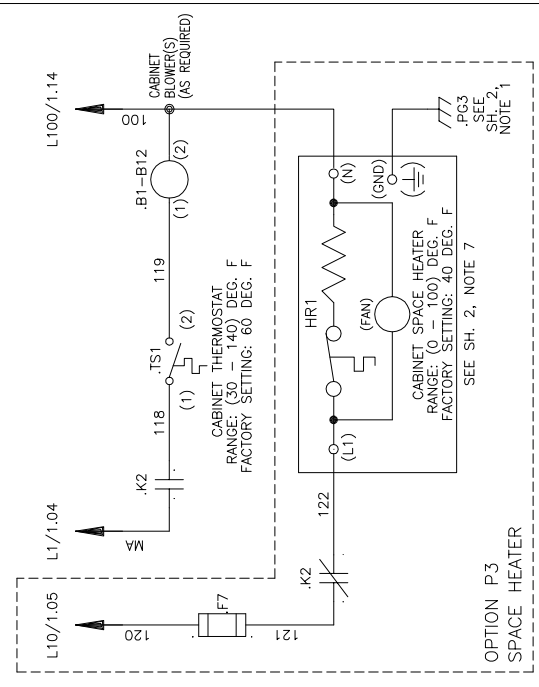
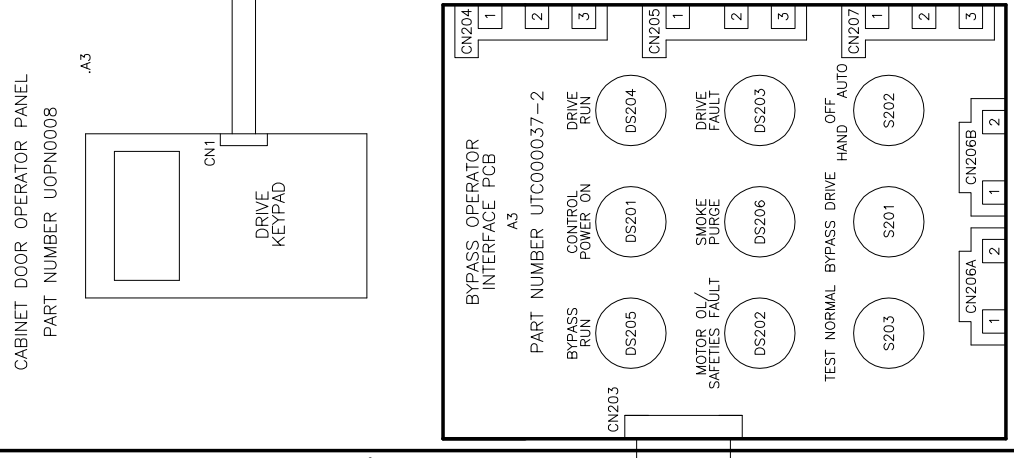


CONTROL TRANSFORMER PRIMARY CONNECTIONS

INPUT VOLTS	TERMINALS	JUMPER LOCATION
208	(H1) (H2)	NONE
230/240	(H1) (H4)	(H1) TO (H3)
460/480	(H1) (H4)	(H2) TO (H4)



**YASKAWA**

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DATE: 5/27/08  
DATE: 5/27/08  
DATE: 5/27/08  
DATE: 5/7/07

TITLE: SCHEMATIC DIAGRAM  
E7B BYPASS

SIZE: R03  
REVISION: D

PAGE: 1 of 3

DRAWING NO.: DS-E7B.04

\* - INDICATES COMPONENTS NOT SUPPLIED BY YASKAWA.  
- - - INDICATES CUSTOMER WIRING.  
SEE SHEETS 2 AND 3 FOR NOTES AND TABLES.

NOTES:

- CONNECTED TO THE CABINET. CUSTOMER TO CONNECT THE CABINET GROUND LUGS TO EARTH GROUND AND UTILITY GROUND.
- THE CUSTOMER MUST USE TYPE 3R HUBS AND FITTINGS (OR EQUIVALENT) TO MAINTAIN THE ENCLOSURE RATING.
- THE MOTOR OVERLOAD RELAY IS FACTORY SET FOR MANUAL RESET. CUSTOMER TO ADJUST THE MOTOR OVERLOAD RELAY TRIP SETTING FOR THE ACTUAL AC MOTOR'S FULL LOAD AMPS.
- TERMINALS TB1(1) AND TB1(2) ARE SUPPLIED FOR INSERTION OF CUSTOMER SUPPLIED NORMALLY CLOSED SAFETY CONTACTS (I.E., FIRESTAT, FREEZE/STAT, WINDING OR BEARING TEMPERATURE ACTIVATED SWITCHES). IF APPLICABLE, REMOVE FACTORY INSTALLED JUMPER J1.
- TERMINALS TB1(5) AND TB1(6) ARE SUPPLIED FOR INSERTION OF A CUSTOMER SUPPLIED NORMALLY OPEN DAMPER END SWITCH (OPEN = DAMPER CLOSED, AND CLOSED = DAMPER FULLY OPEN), OR A NORMALLY OPEN BUILDING AUTOMATION SYSTEM (BAS) INTERLOCK. IF APPLICABLE, REMOVE THE FACTORY INSTALLED JUMPER J2.
- INSULATED TWISTED SHIELDED WIRE IS REQUIRED. 2 CONDUCTOR #18GA. (BELDEN #8760 OR EQUIVALENT). SHIELD TO CONNECT TO PROPER TERMINAL AS SHOWN. CONNECT THE SHIELD ONLY AT THIS END. STUB AND ISOLATE THE OTHER END. DO NOT RUN THESE WIRES IN THE SAME CONDUIT AS THE AC POWER AND AC CONTROL WIRES.
- CUSTOMER TO ADJUST THE THERMOSTAT ON THE SPACE HEATER HR1 FOR THE MINIMUM DESIRED TEMPERATURE INSIDE THE DRIVE CABINET. THIS SET TEMPERATURE IS NORMALLY SELECTED TO BE SLIGHTLY HIGHER THAN THE MINIMUM AMBIENT TEMPERATURE OF THE AIR SURROUNDING THE DRIVE CABINET, AND IS THE TEMPERATURE AT WHICH THE SPACE HEATER HR1 WILL SHUT OFF.
- SERIAL COMMUNICATIONS OPTIONS T2, T3, T4, T5, OR T6 (SEE TABLE 5 ON SHEET 3):  
OPTION T2 = ETHERNET/IP, OPTION T3 = BACNET, OPTION T4 = EMBEDDED METASYS N2, OPTION T5 = EMBEDDED APOGEE FLN, OPTION T6 = EMBEDDED MODBUS AND OPTION T6 = LONWORKS

- THE HAND/OFF/AUTO SWITCH MUST BE IN THE "AUTO" POSITION, IF SERIAL COMMUNICATION IS TO BE USED TO CONTROL THE DRIVE.
- TO OBTAIN AN ANALOG REFERENCE AT DRIVE TERMINAL A2 WHEN IN THE "AUTO" MODE, THERE MUST BE JUMPERS ADDED TO THE DRIVE, FROM TERMINAL S4 TO TERMINAL SN, AND FROM TERMINAL S5 TO TERMINAL S6.
- THERE MUST BE A JUMPER ADDED TO THE DRIVE, FROM TERMINAL S5 TO TERMINAL S6.

