

**WARNING**

HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING
REMOTE DISCONNECTS AND FOLLOW LOCK OUT
AND TAG PROCEDURES BEFORE SERVICING.
INSURE THAT ALL MOTOR CAPACITORS HAVE
DISCHARGED STORED VOLTAGE. UNITS WITH
VARIABLE SPEED DRIVE, REFER TO DRIVE
INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE COULD RESULT
IN DEATH OR SERIOUS INJURY.

**AVERTISSEMENT**

TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR
LES SECTIONNEURS
LES PROC

V
DES MOTEURS SONT D
D'UNIT

INSTRUCTIONS DE L'ENTRA
D
UN MANQUEMENT
CI-DESSUS PEUT ENTRA
BLESSURES GRAVES, VOIRE LA MORT.

**ADVERTENCIA**

¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENER
G
INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA
LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO
ANTES DE PROCEDER AL SERVICIO. ASEG
DE QUE TODOS LOS CAPACITORES DEL MOTOR
HAYÁN DESCARGADO EL VOLTAJE ALMACENADO.
PARA LAS UNIDADES CON TRANSMISI
DE VELOCIDAD VARIABLE. CONSULTE LAS
INSTRUCCIONES PARA LA DESCARGA
DEL CONDENSADOR.
NO REALIZAR LO ANTEDICHO PUEDE PROVOCAR
LA MUERTE O LESIONES GRAVES.

NOTICE

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT
DESIGNED TO ACCEPT OTHER
TYPES OF CONDUCTORS.
FAILURE TO DO THE ABOVE COULD
RESULT IN EQUIPMENT DAMAGE.

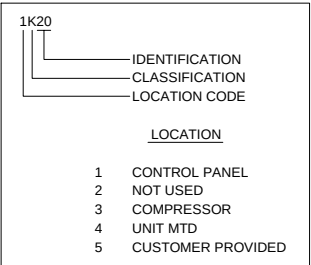
AVIS

N'UTILISER QUE DES CONDUCTEURS
EN CUIVRE!
LES BORNES DE L'UNIT
PAS CON
D'AUTRES TYPES DE CONDUCTEURS.
UN MANQUEMENT
CI-DESSUS PEUT ENTRA
DES DOMMAGES

AVISO

CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO
EST
OTROS TIPOS DE CONDUCTORES.
NO REALIZAR LO ANTEDICHO PUEDE
PROVOCAR DA

