

⚠ 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
OUIR LES SECTIONNEURS À DISTANCE.
PUIS SUIVRE LES PROCÉDURES DE
VERROUILLAGE ET DES ÉTIQUETTES AVANT
TOUTE INTERVENTION. VÉRIFIER QUE TOUTS
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
MORTELLLES.

⚠ ADVERTENCIA
¡VOLTAJE PELIGROSO!
DESCONECTE TODA LA ENERGÍA ELÉCTRICA,
INCLUIDO LAS DESCONEXIONES REMOTAS Y
SIGA LOS PROCEDIMIENTOS DE CIERRE Y
ETIQUETADO ANTES DE PROCEDER AL
SERVICIO. ASEGURESE DE QUE TODOS
LOS CAPACITORES DEL MOTOR HAYAN
DESCARGADO EL VOLTAJE ALMACENADO.
PARA LAS UNIDADES CON TRANSMISIÓN
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.

TRANE

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DRAWN BY:

REPLACES:

REVISION DATE: 10 MAR 2022

SIMILIAR TO:

2309-2076

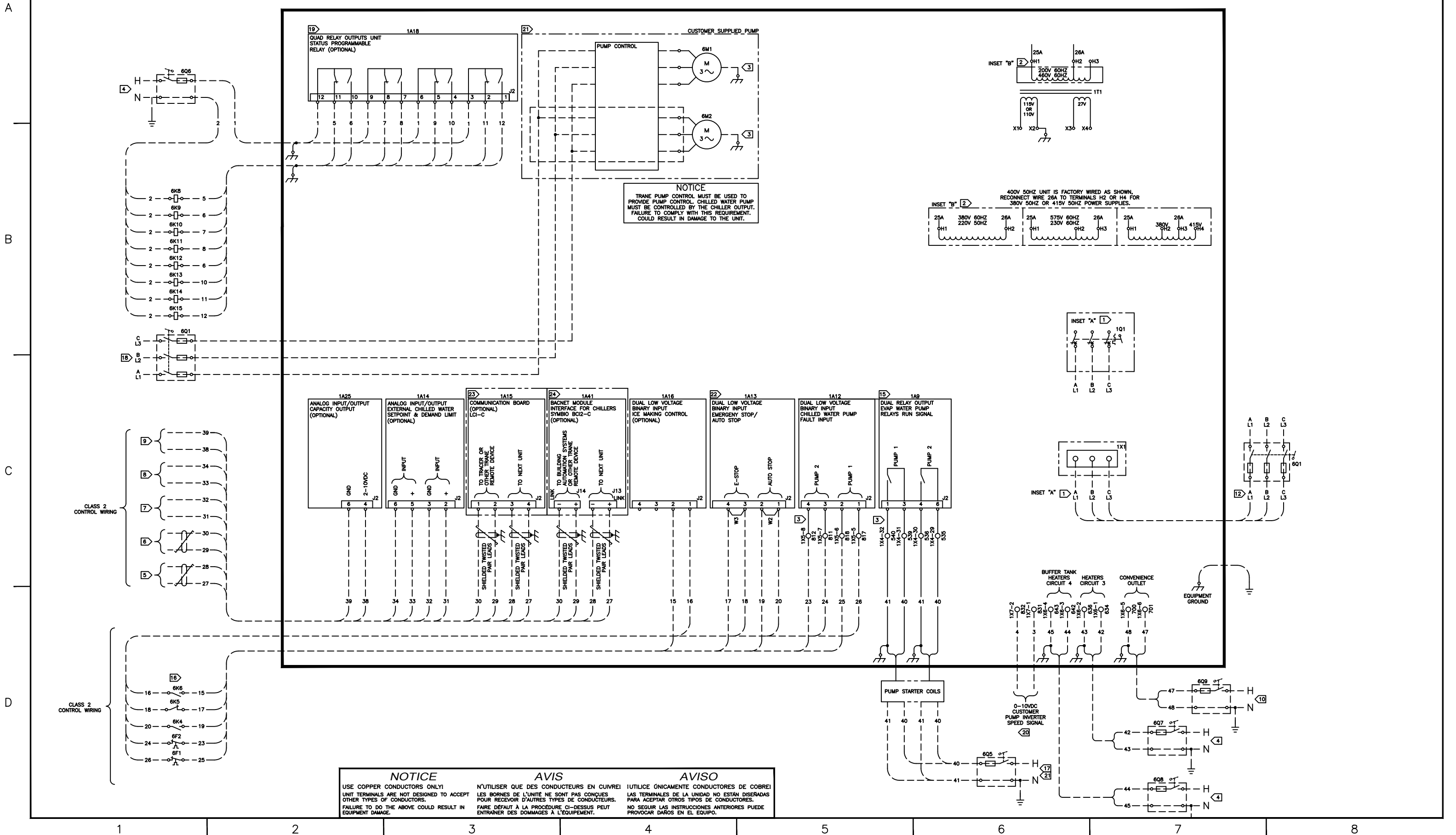
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FIELD WIRING DIAGRAM

