IMPORTANT!

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

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.

PRECAUCIÓN

N'UTILISER QUE DES CONDUCTEURS EN CUIVRE!

LES BORNES DE L'UNITÉ NE SONT PAS CONÇUES POUR RECEVOIR D'AUTRES TYPES DE CONDUCTEURS.

L'UTILISATION DE TOUT AUTRE CONDUCTEUR PEUT ENDOMMAGER L'ÉQUIPEMENT.

ATTENTION

¡UTILICE ÚNICAMENTE CONDUCTORES DE COBRE!

LAS TERMINALES DE LA UNIDAD NO ESTÁN DISEÑADAS PARA ACEPTAR OTROS TIPOS DE CONDUCTORES.

SI NO LO HACE, PUEDE OCASIONAR DAÑO AL EQUIPO.

DEVICE PREFIX LOCATION CODE	
AREA	LOCATION
1	INSIDE UNIT CONTROL BOX
2	CONDENSER SECTION
3	AIR HANDLER SECTION
4	HEATING SECTION
5	EXTERNAL FIELD MOUNTED DEVICE

⚠ 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 VARAIBLE, 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.

VFD PROTECTION FUSES - 1F104-1F106 (CLASS "J" - 600V RATING)			
VARIABLE SPEED COMPRESSOR OPTION	UNIT VOLTAGE	40T UNITS	50-70T UNITS
	200V/240V	125	150
	380V-575V	60	80

FUSE REPLACEMENT TABLE							
CONDENSER FAN FUSE 1F1 THRU 1F6 CLASS RK5	UNIT VOLTAGE	200V/60/3	230V/60/3	380V/50/3	415V/50/3	460V/60/3	575V/60/3
	TIME DELAY	25A	25A	15A	15A	15A	15A
OPTIONAL CONVENIENCE OUTLET FUSE 1F55 AND 1F56 (TIME DELAY TYPE FNQ-R FUSE)		12A	10A	N/A	N/A	5A	4A

COMPRESSOR PROTECTION FUSE 1F44 & 1F45 - TYPE MTH	6A	TRANSFORMER CIRCUIT FUSE 1F72-1F74 - TYPE FNQ-R	15A	ELECTRIC HEAT FUSE 4F19-4F36, 4F46-4F48 - CLASS K5	60A

CONTROL POWER FUSE							
CONTROL (1T1) TRANSFORMER RATING		0.25 KVA	0.30 KVA	0.50 KVA	0.75 KVA	1.00 KVA	1.50 KVA
1F7 CLASS CC - TYPE FNQ-R	20-30 TON	6.25A	6.25A	--	10A	--	--
	40 TON	15A	20A	--	20A	--	--
	50-60 TON	--	--	15A/20A	--	20A	--
	70-75 TON	--	--	--	--	15A	20A
	90-130 TON	--	--	--	--	15A	20A