DEVICE	DESCRIPTION	ZONE
	?	4-172
1A1	SYMBIO 800 UNIT CONTROLLER	2-72
1A2	MODULE, POWER SUPPLY	2-53
1A3	MODULE, STARTER	3-103
1A4	MODULE, HIGH PRESSURE CUTOUT	3-110
1A5	MODULE, SLIDE VALVE UNLOAD/LOAD	3-118
1A7	MODULE, CONDENSER/CHILLED WATER FLOW SWITCH INTERLOCKS	3-144
1A8	ICE BUILDING	3-136
1A9	CONDENSER/CHILLED WATER WATER PUMP STARTER	3-0
1A10	MODULE, (OPTIONAL) OPERATING STATUS PROGRAMMABLE RELAYS	4-217
1A11	MODULE, OIL LOSS LEVEL	4-172
1A12	MODULE, AUTO STOP/EMERGENCY STOP	4-162
1A13	MODULE, (OPTIONAL) CONDENSER CONTROL OUTPUT & COMPRESSOR % RLA OUTPUT	4-185
1A14	MODULE, (OPTIONAL) EXTERNAL CURRENT LIMIT AND EXTERNAL CHILLED WATER SETPOINT	4-197
1A15	MODULE, (OPTIONAL) ICE/EXTERNAL BASE LOAD	4-184
1A16	OPTIONAL LONTALK INTERFACE	2-72
1A17	MODULE, (OPTIONAL) REFRIGERANT MONITOR INPUT & EXTERNAL BASELOAD SETPOINT INPUT	4-199
1A18	MODULE, OIL PURGE SOLENOID VALVE	3-126
1A20	ADAPTIVIEW DISPLAY MONITOR	2-44
1F1	PRIMARY FUSES-CONTROL POWER TRANSFORMER, UNDER/OVER VOLTAGE MODULE	2-23
1F2	PRIMARY FUSES-CONTROL POWER TRANSFORMER, UNDER/OVER VOLTAGE MODULE	2-23
1F3	PRIMARY FUSES-CONTROL POWER TRANSFORMER, UNDER/OVER VOLTAGE MODULE	2-23
1F4	SECONDARY FUSE-CONTROL POWER TRANSFORMER, 115V	2-46
1F5	SECONDARY FUSE-CONTROL POWER TRANSFORMER, 27V	2-46
1F6	SECONDARY FUSE-CONTROL POWER TRANSFORMER, 27V	2-46
1K1	START CONTACTOR	3-93
1K2	RUN CONTACTOR	3-97
1K3	SHORTING CONTACTOR	3-100
1K4	TRANSITION CONTACTOR	3-103
1K11	START CONTACTOR	3-89
1P1	ENERGY METER	2-13
1Q1	CIRCUIT BREAKER	2-4
1R1	TRANSITION RESISTOR	2-35
1R2	TRANSITION RESISTOR	2-32
1R3	TRANSITION RESISTOR	2-29
1T1	CONTROL POWER TRANSFORMER	2-44
1T2-1	CURRENT TRANSFORMERS	2-15
1T2-2	CURRENT TRANSFORMERS	2-17
1T2-3	CURRENT TRANSFORMERS	2-19
1T3-1	UNDER OVER VOLTAGE TRANSFORMERS	2-32
1T3-2	UNDER OVER VOLTAGE TRANSFORMERS	2-32
1T3-3	UNDER OVER VOLTAGE TRANSFORMERS	2-32
1T5-1	CURRENT TRANSFORMERS; ENERGY METER	2-13
1T5-2	CURRENT TRANSFORMERS; ENERGY METER	2-11
1T5-3	CURRENT TRANSFORMERS; ENERGY METER	2-9
1X3-1	UNDER OVER VOLTAGE TERMINAL BLOCK	2-28
1X5-1	CONTROL TERMINAL BLOCK 115V	3-81
1X6-1	FIELD FLOW SWITCH TERMINAL BLOCK	3-141
3M1	COMPRESSOR MOTOR	2-29
3Y1	LOAD SOLENOID VALVE	3-116
3Y2	UNLOAD SOLENOID VALVE	3-118
4B2	OIL LOSS LEVEL OPTICAL SENSOR	4-170
4B3	EVAPORATOR REFRIGERANT LIQUID LEVEL	2-58
4B20	EVAPORATOR ENTRANCE WATER	2-45
4B21	EVAPORATOR LEAVING WATER	2-47
4B22	CONDENSER ENTRANCE WATER	2-50
4B23	CONDENSER LEAVING WATER	2-53
4B24	OIL PRESSURE TRANSDUCER	2-55
4B25	EVAPORATOR REFRIGERANT PRESSURE	2-61
4B26	CONDENSER REFRIGERANT PRESSURE	2-63
4B27	COMPRESSOR DISCHARGE TEMPERATURE	2-66
4B29	HIGH PRESSURE CUTOOUT SWITCH	3-86
4E1	OIL SUMP HEATERS	3-81
4E2	OIL SUMP HEATERS	3-82
4Y3	MASTER OIL LINE SOLENOID	3-83
4Y4	OIL PURGE VALVE	3-126
4Y20	DUAL PORT ELECTRONIC EXPANSION VALVE ACTUATOR 1	2-42
4Y21	DUAL PORT ELECTRONIC EXPANSION VALVE ACTUATOR 2	2-39
5A1	WI-FI INTERFACE	2-65
5A2	AIR-FI INTERFACE	2-57
5A3	LTE INTERFACE	2-75
5B28	OUTDOOR AIR TEMPERATURE	2-63
5K1	CHILLED WATER PUMP STARTER	3-141
5K2	CONDENSER WATER PUMP STARTER	3-143
5K4	UNIT STATUS RELAYS	4-207
5K5	UNIT STATUS RELAYS	4-208
5K6	UNIT STATUS RELAYS	4-210
5K7	UNIT STATUS RELAYS	4-211
5K8	UNIT STATUS RELAYS	4-213
5K9	UNIT STATUS RELAYS	4-214
5K10	UNIT STATUS RELAYS	4-216
5K11	UNIT STATUS RELAYS	4-217
5K12	ICE BUILDING CONTROL	4-183
5K13	EXTERNAL BASE LOAD ENABLE	4-181
5K20	ICE BUILDING STATUS	3-136
5K21	EXTERNAL AUTO STOP	4-161
5K22	EXTERNAL EMERGENCY STOP	4-159
5S1	CHILLED WATER	3-141
5S2	CONDENSER WATER	3-143



COLOR CODE	
BK	BLACK
BN	BROWN
BU	BLUE
GY	GRAY
RD	RED
WH	WHITE
GN	GREEN
OG	ORANGE
YE	YELLOW

CPT FUSE REPLACEMENT TABLE					
FUSE-VOLTAGE	200V	230V	380V	460-575V	
1F1	10	8	5	4	
1F2	10	8	5	4	
1F3	3	3	3	3	
1F4	10	10	10	10	
1F5	6	6	6	6	
1F6	6	6	6	6	