CGAM (NAR)

SLANT, V & W UNITS



A

B

C

D

- 1

SINGLE SOURCE POWER IS PROVIDED AS STANDARD ON THESE PRODUCTS, FIELD CONNECTIONS ARE MADE TO 1X1, OR 1Q2.
- 2

FOR VOLTAGES 200V/60HZ, 220V/50HZ, 380V/60HZ, 460V/60HZ, WIRE 26A SHALL BE CONNECTED TO H2. FOR VOLTAGES 230V/60HZ & 575V/60HZ, WIRE 26A SHALL BE CONNECT TO H3. 400V/50HZ UNIT IS FACTORY WIRED WITH 26A CONNECTED TO H3 – RECONNECT WIRE 26A TO H2 FOR 380V/50HZ, OR H4 FOR 415V/50HZ. H4 IS ONLY AVAILABLE WITH 400V/50HZ PANELS.
- 3

FIELD CONNECTIONS ARE ONLY MADE IN A CUSTOMER PROVIDED PUMP (PTYP=NONE). THESE CONNECTIONS WILL BE MADE BY THE FACTORY WHEN THE PUMP IS PROVIDED BY THE FACTORY (PTYP=DHHP).
- 4

CUSTOMER SUPPLIED POWER 115/60/1 OR 220/50/1 TO POWER RELAYS. MAX. FUSE SIZE IS 20 AMPS. GROUND ALL CUSTOMER SUPPLIED POWER SUPPLIES AS REQUIRED BY APPLICABLE CODES. GREEN GROUND SCREWS ARE PROVIDED IN UNIT CONTROL PANEL.
- 5

WIRED TO NEXT UNIT. 22 AWG SHIELDED COMMUNICATION WIRE EQUIVALENT TO HELIX LF22P0014216 RECOMMENDED. THE SUM TOTAL OF ALL INTERCONNECTED CABLE SEGMENTS NOT TO EXCEED 4500 FEET. CONNECTION TOPOLOGY SHOULD BE DAISY CHAIN. REFER TO BUILDING AUTOMATION SYSTEM (BAS) COMMUNICATION INSTALLATION LITERATURE FOR END OF LINE TERMINATION RESISTOR REQUIREMENTS.
- 6

WIRED TO TRACER OR OTHER TRANE REMOTE DEVICE. 22 AWG SHIELDED COMMUNICATION WIRE EQUIVALENT TO HELIX LF22P0014216 RECOMMENDED. THE SUM TOTAL OF ALL INTERCONNECTED CABLE SEGMENTS NOT TO EXCEED 4500 FEET. CONNECTION TOPOLOGY SHOULD BE DAISY CHAIN. REFER TO BUILDING AUTOMATION SYSTEM (BAS) COMMUNICATION INSTALLATION LITERATURE FOR END OF LINE TERMINATION RESISTOR REQUIREMENTS.
- 7

WIRED TO CUSTOMER CHILLED WATER SET POINT 2–10V OR 4–20mA.
- 8

WIRED TO CUSTOMER EXTERNAL DEMAND LIMIT 2–10V OR 4–20mA.
- 9

WIRED TO CUSTOMER 2–10V OR 4–20mA % CAPACITY ANNUNCIATOR.
- 10

CUSTOMER SUPPLIED POWER 115/60/1 TO CONVENIENCE OUTLET. MAX FUSE SIZE IS 20A. GROUND ALL CUSTOMER SUPPLIED POWER SUPPLIES AS REQUIRED BY APPLICABLE CODES. GREEN GROUND SCREWS ARE PROVIDED IN UNIT CONTROL PANEL.
11.

REFER TO CGAM ELECTRICAL SCHEMATIC FOR SPECIFIC ELECTRICAL CONNECTION INFORMATION AND NOTES PERTAINING TO WIRING INSTALLATION.
- 12

ALL UNIT POWER WIRING MUST BE 600 VOLT COPPER CONDUCTORS ONLY AND HAVE A MINIMUM TEMPERATURE INSULATION RATING OF 90 DEGREE C. REFER TO UNIT NAMEPLATE FOR MINIMUM CIRCUIT AMPACITY AND MAXIMUM OVERCURRENT PROTECTION DEVICE. PROVIDE AN EQUIPMENT GROUND IN ACCORDANCE WITH APPLICABLE ELECTRIC CODES. REFER TO WIRE RANGE TABLE FOR LUG SIZES.
13.

ALL FIELD WIRING MUST BE IN ACCORDANCE WITH NATIONAL ELECTRIC CODE AND LOCAL REQUIREMENTS.
14.

