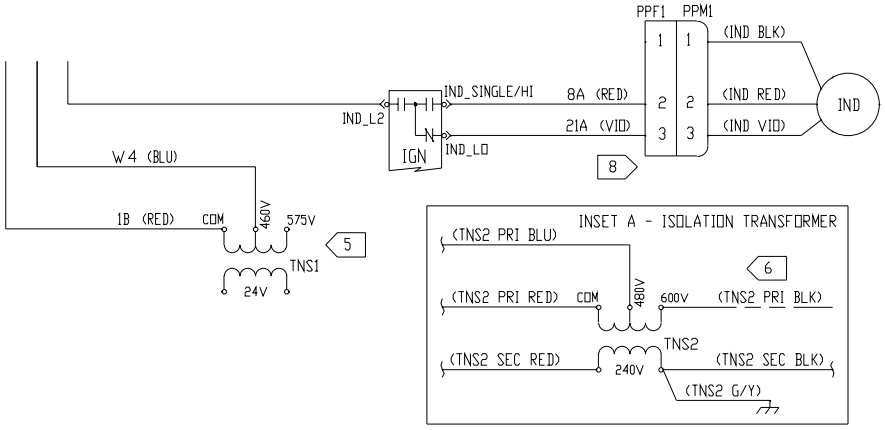
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.

Diagram 7

Power Schematic - 460-575v/60hz/3ph
3 Ton Single Stage Gas Heat / Direct Drive Motor
4366-1004





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	17,19,31
CCH	CRANKCASE HEATER	21
CF1	OD MOTOR CAPACITOR	31
CF2	ID MOTOR CAPACITOR	12
CPR1	COMPRESSOR	17
CTL	COIL TEMP LIMIT SWITCH	21
F	FAN RELAY	10
FTB	FAN TERMINAL BLOCK	6-12
H	HEAT RELAY	6-10
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	41-42
IND	INDUCER MOTOR	41
ODM	OD FAN MOTOR	32
TNS1	LOW VOLTAGE TRANSFORMER	45-47
TNS2	INDUCER AUTOTRANSFORMER	37-38

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 575V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE (TNS2 PRI BLU) FROM CC1-L2 AND CONNECT WIRE (TNS2 PRI BLK) TO CC1-L2.

7 CONNECTIONS SHOWN ARE FOR LOW SPEED OPERATION (COOLING) AND HIGH SPEED OPERATION (HEATING). WHEN HIGH SPEED COOLING IS REQUIRED, REMOVE WIRE 14A(ORG) FROM FTB-E AND TAPE, AND MOVE WIRE 11A(RED) FROM FTB-C TO FTB-D.

8 (FUTURE) CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. WHEN SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO IGN AND WIRE (IND VIO) IS NOT PRESENT.

⚠ WARNING
HAZARDOUS VOLTAGE!
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FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

⚠ CAUTION
USE COPPER CONDUCTORS ONLY!

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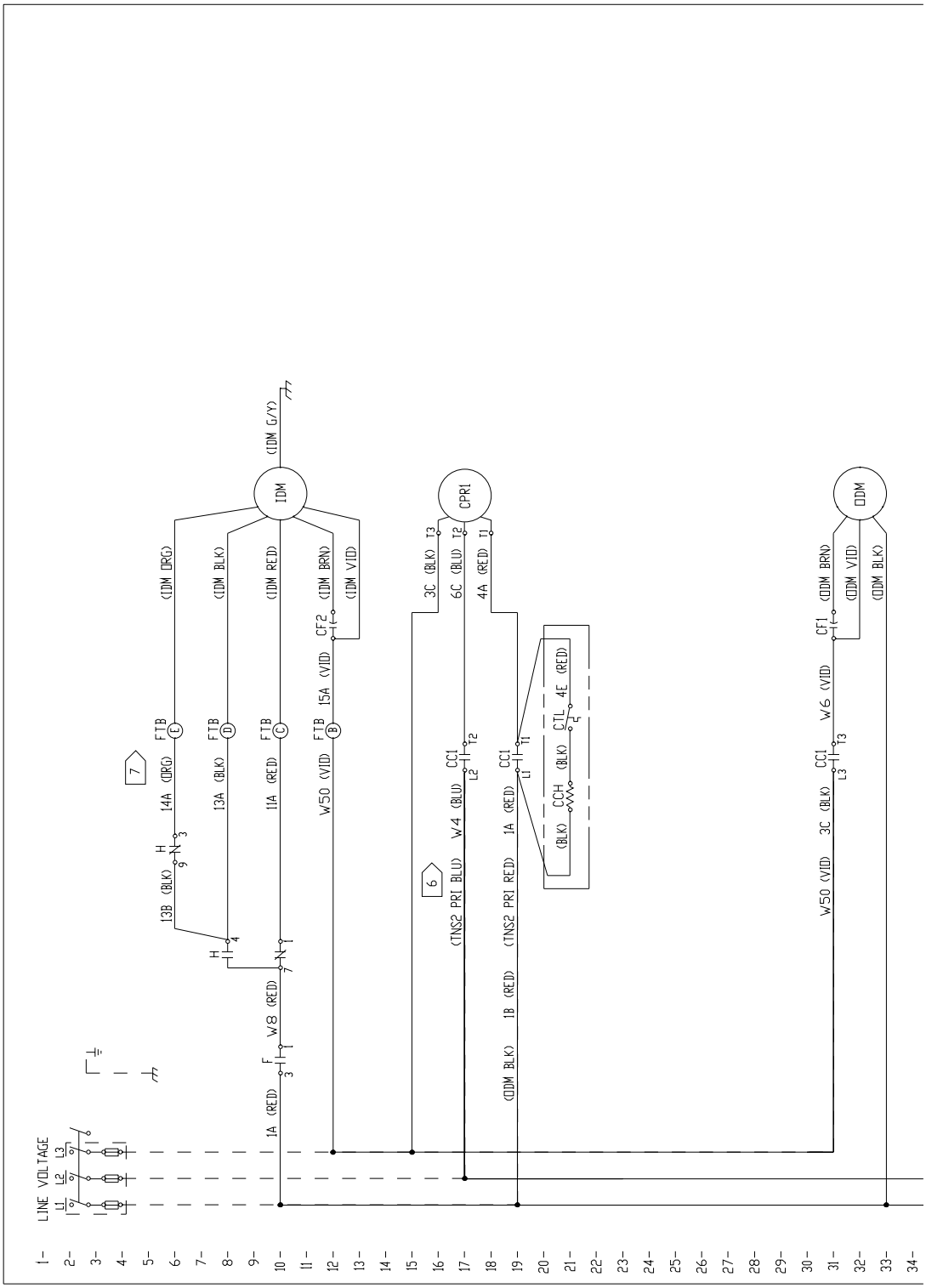
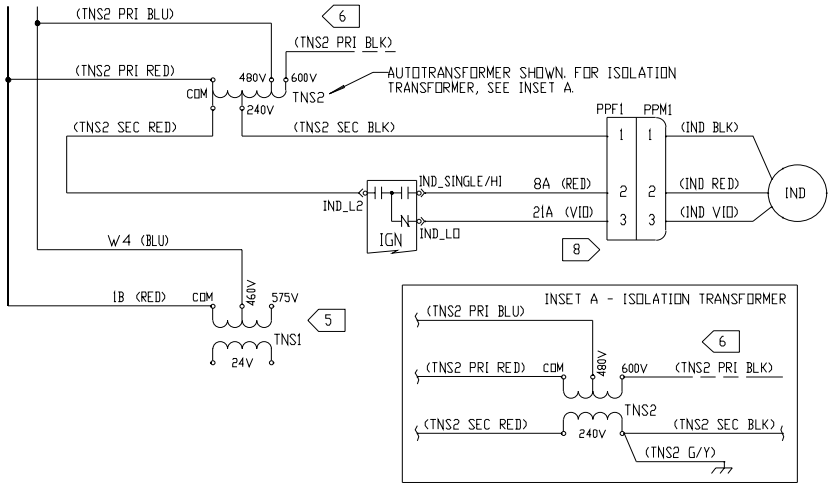
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.

Diagram 8

Power Schematic - 460-575v/60hz/3ph
4 - 5 Ton Single Stage Gas Heat / Direct Drive Motor
4366-1032





1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 575V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE (TNS2 PRI BLU) FROM CC1-L2 AND CONNECT WIRE (TNS2 PRI BLK) TO CC1-L2.

7 CONNECTIONS SHOWN ARE FOR LOW SPEED OPERATION (COOLING) AND HIGH SPEED OPERATION (HEATING). WHEN HIGH SPEED COOLING IS REQUIRED, REMOVE WIRE 14A(ORG) FROM FTB-E AND TAPE, AND MOVE WIRE 11A(RED) FROM FTB-C TO FTB-D.

8 (FUTURE) CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. WHEN SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO IGN AND WIRE (IND VIO) IS NOT PRESENT.

REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	17,19,31
CCH	CRANKCASE HEATER	21
CF1	OD MOTOR CAPACITOR	31
CF2	ID MOTOR CAPACITOR	12
CPR1	COMPRESSOR	17
CTL	COIL TEMP LIMIT SWITCH	21
F	FAN RELAY	10
FTB	FAN TERMINAL BLOCK	6-12
H	HEAT RELAY	6-10
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	41-42
IND	INDUCER BLOWER	41
ODM	OD FAN MOTOR	32
TNS1	LOW VOLTAGE TRANSFORMER	45-47
TNS2	INDUCER AUTOTRANSFORMER	37-38

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

⚠ WARNING
HAZARDOUS VOLTAGE!
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FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
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FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

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IMPORTANT!
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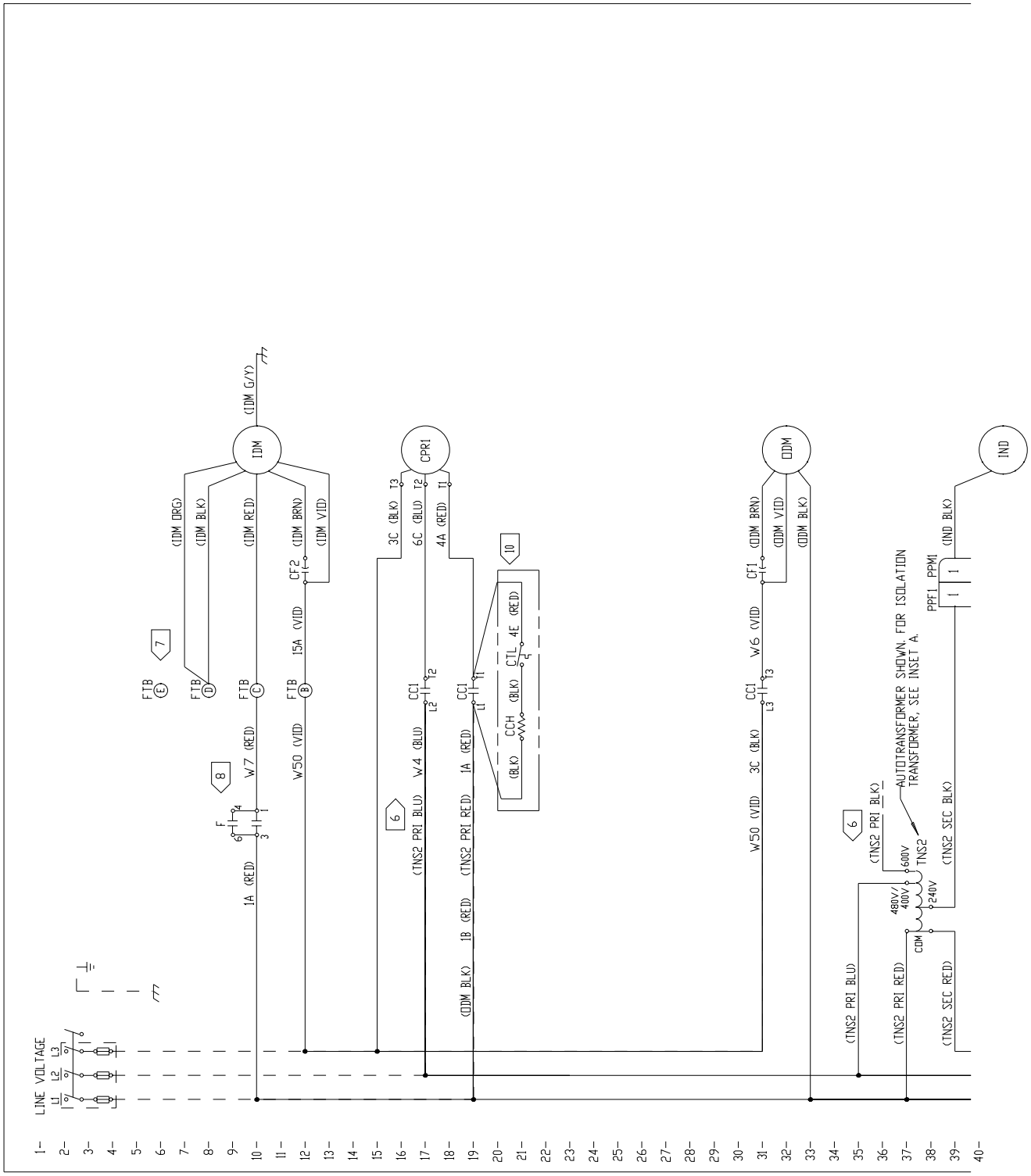
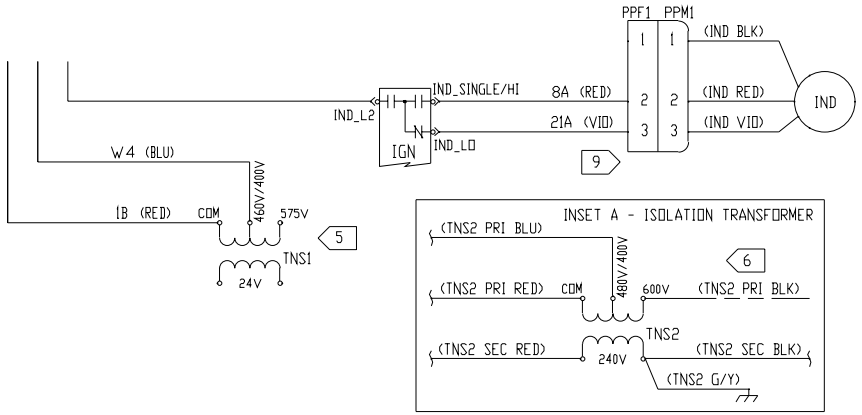
Diagram 9

Power Schematic - 460-575v/60hz/3ph
4 - 5 Ton Single Stage Gas Heat / Oversize Motor
4366-1011





1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH AND 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 575V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH AND 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE (TNS2 PRI BLU) FROM CC1-L2 AND CONNECT WIRE (TNS2 PRI BLK) TO CC1-L2.

7 CONNECTIONS SHOWN ARE FOR LOW SPEED OPERATION. WHEN HIGH SPEED OPERATION IS REQUIRED, MOVE WIRE (IDM ORG) FROM FTB-D TO FTB-E AND MOVE WIRE W7(RED) FROM FTB-C TO FTB-D.

8 CONNECTIONS SHOWN ARE FOR 4 AND 5 TON UNITS. FOR 3 TON UNITS (AND BELOW) THERE ARE NO FAN RELAY (F) JUMPERS FROM PIN 3 TO PIN 6 OR FROM PIN 1 TO PIN 4.

9 (FUTURE) CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. IF SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A(VID) IS NOT CONNECTED TO IGN AND WIRE (IND VID) IS NOT PRESENT.

10 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH AND 575V/60HZ/3PH UNITS. FOR 380V/60HZ/3PH UNITS, CCH, CTL, AND WIRE 4E(RED) ARE NOT PRESENT.

REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	17,19,31
CCH	CRANKCASE HEATER	21
CF1	OD MOTOR CAPACITOR	31
CF2	ID MOTOR CAPACITOR	12
CPR1	COMPRESSOR	17
CTL	COIL TEMP LIMIT SWITCH	21
F	FAN RELAY	9-10
FTB	ID FAN TERMINAL BLOCK	6-12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	41-42
IND	INDUCER MOTOR	41
ODM	OD FAN MOTOR	32
TNS1	LOW VOLTAGE TRANSFORMER	45-47
TNS2	INDUCER AUTOTRANSFORMER	37-38

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

⚠ WARNING

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FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT

VOLTAGE HASARDEUX!

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FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.

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FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.

IMPORTANT!

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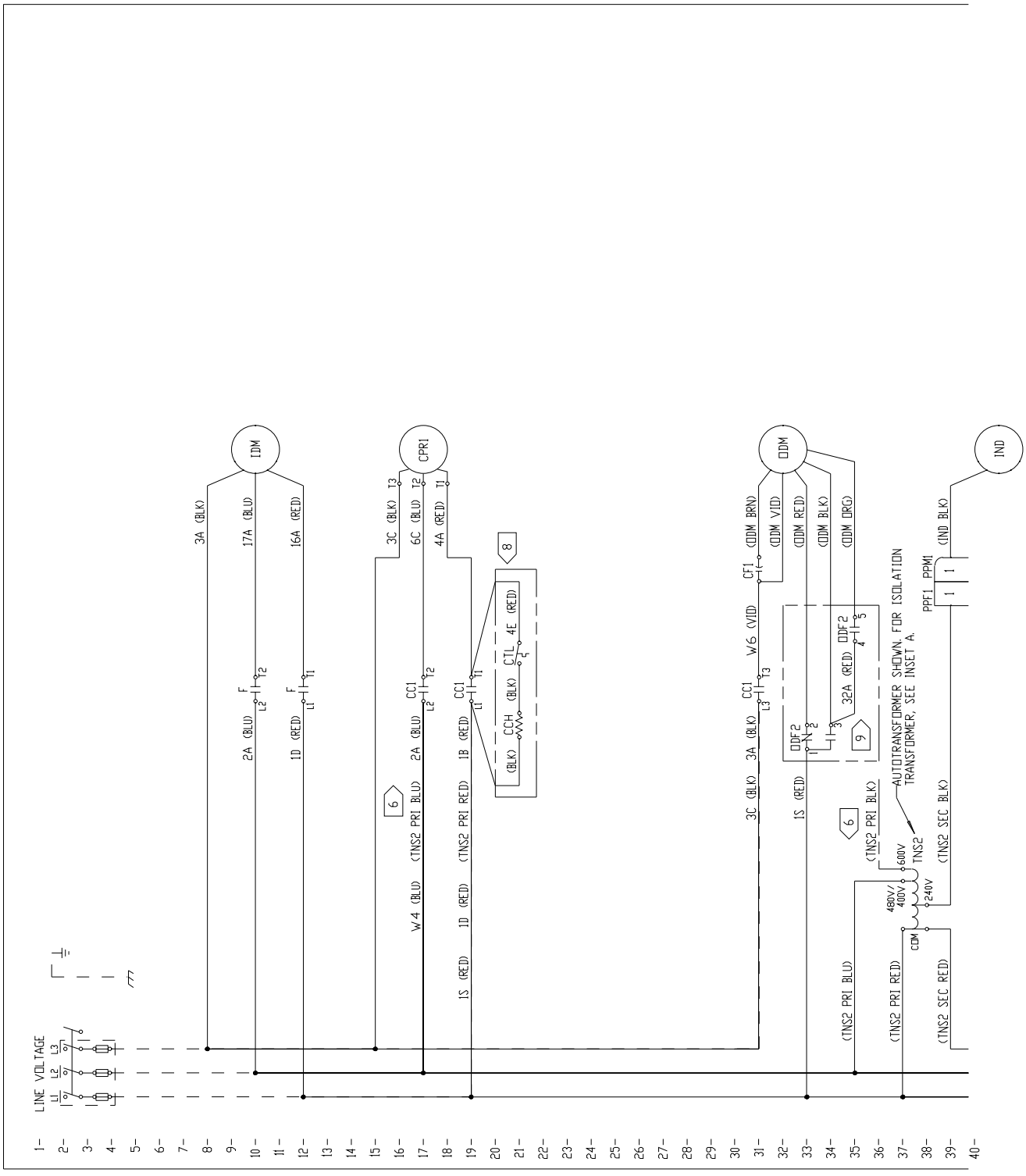
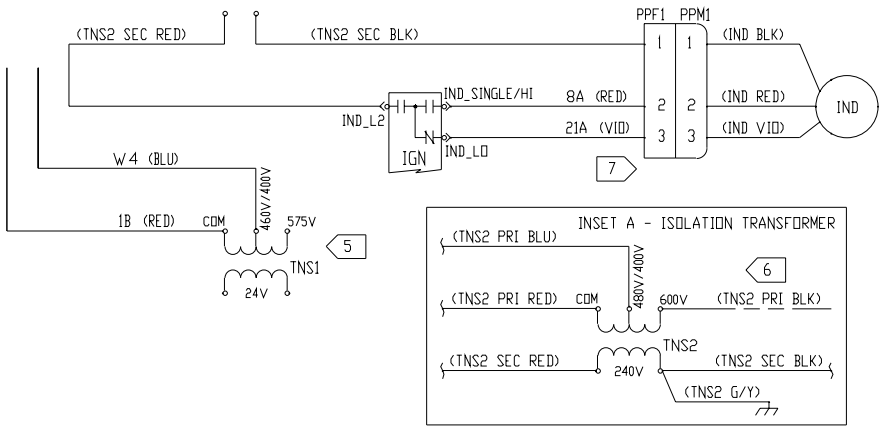
Diagram 10

Power Schematic - 460,575v/60hz/3ph
2 - 7. 5 Ton Gas Heat / Belt Drive Motor
4366-1005





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	17,19,31
CCH	CRANKCASE HEATER	21
CF1	ID MOTOR CAPACITOR	31
CPR1	COMPRESSOR	17
CTL	COIL TEMP LIMIT SWITCH	21
F	FAN CONTACTOR	10,12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	41-42
IND	INDUCER MOTOR	41
IDF2	ID FAN SPEED RELAY	33-35
ODM	OD FAN MOTOR	32
TNS1	LOW VOLTAGE TRANSFORMER	45-47
TNS2	INDUCER AUTOTRANSFORMER	37-38

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 380-415V/50HZ/3PH, 380V/60HZ/3PH, AND 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 575V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR 380-415V/50HZ/3PH, 380V/60HZ/3PH, AND 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE (TNS2 PRI BLU) FROM CC1-L2 AND CONNECT WIRE (TNS2 PRI BLK) TO CC1-L2.

7 CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. WHEN SINGLE-STAGE OPERATION IS REQUIRED, WIRE 21A(VID) IS NOT CONNECTED, AND WIRE (IND VID) IS NOT PRESENT.

8 THESE CONNECTIONS ARE FOR UNITS WITH A CRANKCASE HEATER INSTALLED. FOR 5-TON AND SMALLER UNITS, CONNECT AS SHOWN. FOR UNITS LARGER THAN 5-TON, CTL AND WIRE 4E(RED) ARE NOT PRESENT, AND CCH WIRES ARE CONNECTED TO CC1-L1 AND CC1-T1.

9 CONNECTIONS SHOWN ARE FOR DEHUMIDIFICATION OPTION (2-SPEED IDM). FOR 1-SPEED IDM, WIRES 1S(RED), 32A(RED), (IDM RED), (IDM ORG), AND COMPONENT IDF2 ARE NOT PRESENT AND WIRE (IDM BLK) IS CONNECTED TO CC1-L1.