—————	TRANE WIRING
—————	CUSTOMER WIRING
— · — · —	OPTIONS

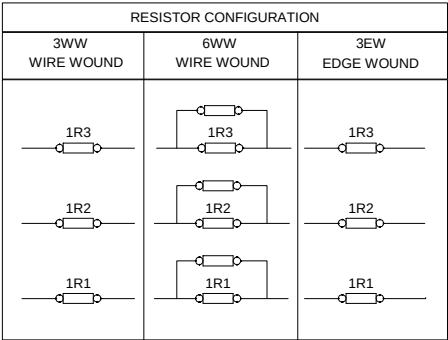


TABLE 1		
TRANSITION RESISTOR CONFIGURATION		
VOLTS	RLA	CONFIGURATION
200	477-606	6WW
	607-779	6WW
	399-476	6WW
230	477-606	6WW
	607-779	3EW
	0-277	6WW
346-480	278-364	6WW
	365-398	6WW
	399-476	3EW
	477-606	3EW
550-600	0-277	6WW
	278-364	3EW
	399-476	3EW

- NOTES:
- 1

CLASS 1 FIELD WIRED MODULE
- 2

CLASS 1 FIELD WIRING INSULATION RATING IS REQUIRED TO BE EQUAL TO OR GREATER THAN THE EQUIPMENT SUPPLY VOLTAGE RATING.
CLASS 2 FIELD WIRE INSULATION TO BE RATED AT 300V MINIMUM.
- 3

OPTIONAL MODULES. REFER TO FIELD WIRING DIAGRAM FOR SUGGESTED WIRING.
- 4

TRANSITION RESISTORS SHOWN MAY BE COMPRISED OF ONE OR TWO RESISTORS. DEPENDING ON RLA RATING OF COMPRESSOR. REFER TO TABLE 1 FOR RESISTOR CONFIGURATION.
- 5

FIELD ASSIGNED PROGRAMMABLE RELAYS.
- 6

AUTO/STOP, EMERGENCY STOP THE CONTACTS ARE JUMPED AT THE FACTORY BY JUMPERS W1 & W2 TO ENABLE UNIT OPERATION. IF REMOTE CONTROL IS DESIRED REMOVE THE JUMPERS AND CONNECT TO THE DESIRED CONTROL CIRCUIT.
- 7

RELAY AT 120VAC: 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, 1/3 HP, 7.2 FLA
AT 240VAC: 5 AMPS GENERAL PURPOSE.
- 8