ALL CUSTOMER CONTROL CIRCUIT WIRING MUST BE COPPER CONDUCTORS ONLY AND HAVE A MINIMUM INSULATION RATING OF 300 VOLTS. EXCEPT AS NOTED, ALL CUSTOMER WIRING CONNECTIONS ARE MADE TO CIRCUIT BOARD MOUNTED BOX LUGS WITH A WIRE RANGE OF 14 TO 18 AWG OR DIN RAIL MOUNTED SPRING FORCE TERMINALS.
- 15

UNIT PROVIDED DRY CONTACTS FOR THE CONDENSER/CHILLED WATER PUMP CONTROL. RELAYS ARE RATED FOR 7.2 AMPS RESISTIVE, 2.88 AMPS PILOT DUTY, OR ⅓ HP, 7.2 FLA AT 120 VOLTS 60 HZ, CONTACTS ARE RATED FOR 5 AMPS GENERAL PURPOSE DUTY 240 VOLTS.
- 16

CUSTOMER SUPPLIED CONTACTS FOR ALL LOW VOLTAGE CONNECTIONS MUST BE COMPATABLE WITH DRY CIRCUIT 24 VOLTS DC FOR A 12 mA RESISTIVE LOAD. SILVER OR GOLD PLATED CONTACTS RECOMMENDED.
- 17

FIELD CONNECTIONS ARE ONLY MADE IN A CUSTOMER PROVIDED PUMP. THESE CONNECTIONS WILL BE MADE BY THE FACTORY WHEN THE PUMP IS PROVIDED BY THE FACTORY. CUSTOMER SUPPLIED POWER 115V, 60Hz, 1PH.
- 18

CUSTOMER SUPPLIED 3 PHASE POWER.
- 19

OPTIONAL FIELD ASSIGNED PROGRAMMABLE RELAYS (STAT=PRLY). CLASS 1 FIELD WIRED MODULE, RELAY AT 120V: 7.2A RESISTIVE 2.88A PILOT DUTY, 1/2HP 7.2FLA; AT 240VAC: 5 AMPS GENERAL PURPOSE.
- 20

WIRED TO CUSTOMER 0–10 VDC PUMP SPEED SIGNAL.
- 21

WHEN FACTORY PROVIDED PUMP IS NOT SELECTED. CUSTOMER MUST SUPPLY SUITABLE PUMP SYSTEM. REFER TO PUMP MANUFACTURER FOR WIRING REQUIREMENTS.
- 22

THE CONTACTS FOR AUTO STOP AND EMERGENCY STOP SWITCHES ARE JUMPERED AT THE FACTORY BY JUMPERS W2 & W3 TO ENABLE UNIT OPERATION. IF REMOTE CONTROL IS DESIRED, REMOVED THE JUMPERS AND CONNECT TO THE DESIRED CONTROL CIRCUIT.

- 23

1A15, LCI MODULE USED WHEN (COMM = LCI).
- 24

1A41, BACNET INTERFACE MODULE USED WHEN (COMM = BCNT).

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©TRANE DATE: 12/5/08

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FIELD WIRING DIAGRAM

CGAM (NAR)

SLANT, V & W UNITS

FUSE REPLACEMENT TABLE					
FUSE	VOLTAGE	HERTZ (Hz)	CLASS	AMPS	NOTES
1F1	ALL	ALL	CC	10	FUSE, COMPRESSOR CRANKCASE HEATER, CIRCUIT 1
1F2	ALL	ALL	CC	10	
1F3	ALL	ALL	CC	10	FUSE, COMPRESSOR CRANKCASE HEATER, CIRCUIT 2
1F4	ALL	ALL	CC	10	
1F5 – 1F6	200	60	CC	10	FUSE, CONTROL POWER TRANSFORMER, PRIMARY
	230	60	CC	8	
	380	60	CC	5	
	400	50	CC	5	
	460	60	CC	5	
	575	60	CC	4	
1F7	200	60	CC	10	FUSE, THIRD PHASE, PHASE PROTECTION MONITOR
	230	60	CC	8	
	380	60	CC	5	
	400	50	CC	5	
	460	60	CC	5	
	575	60	CC	4	
1F8 – 1F10	200	60	CC	10	FUSE, DUAL POINT, POWER SECOND PHASE, PHASE PROTECTION MONITOR
	230	60	CC	8	
	380	60	CC	5	
	400	50	CC	5	
	460	60	CC	5	
	575	60	CC	4	
1F11	ALL	ALL	CC	10	FUSE, CONTROL POWER TRANSFORMER, SECONDARY, 115V
1F12 – 1F13	ALL	ALL	CC	6	FUSE, CONTROL POWER TRANSFORMER, SECONDARY, 24V
1F14 – 1F16	200–460	ALL	CC	30	FUSE, INVERTER, FAN (FAST ACTING EXCEPT 575V)
1F17 – 1F19	575	60	CC	6	
1F38 – 1F40 1F44 – 1F46	ALL	ALL	CC	30	FUSE, FAST ACTING, ATM–R–30
1F35 – 1F37 1F41 – 1F43	ALL	ALL	CC	30	FUSE, FAST ACTING, (USED ON W UNITS ONLY)
FACTORY PROVIDED PUMP INVERTER FUSE					
1F32 – 1F34	200,230	60	CC	30	3.7Kw VSD
	460,575			25	5.5Kw VSD
	200,230		J	60	7.5Kw VSD
	460,575		CC	30	
	200–230		J	60	11Kw VSD
	460,575			40	