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VOLTAGE HASARDEUX!
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IMPORTANT!
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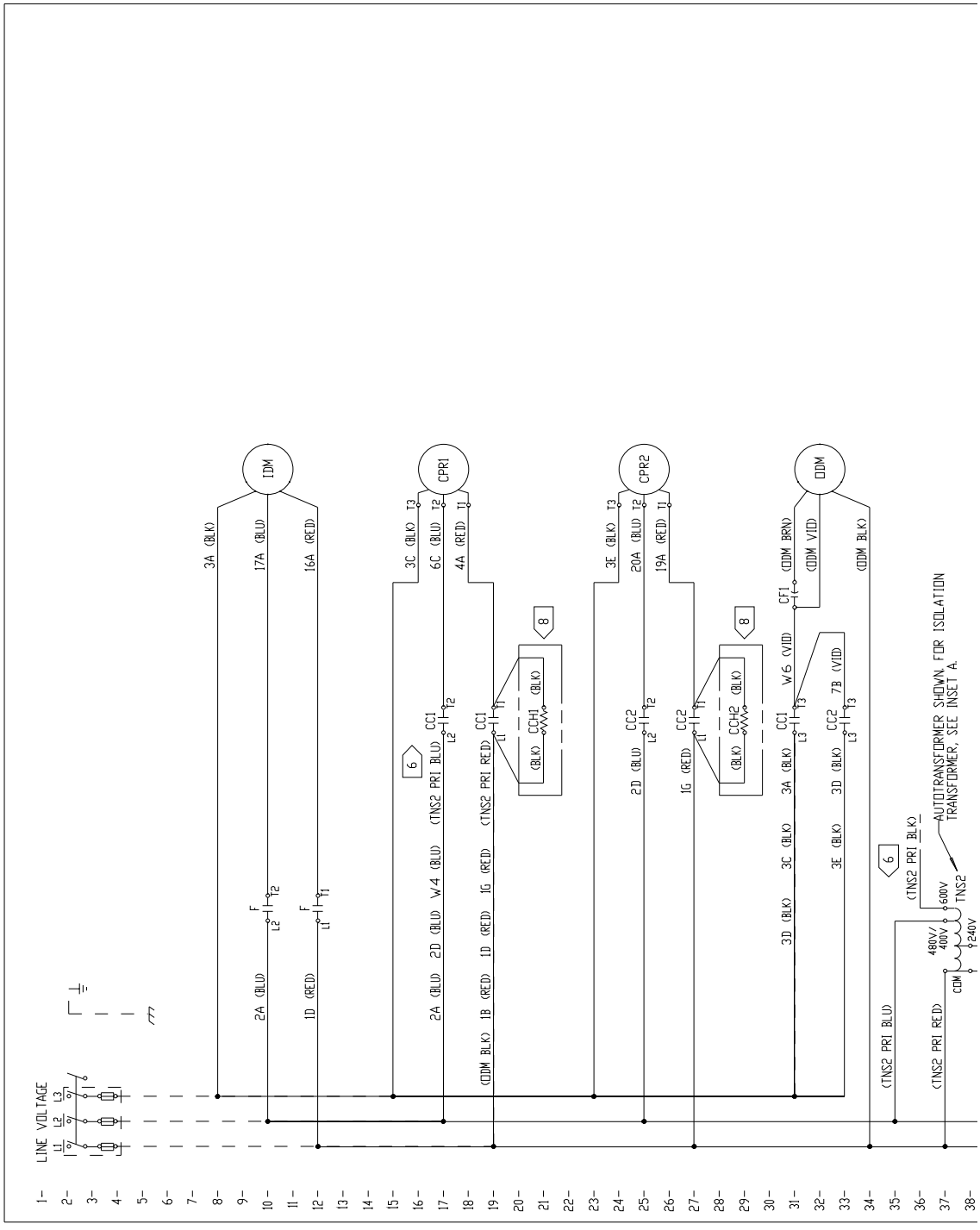
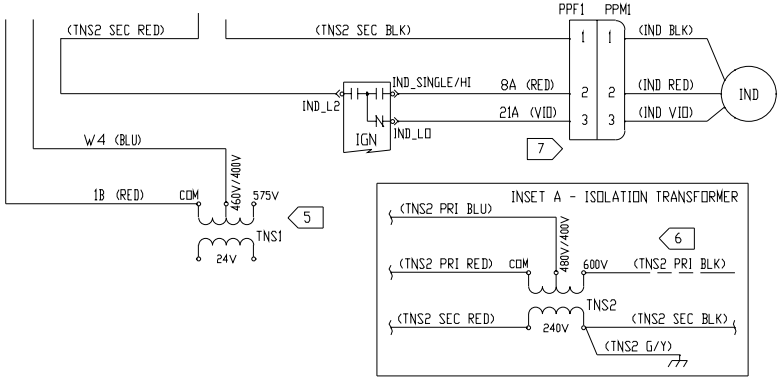
Diagram 11

Power Schematic - 460,575v/60hz/3ph
7. 5 - 10 Ton Gas Heat / Belt Drive Motor
4366-1034





REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR 1	17,19,31
CC2	COMPRESSOR CONTACTOR 2	25,27,33
CCH1	CRANKCASE HEATER 1	21
CCH2	CRANKCASE HEATER 2	29
CF1	ID FAN CAPACITOR	31
CPR1	COMPRESSOR 1	17
CPR2	COMPRESSOR 2	25
F	FAN CONTACTOR	10,12
IDM	ID FAN MOTOR	10
IGN	IGNITION MODULE	41-42
IND	INDUCER MOTOR	41
IDM	ID FAN MOTOR	32
TNS1	LOW VOLTAGE TRANSFORMER	45-47
TNS2	INDUCER AUTOTRANSFORMER	37-38

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY WITH ALL UTILITIES TURNED OFF AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
3. NUMBERS ALONG THE RIGHT SIDE OF THE SCHEMATIC DESIGNATE THE LOCATION OF CONTACTS BY LINE NUMBER. AN UNDERLINED NUMBER INDICATES A NORMALLY CLOSED CONTACT.
4. THREE-PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION AND COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

5 CONNECTIONS SHOWN ARE FOR 380-415V/50HZ/3PH, 380V/60HZ/3PH AND 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 575V TERMINAL.

6 CONNECTIONS SHOWN ARE FOR 380-415V/50HZ/3PH, 380V/60HZ/3PH AND 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE (TNS2 PRI BLU) FROM CC1-L2 AND CONNECT WIRE (TNS2 PRI BLK) TO CC1-L2.

7 CONNECTIONS SHOWN ARE FOR DUAL-STAGE GAS HEAT OPERATION. WHEN SINGLE-STAGE GAS HEAT OPERATION IS REQUIRED, WIRE 21A(VID) IS NOT CONNECTED TO IGN, AND WIRE (IND VIO) IS NOT PRESENT.

8 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH AND 575V/60HZ/3PH UNITS. FOR 380-415V/50HZ/3PH AND 380V/60HZ/3PH UNITS, CCH1 AND CCH2 ARE NOT PRESENT.

⚠ WARNING

HAZARDOUS VOLTAGE!

DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.

FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.

⚠ AVERTISSEMENT

VOLTAGE HASARDEUX!

DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.

FAUTE DE DECONNECTEZ 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.

IMPORTANT!

DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.

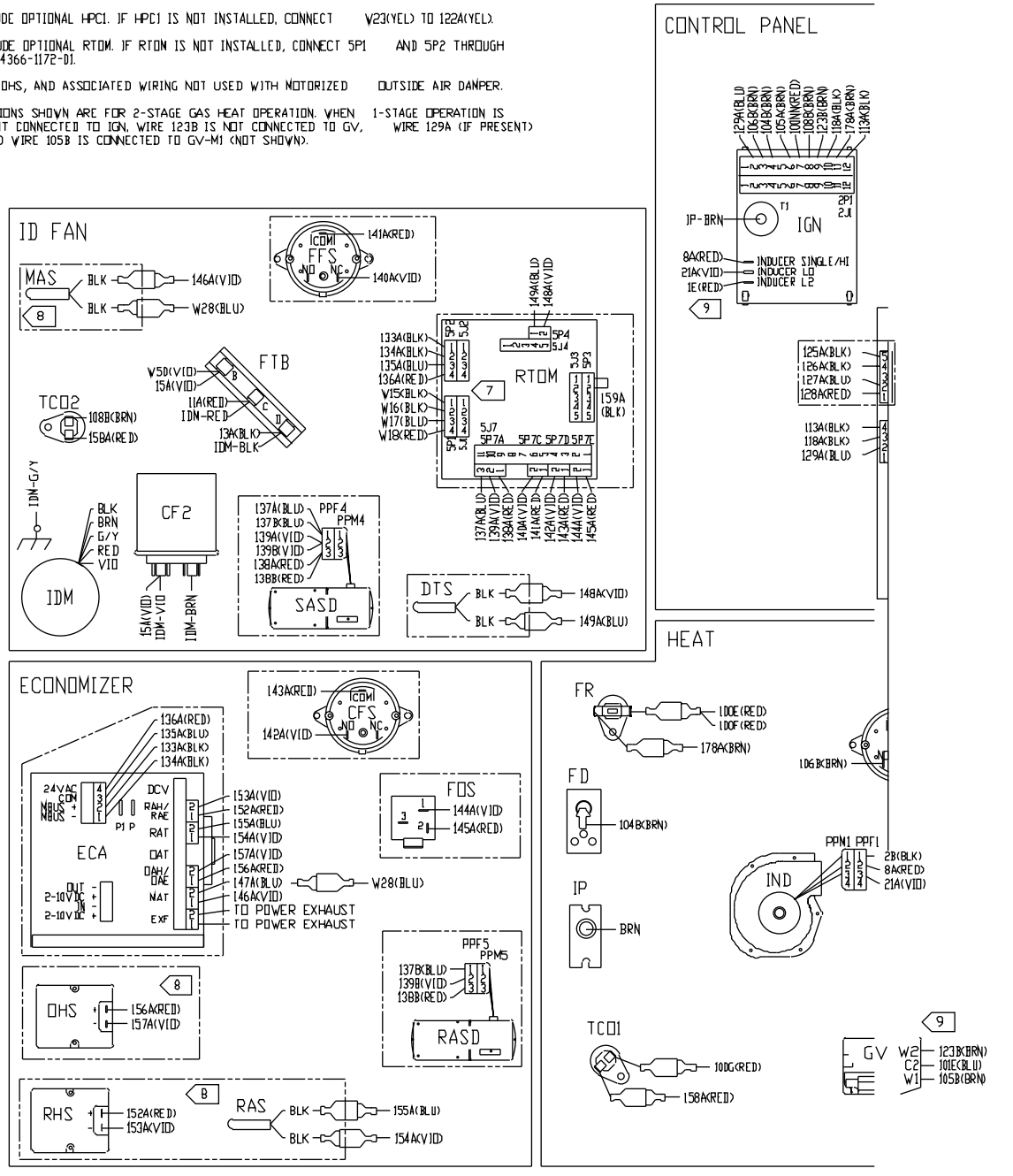
Diagram 12

Connection Schematic - 230v/60hz/1ph
3 - 5 Ton Single Stage Gas Heat / Direct Drive
4366-1501

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 230V/60HZ/1PH UNITS. WHEN 208V/60HZ/1PH OPERATION IS REQUIRED, MOVE WIRE W9 (BLK) FROM THE 230V TERMINAL ON TNSI TO THE 208V TERMINAL.
5. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
6. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
7. CONNECTIONS SHOWN INCLUDE OPTIONAL RTDM. IF RTDM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
8. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
9. (FUTURE OPTION) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105B IS CONNECTED TO GV-M1 (NOT SHOWN).

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.

FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.



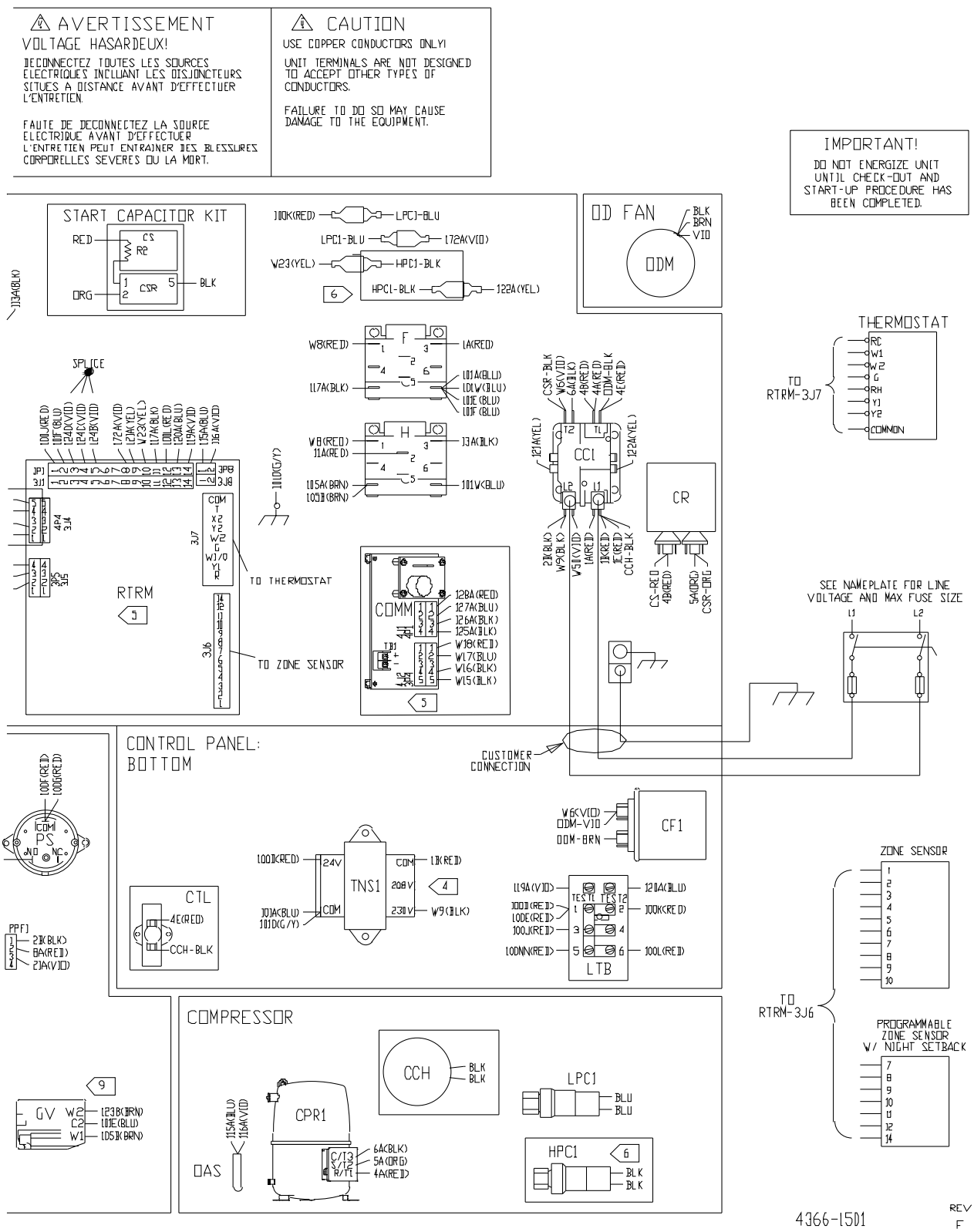

⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ LA SOURCE ELECTRIQUE AVANT D'EFFECTUER L'ENTRETIEN PEUT ENTRAINER DES BLESSURES CORPORELLES SEVERES OU LA MORT.
⚠ CAUTION
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO SO MAY CAUSE DAMAGE TO THE EQUIPMENT.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
START CAPACITOR KIT
RED
ORG
BLK
CSR
CS
RS
ODM FAN
BLK
BRN
VIO
ODM
THERMOSTAT
TO RTRM-3J7
RC
W1
W2
G
RH
Y1
Y2
COMMON
SPLICE
RTRM
TO THERMOSTAT
TO ZONE SENSOR
CCH
CR
CC1
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L1
L2
CONTROL PANEL: BOTTOM
CUSTOMER CONNECTION
PS
CTL
TNS1
CF1
LTB
TEST1
TEST2
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CCH
CPR1
LPC1
HPC1
GV
OAS
4366-1501
REV F

Diagram 13

Connection Diagram - 230v/60hz/1ph

3 - 5 Ton Single Stage Gas Heat / Oversize Motor

4366-1520

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

4 CONNECTIONS SHOWN ARE FOR 230V/60HZ/1PH UNITS. WHEN 208V/60HZ/1PH OPERATION IS REQUIRED, MOVE WIRE W9 (BLK) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.

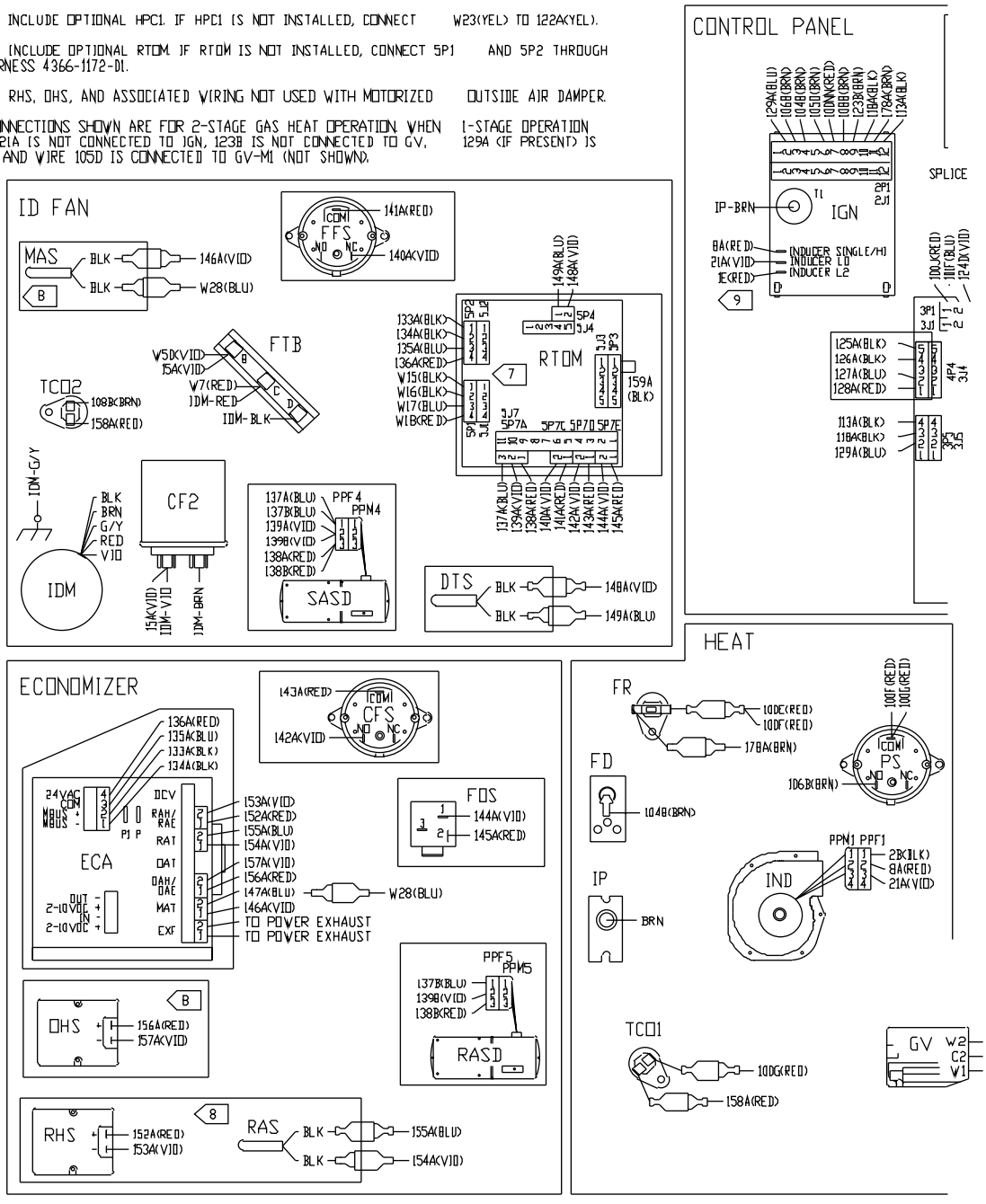
5 ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.

6 CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).

7 CONNECTIONS SHOWN INCLUDE OPTIONAL RTDM. IF RTDM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.

B OPTIONAL MAS, RAS, RHS, DHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.

9 (FUTURE OPTION) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, 123B IS NOT CONNECTED TO GV, 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105D IS CONNECTED TO GV-M1 (NOT SHOWN).



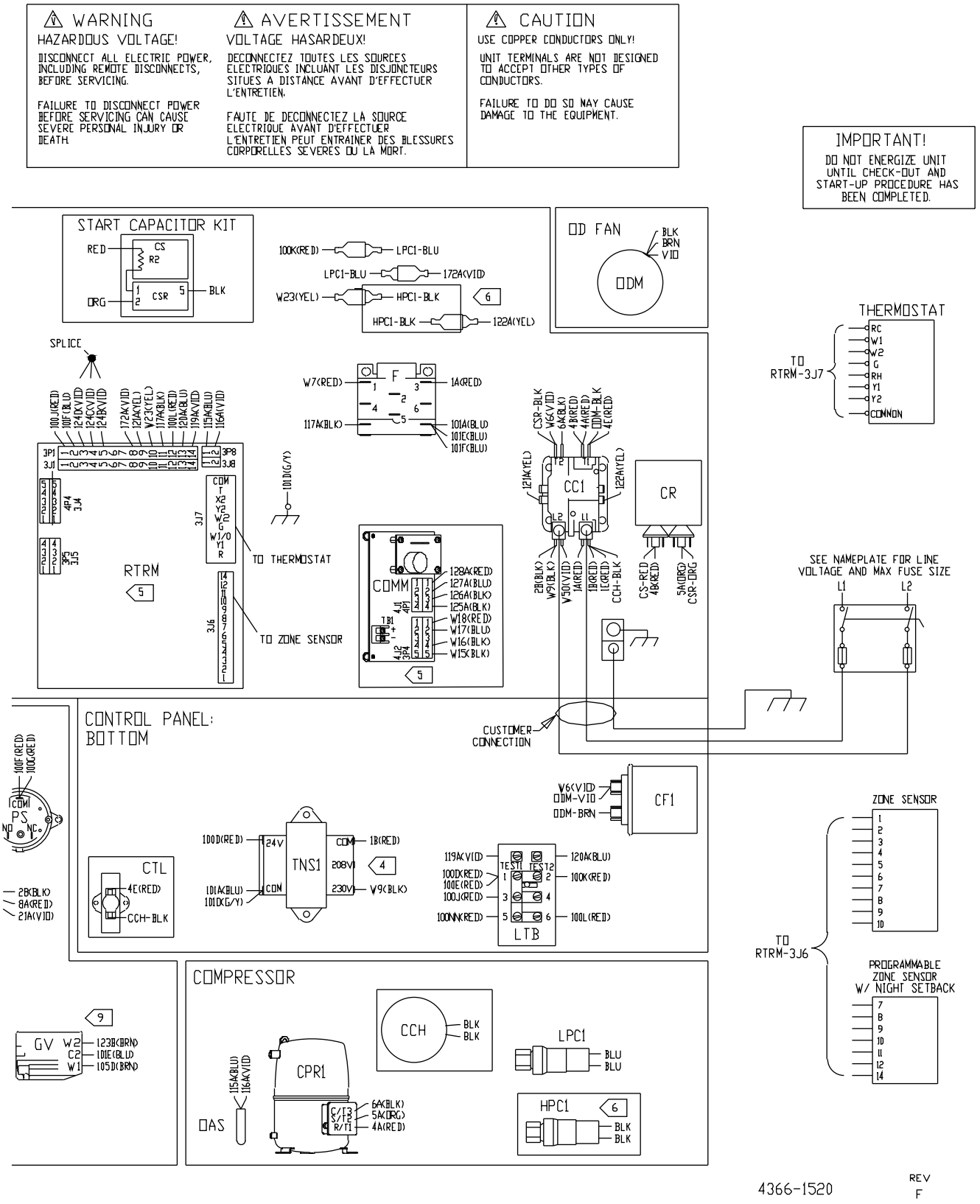
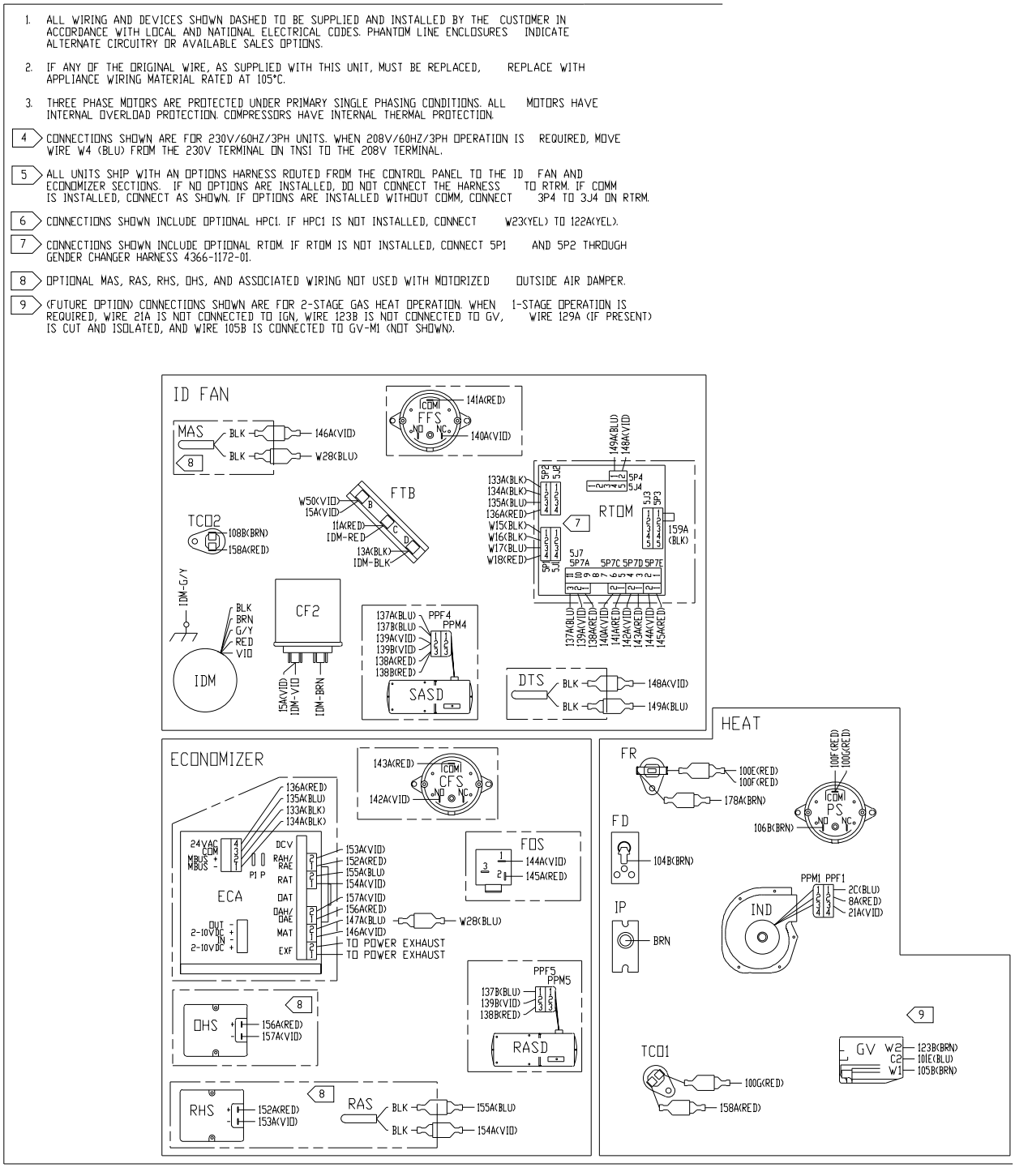

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
START CAPACITOR KIT
RED
CS
R2
CSR
ORG
BLK
100K(RED)
LPC1-BLU
172A(VIO)
W23(YEL)
HPC1-BLK
122A(YEL)
6
OD FAN
BLK
BRN
VIO
ODM
THERMOSTAT
TO RTRM-3J7
RC
W1
W2
G
RH
Y1
Y2
COMMON
SPLICE
F
W7(RED)
1A(RED)
117A(BLK)
101A(BLU)
101E(BLU)
101F(BLU)
CSR-BLK
W6(VIO)
6A(BLK)
4B(RED)
4A(RED)
ODM-BLK
4E(RED)
121A(YEL)
CC1
122A(YEL)
CR
RTRM
5
TO THERMOSTAT
TO ZONE SENSOR
101D(G/Y)
COMM
128A(RED)
127A(BLU)
126A(BLK)
125A(BLK)
W18(RED)
W17(BLU)
W16(BLK)
W15(BLK)
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L1
L2
CONTROL PANEL: BOTTOM
CUSTOMER CONNECTION
100F(RED)
100G(RED)
COM
PS
NO
NC
2B(BLK)
8A(RED)
21A(VIO)
CTL
4E(RED)
CCH-BLK
100D(RED)
24V
TNS1
COM
208V
230V
101A(BLU)
101D(G/Y)
1B(RED)
4
W9(BLK)
W6(VIO)
ODM-VIO
ODM-BRN
CF1
119A(VIO)
100D(RED)
100E(RED)
100J(RED)
100NN(RED)
TEST1
TEST2
LTB
120A(BLU)
100K(RED)
100L(RED)
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
9
GV
W2
C2
W1
123B(BRN)
101E(BLU)
105D(BRN)
CCH
BLK
BLK
LPC1
BLU
BLU
115A(BLU)
116A(VIO)
CPR1
DAS
C/T3
S/T2
R/T1
6A(BLK)
5A(ORG)
4A(RED)
HPC1
6
BLK
BLK
4366-1520
REV
F

Diagram 14

Connection Diagram - 230v/60hz/3ph
3 - 5 Ton Single Stage Gas Heat / Direct Drive
4366-1503

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.
5. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
6. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
7. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF RTOM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
8. OPTIONAL MAS, RAS, RHS, DHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
9. (FUTURE OPTION) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105B IS CONNECTED TO GV-M1 (NOT SHOWN).