CONNECT WIRE SHIELD TO GROUND IN CONTROL PANEL.
- 9

RELAY ENERGIZED WHILE MAKING ICE.
- 10

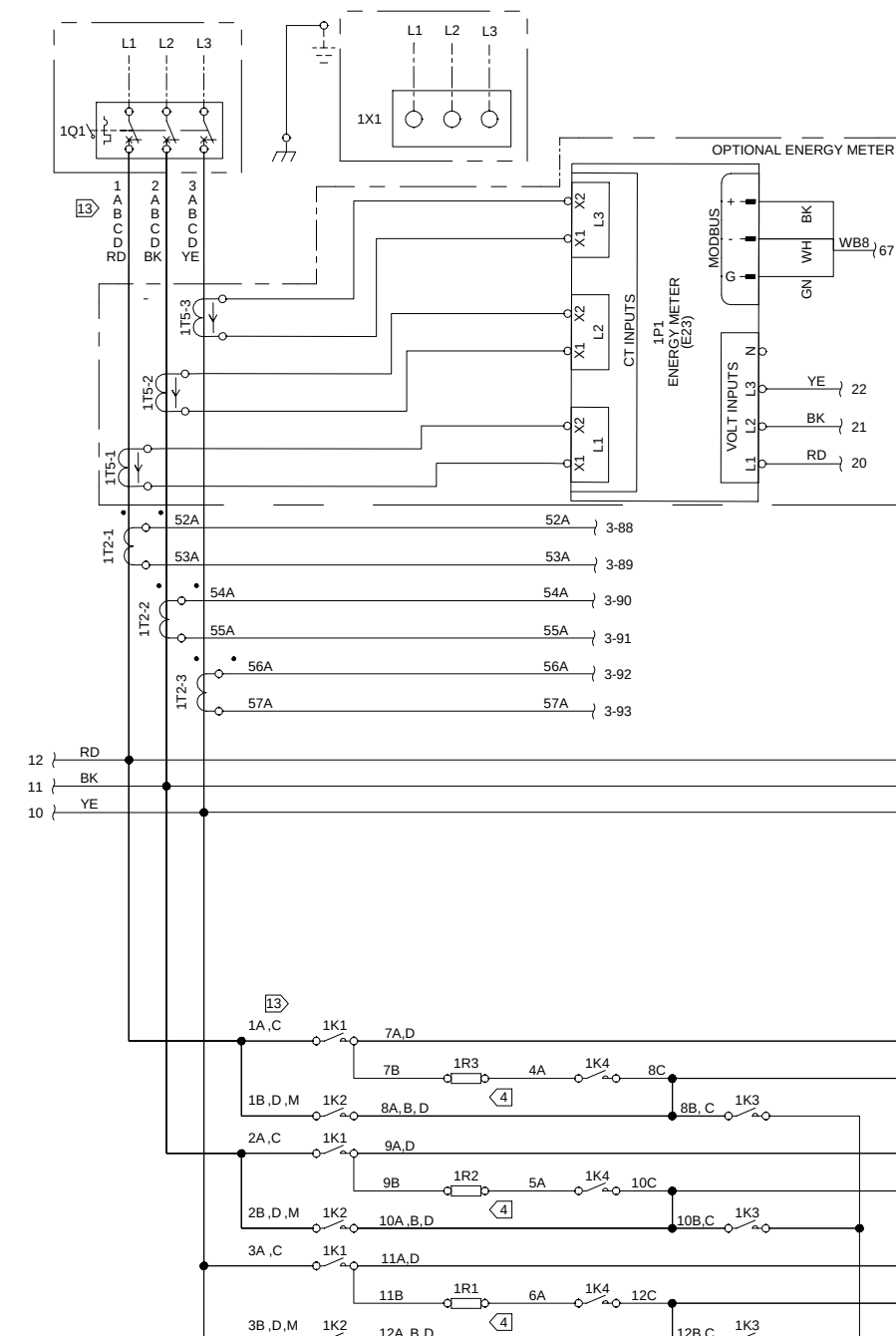
CONTACT CLOSURE ENABLES ICE MAKING.
- 11

CLOSED CONTACT COMMANDS BASE LOADING OPERATION.
- 12

ACTUAL BASE LOADING SETPOINT USED IS SETABLE AT FRONT PANEL. REFER TO IOM FOR DETAILS.
- 13

WIRES 1C, 1D, 2C, 2D, 3C, 3D, 7D, 8D, 9D,10D, 11D, 12D ARE ONLY PRESENT WHERE PARALLEL WIRE SETS ARE USED.

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
26
27
28
29
30
31
32
33
34
35
36
37
38
39
40
41
42
43
44
45
46
47
48
49
50
51
52
53
54
55
56
57
58
59
60
61
62
63
64
65
66
67
68
69
70
71
72
73
74
75



⚠ WARNING

HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING
REMOTE DISCONNECTS AND FOLLOW LOCK OUT
AND TAG PROCEDURES BEFORE SERVICING.
INSURE THAT ALL MOTOR CAPACITORS HAVE
DISCHARGED STORED VOLTAGE. UNITS WITH
VARIABLE SPEED DRIVE, REFER TO DRIVE
INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE COULD RESULT
IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT

TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRI
LES SECTIONNEURS
LES PROC

V
DES MOTEURS SONT D
D'UNIT

INSTRUCTIONS DE L'ENTRA
D

UN MANQUEMENT
CI-DESSUS PEUT ENTRA
BLESSURES GRAVES, VOIRE LA MORT.

⚠ ADVERTENCIA

¡VOLTAGE PELIGROSO!
DESCONECTE TODA LA ENERGI
INCLUSO LAS DESCONECIONES REMOTAS Y SIGA
LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO
ANTES DE PROCEDER AL SERVICIO. ASEG
DE QUE TODOS LOS CAPACITORES DEL MOTOR
HAYAN DESCARGADO EL VOLTAGE ALMACENADO.
PARA LAS UNIDADES CON TRANSMISI
DE VELOCIDAD VARIABLE, CONSULTE LAS
INSTRUCCIONES PARA LA DESCARGA
DEL CONDENSADOR.
NO REALIZAR LO ANTEDICHO PUEDE PROVOCAR
LA MUERTE O LESIONES GRAVES.

