1U33 MCM MULTIPLE CIRCUIT MODULE

24 VAC (IN)
LINE 60 — 1TB4-3 (42) D P2-4 — J2-4 (+)
LINE 59 — 1TB4-22 (52) D P2-3 — J2-3 (−)

(+) J1-3 — P1-3 — D — 1TB12-B (283) — LINE 61
(−) J1-4 — P1-4 — D — 1TB12-D (284) — LINE 62

IPC

(+) 115 VAC (−)
LINE 58
1TB2-5 (63) — AC, AE, AD, AA
1TB2-12 (87) — AC, AB

4RT7 — 220A P3-2 — J3-2 / 221A P3-3 — J3-3 — EVAPORATOR TEMPERATURE CKT #1

DO NOT JUMPER
45 SEE INSET "B"
2S21 — 907A — 2S20 — G 1TB5-5 (202) C P3-17 — J3-17
41
G 1TB5-6 (203) C P3-18 — J3-18
LOW PRESSURE CUTOUT CKT #1

2RT14 — 222A P3-6 — J3-6 / 223A P3-7 — J3-7 — SATURATED CONDENSER TEMPERATURE CKT #1

45 SEE INSET "C"
1K5(AUX) C NO — 908A — 1K4 (AUX) C NO — 47E P3-10 — J3-10
48E P3-11 — J3-11
CKT #1 PROVING INPUT

DO NOT JUMPER
45 SEE INSET "D"
2S30 — 909A — 2S29 — C 1TB5-7 (224) A P3-14 — J3-14
41
C 1TB5-8 (225) A P3-15 — J3-15
LOW PRESSURE CUTOUT CKT #3

4RT8 — 226A P13-2 — J13-2 / 227A P13-3 — J13-3 — EVAPORATOR TEMPERATURE CKT #2

DO NOT JUMPER
2S18 — G 1TB5-9 (228) A P13-16 — J13-16
41
G 1TB5-10 (229) A P13-17 — J13-17
LOW PRESSURE CUTOUT CKT #2

2RT15 — 230A P13-6 — J13-6 / 231A P13-7 — J13-7 — SATURATED CONDENSER TEMPERATURE CKT #2

1K2 (AUX) C NO — 55D P13-10 — J13-10 / 56D P13-11 — J13-11 — CKT #2 PROVING INPUT

DO NOT JUMPER
2S19 — C 1TB5-11 (232) A P13-13 — J13-13
41
C 1TB5-12 (233) A P13-14 — J13-14
LOW PRESSURE CUTOUT CKT #4

CIRCUIT 1 — K11 — J12-9 — 75B P12-9 — J12-11 — E 1TB3-2 (71) G — 1CB4 (AUX) C NO — 1CB5 (AUX) C NO — 900A — D 1TB3-3 (69) E — 2B4S12 — 901A — 2B5S13 — E 1TB3-4 (68) F — 2S4 — 902A — 902B — 2S5 — AE
42
CIRCUIT 3 — K12 — J12-5 — 86B P12-5 — J12-7 — C 1TB3-5 (67) E — 1CB6 (AUX) C NO — 903A — 1CB9 (AUX) C NO — C 1TB3-6 (84) D — 2B6S14 — 904A — 2B7S15 — E 1TB3-7 (85) J — 2S9 — 905A — 905B — 2S10 — AA

COMPR D — C 1K5 N — 45 SEE INSET "A"
COMPR C — 75B,C 1K4 L,N — 1K5-38,39,40 1K5-129 1K4-34,35,36 1K4-129
COMPR F — C 1K20 AA
COMPR E — 86B,C 1K19 AA,AB — 1K20-46,47,48 1K20-155 1K19-42,43,44 1K19-155

INSET " A "
COMPR C — 75B — 1K4 — 87L,N
COMPR D — D 1K5 — 87N
COMPR E — 86B,D 1K19 — 87AB

CIRCUIT 2 — K3 — J18-5 — P18-5 — J18-7 — A 1TB3-8 (78) J — 1CB2 (AUX) C NO — J 1TB3-9 (79) K — 2B2S10 — J 1TB3-10 (80) K — 2S2 — AC
42
CIRCUIT 4 — K4 — J18-1 — P18-1 — J18-3 — A 1TB3-11 (94) C — 1CB3 (AUX) C NO — C 1TB3-12 (95) D — 2B3S11 — C 1TB3-13 (96) D — 2S3 — AD