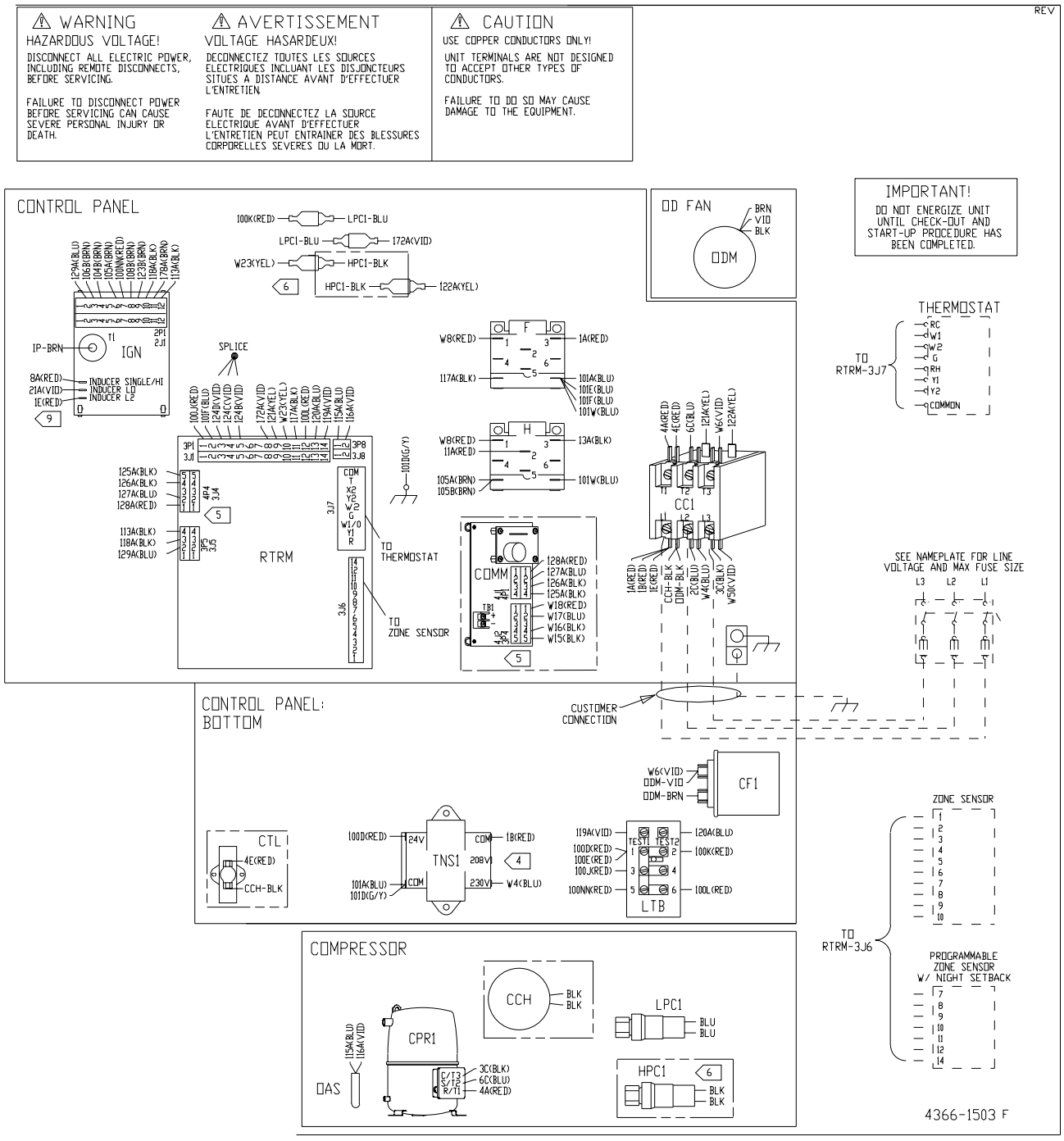
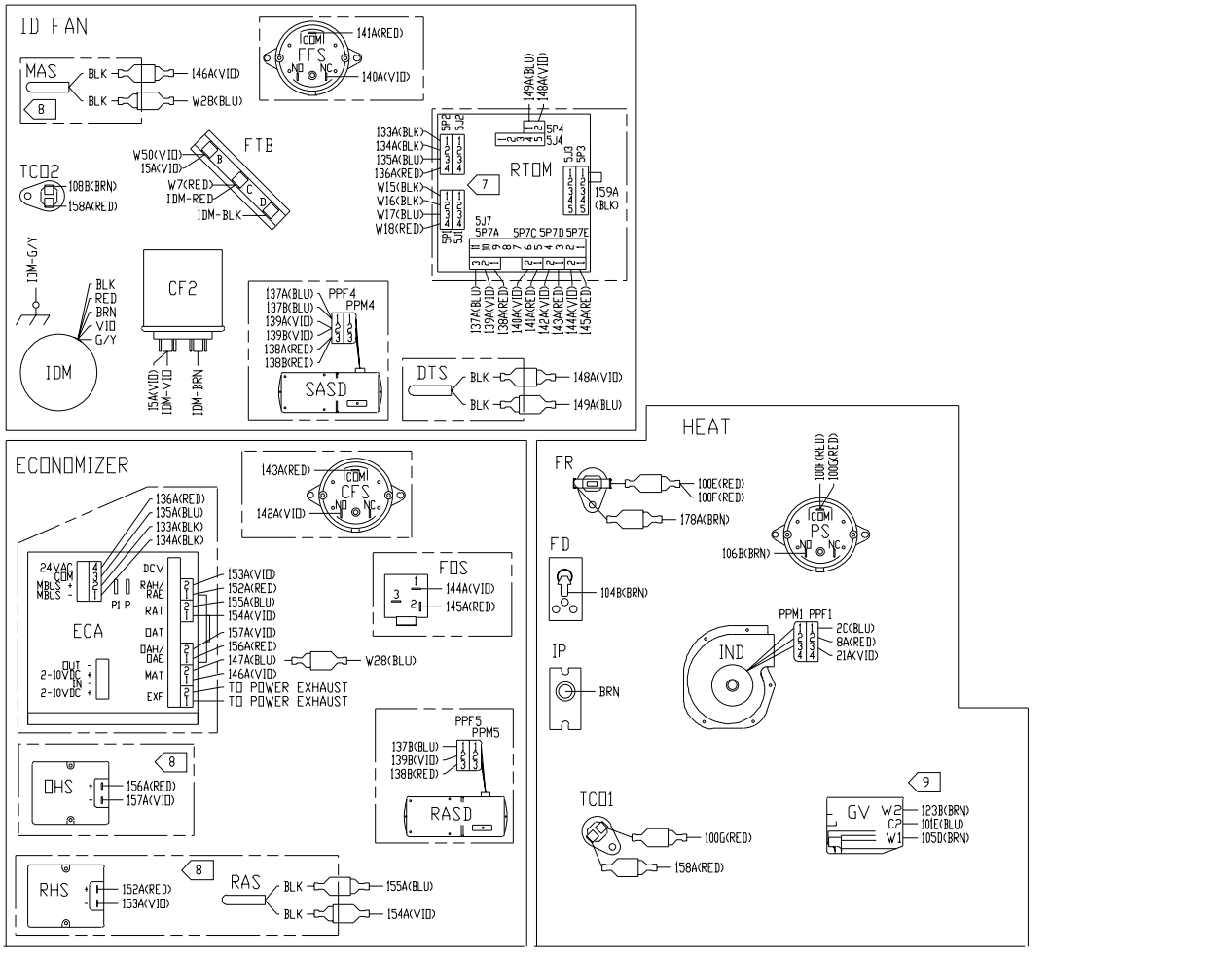

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
REV
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
IGN
RTRM
SPLICE
TO THERMOSTAT
TO ZONE SENSOR
CC1
COMM
TB1
F
H
OD FAN
ODM
BRN
VIO
BLK
THERMOSTAT
TO RTRM-3J7
RC
W1
W2
G
RH
Y1
Y2
COMMON
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L3
L2
L1
CUSTOMER CONNECTION
CONTROL PANEL: BOTTOM
CF1
CTL
TNS1
24V
208V
230V
LTB
TEST1
TEST2
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CCH
CPR1
LPC1
HPC1
ODS
4366-1503 F

Diagram 15

Connection Diagram - 230v/60hz/3ph
3 - 5 Ton Single Stage Gas Heat / Oversize Motor
4366-1504

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.
5. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
6. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
7. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF RTOM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
8. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
9. (FUTURE OPTION) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105D IS CONNECTED TO GV-M1 (NOT SHOWN).



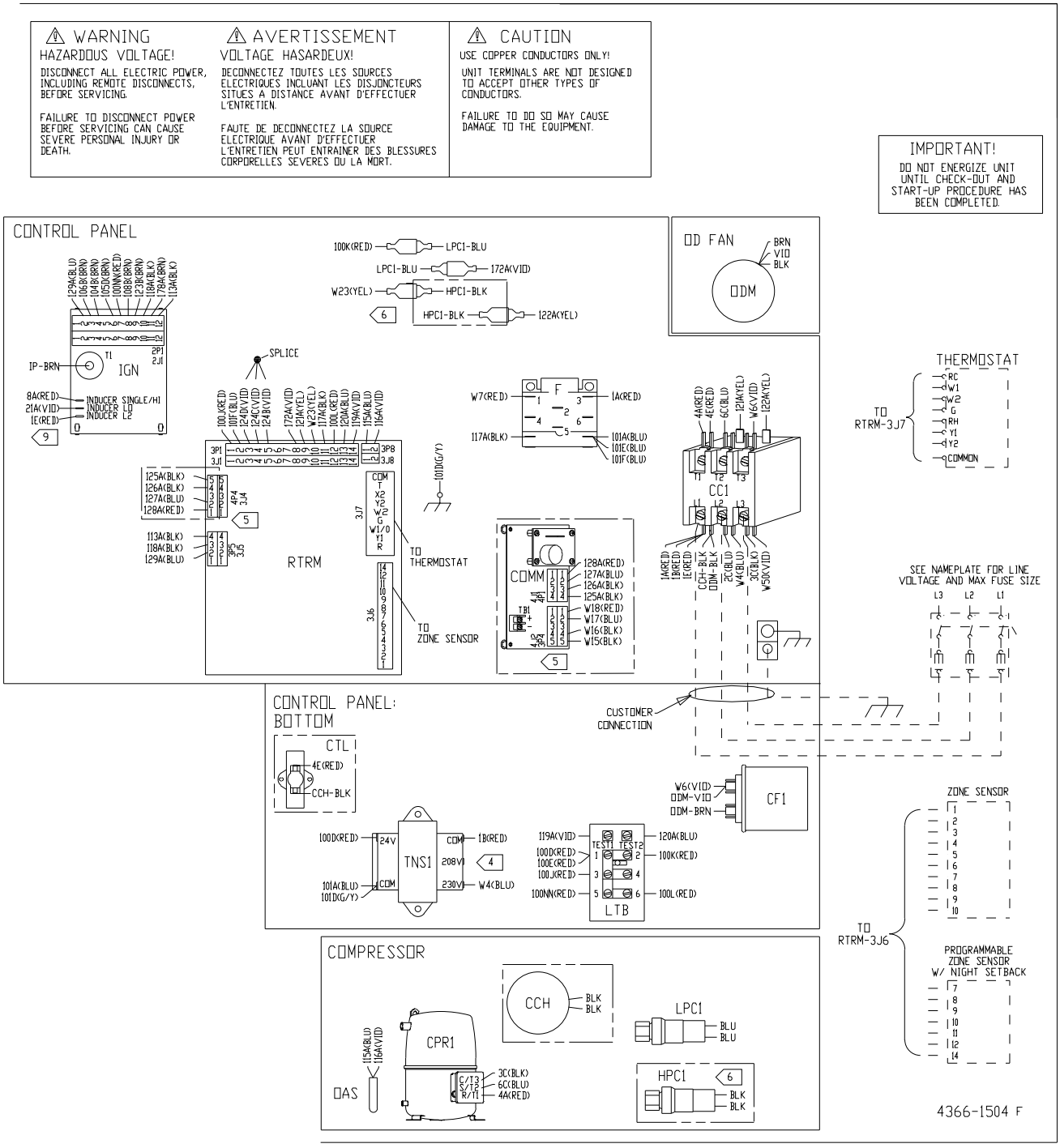

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
IGN
RTRM
TO THERMOSTAT
TO ZONE SENSOR
SPLICE
F
CC1
COMM
THERMOSTAT
TO RTRM-3J7
RC
W1
W2
G
RH
Y1
Y2
COMMON
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L3
L2
L1
CUSTOMER CONNECTION
CONTROL PANEL: BOTTOM
CTL
TNS1
LTB
CF1
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CPR1
CCH
LPC1
HPC1
OAS
4366-1504 F

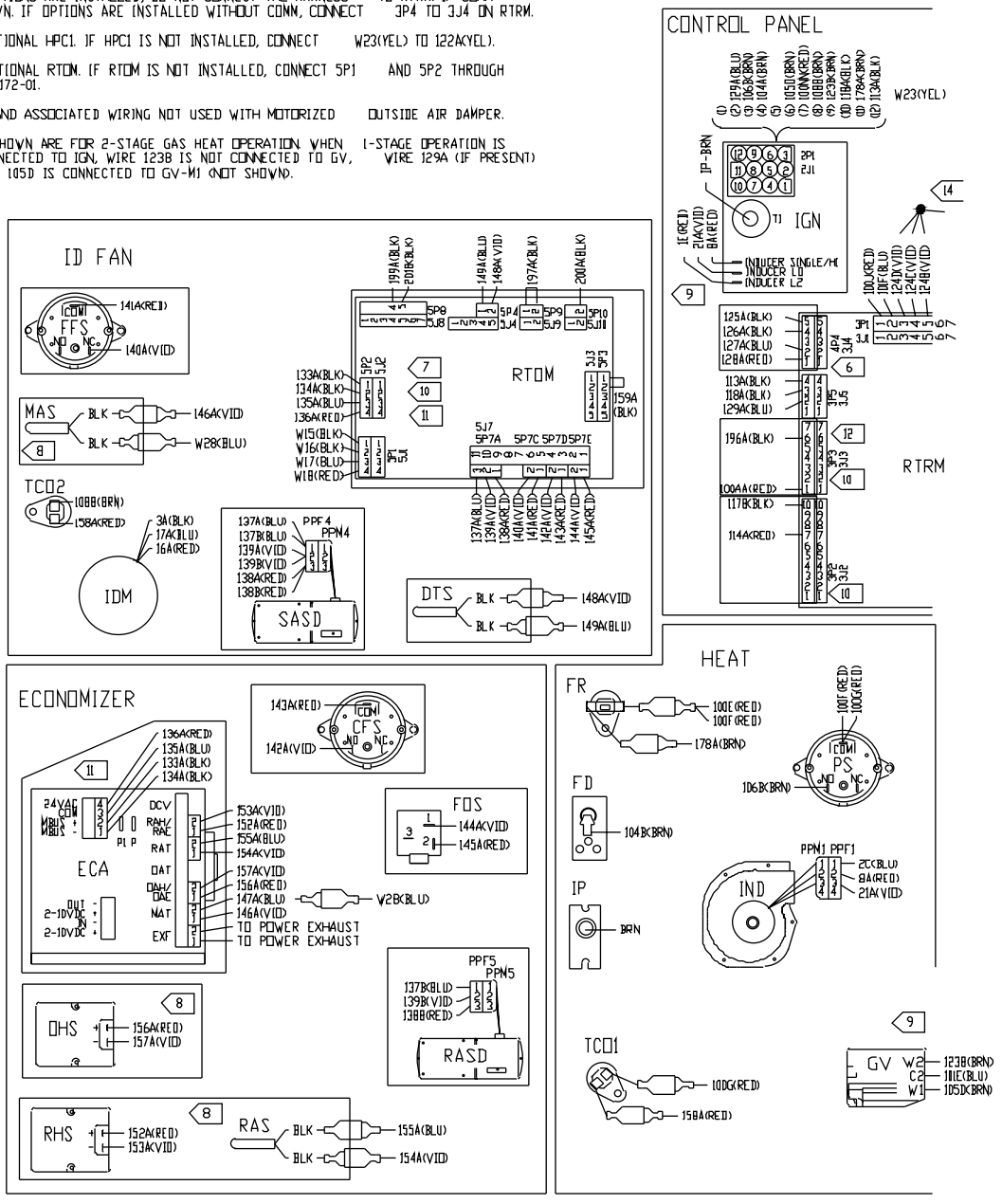
Diagram 16

Connection Diagram - 230v/60hz/3ph

3 - 5 Ton Single Stage Gas Heat / Belt Drive

4366-1522

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4 (BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.
5. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
6. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
7. CONNECTIONS SHOWN INCLUDE OPTIONAL RTDM. IF RTDM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
8. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
9. (FUTURE OPTION) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105D IS CONNECTED TO GV-M1 (NOT SHOWN).
10. COMPONENTS 3P2, 3P3, 5P8, 5P9, 5P10, NLTB, LTB 7-14, RHV, RTDM AND ASSOCIATED WIRING ARE PRESENT ONLY WITH DEHUMIDIFICATION OPTION.
11. SEE CO2 & VENT. OVERRIDE ACCESSORY DIAGRAM FOR ADDITIONAL WIRING.
12. CONNECTIONS SHOWN ARE FOR DEHUMIDIFICATION OPTION (2-SPEED ODM), FOR 1-SPEED ODM, WIRES ODM-RED, 1S (RED), 10A1 (BLU), 196A (BLK), AND RELAY ODF2 ARE NOT PRESENT AND WIRE ODN-BLK IS CONNECTED TO CC1, TERMINAL L1.
13. FOR 200V/208V/230V DEHUMIDIFICATION OPTION, WIRE 32A (RED) IS NOT CONNECTED.
14. CUT AND ISOLATE WIRE 124B(VIO) IF DEHUMIDIFICATION OPTION IS INSTALLED.



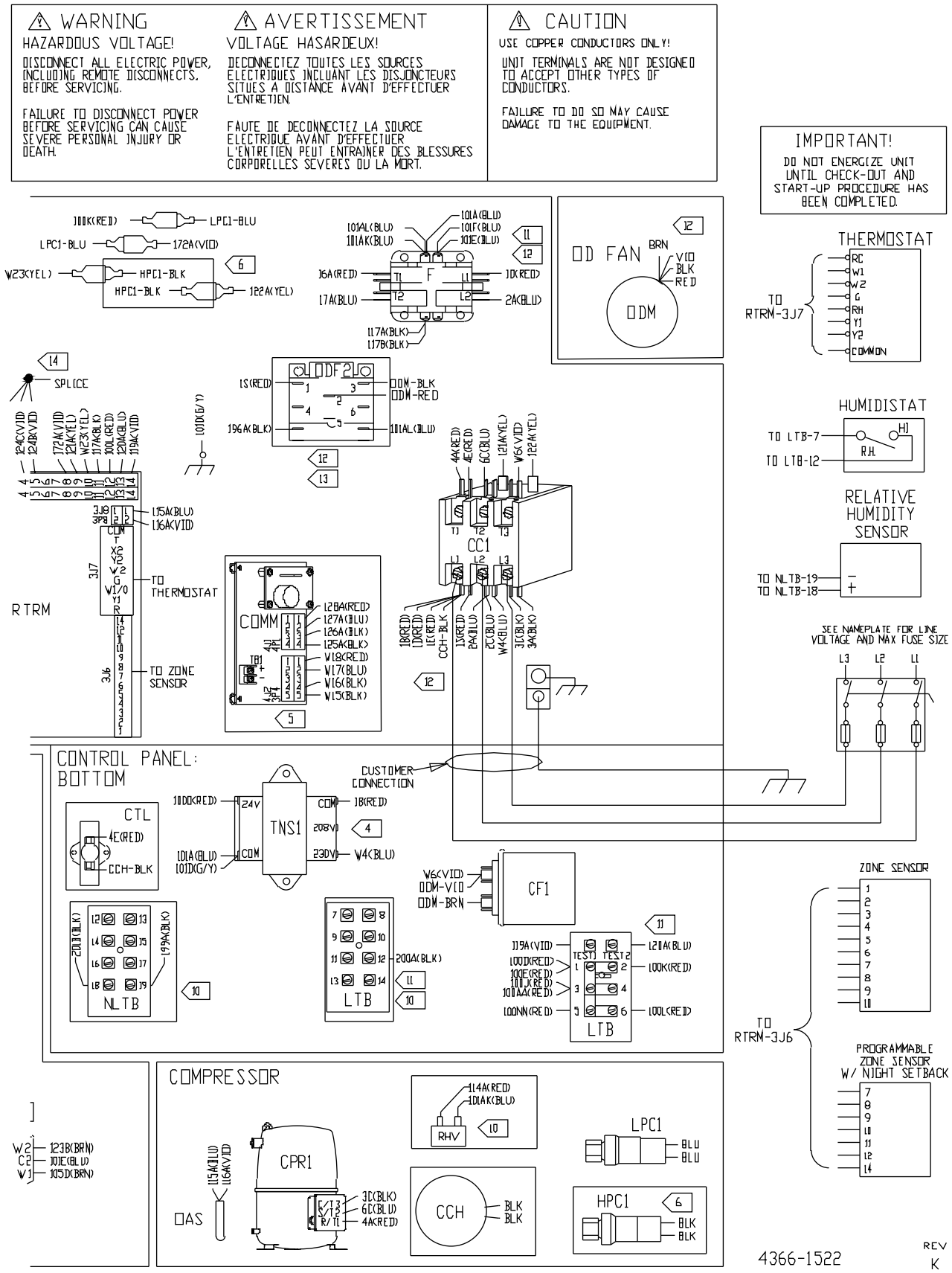
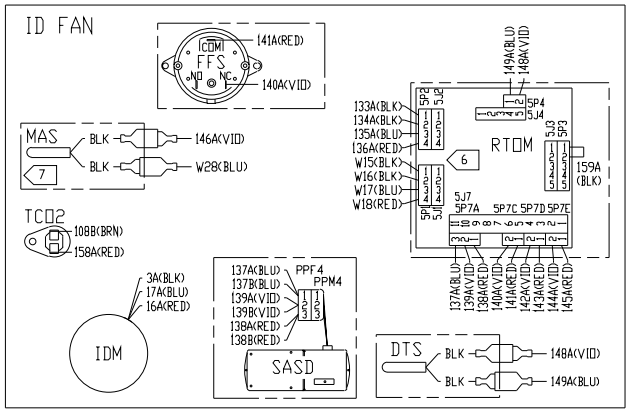
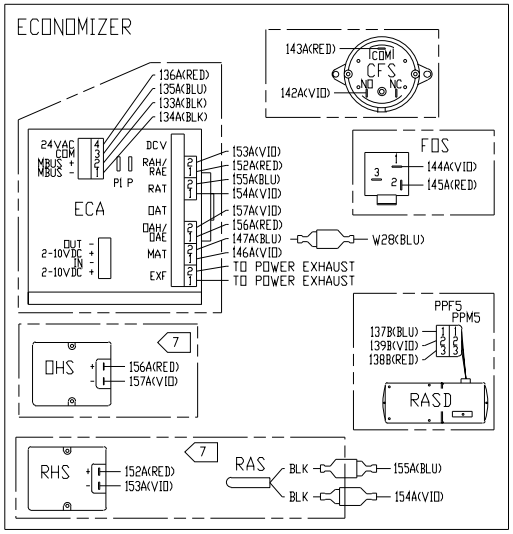

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS. BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
THERMOSTAT
HUMIDISTAT
RELATIVE HUMIDITY SENSOR
ZONE SENSOR
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
RTRM
CONTROL PANEL: BOTTOM
COMPRESSOR
CPR1
CCH
HPC1
LPC1
CC1
CF1
TNS1
NLTB
LTB
RHV
CTL
SPLICE
CUSTOMER CONNECTION
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
TO THERMOSTAT
TO ZONE SENSOR
TO RTRM-3J7
TO RTRM-3J6
4366-1522
REV K

Diagram 17

Connection Diagram - 230v/60hz/3ph
6 - 7.5 Ton Gas Heat / Single Compressor
4366-1539

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.
5. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO THE RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
6. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
7. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
8. CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105D IS CONNECTED TO GV-M1 (NOT SHOWN).