NOTICE

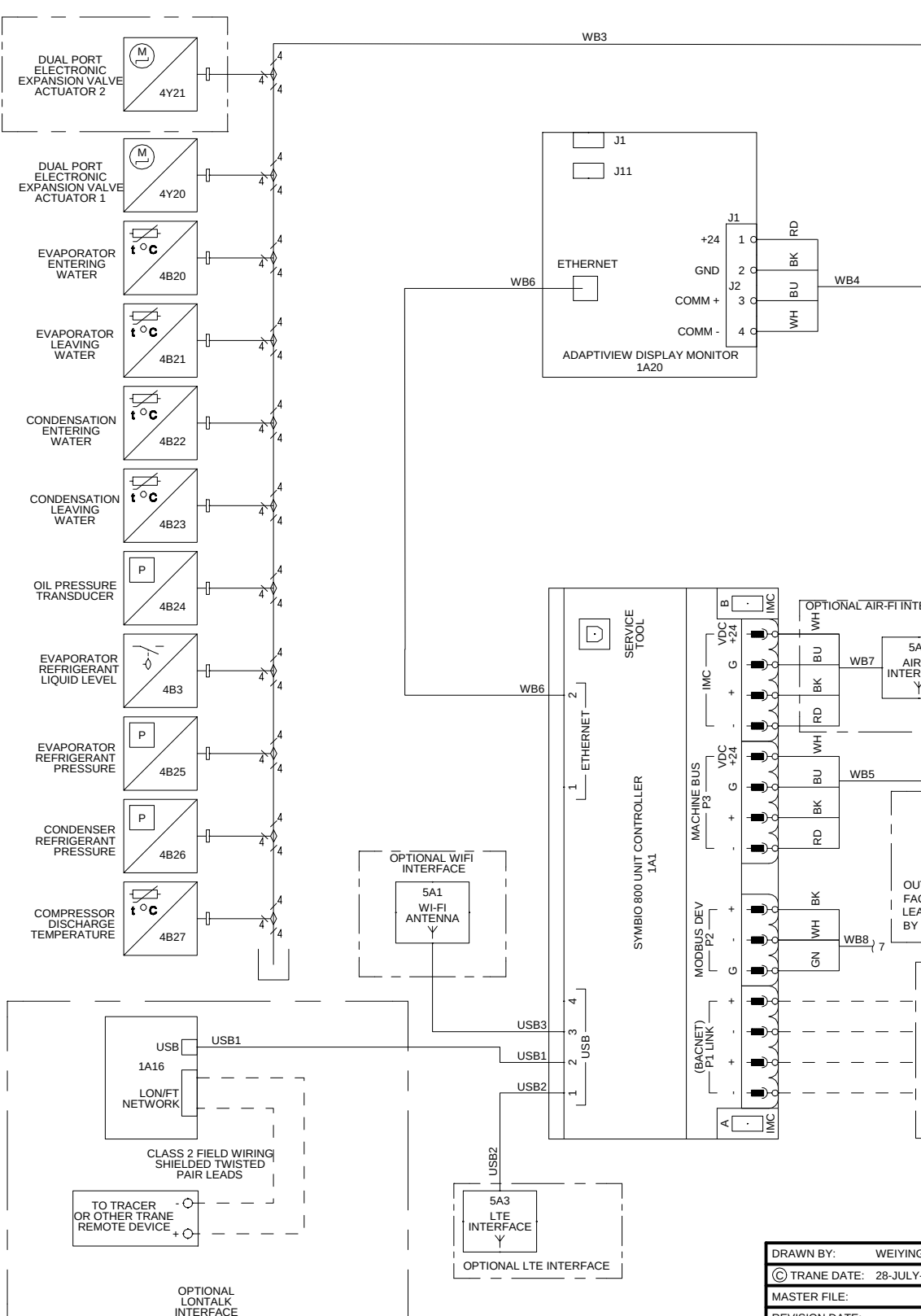
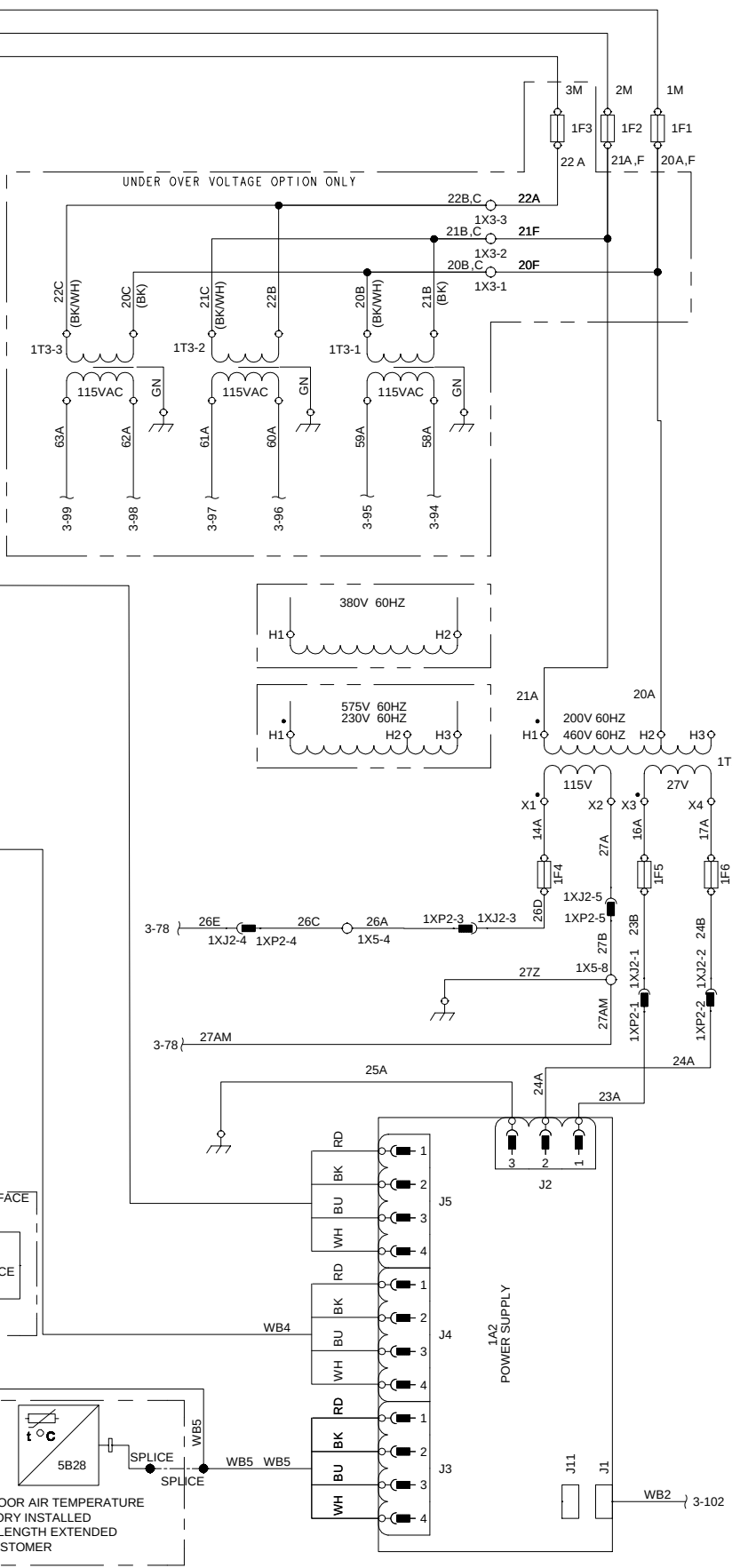
USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT
DESIGNED TO ACCEPT OTHER
TYPES OF CONDUCTORS.
FAILURE TO DO THE ABOVE COULD
RESULT IN EQUIPMENT DAMAGE.