TABLE 1 FACTORY SET DRIVE PARAMETERS

PARAMETER	DATA	UNIT	DESCRIPTION/REMARKS
b1-01	SEE TABLE 5	N/A	FREQUENCY REFERENCE SELECTION
b1-08	1	N/A	RUN COMMAND SELECTION DURING PROGRAMMING - ENABLED
b2-03	0.0	SEC.	DC INJECTION BRAKING TIME AT START
b5-01	SEE TABLE 5	N/A	PI MODE SETTING
d1-01	10.0	HZ.	FREQUENCY REFERENCE 1 - SEE TABLE 5
d1-02	6.0	HZ.	FREQUENCY REFERENCE 2 - SEE TABLE 5
d1-04	20.0	HZ.	FREQUENCY REFERENCE 4 - SEE TABLE 5
E1-01	240(480) 208	VOLTS	STANDARD INPUT VOLTAGE SETTING INPUT VOLTAGE SETTING FOR BASE NUMBER "D_--"
E1-05	230(460) 208	VOLTS	STANDARD MAXIMUM OUTPUT VOLTAGE SETTING MAXIMUM OUTPUT VOLTAGE SETTING FOR BASE NUMBER "D_--"
F6-02	SEE TABLE 5	N/A	SERIAL COMMUNICATIONS EXTERNAL FAULT DETECTION SELECTION
F6-03	SEE TABLE 5	N/A	SERIAL COMMUNICATIONS EXTERNAL FAULT STOPPING METHOD SELECTION
H1-01	70	N/A	TERMINAL S3 SET FOR BYPASS DRIVE ENABLE
H1-02	SEE TABLE 5	N/A	TERMINAL S4 SELECTION
H1-03	SEE TABLE 5	N/A	TERMINAL S5 SELECTION
H1-04	SEE TABLE 5	N/A	TERMINAL S6 SELECTION
H2-02	3B	N/A	TERMINALS M3-M4 SET FOR SERIAL COMM. RUN COMMAND
H3-08	SEE TABLE 5	N/A	TERMINAL A2 SIGNAL SELECTION
H3-09	SEE TABLE 5	N/A	TERMINAL A2 FUNCTION SELECTION
H5-02	SEE TABLE 5	N/A	SERIAL COMMUNICATIONS SPEED SELECTION BAUD RATE
H5-07	SEE TABLE 5	N/A	REQUEST TO SEND (RTS) CONTROL SELECTION
H5-08	SEE TABLE 5	N/A	SERIAL COMMUNICATIONS PROTOCOL SELECTION
H5-09	10.0	SEC.	SERIAL COMMUNICATIONS ERROR DETECTION TIME
L4-05	0	N/A	FREQUENCY REFERENCE LOSS DETECTION DISABLED
L5-01	10	N/A	NUMBER OF AUTO RESTART ATTEMPTS
L5-03	10.0	SEC.	MAXIMUM RESTART TIME AFTER FAULT
o2-02	0	N/A	DIGITAL OPERATOR KEYPAD "OFF" KEY DISABLED
o2-03	1	N/A	USER INITIALIZATION FACTORY SET PARAMETER DEFAULT VALUES (FOUND IN A1-03="1110")
o2-15	0	N/A	DIGITAL OPERATOR KEYPAD "HAND" KEY DISABLED
o3-02	1	N/A	DIGITAL OPERATOR KEYPAD READ ALLOWED ENABLED

SEE SHEET 3 FOR TABLE 5.

CUSTOMER WIRING REQUIREMENTS

- FOR 0 TO 100 AMPS, USE A MINIMUM OF 60° -75°C COPPER WIRE.
- FOR ABOVE 100 AMPS, USE A MINIMUM OF 75°C COPPER WIRE.

TABLE 2 E7 BYPASS MODEL NO. BASE NUMBER E7BRXXXX			TABLE 3 E7 BYPASS PART NUMBER E7BRXXXX		
208V	240V	480V	208V	240V	480V
D343	A312	B361	D343	A312	B361
D396	A360	B414	D396	A360	B414
		B477			B477

TABLE 2 E7 BYPASS MODEL NO. BASE NUMBER E7BRXXXX			TABLE 3 E7 BYPASS PART NUMBER E7BRXXXX		
208V	240V	480V	208V	240V	480V
D343	A312	B361	D343	A312	B361
D396	A360	B414	D396	A360	B414
		B477			B477

TABLE 4

E7 BYPASS MODEL NO. BASE NUMBER E7BRXXXX			MOTOR CIRCUIT PROTECTOR			A.C. MOTOR WIRING			CONTROL WIRING		
208V	240V	480V	MFG. PART NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	MFG. PART NUMBER	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)	TERMINAL BLOCK TB1	WIRE SIZE RANGE (AWG)	TIGHTENING TORQUE (LB.-IN.)
D343	A312	B361	LR9	F7379	2 x (2-600 kcmil)	LR9	F7379	2 x (2-600 kcmil)	22 - 14	22 - 14	4.4
D396	A360	B414									
		B477									



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		PAGE 2 of 3

SEE SHEET 3 FOR TABLE 5.

TABLE 5 DRIVE OPERATION MODE SELECTION

Table with columns for OPTION, PRESENT, FACTORY SET E7B BYPASS DRIVE PARAMETERS (b1-01 to TL AND TP), DRIVE CONTROL BOARD SWITCH S1 SETTING (1, 2), DRIVE MODE SPEED COMMAND (HAND MODE, AUTO MODE), DRIVE MODE PI CONTROL (HAND MODE, AUTO MODE), and RUN/STOP CONTROL (SEE SHEET 2, NOTE 5).

+ = STANDARD E7B BYPASS SET UP

= FACTORY 2-WIRE INITIALIZATION/DEFAULT SETTING

SEE SHEET 2 FOR NOTES, AND TABLES 1, 2, 3 AND 4.



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