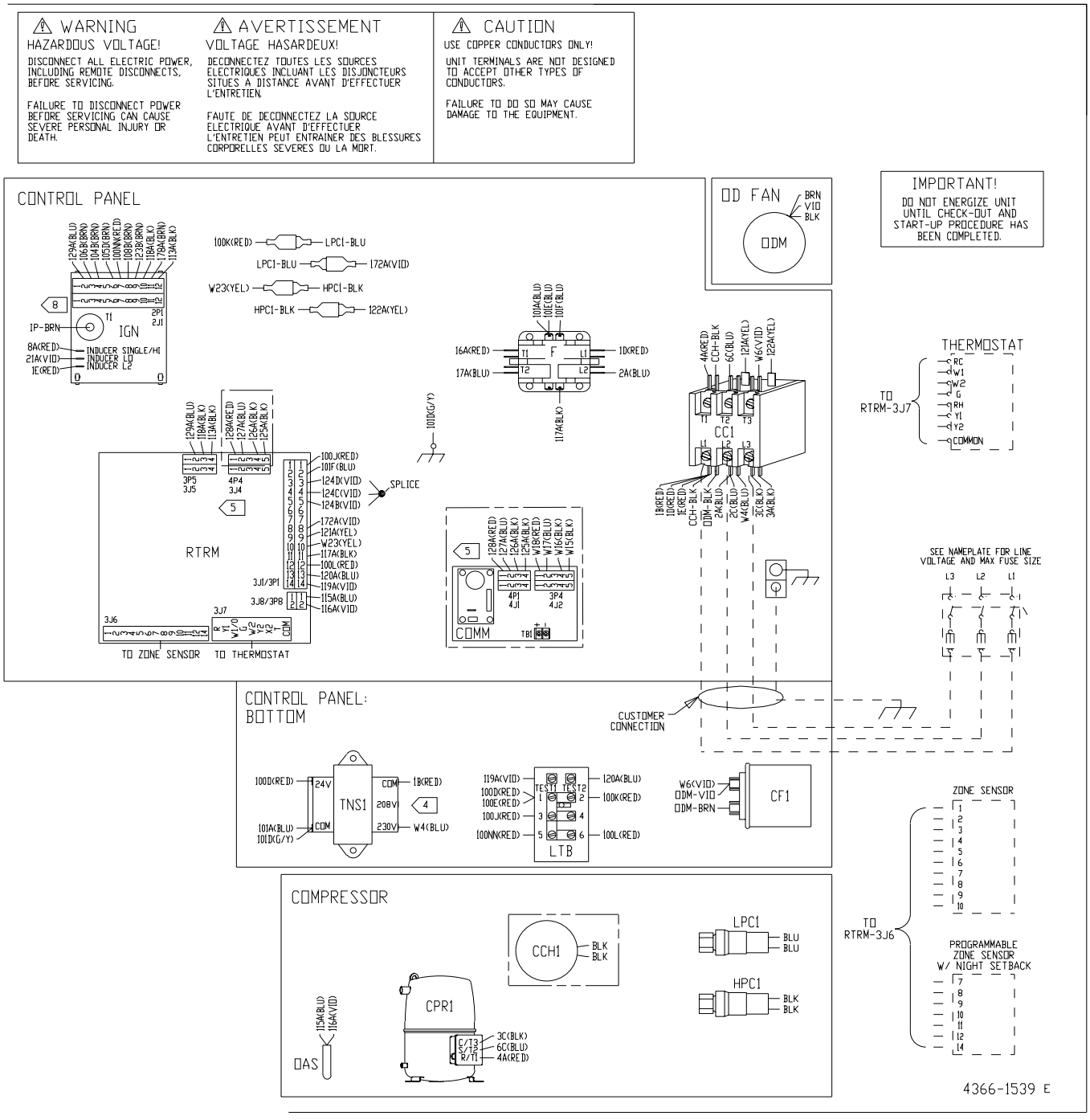
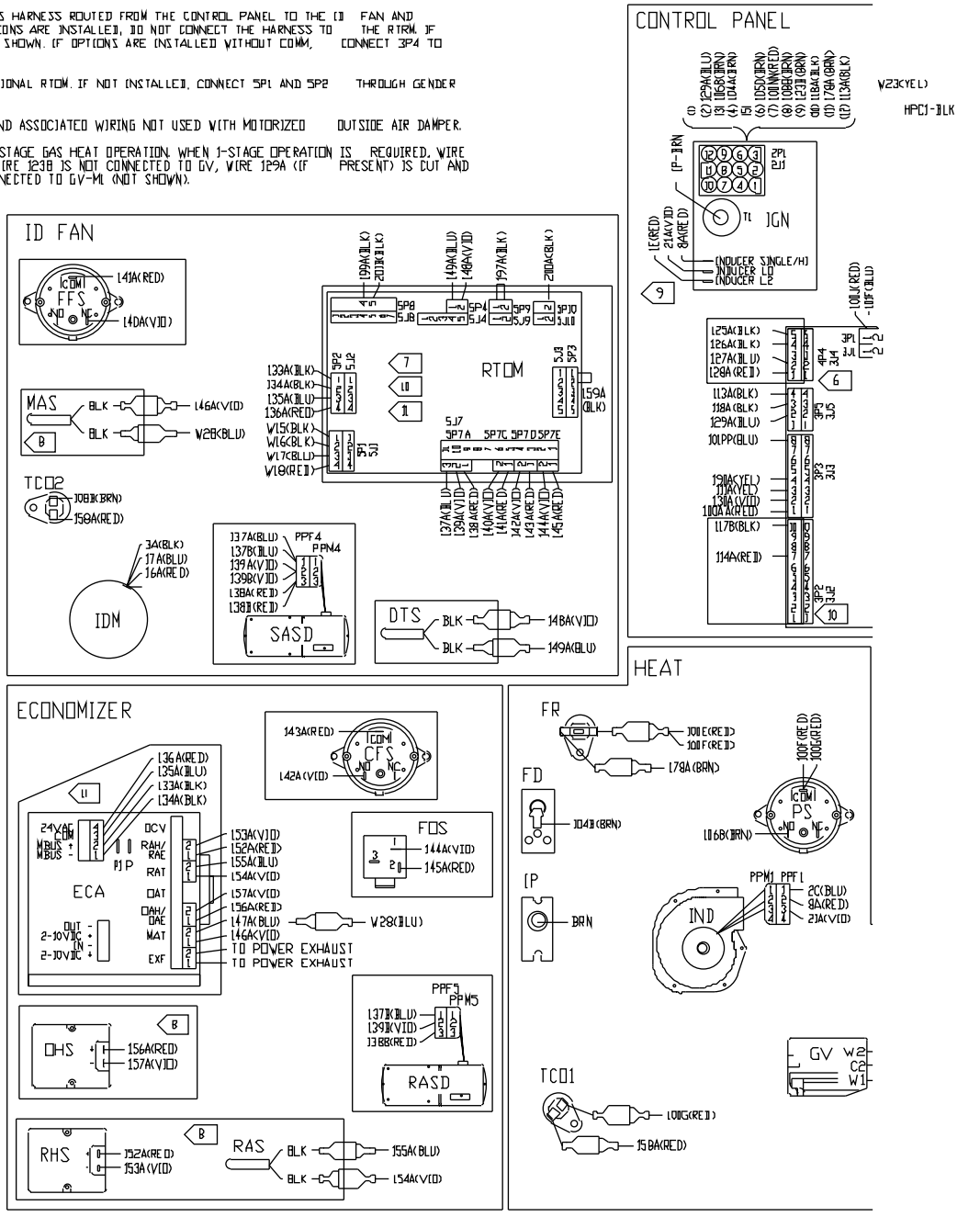

WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
IGN
RTRM
COMM
TNS1
LTB
CF1
CC1
F
THERMOSTAT
TO RTRM-3J7
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
CONTROL PANEL: BOTTOM
CUSTOMER CONNECTION
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CCH1
CPR1
LPC1
HPC1
4366-1539 E

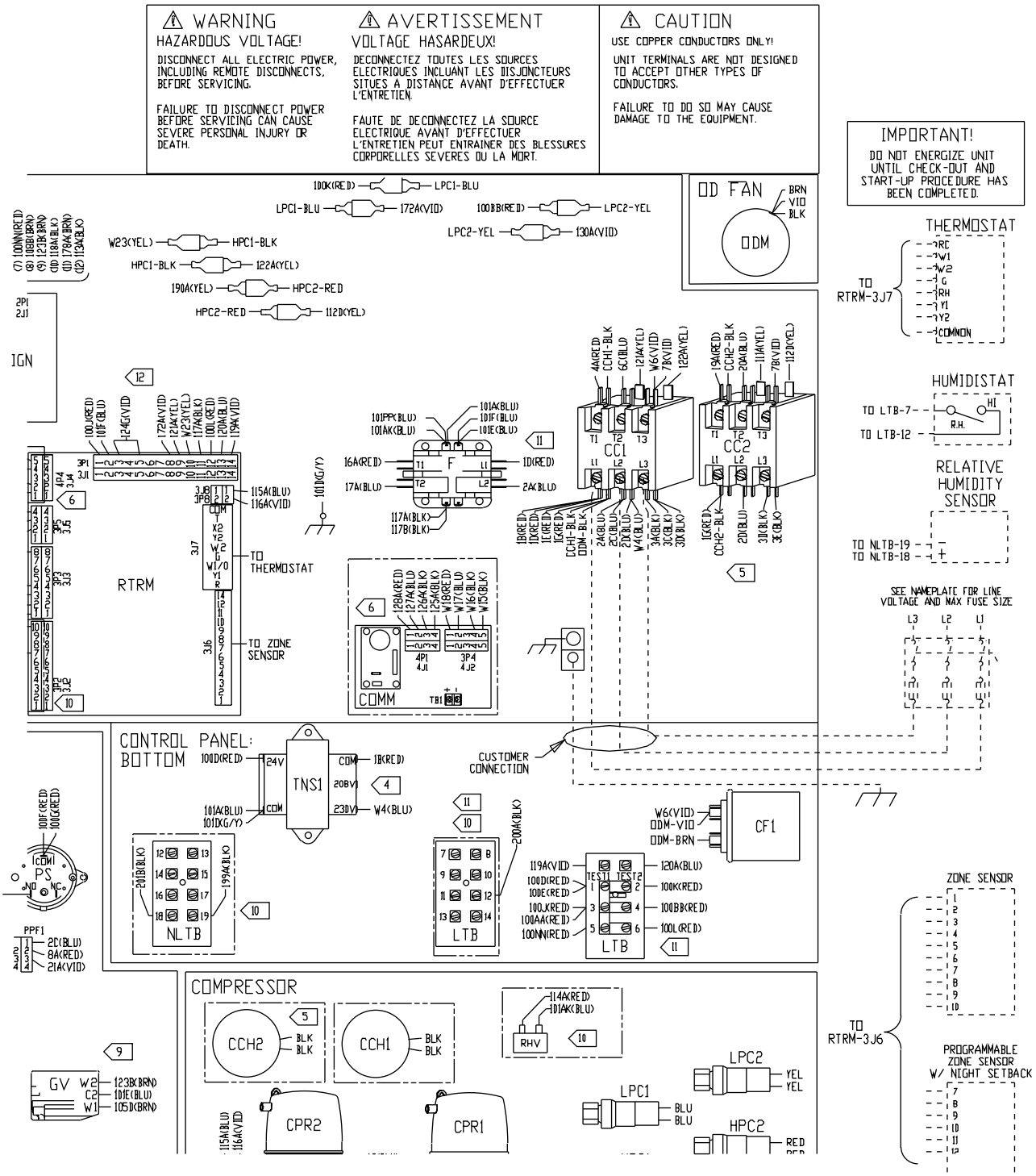
Diagram 18

Connection Diagram - 230v/60hz/3ph
7.5 - 10 Ton Gas Heat / Dual Compressor
4366-1530

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH UNITS. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 230V TERMINAL ON TNS1 TO THE 208V TERMINAL.
5. CCH2 CONDUCTORS ARE IDENTIFIED BY BROWN TAPE PLACED NEAR WIRE TERMINATIONS INSIDE CONTROL PANEL.
6. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO THE RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
7. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
8. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
9. CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A IS NOT CONNECTED TO IGN, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND INSULATED, AND WIRE 105D IS CONNECTED TO GV-M1 (NOT SHOWN).
10. COMPONENTS 3P2, 5P8, 5P9, 5P10, NLTB, LTB 7-14, RHV, RTOM AND ASSOCIATED WIRING ARE PRESENT ONLY WITH DEHUM(ID)IFICATION OPTION.
11. SEE CO2 & VENT. OVERRIDE ACCESSORY DIAGRAM FOR ADDITIONAL WIRING.
12. CUT AND ISOLATE WIRE 124G(VIO) IF DEHUM(ID)IFICATION OPTION IS INSTALLED.

CORPORELLES SEVERES OU LA MORT.



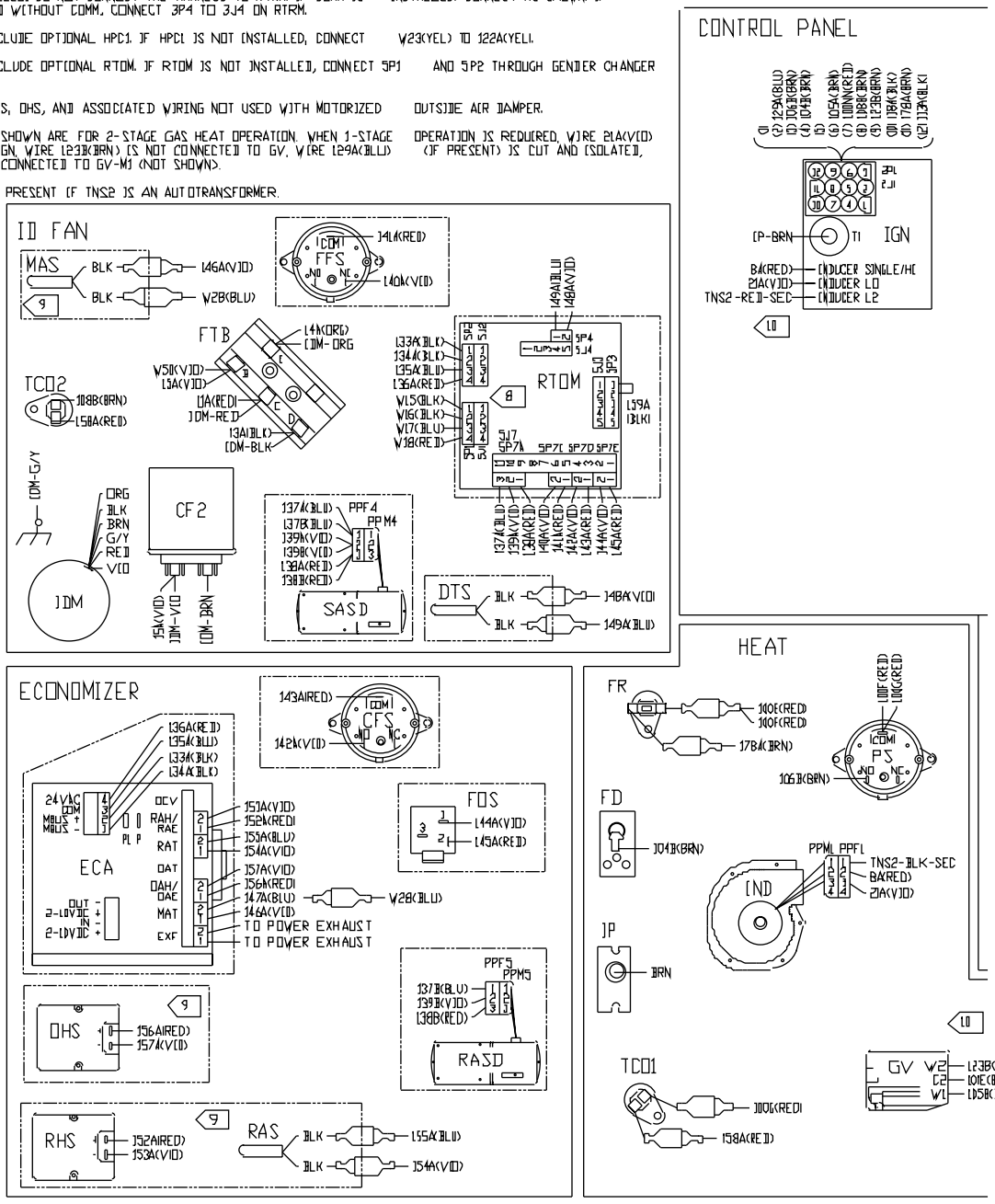


4366-1530 REV G

Diagram 19

Connection Diagram - 460-575v/60hz/3ph
3 Ton Gas Heat / Direct Drive
4366-1514

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 575V TERMINAL.
5. CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE TNS2-BLU-PRI FROM CC1-L2 AND CONNECT TNS2-BLK-PRI TO CC1-L2.
6. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT JP4 TO JU4 ON RTRM.
7. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
8. CONNECTIONS SHOWN INCLUDE OPTIONAL RTDM. IF RTDM IS NOT INSTALLED, CONNECT SP1 AND SP2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
9. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
10. (FUTURE) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO IGN, WIRE L23B(BRN) IS NOT CONNECTED TO GV, WIRE L29A(BLU) (IF PRESENT) IS CUT AND ISOLATED, AND WIRE L05B(BRN) IS CONNECTED TO GV-M1 (NOT SHOWN).
11. WIRE TNS2-G/Y IS NOT PRESENT IF TNS2 IS AN AUTOTRANSFORMER.



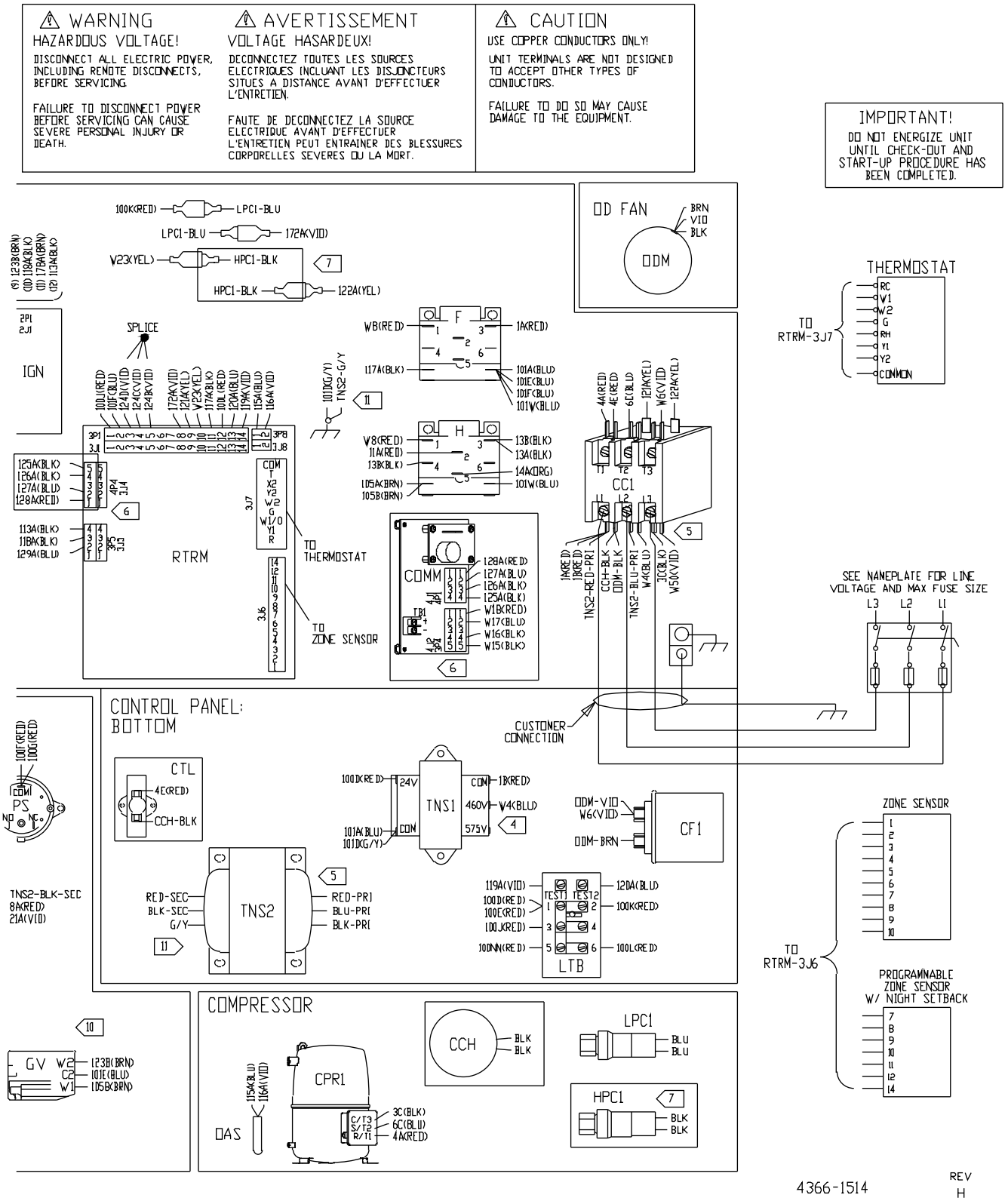
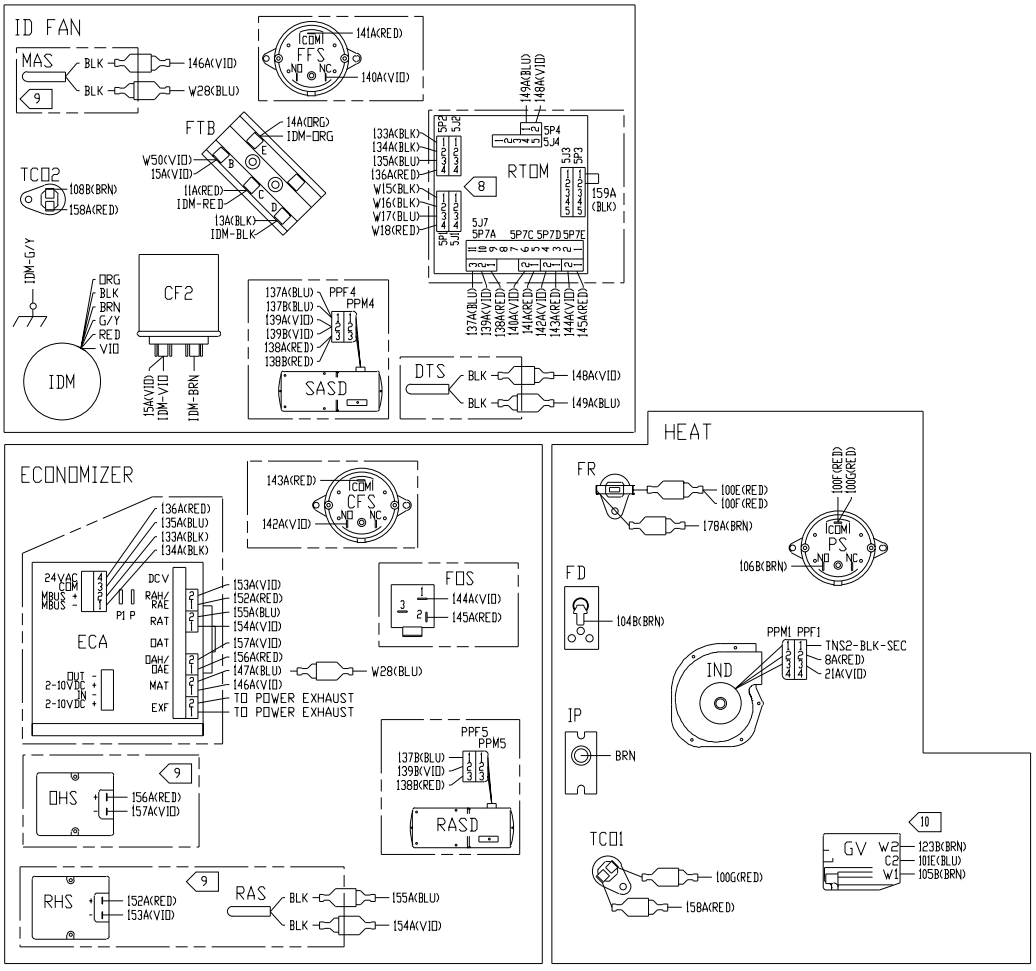

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
IGN
SPLICE
RTRM
TO THERMOSTAT
TO ZONE SENSOR
COMM
CONTROL PANEL: BOTTOM
CTL
PS
TNS1
TNS2
CF1
LTB
CUSTOMER CONNECTION
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L3 L2 L1
THERMOSTAT
RC
W1
W2
G
RH
Y1
Y2
COMMON
TO RTRM-3J7
OD FAN
BRN
VIO
BLK
ODM
CC1
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CPR1
CCH
LPC1
HPC1
GV
OAS
4366-1514
REV H

Diagram 20

Connection Diagram - 460-575v/60hz/3ph
4 - 5 Ton Gas Heat / Direct Drive
4366-1518

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 380V/60HZ/3PH OR 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 400V/575V TERMINAL.
5. CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH OR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE TNS2-BLU-PRI FROM THE CC1-L2 AND CONNECT TNS2-BLK-PRI TO CC1-L2.
6. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
7. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
8. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF RTOM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
9. OPTIONAL MAS, RAS, RHS, DHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
10. (FUTURE) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO IGN, WIRE 123B(BRN) IS NOT CONNECTED TO GV, WIRE 129A(BLU) (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105B(BRN) IS CONNECTED TO GV-M1 (NOT SHOWN).
11. WIRE TNS2-G/Y IS NOT PRESENT IF TNS2 IS AN AUTOTRANSFORMER.