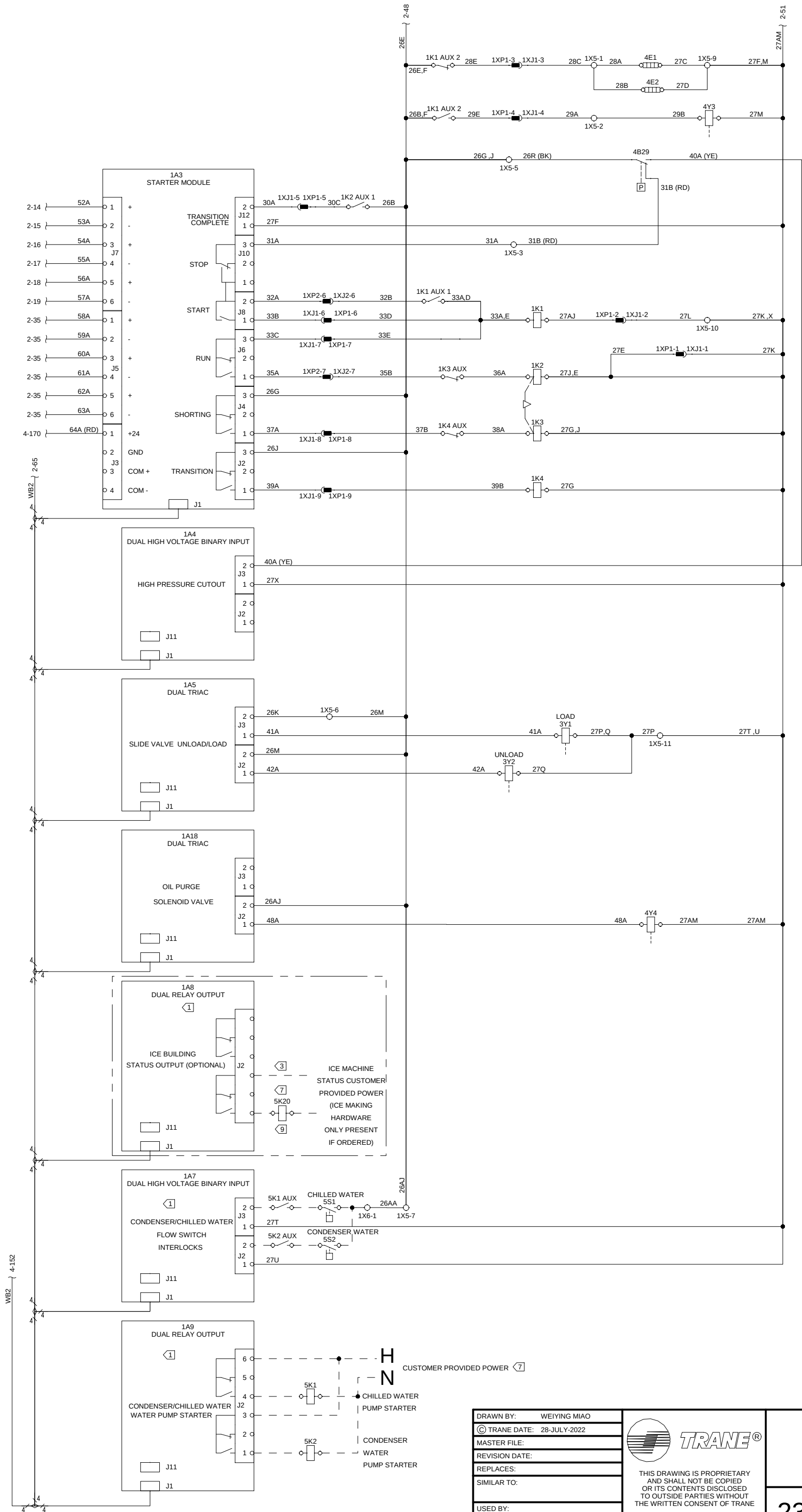
AVIS

NUTILISER QUE DES CONDUCTEURS
EN CUIVRE!
LES BORNES DE L'UNIT
PAS CON
D'AUTRES TYPES DE CONDUCTEURS.
UN MANQUEMENT
CI-DESSUS PEUT ENTRA
DES DOMMAGES

AVISO

CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO
EST
OTROS TIPOS DE CONDUCTORES.
NO REALIZAR LO ANTEDICHO PUEDE
PROVOCAR DA





NOTICE

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO
ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO THE ABOVE COULD
RESULT IN EQUIPMENT DAMAGE.

AVIS

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNIT
PAS CON
D'AUTRES TYPES DE CONDUCTEURS.
UN MANQUEMENT
CI-DESSUS PEUT ENTRA
DES DOMMAGES

AVISO

LAS TERMINALES DE LA UNIDAD NO
EST
OTROS TIPOS DE CONDUCTORES.
NO REALIZAR LO ANTEDICHO PUEDE
PROVOCAR DA

⚠ WARNING

HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING
REMOTE DISCONNECTS AND FOLLOW LOCK OUT
AND TAG PROCEDURES BEFORE SERVICING.
INSURE THAT ALL MOTOR CAPACITORS HAVE
DISCHARGED STORED VOLTAGE. UNITS WITH
VARIABLE SPEED DRIVE, REFER TO DRIVE
INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE COULD RESULT
IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT

TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR
LES SECTIONNEURS
LES PROC

V
DES MOTEURS SONT D
D'UNIT

INSTRUCTIONS DE L'ENTRA
D

UN MANQUEMENT
CI-DESSUS PEUT ENTRA
BLESSURES GRAVES, VOIRE LA MORT.

⚠ ADVERTENCIA

¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERG
INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA
LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO
ANTES DE PROCEDER AL SERVICIO. ASEG
DE QUE TODOS LOS CAPACITORES DEL MOTOR
HAYAN DESCARGADO EL VOLTAJE ALMACENADO.
PARA LAS UNIDADES CON TRANSMISI
DE VELOCIDAD VARIABLE, CONSULTE LAS
INSTRUCCIONES PARA LA DESCARGA
DEL CONDENSADOR.
NO REALIZAR LO ANTEDICHO PUEDE PROVOCAR
LA MUERTE O LESIONES GRAVES.

DRAWN BY:	WEIYING MIAO
© TRANE DATE:	28-JULY-2022
MASTER FILE:	
REVISION DATE:	
REPLACES:	
SIMILAR TO:	
USED BY:	

THIS DRAWING IS PROPRIETARY
AND SHALL NOT BE COPIED
OR ITS CONTENTS DISCLOSED
TO OUTSIDE PARTIES WITHOUT
THE WRITTEN CONSENT OF TRANE