COMPR A — 90C — 1K2 — AC, M — 1K2-26,27,28 1K2-141
COMPR B — 81B — 1K3 — L,M — 1K3-30,31,32 1K3-166

INSET " B "
2S20 — G 1TB5-5 (202) C P3-17 — J3-17
J 1TB5-6 (203) C P3-18 — J3-18
1U33

INSET " C "
1K4 (AUX) C NO — 47E P3-10 — J3-10
48F P3-11 — J3-11
1U33

INSET " D "
2S21 — 911A — 2S29 — C 1TB5-7 (224) A P3-14 — J3-14
D 1TB5-8 (225) A P3-15 — J3-15
1U33

INSET " E "
1K5 (AUX) C NO — 912A — 1K19 (AUX) C NO — 57B P3-10 — J3-10
58C P3-11 — J3-11
1U41

(+) 24 VAC
LINE 60
1TB4-10 (41)

1U41 WATERSIDE MODULE

LINE 60 — 1TB4-3 (42) C P2-4 — J2-4 (+)
24 VAC (IN)
LINE 59 — 1TB4-22 (52) C P2-3 — J2-3 (−)

(+) J1-3 — P1-3 — C — 1TB12-B (283) — LINE 61
(−) J1-4 — P1-4 — C — 1TB12-D (284) — LINE 62

IPC

2RT11 — 206A P3-2 — J3-2 / 207A P3-3 — J3-3 — ENTERING CONDENSER WATER TEMP

2RT16 — 234A P3-6 — J3-6 / 235A P3-7 — J3-7 — SATURATED CONDENSER TEMPERATURE CKT #3

45 SEE INSET "E"
1K20(AUX) C NO — 910A — 1K19(AUX) C NO — 57B P3-10 — J3-10
58B P3-11 — J3-11
CKT #3 PROVING INPUT

WATERSIDE ECONOMIZER VALVE ACTUATOR 0 – 10 VDC
(+) J12-18 — P12-18 — A 1TB5-17 (140) B — 2P4-3 — 2J4-3 — (+) <3> (24V) <1>
(−) J12-19 — P12-19 — A 1TB5-18 (141) B — 2P4-1 — 2J4-1 — (−) <2> — 2U5
ECONOMIZER VALVE ACTR
2J4-2 — E — 2P4-2

WATERSIDE BYPASS VALVE ACTUATOR 0 – 10 VDC
(+) J12-14 — P12-14 — A 1TB5-19 (142) B — 2P5-3 — 2J5-3 — (+) <3> (24V) <1>
(−) J12-15 — P12-15 — A 1TB5-20 (143) B — 2P5-1 — 2J5-1 — (−) <2> — 2U43
BYPASS VALVE ACTR
2J5-2 — F — 2P5-2

2S6 — B 1TB5-13 (208) A P3-17 — J3-17 / B 1TB5-14 (209) A P3-18 — J3-18 — WATER FLOW SWITCH

47
2RT18 — 210A P13-2 — J13-2 / 211A P13-3 — J13-3 — ENTERING WATERSIDE ECONOMIZER TEMPERATURE

2RT17 — 214A P13-6 — J13-6 / 215A P13-7 — J13-7 — SATURATED CONDENSER TEMPERATURE CKT #4

1K3 (AUX) C NO — 59B P13-10 — J13-10 / 60B P13-11 — J13-11 — CKT #4 PROVING INPUT

48
4S44 — 503A — 4S40 — B 1TB5-15 (212) A P13-16 — J13-16
W31
B 1TB5-16 (213) A P13-17 — J13-17
LOW TEMPERATURE LIMIT

28
WATER PUMP
K11 — J26-1 — P26-1 — A 1TB7-3 (321)
J26-3 — P26-3 — A 1TB7-5 (323)
K8 — J26-2 — P26-2 — A 1TB7-4 (322)

MIXED AIR TEMPERATURE — J27-2, J27-3
EVAPORATOR TEMP CKT #3 — J27-6, J27-7
EVAPORATOR TEMP CKT #4 — J27-10, J27-11

44
4RT4 — B 1TB5-21 (45) A — J27-2, J27-3
B 1TB5-22 (46) A — J27-6, J27-7

4RT9 — 216A — 217A — J27-6, J27-7
4RT10 — 218A — 219A — J27-10, J27-11

⚠ 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 BEFORE SERVICING COULD RESULT IN DEATH OR SERIOUS INJURY.