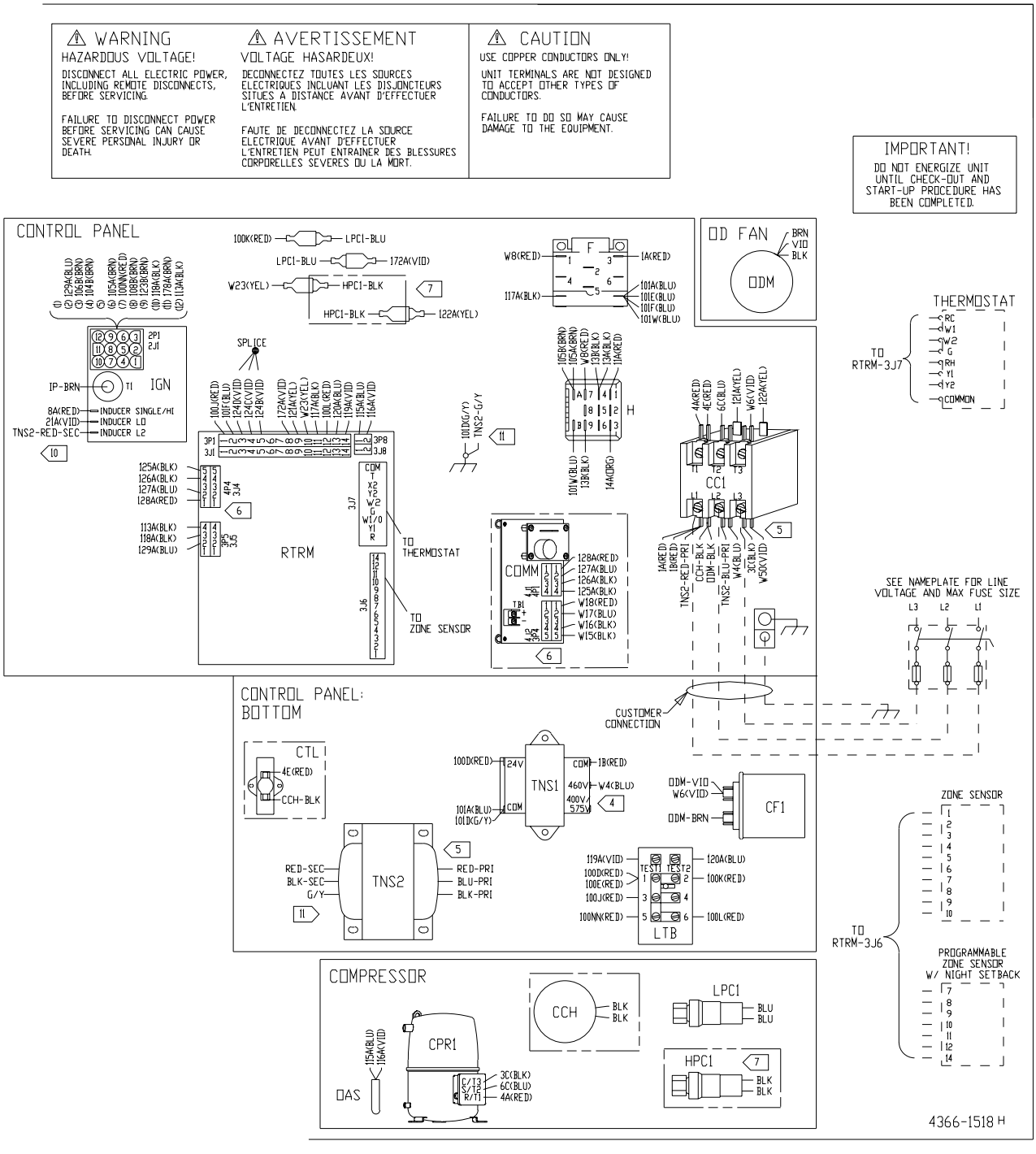

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
IGN
INDUCER SINGLE/HI
INDUCER LO
INDUCER L2
SPLICE
RTRM
TO THERMOSTAT
TO ZONE SENSOR
F
OD FAN
ODM
THERMOSTAT
TO RTRM-3J7
RC
W1
W2
G
RH
Y1
Y2
COMMON
CC1
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L3 L2 L1
CONTROL PANEL: BOTTOM
CUSTOMER CONNECTION
CTL
TNS1
TNS2
CF1
LTB
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CPR1
CCH
LPC1
HPC1
OAS
4366-1518 H

Diagram 21

Connection Diagram - 460-575v/60hz/3ph
4 - 5 Ton Gas Heat / Oversize Motor
4366-1515

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

4 CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 380V/60HZ/3PH OR 575V/60HZ/3PH OPERATION IS REQUIRED. MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 400V/575V TERMINAL.

5 CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH OR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE TNS2-BLU-PRI FROM THE DC1-L2 AND CONNECT TNS2-BLK-PRI TO DC1-L2.

6 ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF THERE ARE NO OPTIONS INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.

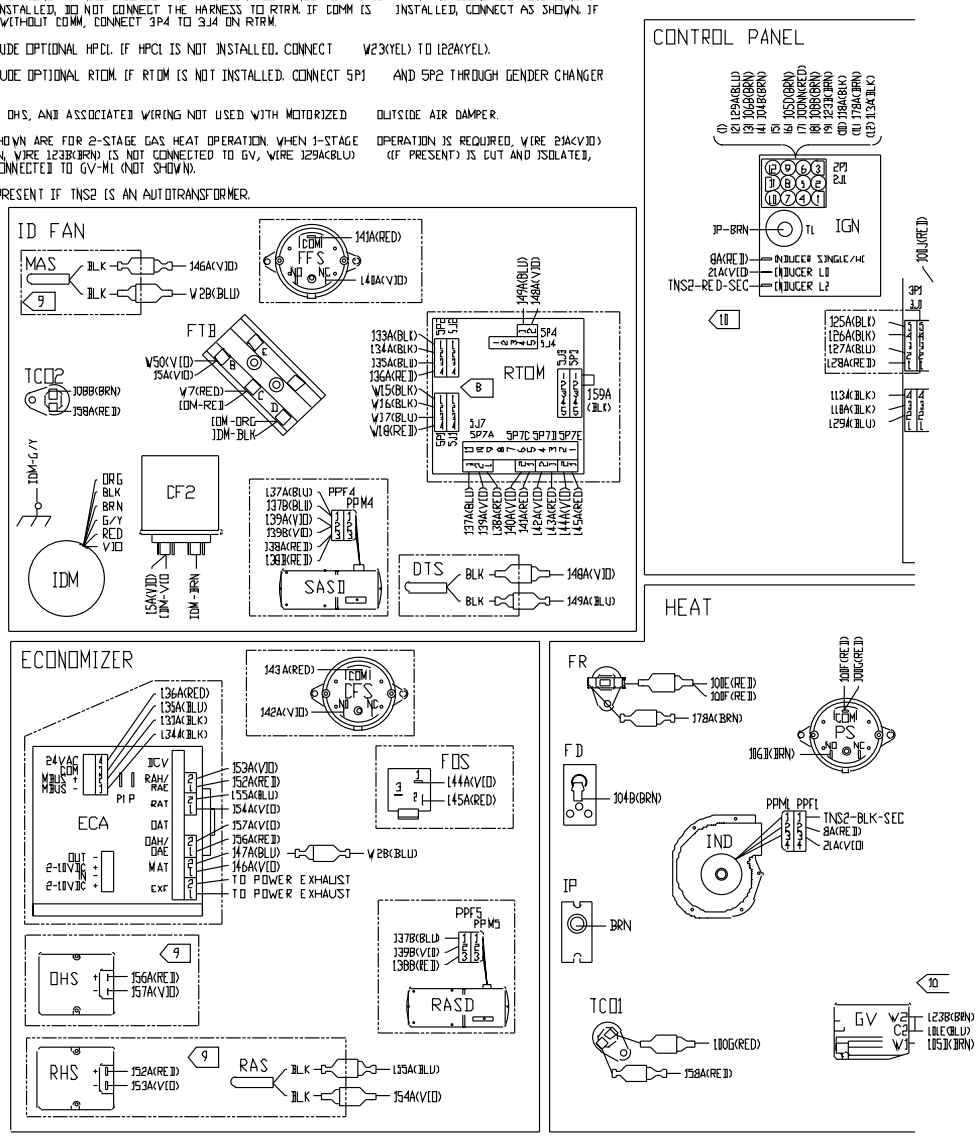
7 CONNECTIONS SHOWN INCLUDE OPTIONAL HPCI. IF HPCI IS NOT INSTALLED, CONNECT W23(YEL) TO L22A(YEL).

8 CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF RTOM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.

9 OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.

10 (FUTURE) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, W(RE 21A(VIO) IS NOT CONNECTED TO IGN, WIRE 123B(BRN) IS NOT CONNECTED TO GV, WIRE 129A(BLU) (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105D(BRN) IS CONNECTED TO GV-M1 (NOT SHOWN).

11 WIRE TNS2-G/Y IS NOT PRESENT IF TNS2 IS AN AUTOTRANSFORMER.



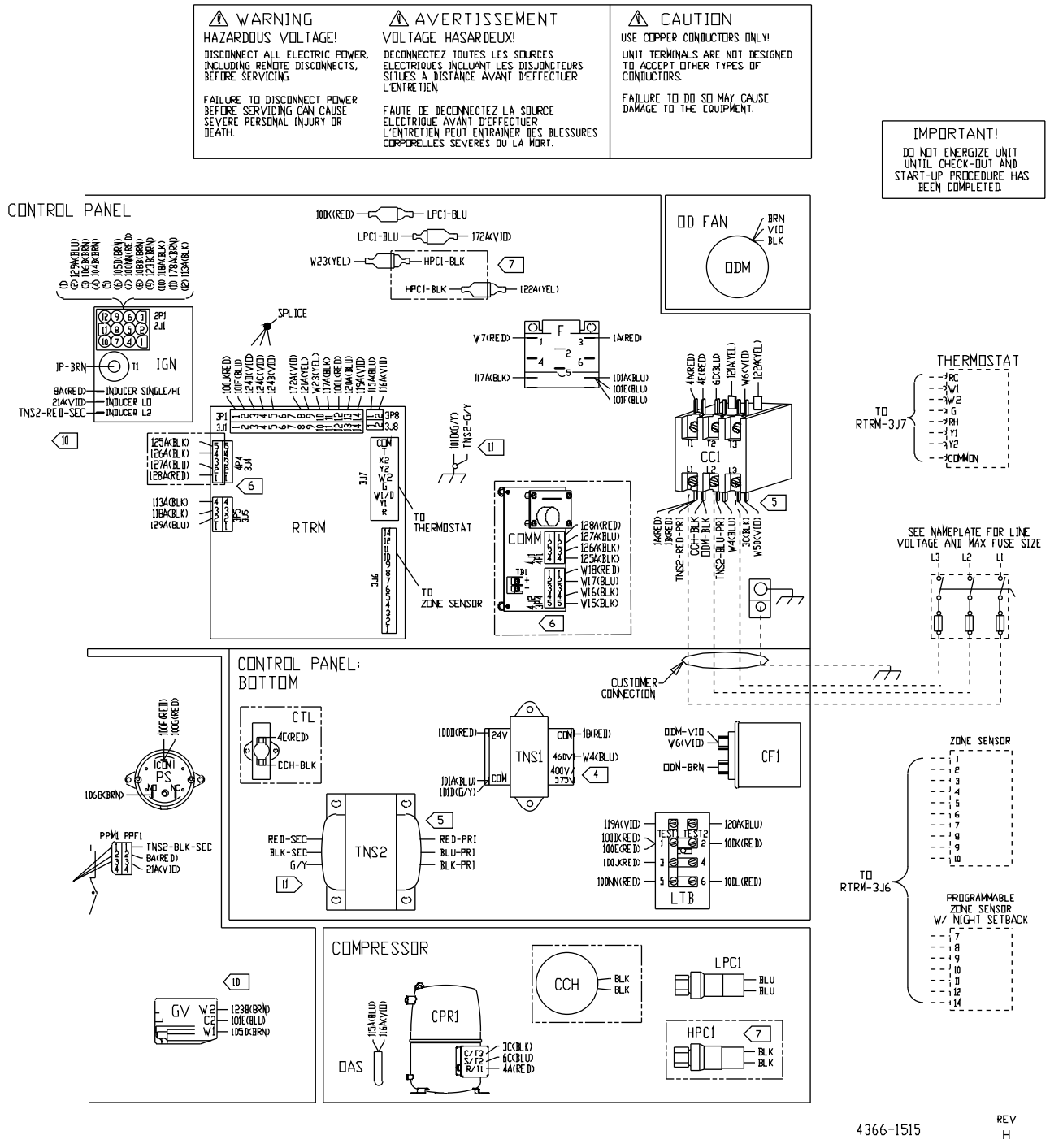
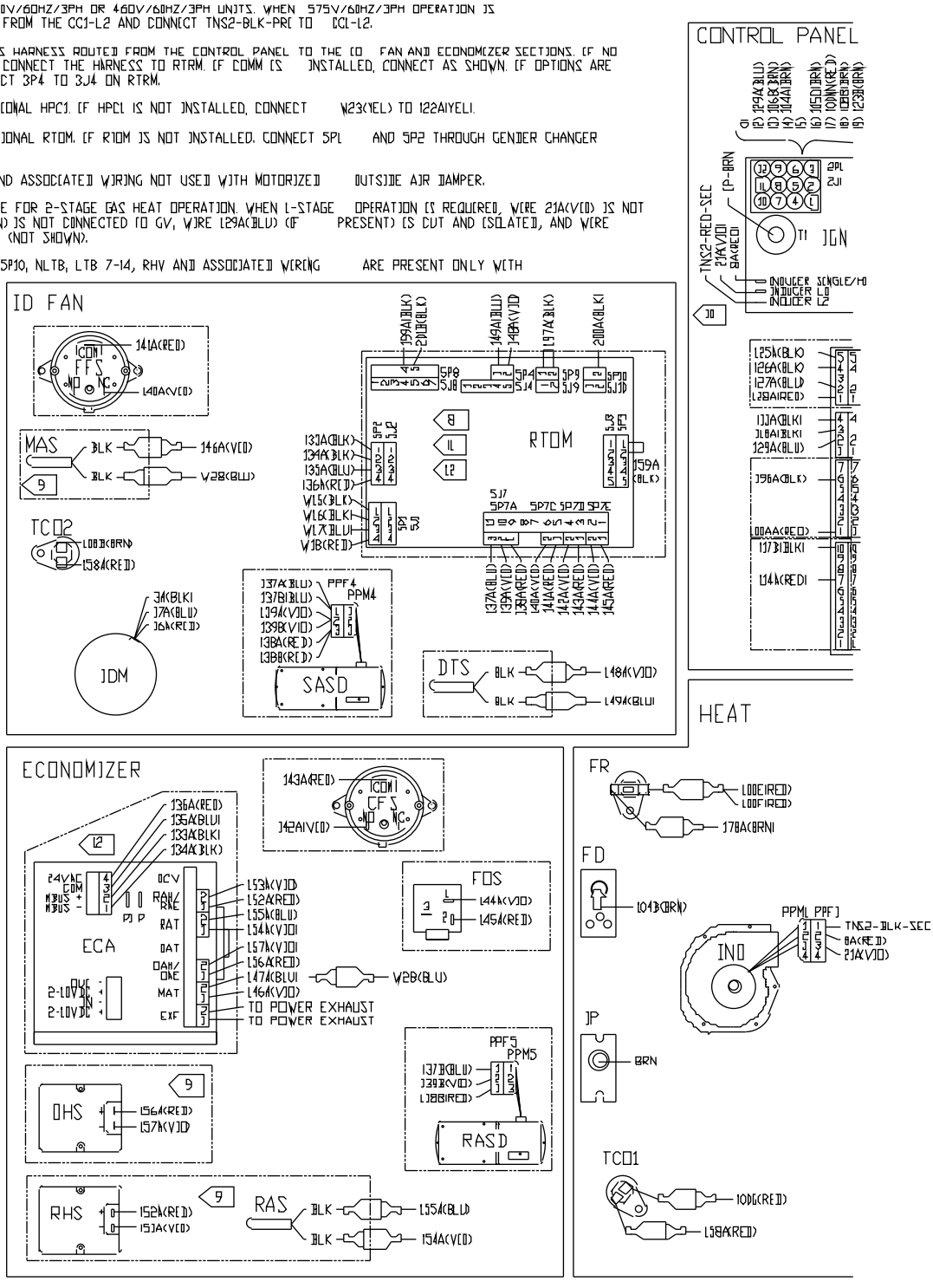

WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
IGN
RTRM
THERMOSTAT
TO RTRM-3J7
CC1
COMM
TO THERMOSTAT
TO ZONE SENSOR
SPLICE
OD FAN
ODM
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
CUSTOMER CONNECTION
CONTROL PANEL: BOTTOM
CTL
ICON PS
TNS1
TNS2
CF1
LTB
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
CCH
CPR1
LPC1
HPC1
GV
OAS
4366-1515
REV H

Diagram 22

Connection Diagram - 460-575v/60hz/3ph
3 - 5 Ton Gas Heat / Belt Drive
4366-1516

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 380V/60HZ/3PH OR 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 400V/575V TERMINAL.
5. CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH OR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE TNS2-BLU-PRI FROM THE CC1-L2 AND CONNECT TNS2-BLK-PRI TO CC1-L2.
6. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE CO FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.
7. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT W23(YEL) TO 122A(YEL).
8. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF RTOM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.
9. OPTIONAL MAS, RAS, RHS, DHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
10. (FUTURE) CONNECTIONS SHWON ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO (GN, WIRE 123B(BRN) IS NOT CONNECTED TO GV, WIRE 129A(BLU) (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105D(BRN) IS CONNECTED TO GV-M (NOT SHOWN).
11. COMPONENTS 3P2, 3P3, 5P8, 5P9, 5P10, NLTB, LTB 7-14, RHV AND ASSOCIATED WIRING ARE PRESENT ONLY WITH DEHUMIDIFICATION OPTION
12. SEE CO2 & VENT. DAMPER ACCESSORY DIAGRAM FOR ADDITIONAL WIRING.
13. CONNECTIONS SHOWN ARE FOR DEHUMIDIFICATION OPTION (2-SPEED DDM). FOR 1-SPEED DDM, WIRES DDM-ORG, DDM-RED, 32A(RED), LS(RED), LDIAL(BLU), 196A(BLK), AND RELAY DOR2 ARE NOT PRESENT AND WIRE DDM-BLK IS CONNECTED TO CC1, TERMINAL L1.
14. CUT AND ISOLATE WIRE 124B(VIO) IF DEHUMIDIFICATION OPTION IS INSTALLED.
15. WIRE TNS2-G/Y IS NOT PRESENT IF TNS2 IS AN AUTOTRANSFORMER.



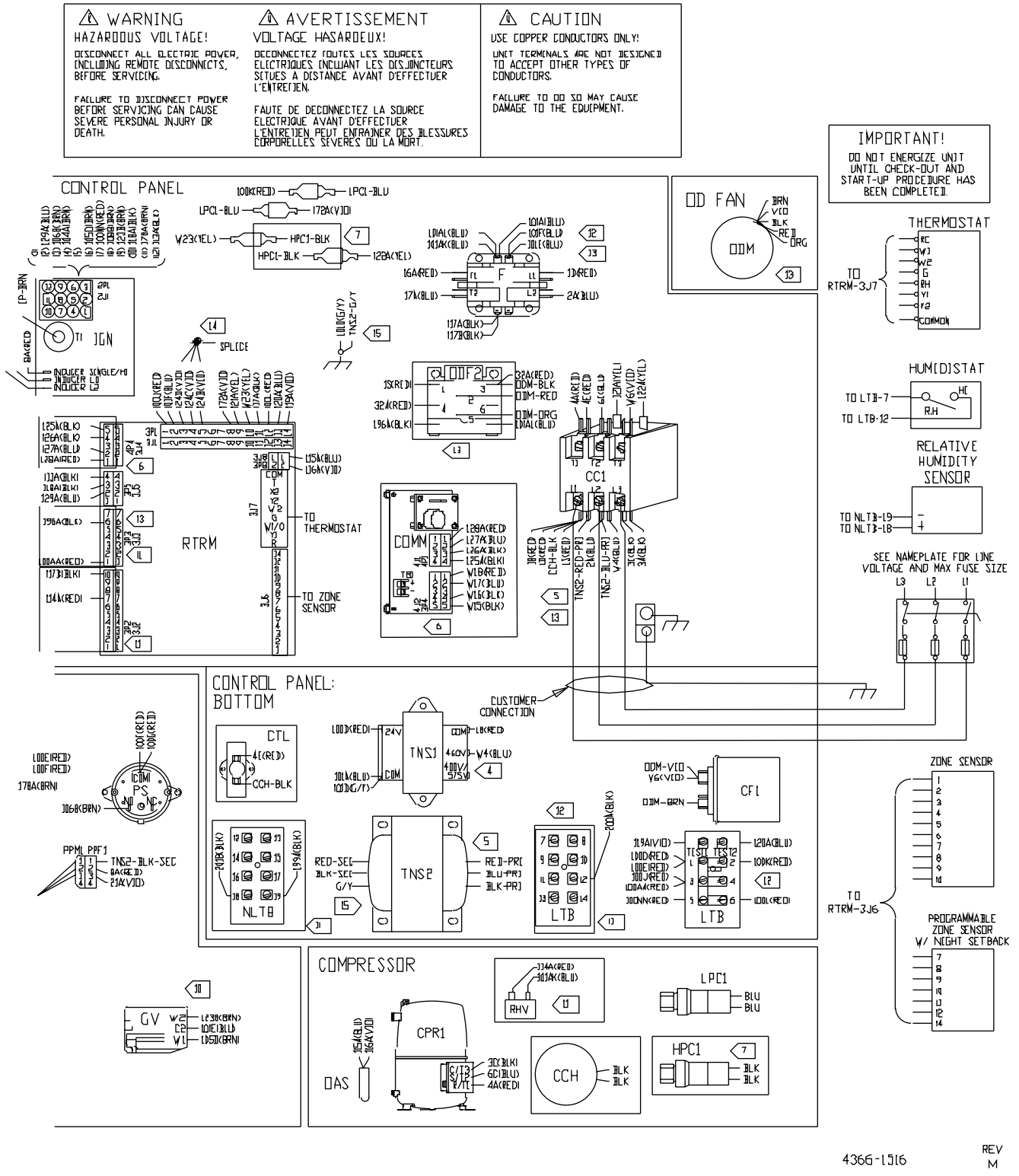

WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES (INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
IGN
SPLICE
RTRM
TO THERMOSTAT
TO ZONE SENSOR
CC1
COMM
OAT
OAS
CPR1
CCH
RHV
GV
PS
CTL
TNS1
TNS2
NLTB
LTB
CFI
OD FAN
ODM
THERMOSTAT
TO RTRM-3J7
HUMIDISTAT
TO LTB-7
TO LTB-12
RELATIVE HUMIDITY SENSOR
TO NLTB-19
TO NLTB-18
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L3 L2 L1
CUSTOMER CONNECTION
CONTROL PANEL: BOTTOM
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
COMPRESSOR
LPC1
HPC1
4366-1516
REV M

Diagram 23

Connection Diagram - 460-575v/60hz/3ph
6 - 7.5 Ton Gas Heat / Single Compressor
4366-1540

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.

2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.

3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.

4. CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 380V/60HZ/3PH OR 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 400V/575V TERMINAL.

5. CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH OR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE TNS2-BLU-PRI FROM CC1-L2 AND CONNECT WIRE TNS2-BLK-PRI TO CC1-L2.

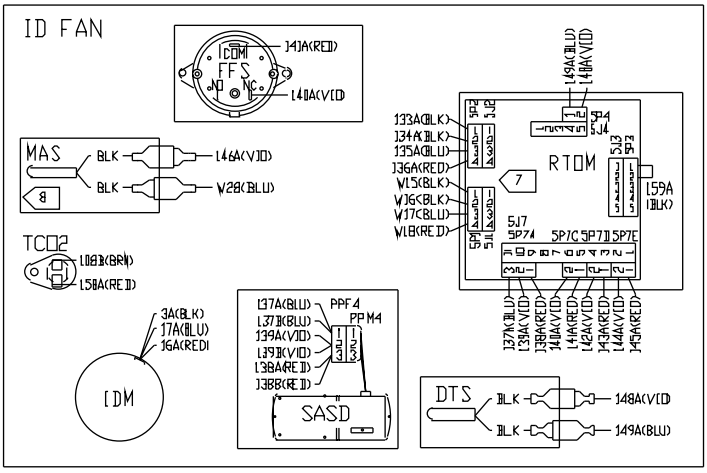
6. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL PANEL TO THE ID FAN AND ECONOMIZER SECTIONS. IF NO OPTIONS ARE INSTALLED, DO NOT CONNECT THE HARNESS TO THE RTRM. IF COMM IS INSTALLED, CONNECT AS SHOWN. IF OPTIONS ARE INSTALLED WITHOUT COMM, CONNECT 3P4 TO 3J4 ON RTRM.

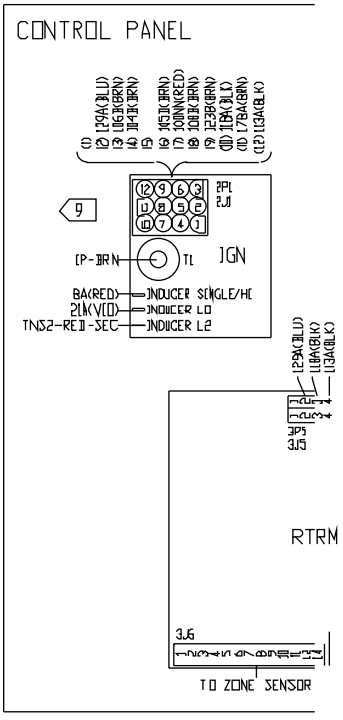
7. CONNECTIONS SHOWN INCLUDE OPTIONAL RTOM. IF RTOM IS NOT INSTALLED, CONNECT 5P1 AND 5P2 THROUGH GENDER CHANGER HARNESS 4366-1172-01.