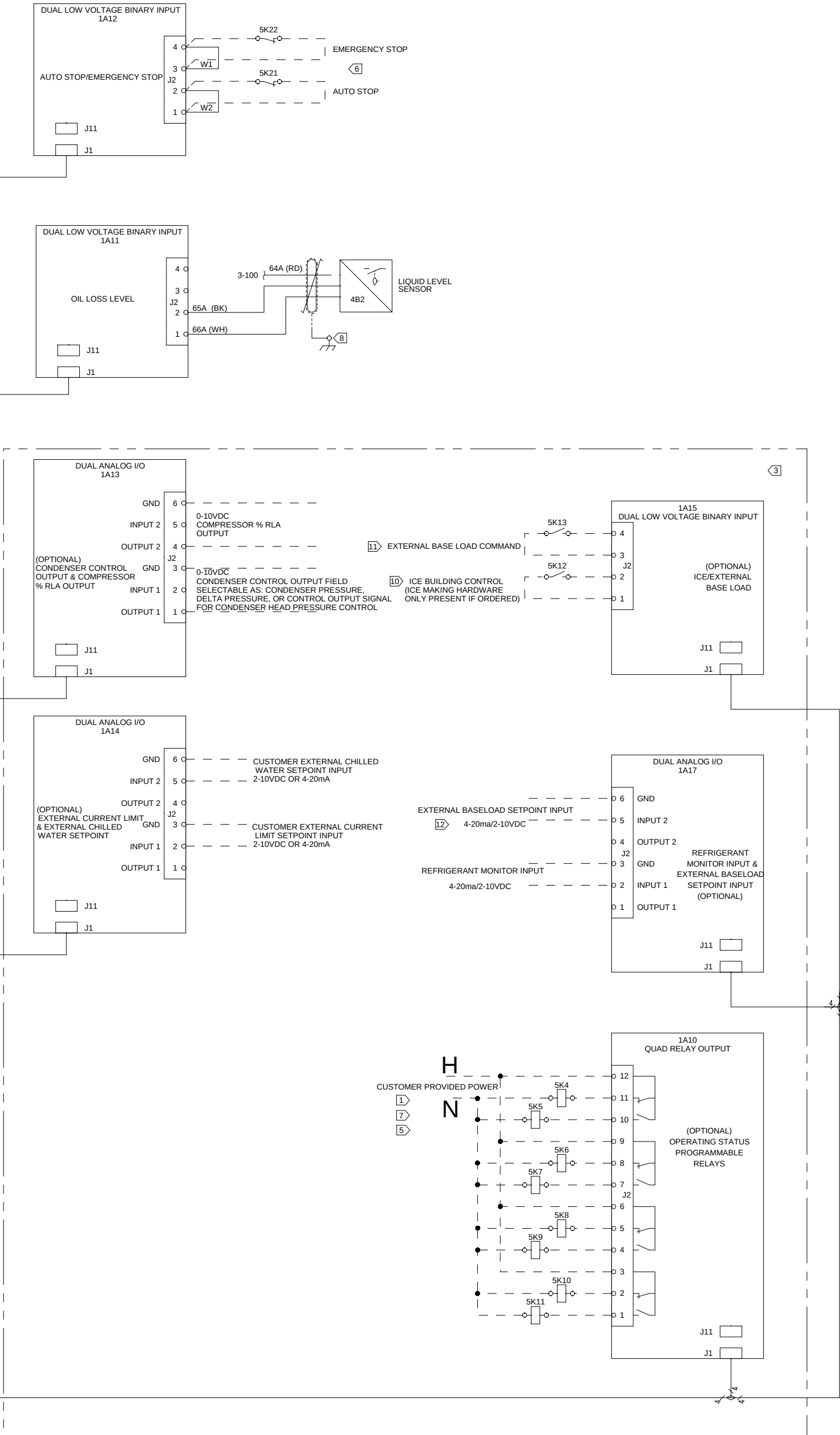
CAD: CREO SCHEMATICS

SCHEMATIC
RTHD
WYE DELTA STARTER

23116082

SHEET
3

REV
A



NOTICE

USE COPPER CONDUCTORS ONLY!
UNIT TERMINALS ARE NOT DESIGNED TO
ACCEPT OTHER TYPES OF CONDUCTORS.
FAILURE TO DO THE ABOVE COULD
RESULT IN EQUIPMENT DAMAGE.

AVIS

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!
LES BORNES DE L'UNIT
PAS CON
D'AUTRES TYPES DE CONDUCTEURS.
UN MANQUEMENT
CI-DESSUS PEUT ENTRA
DES DOMMAGES

AVISO

LAS TERMINALES DE LA UNIDAD NO
EST
OTROS TIPOS DE CONDUCTORES.
NO REALIZAR LO ANTEDICHO PUEDE
PROVOCAR DA

WARNING

HAZARDOUS VOLTAGE!
DISCONNECT ALL ELECTRIC POWER INCLUDING
REMOTE DISCONNECTS AND FOLLOW LOCK OUT
AND TAG PROCEDURES BEFORE SERVICING.
INSURE THAT ALL MOTOR CAPACITORS HAVE
DISCHARGED STORED VOLTAGE. UNITS WITH
VARIABLE SPEED DRIVE, REFER TO DRIVE
INSTRUCTIONS FOR CAPACITOR DISCHARGE.
FAILURE TO DO THE ABOVE COULD RESULT
IN DEATH OR SERIOUS INJURY.

AVERTISSEMENT

TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR
LES SECTIONNEURS
LES PROC

V
DES MOTEURS SONT D
D'UNIT

INSTRUCTIONS DE L'ENTRA
D
UN MANQUEMENT
CI-DESSUS PEUT ENTRA
BLESSURES GRAVES, VOIRE LA MORT.

ADVERTENCIA

¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERG
INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA
LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO
ANTES DE PROCEDER AL SERVICIO. ASEG
DE QUE TODOS LOS CAPACITORES DEL MOTOR
HAYAN DESCARGADO EL VOLTAJE ALMACENADO.
PARA LAS UNIDADES CON TRANSMISI
DE VELOCIDAD VARIABLE, CONSULTE LAS
INSTRUCCIONES PARA LA DESCARGA
DEL CONDENSADOR.
NO REALIZAR LO ANTEDICHO PUEDE PROVOCAR
LA MUERTE O LESIONES GRAVES.