VFD PROTECTION FUSES (CLASS "T" FUSES - 600V RATING) 29

OPTIONAL SUPPLY VFD 1F57-1F62 OPTIONAL EXHAUST / RETURN VFD 1F63-1F65

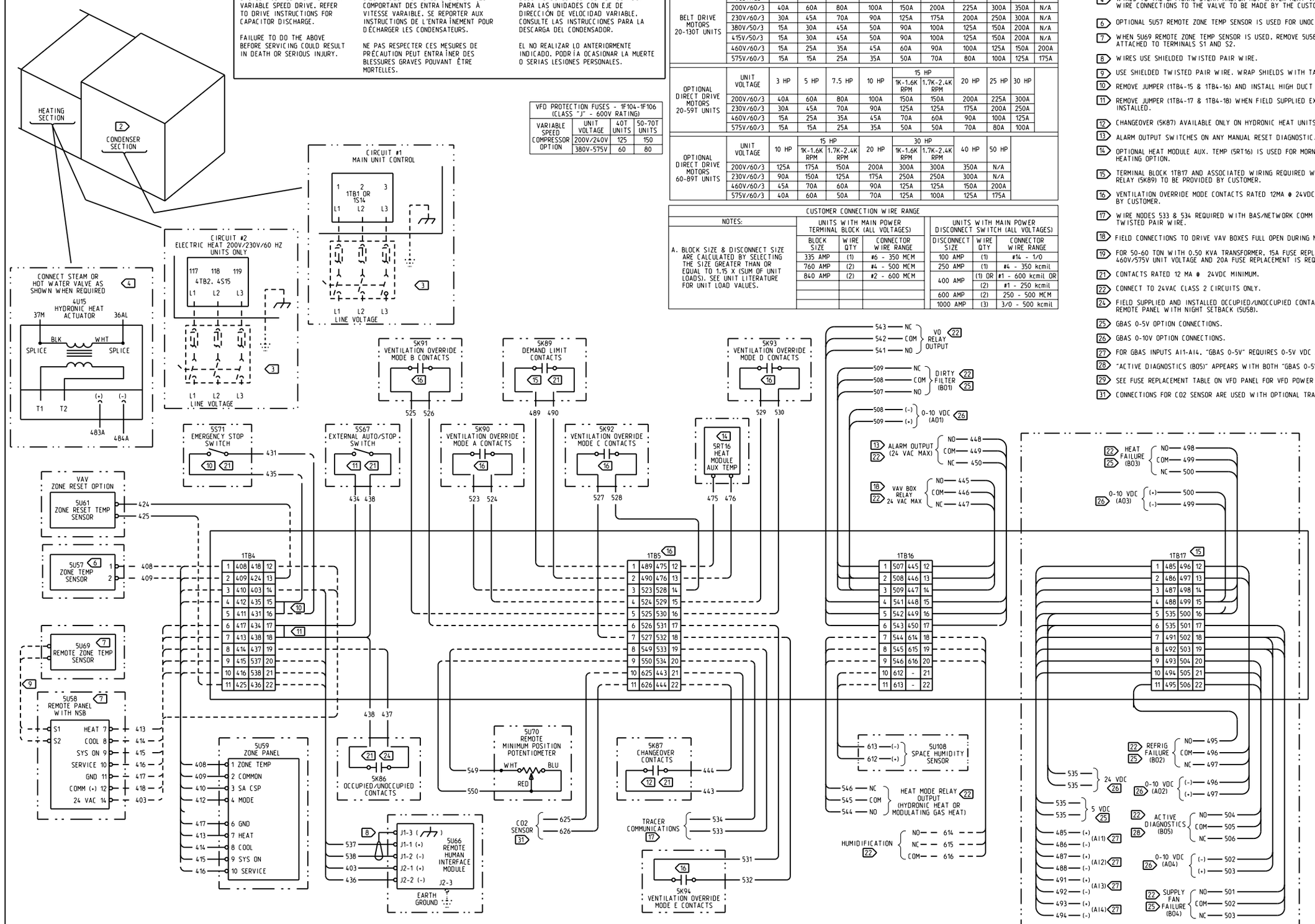
	UNIT VOLTAGE	3 HP	5 HP	7.5 HP	10 HP	15 HP	20 HP	25 HP	30 HP	40 HP	50 HP
BELT DRIVE MOTORS 20-130T UNITS	200V/60/3	40A	60A	80A	100A	150A	200A	225A	300A	350A	N/A
	230V/60/3	30A	45A	70A	90A	125A	175A	200A	250A	300A	N/A
	380V/50/3	15A	30A	45A	50A	90A	100A	125A	150A	200A	N/A
	415V/50/3	15A	30A	45A	50A	90A	100A	125A	150A	200A	N/A
	460V/60/3	15A	25A	35A	45A	60A	90A	100A	125A	150A	200A
	575V/60/3	15A	15A	25A	35A	50A	70A	80A	100A	125A	175A