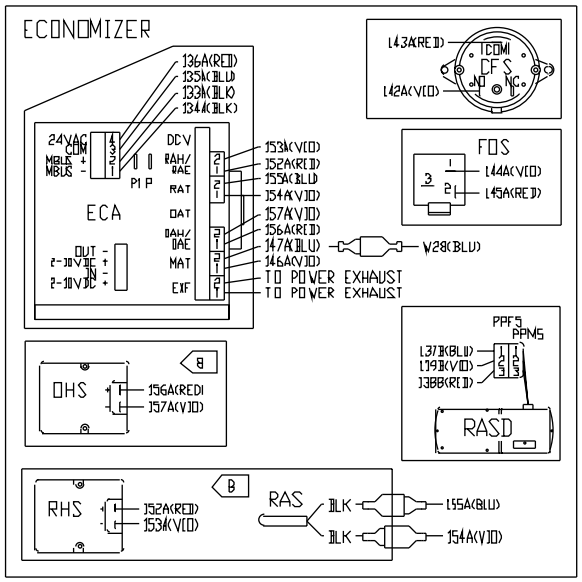
8. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.

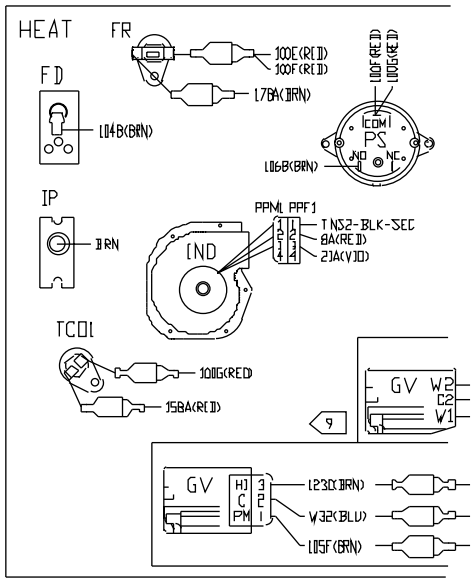
9. CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 21A(VIO) IS NOT CONNECTED TO IGN. WIRE 123K(BRN) IS NOT CONNECTED TO GV. WIRE 129A(BLU) (IF PRESENT) IS CUT AND ISOLATED. WIRE 105K(BRN) IS CONNECTED TO GV-M1 (NOT SHOWN, 60HZ ONLY), AND GV PINS 1 AND 3 ARE JUMPERED WITH WIRE W37(BRN) (NOT SHOWN, 50HZ ONLY).

10. WIRE TNS2-G/Y IS NOT PRESENT IF TNS2 IS AN AUTOTRANSFORMER.









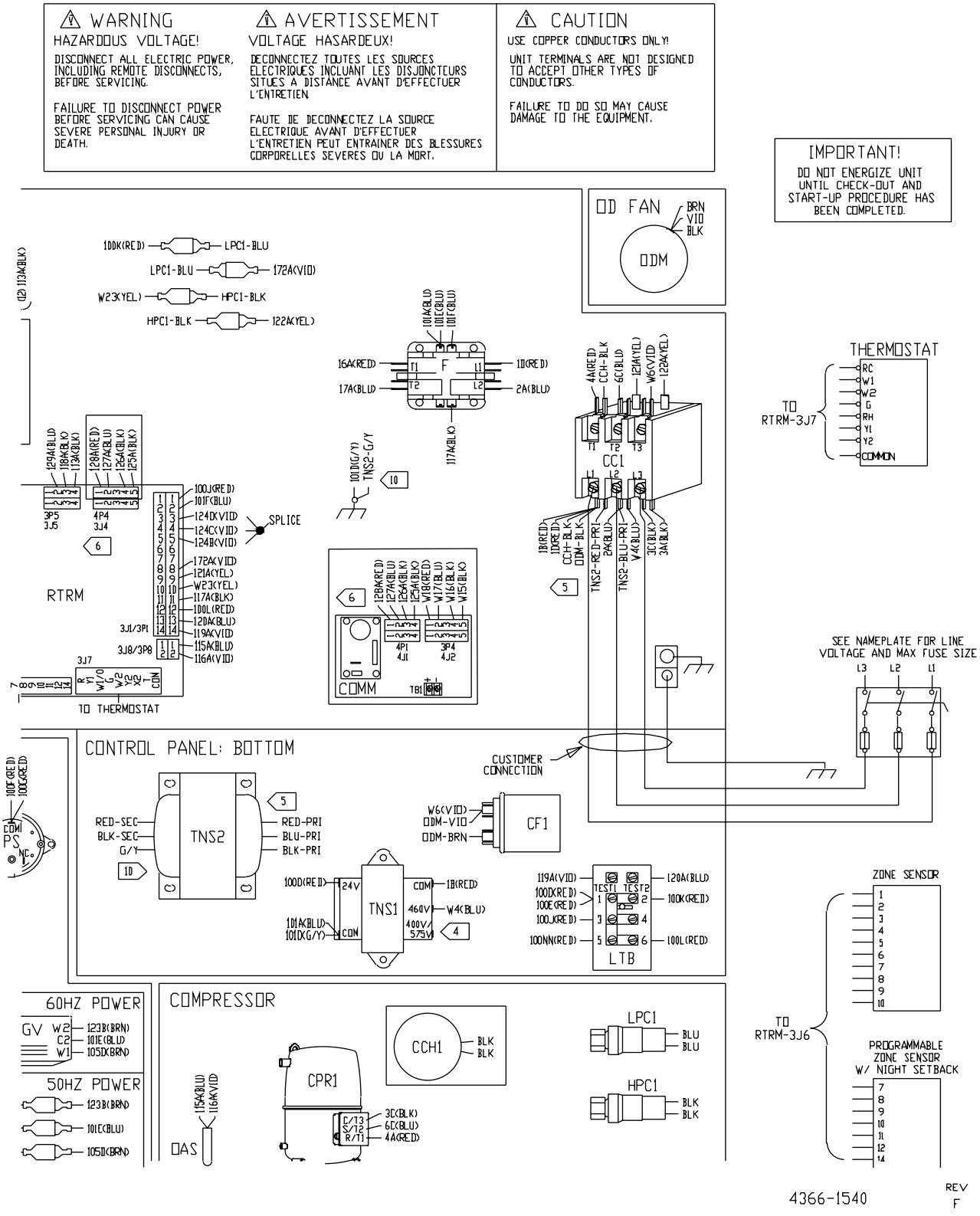
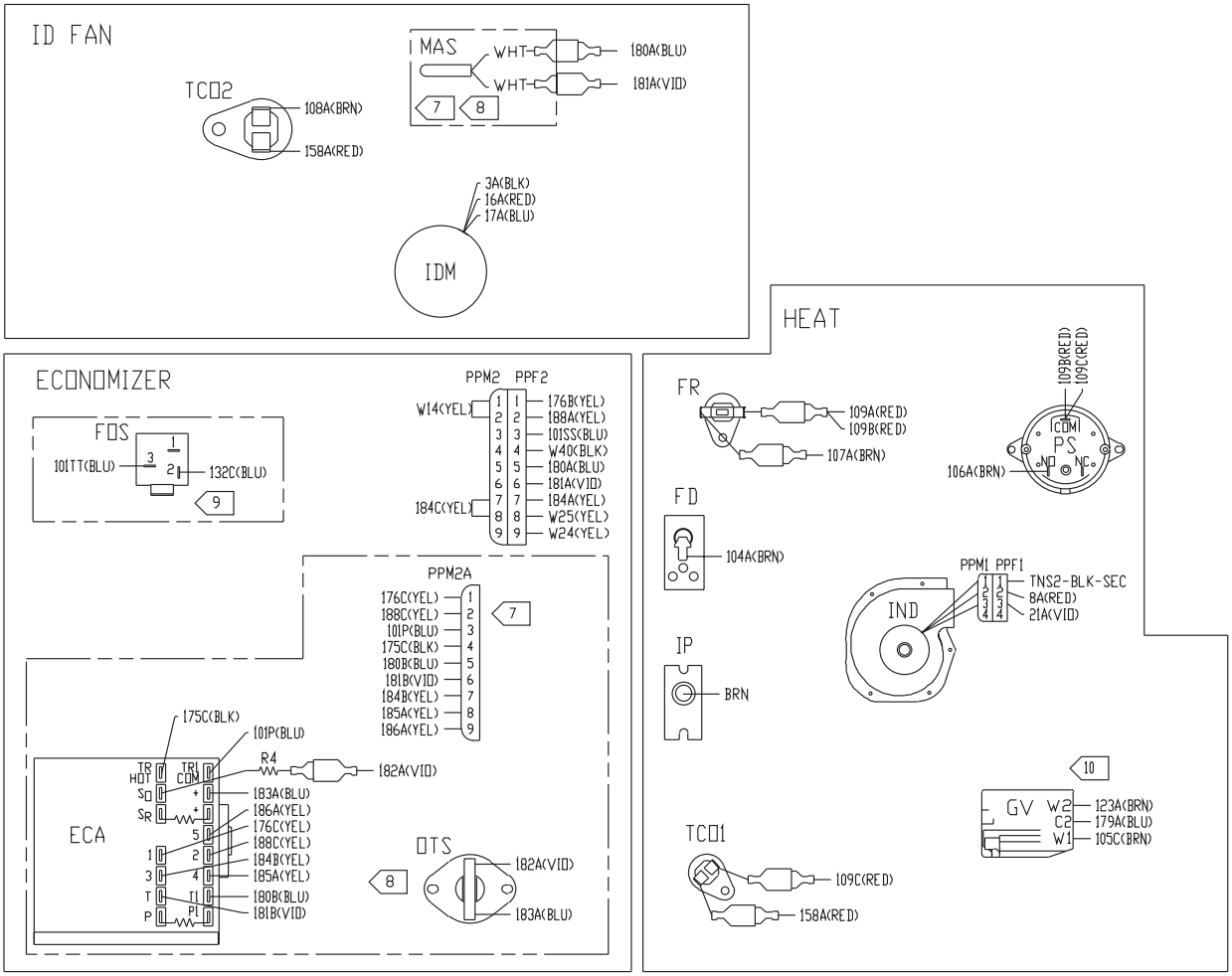

WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
OD FAN
BRN
VIO
BLK
ODM
THERMOSTAT
TO RTRM-3J7
RC
W1
W2
G
RH
Y1
Y2
COMMON
CC1
RTRM
SPLICE
TO THERMOSTAT
COMM
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L3
L2
L1
CUSTOMER CONNECTION
CONTROL PANEL: BOTTOM
TNS2
TNS1
CF1
LTB
ZONE SENSOR
TO RTRM-3J6
PROGRAMMABLE ZONE SENSOR W/ NIGHT SETBACK
60HZ POWER
50HZ POWER
COMPRESSOR
CPR1
CCH1
LPC1
HPC1
OAS
4366-1540
REV F

Diagram 24

Connection Diagram - 460-575v/60hz/3ph
7.5 - 10 Ton Gas Heat / Dual Compressor
4366-1532

1. ALL WIRING AND DEVICES SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL AND NATIONAL ELECTRICAL CODES. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.
2. IF ANY OF THE ORIGINAL WIRE, AS SUPPLIED WITH THIS UNIT, MUST BE REPLACED, REPLACE WITH APPLIANCE WIRING MATERIAL RATED AT 105°C.
3. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS. ALL MOTORS HAVE INTERNAL OVERLOAD PROTECTION. COMPRESSORS HAVE INTERNAL THERMAL PROTECTION.
4. CONNECTIONS SHOWN ARE FOR 460V/60HZ/3PH UNITS. WHEN 380V/60HZ/3PH OR 575V/60HZ/3PH OPERATION IS REQUIRED, MOVE WIRE W4(BLU) FROM THE 460V TERMINAL ON TNS1 TO THE 400V/575V TERMINAL.
5. CONNECTIONS SHOWN ARE FOR 380V/60HZ/3PH OR 460V/60HZ/3PH UNITS. WHEN 575V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE TNS2-BLU-PRI FROM CC1-L2 AND CONNECT WIRE TNS2-BLK-PRI TO CC1-L2.
6. CCH2 CONDUCTORS ARE IDENTIFIED BY BROWN TAPE PLACED NEAR WIRE TERMINATIONS INSIDE CONTROL PANEL.
7. WHEN INSTALLING ECONOMIZER, REMOVE PPM2 FROM PPF2, CONNECT PPM2A TO PPF2, AND CONNECT MAS TO WIRES 180A(BLU) AND 181A(VIO).
8. FOR MOTORIZED OUTSIDE AIR DAMPER, OPTIONAL MAS AND OTS (AND ASSOCIATED WIRING) ARE NOT USED, AND R4 IS REMOVED BETWEEN SO AND + ON ECA.
9. CONNECTIONS SHOW OPTIONAL FOS INSTALLED. IF FOS IS NOT INSTALLED, CONNECT WIRE W27(BLU) TO WIRE 132A(BLU).
10. CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 102B(BLK) IS REMOVED, WIRES 21A(VIO), 101NN(BLU), AND 174A(BRN) ARE NOT CONNECTED TO IGN, WIRE 123A(BRN) IS NOT CONNECTED TO GV, AND WIRE 105C(BRN) IS CONNECTED TO GV-M1 (NOT SHOWN).
11. WIRE TNS2-G/Y IS NOT PRESENT IF TNS2 IS AN AUTOTRANSFORMER.



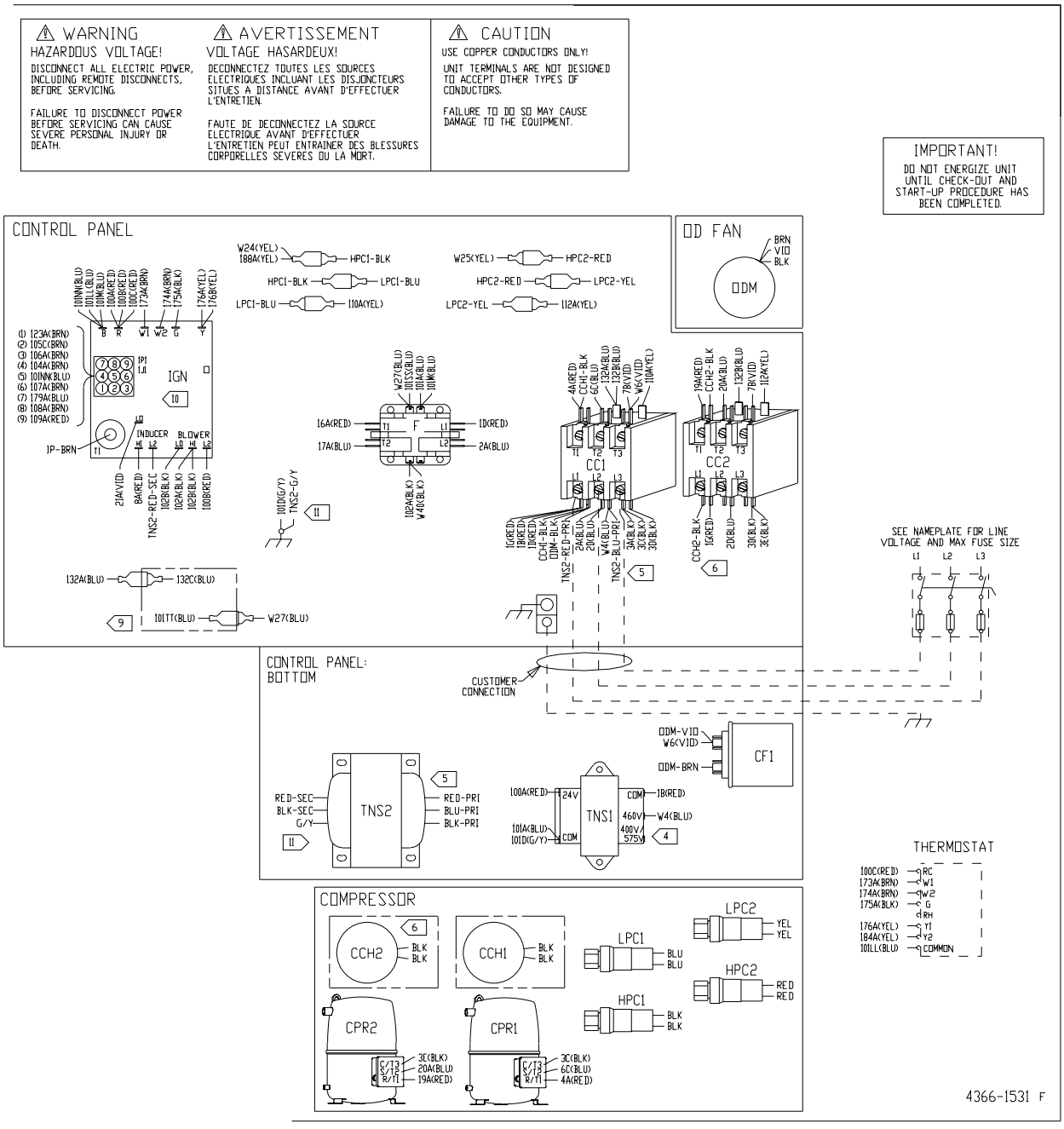
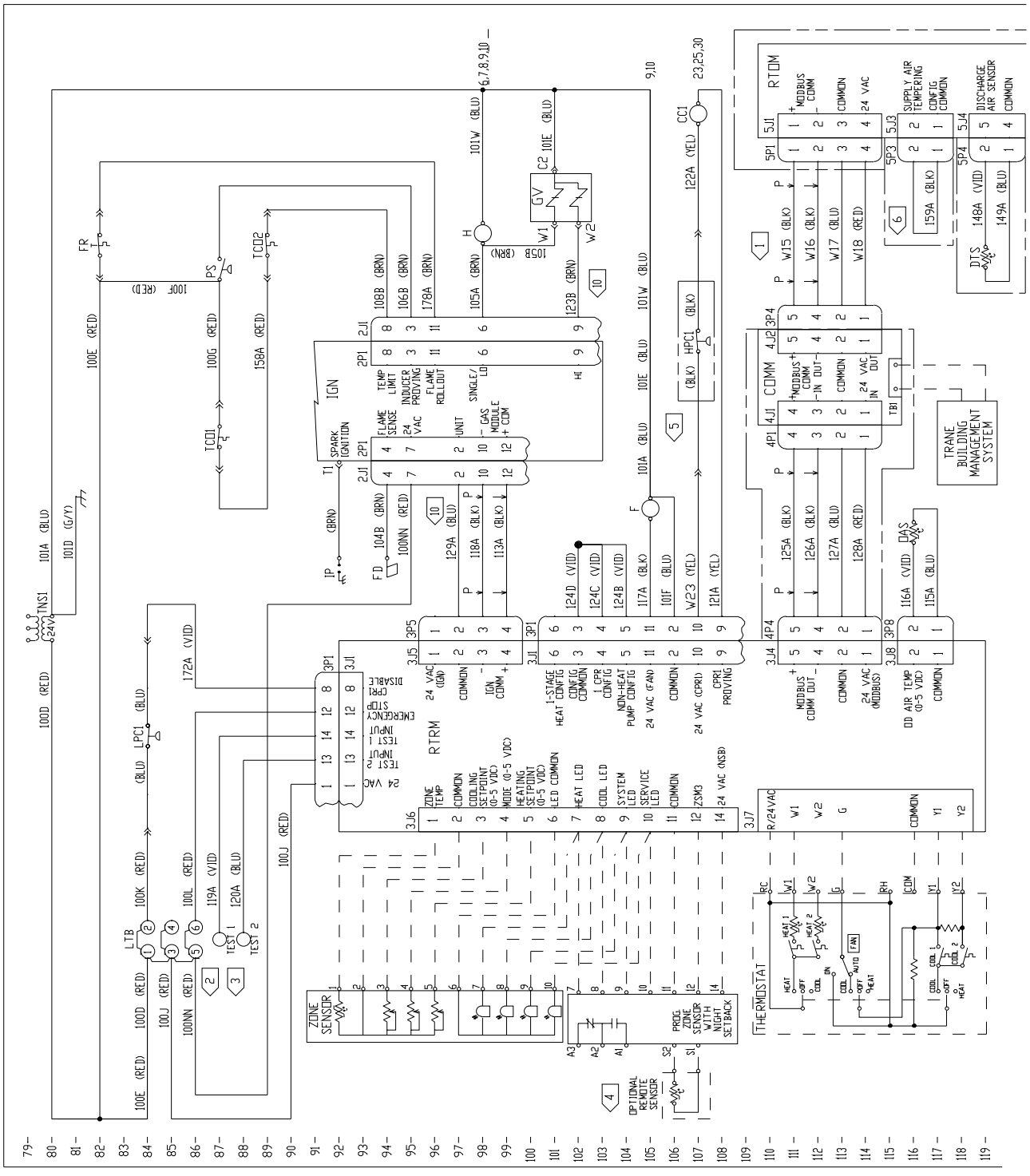
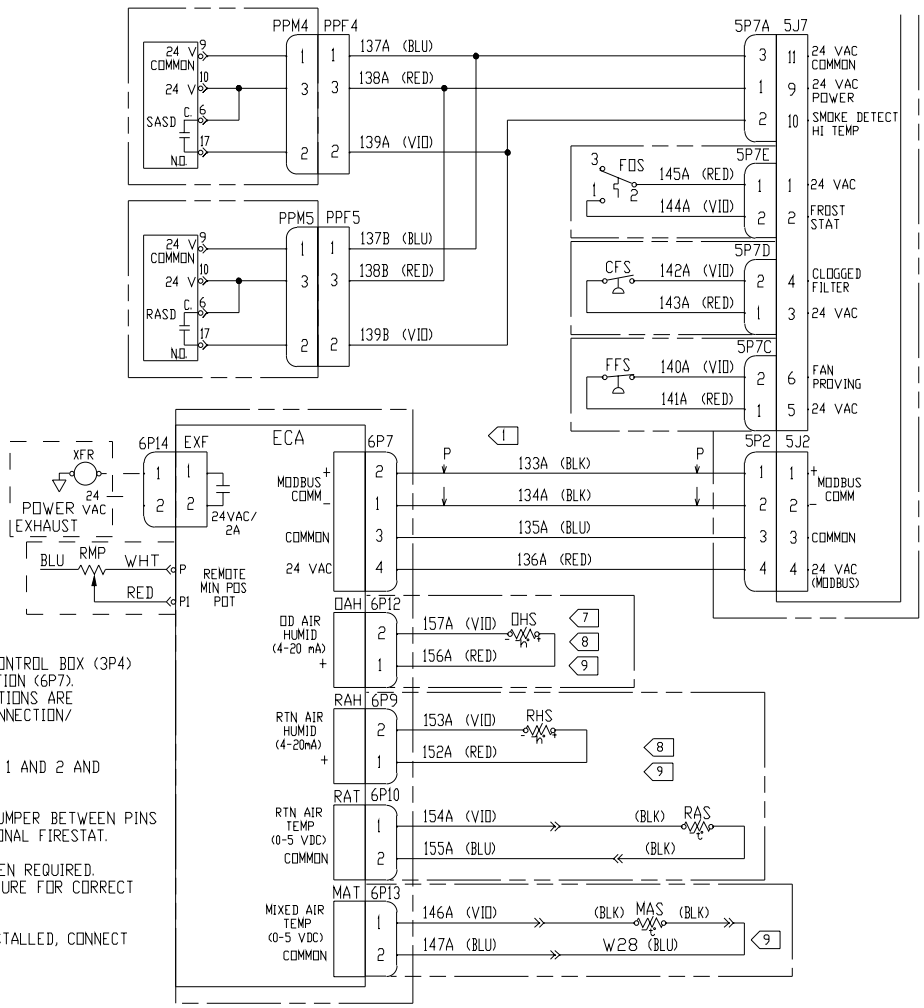

⚠ WARNING
HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER, INCLUDING REMOTE DISCONNECTS, BEFORE SERVICING.
FAILURE TO DISCONNECT POWER BEFORE SERVICING CAN CAUSE SEVERE PERSONAL INJURY OR DEATH.
⚠ AVERTISSEMENT
VOLTAGE HASARDEUX!
DECONNECTEZ TOUTES LES SOURCES ELECTRIQUES INCLUANT LES DISJONCTEURS SITUES A DISTANCE AVANT D'EFFECTUER L'ENTRETIEN.
FAUTE DE DECONNECTEZ 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.
IMPORTANT!
DO NOT ENERGIZE UNIT UNTIL CHECK-OUT AND START-UP PROCEDURE HAS BEEN COMPLETED.
CONTROL PANEL
ODM FAN
BRN
VIO
BLK
ODM
W24(YEL)
188A(YEL)
HPC1-BLK
HPC1-BLK
LPC1-BLU
LPC1-BLU
110A(YEL)
W25(YEL)
HPC2-RED
HPC2-RED
LPC2-YEL
LPC2-YEL
112A(YEL)
IGN
INDUCER
BLOWER
1P-BRN
16A(RED)
17A(BLU)
1D(RED)
2A(BLU)
CC1
CC2
CONTROL PANEL: BOTTOM
CUSTOMER CONNECTION
SEE NAMEPLATE FOR LINE VOLTAGE AND MAX FUSE SIZE
L1 L2 L3
TNS2
TNS1
CF1
THERMOSTAT
RC
W1
W2
G
RH
Y1
Y2
COMMON
COMPRESSOR
CCH2
CCH1
LPC2
LPC1
HPC2
HPC1
CPR2
CPR1
4366-1531 F