⚠ AVERTISSEMENT
TENSION DANGEREUSE!
COUPER TOUTES LES TENSIONS ET OUVRIR LES SECTIONNEURS À DISTANCE, PUIS SUIVRE LES PROCÉDURES DE VERROUILLAGE ET DES ÉTIQUETTES AVANT TOUTE INTERVENTION. VÉRIFIER QUE TOUS LES CONDENSATEURS DES MOTEURS SONT DÉCHARGÉS. DANS LE CAS D'UNITÉS COMPORTANT DES ENTRAÎNEMENTS À VITESSE VARIABLE, SE REPORTER AUX INSTRUCTIONS DE L'ENTRAÎNEMENT POUR DÉCHARGER LES CONDENSATEURS.
NE PAS RESPECTER CES MESURES DE PRÉCAUTION PEUT ENTRAÎNER DES BLESSURES GRAVES POUVANT ÊTRE MORTELLES.

⚠ ADVERTENCIA
¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERGÍA ELÉCTRICA, INCLUSO LAS DESCONEXIONES REMOTAS Y SIGA LOS PROCEDIMIENTOS DE CIERRE Y ETIQUETADO ANTES DE PROCEDER AL SERVICIO. ASEGÚRESE DE QUE TODOS LOS CAPACITORES DEL MOTOR HAYAN DESCARGADO EL VOLTAJE ALMACENADO. PARA LAS UNIDADES CON EJE DE DIRECCIÓN DE VELOCIDAD VARIABLE, CONSULTE LAS INSTRUCCIONES PARA LA DESCARGA DEL CONDENSADOR.
EL NO REALIZAR LO ANTERIORMENTE INDICADO, PODRÍA OCASIONAR LA MUERTE O SERIAS LESIONES PERSONALES.

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'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.
FAIRE DÉFAUT À LA PROCÉDURE CI–DESSUS PEUT ENTRAÎNER DES DOMMAGES À L'ÉQUIPEMENT.

AVISO
¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!
LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.
NO SEGUIR LAS INSTRUCCIONES ANTERIORES PUEDE PROVOCAR DAÑOS EN EL EQUIPO.

28 USE CLASS 2 WIRING FOR 24 VDC AND 24 VAC APPLICATIONS. ANALOG/BINARY INPUTS AND ANALOG OUTPUTS ARE 24 VDC. BINARY OUTPUTS ARE 24 VAC.

41 2S18 – 2S21, 2S29 AND 2S30 ARE LOW PRESSURE CUTOUT SWITCHES USED FOR COMPRESSOR PROTECTION. CAUTION!! DO NOT JUMPER ACROSS SWITCH UNDER ANY CIRCUMSTANCES.

42 STAGING SHOWN WITH LEAD/LAG DISABLED.

44 MIXED AIR TEMPERATURE SENSOR 4RT4 IS REQUIRED WITH THE WATERSIDE ECONOMIZER OPTION.

45 WIRING SHOWN IS FOR THE 100 & 110 TON UNIT. SEE INSETS A,B,C,D,AND E FOR THE 90 TON UNIT WIRING.

47 THE ENTERING WATERSIDE ECONOMIZER TEMPERATURE SENSOR IS ONLY PRESENT WHEN THE WATERSIDE ECONOMIZER OPTION IS DESIRED.

48 REMOVE JUMPER W31 BEFORE INSTALLING THE LOW TEMPERATURE LIMIT SWITCHES 4S40 AND 4S44.

SC5404
28-NOV-07
J. MEYER
D

DO NOT SCALE PRINT

THIRD ANGLE PROJECTION

THIS DRAWING IS PROPRIETARY AND SHALL NOT BE COPIED OR ITS CONTENTS DISCLOSED TO OUTSIDE PARTIES WITHOUT WRITTEN PERMISSION OF ©TRANE
DRAWN BY: MCCLELLAN ©TRANE DATE: 11-16-2000

S*WF 90, 100 & 110 TON
MULTIPLE CURCUIT & WATERSIDE MODULES
460V/60/3
SHEET 3 OF 5

SCHEMATIC DIAGRAM

2309-4605

REV D