	UNIT VOLTAGE	3 HP	5 HP	7.5 HP	10 HP	15 HP 1K-1.6K RPM	15 HP 1.7K-2.4K RPM	20 HP	25 HP	30 HP
OPTIONAL DIRECT DRIVE MOTORS 20-59T UNITS	200V/60/3	40A	60A	80A	100A	150A	150A	200A	225A	300A
	230V/60/3	30A	45A	70A	90A	125A	125A	175A	200A	250A
	460V/60/3	15A	25A	35A	45A	70A	60A	90A	100A	125A
	575V/60/3	15A	15A	25A	35A	50A	50A	70A	80A	100A

	UNIT VOLTAGE	10 HP	15 HP 1K-1.6K RPM	15 HP 1.7K-2.4K RPM	20 HP	30 HP 1K-1.6K RPM	30 HP 1.7K-2.4K RPM	40 HP	50 HP
OPTIONAL DIRECT DRIVE MOTORS 60-89T UNITS	200V/60/3	125A	175A	150A	200A	300A	300A	350A	N/A
	230V/60/3	90A	150A	125A	175A	250A	250A	300A	N/A
	460V/60/3	45A	70A	60A	90A	125A	125A	150A	200A
	575V/60/3	40A	60A	50A	70A	125A	100A	125A	175A

CUSTOMER CONNECTION WIRE RANGE						
NOTES:	UNITS WITH MAIN POWER TERMINAL BLOCK (ALL VOLTAGES)			UNITS WITH MAIN POWER DISCONNECT SWITCH (ALL VOLTAGES)		
	BLOCK SIZE	WIRE QTY	CONNECTOR WIRE RANGE	DISCONNECT SIZE	WIRE QTY	CONNECTOR WIRE RANGE
A. BLOCK SIZE & DISCONNECT SIZE ARE CALCULATED BY SELECTING THE SIZE GREATER THAN OR EQUAL TO 1.15 X (SUM OF UNIT LOADS). SEE UNIT LITERATURE FOR UNIT LOAD VALUES.	335 AMP	(1)	#6 - 350 MCM	100 AMP	(1)	#14 - 1/0
	760 AMP	(2)	#4 - 500 MCM	250 AMP	(1)	#4 - 350 kcmil
	840 AMP	(2)	#2 - 600 MCM	400 AMP	(1) OR	#1 - 600 kcmil OR
					(2)	#1 - 250 kcmil
				600 AMP	(2)	250 - 500 MCM
				1000 AMP	(3)	3/0 - 500 kcmil

TRANE			
THIS DRAWING IS PROPRIETARY AND SHALL NOT BE COPIED OR ITS CONTENTS DISCLOSED TO OUTSIDE PARTIES WITHOUT THE CONSENT OF TRANE.	FILE NUMBER: 2313-1117	DRAWING NUMBER: 2313-1119	SHEET: 1 OF 1 / REV C
DRAWN BY: K. EDWARDS	TRANE® DATE: 6/05/12	ROOFTOP PACKAGED AIR CONDITIONER DIAGRAM	
REPLACES: 2313-1109-B	REVISION DATE: 10/01/13	FIELD CONNECTION EXTERNAL DEVICES - AREA 5 20-130 TON VARIABLE AIR VOLUME	
CAD SYSTEM USED: Pro/DETAIL	SIMILAR TO: --		

NOTES:

1. ALL WIRING AND COMPONENTS SHOWN DASHED TO BE SUPPLIED AND INSTALLED BY THE CUSTOMER IN ACCORDANCE WITH LOCAL ELECTRICAL CODES.
2. CUSTOMER CONNECTIONS - MAIN UNIT CONTROL (CIRCUIT #1) - ARE LOCATED IN THE CONDENSER SECTION FOR 20 THRU 75 TON UNITS. CUSTOMER CONNECTIONS FOR 90 THRU 130 TON UNITS ARE LOCATED IN THE HEATING SECTION.
3. SEE CUSTOMER CONNECTION WIRE RANGE TABLE FOR ACCEPTABLE WIRE SIZES FOR CONNECTION TO MAIN UNIT TERMINAL BLOCK (1TB1/4TB2) OR DISCONNECT SWITCH (1S14/4S15).
4. WIRES TO THE OPTIONAL STEAM AND/OR HOT WATER HEAT VALVE ARE SUPPLIED WITH THE UNIT. WIRE CONNECTIONS TO THE VALVE TO BE MADE BY THE CUSTOMER.
6. OPTIONAL 5U57 REMOTE ZONE TEMP SENSOR IS USED FOR UNOCCUPIED HEAT/COOL TEMP CONTROL SENSING.
7. WHEN 5U69 REMOTE ZONE TEMP SENSOR IS USED, REMOVE 5U58 INTERGRAL ZONE TEMP SENSOR ATTACHED TO TERMINALS S1 AND S2.
8. WIRES USE SHIELDED TWISTED PAIR WIRE.
9. USE SHIELDED TWISTED PAIR WIRE. WRAP SHIELDS WITH TAPE TO PREVENT CONTACT WITH GROUND.
10. REMOVE JUMPER (1TB4-15 & 1TB4-16) AND INSTALL HIGH DUCT TEMP T-STAT OR FIELD SUPPLIED DEVICE.
11. REMOVE JUMPER (1TB4-17 & 1TB4-18) WHEN FIELD SUPPLIED EXTERNAL AUTO/STOP SWITCH (5S67) IS INSTALLED.
12. CHANGEOVER (5K87) AVAILABLE ONLY ON HYDRONIC HEAT UNITS OR MODULATING GAS HEAT UNITS.
13. ALARM OUTPUT SWITCHES ON ANY MANUAL RESET DIAGNOSTIC.
14. OPTIONAL HEAT MODULE AUX. TEMP (5RT16) IS USED FOR MORNING WARM-UP CONTROL ON UNITS WITH HEATING OPTION.
15. TERMINAL BLOCK 1TB17 AND ASSOCIATED WIRING REQUIRED WITH GBAS (1U51) OPTION. DEMAND LIMIT RELAY (5K89) TO BE PROVIDED BY CUSTOMER.
16. VENTILATION OVERRIDE MODE CONTACTS RATED 12MA @ 24VDC MINIMUM (5K90 - 5K94) TO BE PROVIDED BY CUSTOMER.
17. WIRE NODES 533 & 534 REQUIRED WITH BAS/NETWORK COMM MODULE (1U54) OPTION. USE SHIELDED TWISTED PAIR WIRE.
18. FIELD CONNECTIONS TO DRIVE VAV BOXES FULL OPEN DURING NIGHT SETBACK MODE.
19. FOR 50-60 TON WITH 0.50 KVA TRANSFORMER, 15A FUSE REPLACEMENT IS REQUIRED WITH 200V/230V/460V/575V UNIT VOLTAGE AND 20A FUSE REPLACEMENT IS REQUIRED WITH 380V/415V UNIT VOLTAGE.
21. CONTACTS RATED 12 MA @ 24VDC MINIMUM.
22. CONNECT TO 24VAC CLASS 2 CIRCUITS ONLY.
24. FIELD SUPPLIED AND INSTALLED OCCUPIED/UNOCCUPIED CONTACTS (5K86) FOR USE ON UNITS WITHOUT REMOTE PANEL WITH NIGHT SETBACK (5U58).
25. GBAS 0-5V OPTION CONNECTIONS.
26. GBAS 0-10V OPTION CONNECTIONS.
27. FOR GBAS INPUTS AI1-AI4, "GBAS 0-5V" REQUIRES 0-5V VDC AND "GBAS 0-10V" REQUIRES 0-10VDC.
28. "ACTIVE DIAGNOSTICS (BO5)" APPEARS WITH BOTH "GBAS 0-5V" AND "GBAS 0-10V".
29. SEE FUSE REPLACEMENT TABLE ON VFD PANEL FOR VFD POWER FUSES (F40, F41, F42).
31. CONNECTIONS FOR CO2 SENSOR ARE USED WITH OPTIONAL TRAQ DAMPER ONLY.