Diagram 25

Control Schematic -
2 - 5 Ton Single Stage Gas Heat / Direct Drive
4366-1006

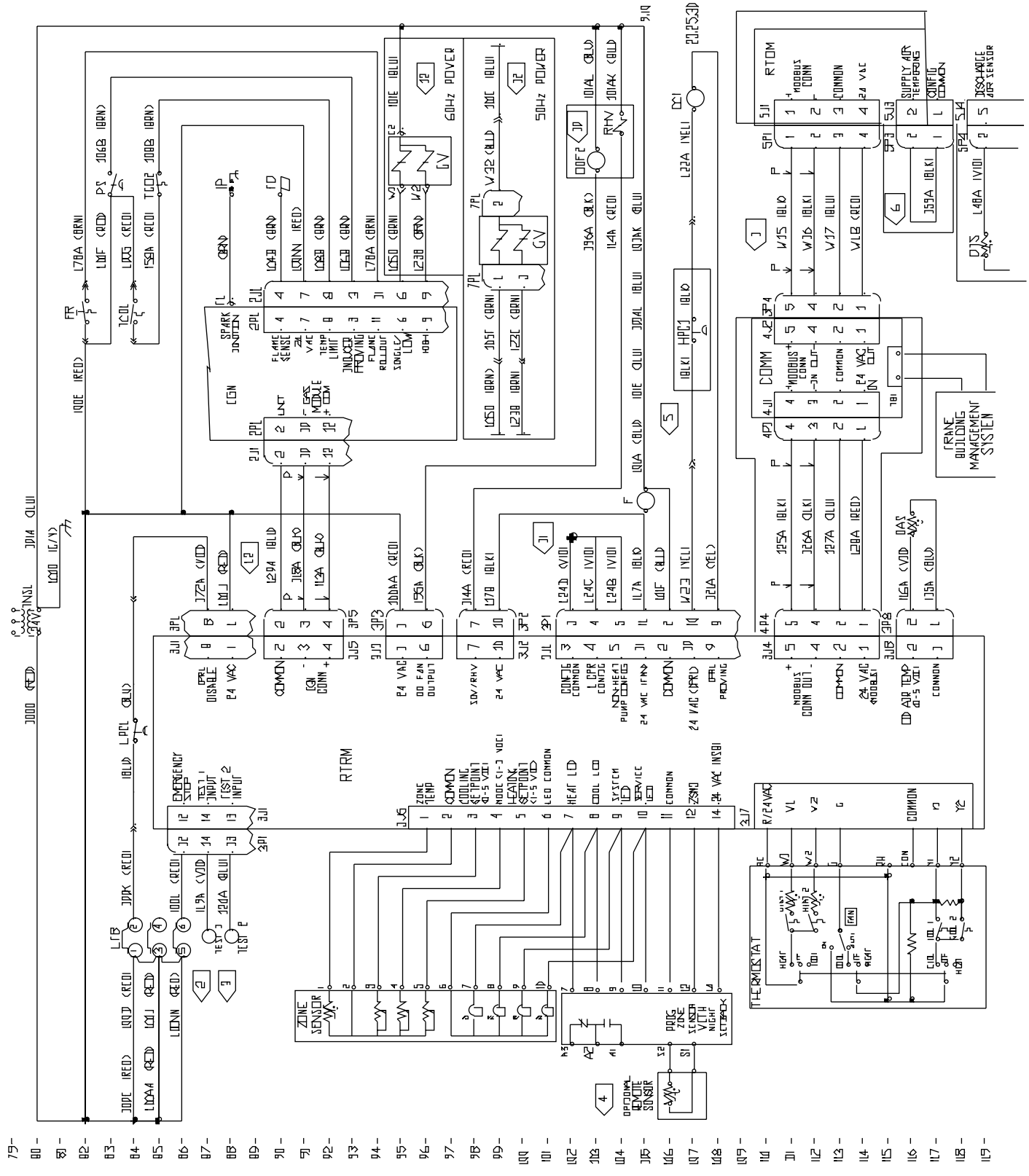


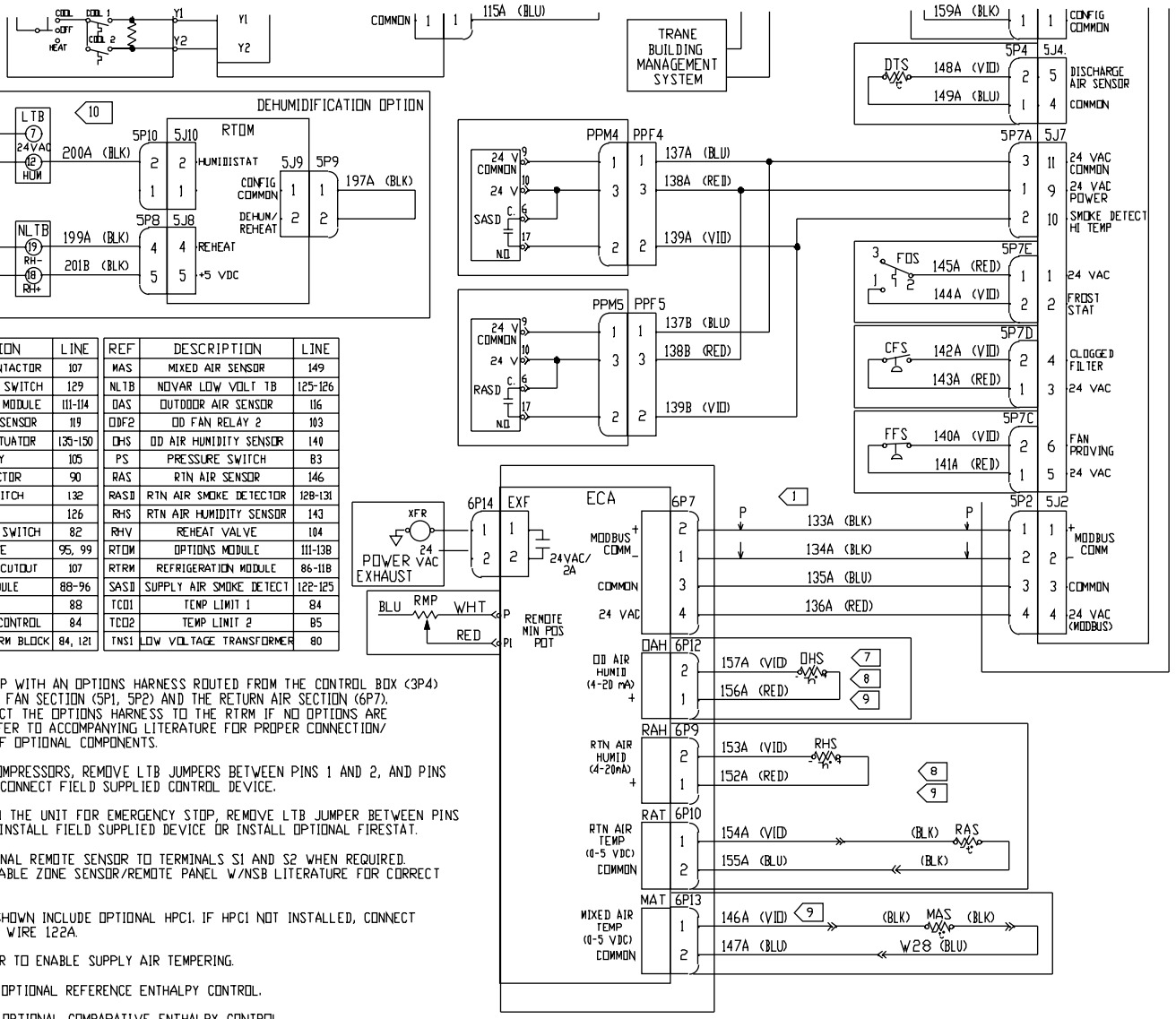
REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	107
CFS	CLOGGED FILTER SWITCH	129
COMM	COMMUNICATIONS MODULE	111-114
DTS	DISCHARGE AIR SENSOR	119
ECA	ECONOMIZER ACTUATOR	135-150
F	FAN RELAY	105
FD	FLAME DETECTOR	94
FFS	FAN FAIL SWITCH	132
FOS	FROSTAT	126
FR	FLAME ROLLOUT SWITCH	82
GV	GAS VALVE	101
H	HEAT RELAY	98
HPC1	HIGH PRESSURE CUTOUT	107
IGN	IGNITION MODULE	92-102
IP	IGNITER	92
LPC1	LOW PRESSURE CONTROL	84
LTB	LOW VOLTAGE TERM BLOCK	84-88
MAS	MIXED AIR SENSOR	149
OAS	OUTDOOR AIR SENSOR	116
OHS	OD AIR HUMIDITY SENSOR	140
PS	PRESSURE SWITCH	87
RAS	RTN AIR SENSOR	146
RASD	RTN AIR SMOKE DETECTOR	128-131
RHS	RTN AIR HUMIDITY SENSOR	143
RTOM	OPTIONS MODULE	111-138
RTRM	REFRIGERATION MODULE	92-118
SASD	SUPPLY AIR SMOKE DETECTOR	122-125
TCO1	TEMP LIMIT 1	87
TCO2	TEMP LIMIT 2	89
TNS1	LOW VOLTAGE TRANSFORMER	80



1. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL BOX (3P4) TO THE INDOOR FAN SECTION (5P1, 5P2) AND THE RETURN AIR SECTION (6P7). DO NOT CONNECT THE OPTIONS HARNESS TO THE RTRM IF NO OPTIONS ARE INSTALLED. REFER TO ACCOMPANYING LITERATURE FOR PROPER CONNECTION/ COMBINATION OF OPTIONAL COMPONENTS.
2. TO DISABLE COMPRESSORS, REMOVE LTB JUMPERS BETWEEN PINS 1 AND 2 AND PINS 3 AND 4, AND CONNECT FIELD SUPPLIED CONTROL DEVICE.
3. TO SHUT DOWN THE UNIT FOR EMERGENCY STOP, REMOVE LTB JUMPER BETWEEN PINS 5 AND 6, AND INSTALL FIELD SUPPLIED DEVICE OR INSTALL OPTIONAL FIRESTAT.
4. INSTALL OPTIONAL REMOTE SENSOR TO TERMINALS S1 AND S2 WHEN REQUIRED. SEE PROGRAMMABLE ZONE SENSOR/REMOTE PANEL W/NSB LITERATURE FOR CORRECT SETTINGS.
5. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 IS NOT INSTALLED, CONNECT WIRE W23 TO WIRE 122A.
6. REMOVE JUMPER TO ENABLE SUPPLY AIR TEMPERING.
7. REQUIRED FOR OPTIONAL REFERENCE ENTHALPY CONTROL.
8. REQUIRED FOR OPTIONAL COMPARATIVE ENTHALPY CONTROL.
9. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
10. (FUTURE) CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT OPERATION. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, AND WIRE 105B IS CONNECTED TO GV-M1.

Diagram 26
Control Schematic -
2 - 5 Ton Single Stage Gas Heat / Belt Drive or Oversize Motor
4366-1015



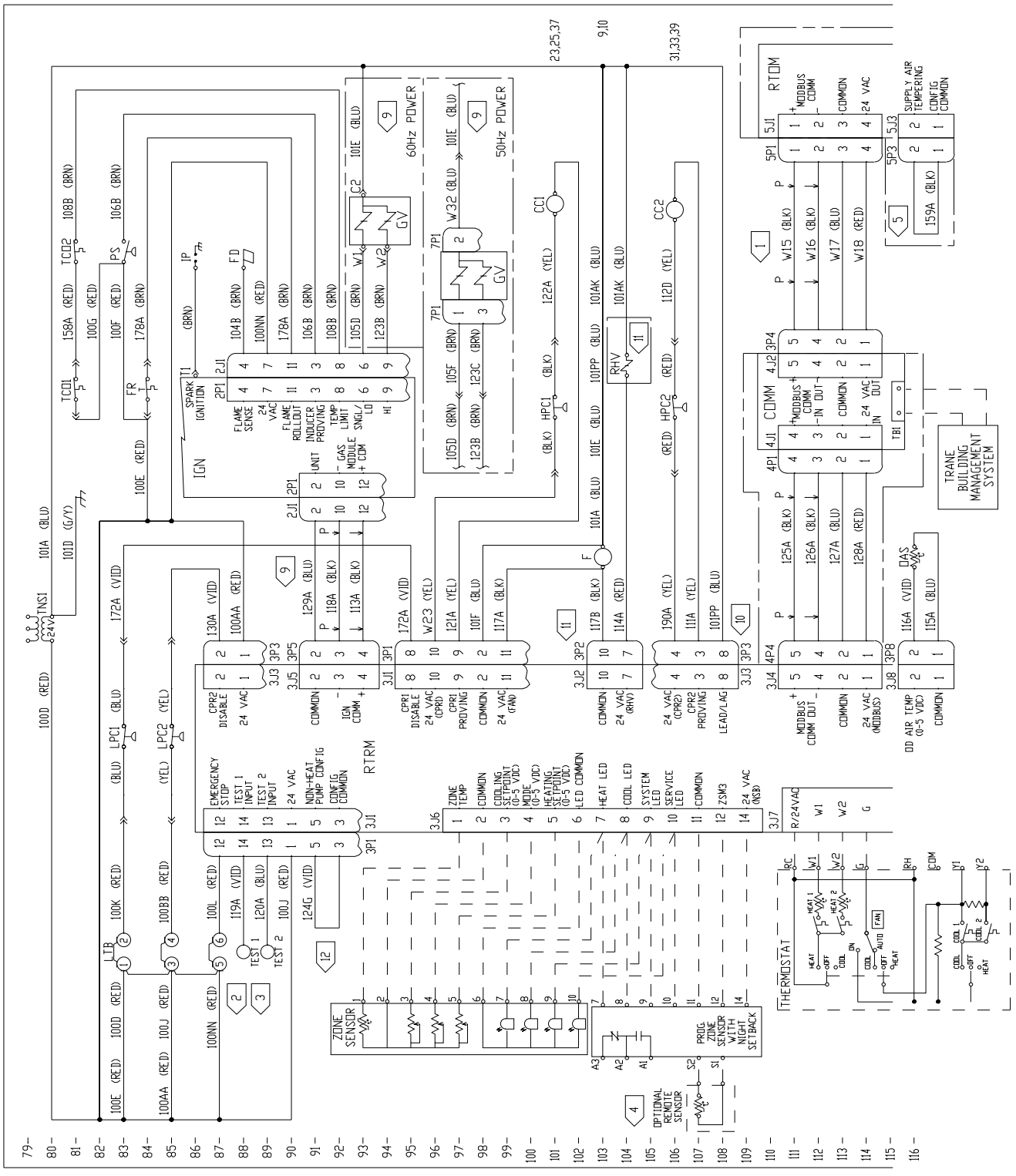


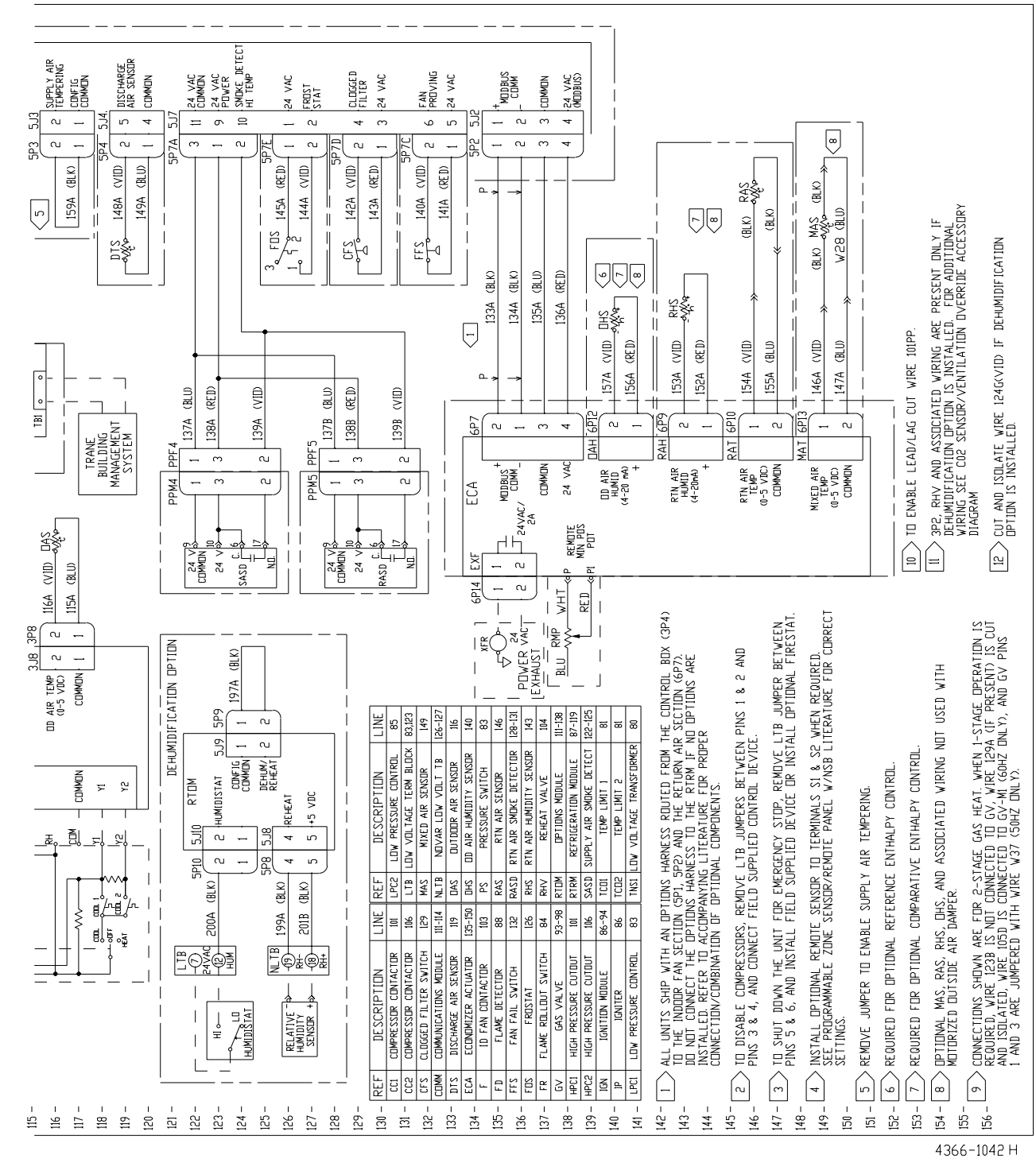
REF	DESCRIPTION	LINE
CC1	COMPRESSOR CONTACTOR	107
CFS	CLOGGED FILTER SWITCH	129
COMM	COMMUNICATIONS MODULE	111-114
DTS	DISCHARGE AIR SENSOR	119
ECA	ECONOMIZER ACTUATOR	135-150
F	FAN RELAY	105
FD	FLAME DETECTOR	90
FFS	FAN FAIL SWITCH	132
FDS	FROSTAT	126
FR	FLAME ROLLOUT SWITCH	82
GV	GAS VALVE	95, 99
HPC1	HIGH PRESSURE CUTOUT	107
IGN	IGNITION MODULE	88-96
IP	IGNITER	88
LPC1	LOW PRESSURE CONTROL	84
LTB	LOW VOLTAGE TERM BLOCK	84, 121

REF	DESCRIPTION	LINE
MAS	MIXED AIR SENSOR	149
NLTB	NOVAR LOW VOLT TB	125-126
OAS	OUTDOOR AIR SENSOR	116
ODF2	OD FAN RELAY 2	103
OHS	OD AIR HUMIDITY SENSOR	140
PS	PRESSURE SWITCH	B3
RAS	RTN AIR SENSOR	146
RASII	RTN AIR SMOKE DETECTOR	128-131
RHS	RTN AIR HUMIDITY SENSOR	143
RHV	REHEAT VALVE	104
RTOM	OPTIONS MODULE	111-138
RTRM	REFRIGERATION MODULE	86-118
SASII	SUPPLY AIR SMOKE DETECT	122-125
TCO1	TEMP LIMIT 1	84
TCO2	TEMP LIMIT 2	85
TNS1	LOW VOLTAGE TRANSFORMER	80

1. ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL BOX (3P4) TO THE INDOOR FAN SECTION (5P1, 5P2) AND THE RETURN AIR SECTION (6P7). DO NOT CONNECT THE OPTIONS HARNESS TO THE RTRM IF NO OPTIONS ARE INSTALLED. REFER TO ACCOMPANYING LITERATURE FOR PROPER CONNECTION/ COMBINATION OF OPTIONAL COMPONENTS.
2. TO DISABLE COMPRESSORS, REMOVE LTB JUMPERS BETWEEN PINS 1 AND 2, AND PINS 3 AND 4, AND CONNECT FIELD SUPPLIED CONTROL DEVICE.
3. TO SHUT DOWN THE UNIT FOR EMERGENCY STOP, REMOVE LTB JUMPER BETWEEN PINS 5 AND 6, AND INSTALL FIELD SUPPLIED DEVICE OR INSTALL OPTIONAL FIRESTAT.
4. INSTALL OPTIONAL REMOTE SENSOR TO TERMINALS S1 AND S2 WHEN REQUIRED. SEE PROGRAMMABLE ZONE SENSOR/REMOTE PANEL W/NSB LITERATURE FOR CORRECT SETTINGS.
5. CONNECTIONS SHOWN INCLUDE OPTIONAL HPC1. IF HPC1 NOT INSTALLED, CONNECT WIRE W23 TO WIRE 122A.
6. REMOVE JUMPER TO ENABLE SUPPLY AIR TEMPERING.
7. REQUIRED FOR OPTIONAL REFERENCE ENTHALPY CONTROL.
8. REQUIRED FOR OPTIONAL COMPARATIVE ENTHALPY CONTROL.
9. OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
10. 3P2, 3P3, ODF2, RHV AND ASSOCIATED WIRING ARE PRESENT ONLY IF DEHUMIDIFICATION OPTION IS INSTALLED. FOR ADDITIONAL WIRING SEE CO2 SENSOR/VENTILATION OVERRIDE ACCESSORY DIAGRAM.
11. CUT AND ISOLATE WIRE 124B IF DEHUMIDIFICATION OPTION IS INSTALLED.
12. CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED. WIRE 105D IS CONNECTED TO GV-M1 (60HZ ONLY), AND GV PINS 1 AND 3 ARE JUMPERED WITH WIRE W37 (50HZ ONLY).

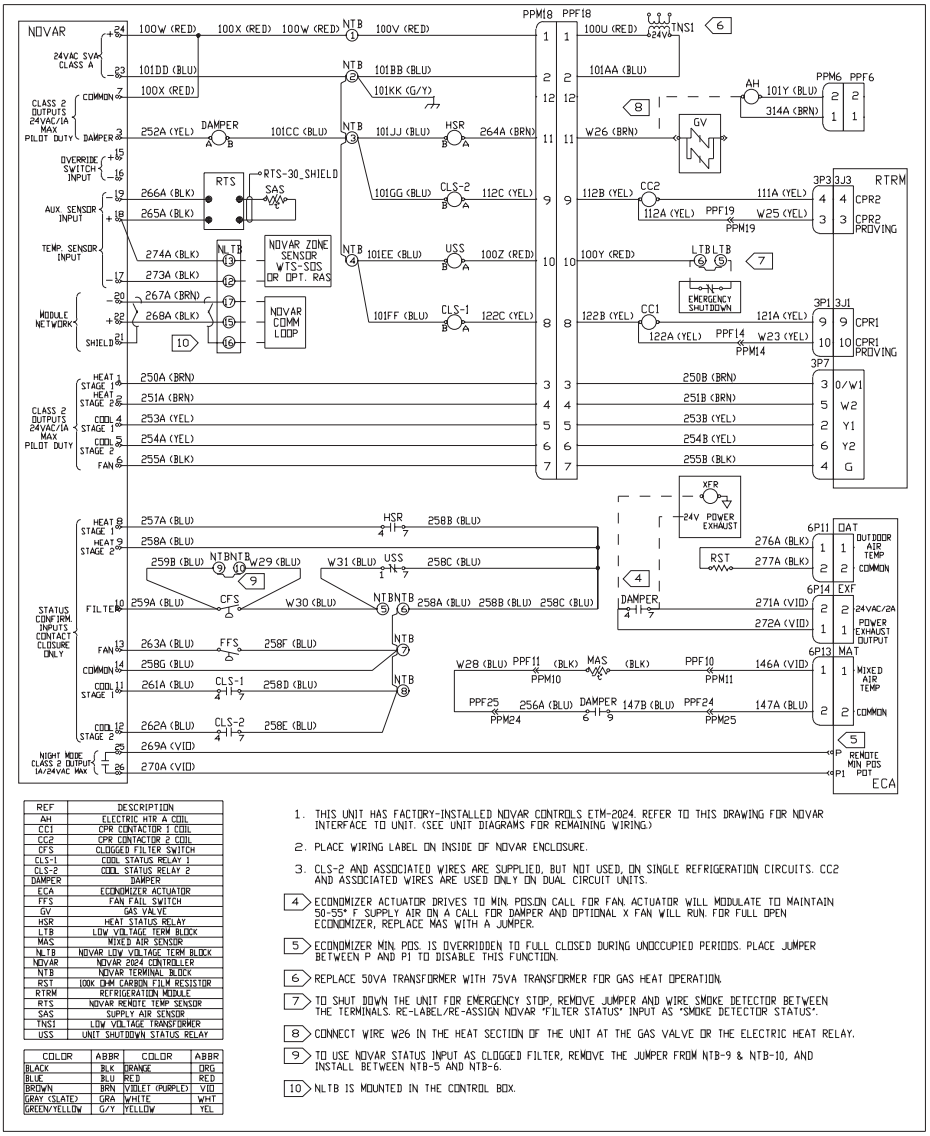
Diagram 27
Control Schematic -
7.5 -10 Ton Gas Heat
4366-1042




DEHUMIDIFICATION OPTION
LTB
24VAC
HUM
HI
LO
HUMIDISTAT
NLTB
RH-
RH+
RELATIVE HUMIDITY SENSOR
5P10
5J10
RTDM
HUMIDISTAT
5J9
5P9
CONFIG COMMON
DEHUM/ REHEAT
5P8
5J8
REHEAT
+5 VDC
200A (BLK)
199A (BLK)
201B (BLK)
197A (BLK)
DD AIR TEMP (0-5 VDC)
COMMON
Y1
Y2
RH
COM
3J8
3P8
116A (VID)
115A (BLK)
DAS
TBI
TRANE BUILDING MANAGEMENT SYSTEM
PPM4
PPF4
PPM5
PPF5
137A (BLU)
138A (RED)
139A (VID)
137B (BLU)
138B (RED)
139B (VID)
24 VAC COMMON
SASD
RASD
ND
ECA
EXF
6P14
6P7
MODBUS+ COMM
24VAC/ 2A
COMMON
24 VAC
XFR
24 VAC
POWER EXHAUST
RMP
WHT
BLU
RED
REMOTE MIN POS POT
P1
P
133A (BLK)
134A (BLK)
135A (BLU)
136A (RED)
DAH
6P12
DD AIR HUMID (4-20 mA)
157A (VID)
156A (RED)
DHS
RAH
6P9
RTN AIR HUMID (4-20mA)
153A (VID)
152A (RED)
RHS
RAT
6P10
RTN AIR TEMP (0-5 VDC)
154A (VID)
155A (BLU)
MAT
6P13
MIXED AIR TEMP (0-5 VDC)
146A (VID)
147A (BLU)
RAS
MAS
(BLK)
W28 (BLU)
5P3
5J3
SUPPLY AIR TEMPERING
CONFIG COMMON
159A (BLK)
5P4
5J4
DISCHARGE AIR SENSOR
COMMON
DTS
148A (VID)
149A (BLU)
5P7A
5J7
24 VAC COMMON
24 VAC POWER
SMOKE DETECT HI TEMP
5P7E
24 VAC
FROST STAT
FDS
145A (RED)
144A (VID)
5P7D
CLOGGED FILTER
24 VAC
CFS
142A (VID)
143A (RED)
5P7C
FAN PROVING
24 VAC
FFS
140A (VID)
141A (RED)
5P2
5J2
MODBUS COMM
COMMON
24 VAC (MODBUS)
REF | DESCRIPTION | LINE | REF | DESCRIPTION | LINE
CC1 | COMPRESSOR CONTACTOR | 101 | LPC2 | LOW PRESSURE CONTROL | 85
CC2 | COMPRESSOR CONTACTOR | 106 | LTB | LOW VOLTAGE TERM BLOCK | 83,123
CFS | CLOGGED FILTER SWITCH | 129 | MAS | MIXED AIR SENSOR | 149
COMM | COMMUNICATIONS MODULE | 111-114 | NLTB | NOVAR LOW VOLT TB | 126-127
DTS | DISCHARGE AIR SENSOR | 119 | OAS | OUTDOOR AIR SENSOR | 116
ECA | ECONOMIZER ACTUATOR | 135-150 | OHS | OD AIR HUMIDITY SENSOR | 140
F | ID FAN CONTACTOR | 103 | PS | PRESSURE SWITCH | 83
FD | FLAME DETECTOR | 88 | RAS | RTN AIR SENSOR | 146
FFS | FAN FAIL SWITCH | 132 | RASD | RTN AIR SMOKE DETECTOR | 128-131
FDS | FROSTAT | 126 | RHS | RTN AIR HUMIDITY SENSOR | 143
FR | FLAME ROLLOUT SWITCH | 84 | RHV | REHEAT VALVE | 104
GV | GAS VALVE | 93-98 | RTDM | OPTIONS MODULE | 111-138
HPC1 | HIGH PRESSURE CUTOUT | 101 | RTRM | REFRIGERATION MODULE | 87-119
HPC2 | HIGH PRESSURE CUTOUT | 106 | SASD | SUPPLY AIR SMOKE DETECT | 122-125
IGN | IGNITION MODULE | 86-94 | TCO1 | TEMP LIMIT 1 | 81
IP | IGNITER | 86 | TCO2 | TEMP LIMIT 2 | 81
LPC1 | LOW PRESSURE CONTROL | 83 | TNS1 | LOW VOLTAGE TRANSFORMER | 80
1 ALL UNITS SHIP WITH AN OPTIONS HARNESS ROUTED FROM THE CONTROL BOX (3P4) TO THE INDOOR FAN SECTION (5P1, 5P22) AND THE RETURN AIR SECTION (6P7). DO NOT CONNECT THE OPTIONS HARNESS TO THE RTRM IF NO OPTIONS ARE INSTALLED. REFER TO ACCOMPANYING LITERATURE FOR PROPER CONNECTION/COMBINATION OF OPTIONAL COMPONENTS.
2 TO DISABLE COMPRESSORS, REMOVE LTB JUMPERS BETWEEN PINS 1 & 2 AND PINS 3 & 4, AND CONNECT FIELD SUPPLIED CONTROL DEVICE.
3 TO SHUT DOWN THE UNIT FOR EMERGENCY STOP, REMOVE LTB JUMPER BETWEEN PINS 5 & 6, AND INSTALL FIELD SUPPLIED DEVICE OR INSTALL OPTIONAL FIRESTAT.
4 INSTALL OPTIONAL REMOTE SENSOR TO TERMINALS S1 & S2 WHEN REQUIRED. SEE PROGRAMMABLE ZONE SENSOR/REMOTE PANEL W/NSB LITERATURE FOR CORRECT SETTINGS.
5 REMOVE JUMPER TO ENABLE SUPPLY AIR TEMPERING.
6 REQUIRED FOR OPTIONAL REFERENCE ENTHALPY CONTROL.
7 REQUIRED FOR OPTIONAL COMPARATIVE ENTHALPY CONTROL.
8 OPTIONAL MAS, RAS, RHS, OHS, AND ASSOCIATED WIRING NOT USED WITH MOTORIZED OUTSIDE AIR DAMPER.
9 CONNECTIONS SHOWN ARE FOR 2-STAGE GAS HEAT. WHEN 1-STAGE OPERATION IS REQUIRED, WIRE 123B IS NOT CONNECTED TO GV, WIRE 129A (IF PRESENT) IS CUT AND ISOLATED, WIRE 105D IS CONNECTED TO GV-M1 (60HZ ONLY), AND GV PINS 1 AND 3 ARE JUMPERED WITH WIRE W37 (50HZ ONLY).
10 TO ENABLE LEAD/LAG CUT WIRE 101PP.
11 3P2, RHV AND ASSOCIATED WIRING ARE PRESENT ONLY IF DEHUMIDIFICATION OPTION IS INSTALLED. FOR ADDITIONAL WIRING SEE CO2 SENSOR/VENTILATION OVERRIDE ACCESSORY DIAGRAM
12 CUT AND ISOLATE WIRE 124GV(VID) IF DEHUMIDIFICATION OPTION IS INSTALLED.

4366-1042 H

Diagram 28
Novar Schematic -
2024

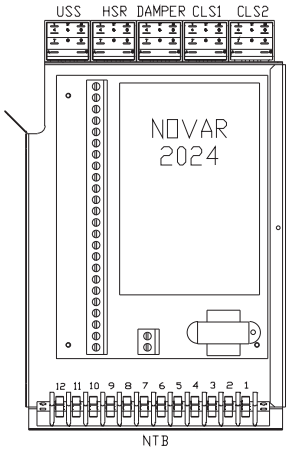


REF	DESCRIPTION
AH	ELECTRIC HTR A COIL
CC1	CPR CONTACTOR 1 COIL
CC2	CPR CONTACTOR 2 COIL
CFS	CLOGGED FILTER SWITCH
CLS-1	COOL STATUS RELAY 1
CLS-2	COOL STATUS RELAY 2
DAMPER	DAMPER
ECA	ECONOMIZER ACTUATOR
FFS	FAN FAIL SWITCH
GV	GAS VALVE
HSR	HEAT STATUS RELAY
LTB	LOW VOLTAGE TERM BLOCK
MAS	MIXED AIR SENSOR
NLTB	NOVAR LOW VOLTAGE TERM BLOCK
NOVAR	NOVAR 2024 CONTROLLER
NTB	NOVAR TERMINAL BLOCK
RST	100K OHM CARBON FILM RESISTOR
RTRM	REFRIGERATION MODULE
RTS	NOVAR REMOTE TEMP SENSOR
SAS	SUPPLY AIR SENSOR
TNS1	LOW VOLTAGE TRANSFORMER
USS	UNIT SHUTDOWN STATUS RELAY

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

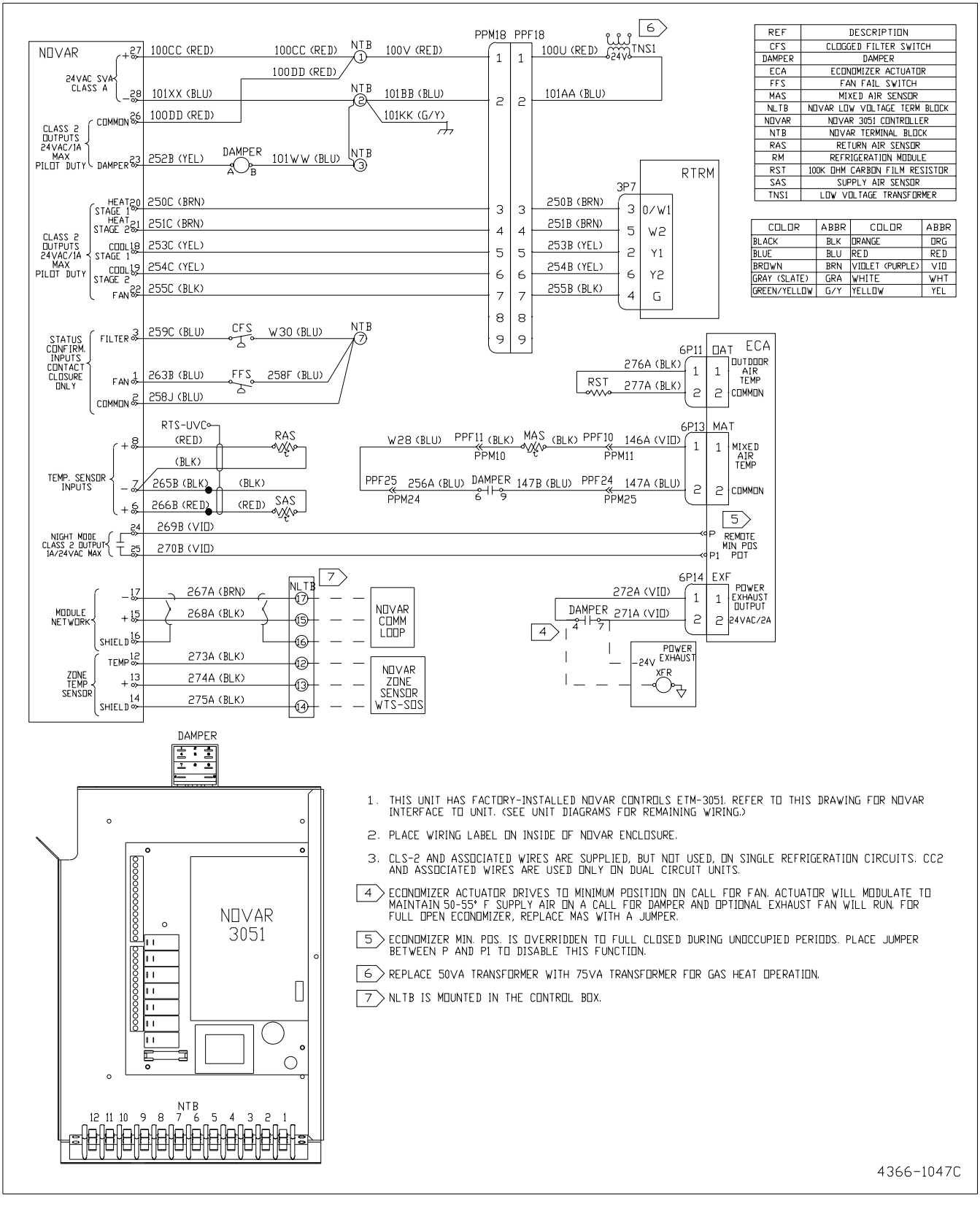
1. THIS UNIT HAS FACTORY-INSTALLED NOVAR CONTROLS ETM-2024. REFER TO THIS DRAWING FOR NOVAR INTERFACE TO UNIT. (SEE UNIT DIAGRAMS FOR REMAINING WIRING.)
2. PLACE WIRING LABEL ON INSIDE OF NOVAR ENCLOSURE.
3. CLS-2 AND ASSOCIATED WIRES ARE SUPPLIED, BUT NOT USED, ON SINGLE REFRIGERATION CIRCUITS. CC2 AND ASSOCIATED WIRES ARE USED ONLY ON DUAL CIRCUIT UNITS.

4. ECONOMIZER ACTUATOR DRIVES TO MIN. POS.ON CALL FOR FAN. ACTUATOR WILL MODULATE TO MAINTAIN 50-55° F SUPPLY AIR ON A CALL FOR DAMPER AND OPTIONAL X FAN WILL RUN. FOR FULL OPEN ECONOMIZER, REPLACE MAS WITH A JUMPER.
5. ECONOMIZER MIN. POS. IS OVERRIDDEN TO FULL CLOSED DURING UNOCCUPIED PERIODS. PLACE JUMPER BETWEEN P AND P1 TO DISABLE THIS FUNCTION.
6. REPLACE 50VA TRANSFORMER WITH 75VA TRANSFORMER FOR GAS HEAT OPERATION.
7. TO SHUT DOWN THE UNIT FOR EMERGENCY STOP, REMOVE JUMPER AND WIRE SMOKE DETECTOR BETWEEN THE TERMINALS. RE-LABEL/RE-ASSIGN NOVAR "FILTER STATUS" INPUT AS "SMOKE DETECTOR STATUS".
8. CONNECT WIRE W26 IN THE HEAT SECTION OF THE UNIT AT THE GAS VALVE OR THE ELECTRIC HEAT RELAY.
9. TO USE NOVAR STATUS INPUT AS CLOGGED FILTER, REMOVE THE JUMPER FROM NTB-9 & NTB-10, AND INSTALL BETWEEN NTB-5 AND NTB-6.
10. NLTB IS MOUNTED IN THE CONTROL BOX.



4366-1099D

Diagram 29
Novar Schematic -
3051



REF	DESCRIPTION
CFS	CLOGGED FILTER SWITCH
DAMPER	DAMPER
ECA	ECONOMIZER ACTUATOR
FFS	FAN FAIL SWITCH
MAS	MIXED AIR SENSOR
NLTB	NOVAR LOW VOLTAGE TERM BLOCK
NOVAR	NOVAR 3051 CONTROLLER
NTB	NOVAR TERMINAL BLOCK
RAS	RETURN AIR SENSOR
RM	REFRIGERATION MODULE
RST	100K OHM CARBON FILM RESISTOR
SAS	SUPPLY AIR SENSOR
TNS1	LOW VOLTAGE TRANSFORMER

COLOR	ABBR	COLOR	ABBR
BLACK	BLK	ORANGE	ORG
BLUE	BLU	RED	RED
BROWN	BRN	VIOLET (PURPLE)	VIO
GRAY (SLATE)	GRA	WHITE	WHT
GREEN/YELLOW	G/Y	YELLOW	YEL

1. THIS UNIT HAS FACTORY-INSTALLED NOVAR CONTROLS ETM-3051. REFER TO THIS DRAWING FOR NOVAR INTERFACE TO UNIT. (SEE UNIT DIAGRAMS FOR REMAINING WIRING.)
2. PLACE WIRING LABEL ON INSIDE OF NOVAR ENCLOSURE.
3. CLS-2 AND ASSOCIATED WIRES ARE SUPPLIED, BUT NOT USED, ON SINGLE REFRIGERATION CIRCUITS. CC2 AND ASSOCIATED WIRES ARE USED ONLY ON DUAL CIRCUIT UNITS.

4 ECONOMIZER ACTUATOR DRIVES TO MINIMUM POSITION ON CALL FOR FAN. ACTUATOR WILL MODULATE TO MAINTAIN 50-55° F SUPPLY AIR ON A CALL FOR DAMPER AND OPTIONAL EXHAUST FAN WILL RUN. FOR FULL OPEN ECONOMIZER, REPLACE MAS WITH A JUMPER.

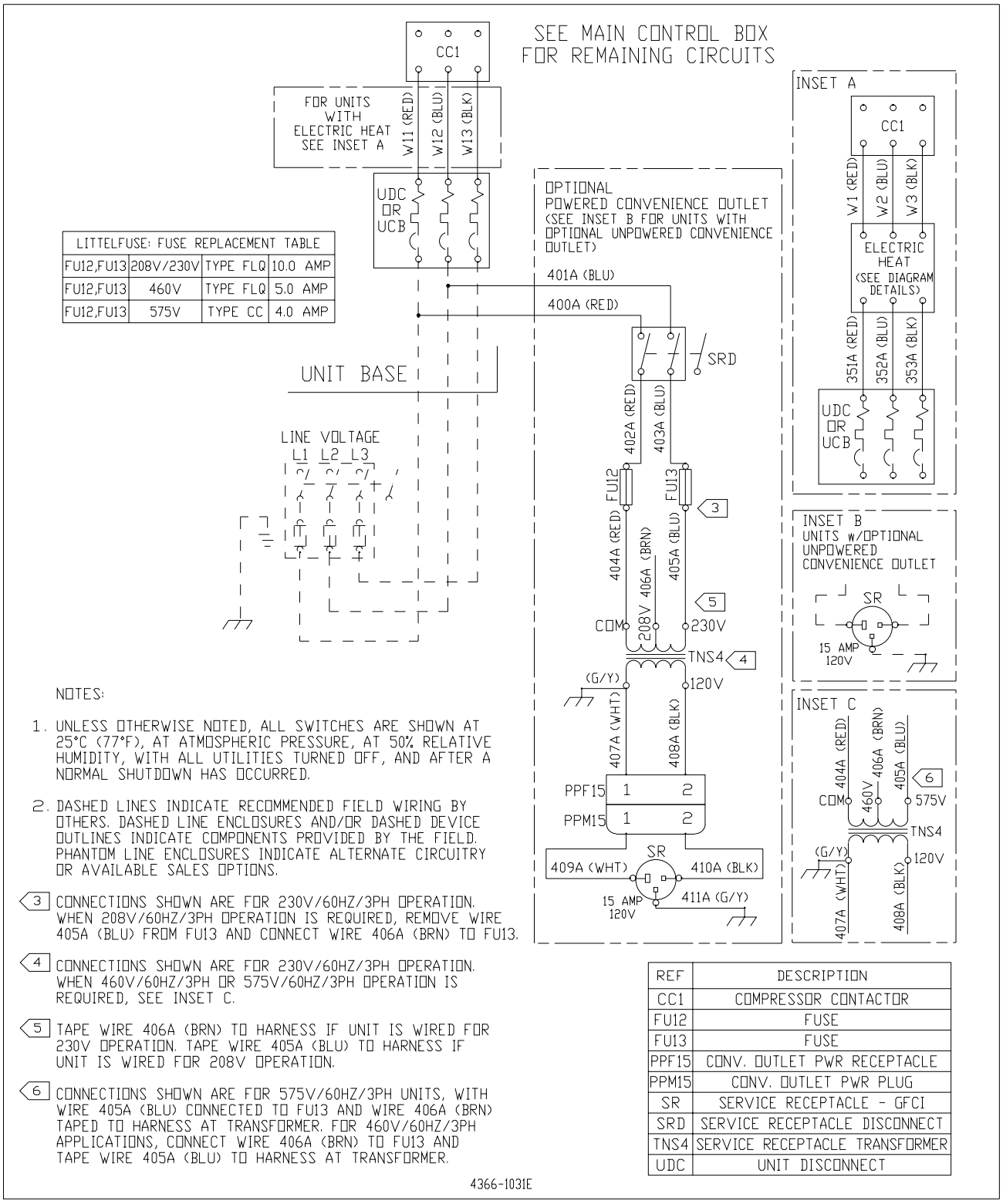
5 ECONOMIZER MIN. POS. IS OVERRIDDEN TO FULL CLOSED DURING UNOCCUPIED PERIODS. PLACE JUMPER BETWEEN P AND P1 TO DISABLE THIS FUNCTION.

6 REPLACE 50VA TRANSFORMER WITH 75VA TRANSFORMER FOR GAS HEAT OPERATION.

7 NLTB IS MOUNTED IN THE CONTROL BOX.

4366-1047C

Diagram 30
Through The Base Utilities Schematic -



LITTELFUSE: FUSE REPLACEMENT TABLE			
FU12,FU13	208V/230V	TYPE FLQ	10.0 AMP
FU12,FU13	460V	TYPE FLQ	5.0 AMP
FU12,FU13	575V	TYPE CC	4.0 AMP

NOTES:

1. UNLESS OTHERWISE NOTED, ALL SWITCHES ARE SHOWN AT 25°C (77°F), AT ATMOSPHERIC PRESSURE, AT 50% RELATIVE HUMIDITY, WITH ALL UTILITIES TURNED OFF, AND AFTER A NORMAL SHUTDOWN HAS OCCURRED.
2. DASHED LINES INDICATE RECOMMENDED FIELD WIRING BY OTHERS. DASHED LINE ENCLOSURES AND/OR DASHED DEVICE OUTLINES INDICATE COMPONENTS PROVIDED BY THE FIELD. PHANTOM LINE ENCLOSURES INDICATE ALTERNATE CIRCUITRY OR AVAILABLE SALES OPTIONS.

<3> CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH OPERATION. WHEN 208V/60HZ/3PH OPERATION IS REQUIRED, REMOVE WIRE 405A (BLU) FROM FU13 AND CONNECT WIRE 406A (BRN) TO FU13.

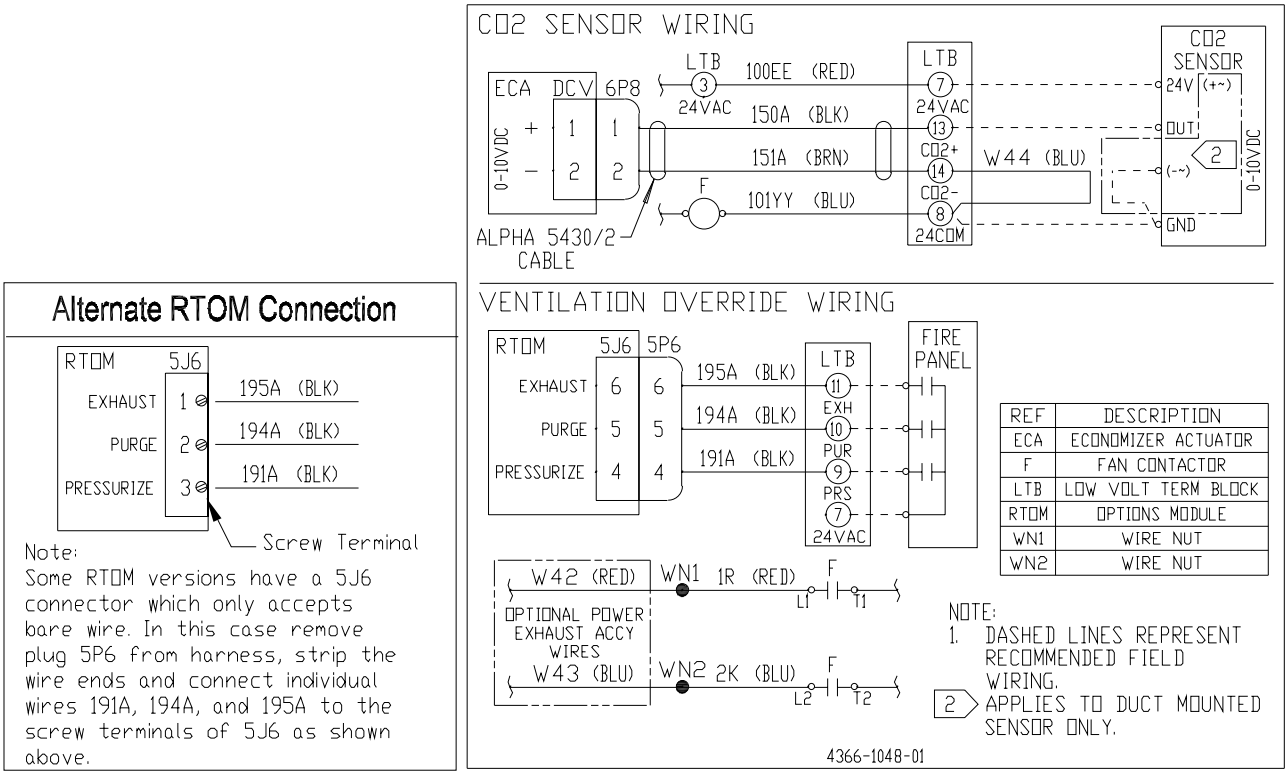
<4> CONNECTIONS SHOWN ARE FOR 230V/60HZ/3PH OPERATION. WHEN 460V/60HZ/3PH OR 575V/60HZ/3PH OPERATION IS REQUIRED, SEE INSET C.

<5> TAPE WIRE 406A (BRN) TO HARNESS IF UNIT IS WIRED FOR 230V OPERATION. TAPE WIRE 405A (BLU) TO HARNESS IF UNIT IS WIRED FOR 208V OPERATION.

<6> CONNECTIONS SHOWN ARE FOR 575V/60HZ/3PH UNITS, WITH WIRE 405A (BLU) CONNECTED TO FU13 AND WIRE 406A (BRN) TAPED TO HARNESS AT TRANSFORMER. FOR 460V/60HZ/3PH APPLICATIONS, CONNECT WIRE 406A (BRN) TO FU13 AND TAPE WIRE 405A (BLU) TO HARNESS AT TRANSFORMER.

REF	DESCRIPTION
CC1	COMPRESSOR CONTACTOR
FU12	FUSE
FU13	FUSE
PPF15	CONV. OUTLET PWR RECEPTACLE
PPM15	CONV. OUTLET PWR PLUG
SR	SERVICE RECEPTACLE - GFCI
SRD	SERVICE RECEPTACLE DISCONNECT
TNS4	SERVICE RECEPTACLE TRANSFORMER
UDC	UNIT DISCONNECT

Diagram 31
CO_2 Sensor / Ventilation Override Schematic



REF	DESCRIPTION
ECA	ECONOMIZER ACTUATOR
F	FAN CONTACTOR
LTB	LOW VOLT TERM BLOCK
RTOM	OPTIONS MODULE
WN1	WIRE NUT
WN2	WIRE NUT

Alternate RTOM Connection

Note:
Some RTOM versions have a 5J6 connector which only accepts bare wire. In this case remove plug 5P6 from harness, strip the wire ends and connect individual wires 191A, 194A, and 195A to the screw terminals of 5J6 as shown above.

Literature Order Number	Y_C-SVE002B-EN
File Number	SV-UN-Y_C-SVE002B-EN 11/04
Supersedes	New
Stocking Location	Webb Mason

The manufacturer has a policy of continuous product and product data improvement and reserves the right to change design and specifications without notice.