

CAUTION - READ MANUAL & ALL NOTES BEFORE INSTALLING OR OPERATING CONTROL. SEE NOTE 1

⚠ DANGER

HAZARDOUS VOLTAGE FROM ONE OR MORE SOURCES

Turn off all voltage sources before touching any components. Electrical shock or flash will cause severe injury or death.

Do not remove or cover this sign. 4881426

⚠ CAUTION

WATER HOSE BURST HAZARD

Cooling water must be flowing when power is on. Water hose can burst and damage controls.

Do not remove or cover this sign. 4881426

CAUTION
Control Shipped Wired for 460 VAC
Unless otherwise specified - See Note 2

PARTS LIST - CONTROL SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1		600581	Assem, Dial Plate, EN2000,
1	PCB1	600580	Consisting of: Assem., Switch, Sequence Control & Display Board
1		540244	Illustrated Panel, Dial Plate, EN2000
1		515104	Panel, Display Window, Red Filter, EN2000
1	J2-J2	SEE CHART	Assem., Harness, Ctrl Bd. to Term. Bd.
1	J3	SEE CHART	Assem., Harness, Power, EN2000-FPX(SCR)

PARTS LIST - CONTACTOR SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1	T51	335067	Terminal Strip, 10 Pin, (Part of J3 Harness)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
2	R70,71	225016	Resistor, Power, Surge, 500 Ohm, 100W
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	F1	307024	Fuse, Control, 1/4A, FNQ-R-1/4 or KLDL-1/4
1	F6 (PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319-017)
1	(R70,71)	325024	Assem., Wire, Surge Resistor, 16 Ga., Black
1	PCB2	410319-007	Assem., PCB, Terminal Strip Board, EN2000
1		510245	Assem, 11 x 11 Flat Plate, EN2000-FPX(SCR)
1		440450-001	Mounting Detail1, 11 x 11 Flat Plate
1		700121	Manual, EN2000
1		421279	Logic Diagram, EN2000-Series Controls
1		421283-004	Wiring Diagram, EN2000-FPX(SCR)

See Drawing #440450-001 for mounting detail of Flat Plate (FP).

Use one (1) Poly Bag P/N 900148 to Flat Plate using Tape P/N 900118 & include the following in the bags:

4 Ea. 6-32 x 1/4 PHMS, PH1, Black	557004
4 Ea. 6-32 x 1/4 PHMS, PH1, Britte	557003
4 Ea. 6-32 x 1/4 A/F Hex Nut	557018
4 Ea. 6-32 x 1/2 Standoffs	555031
1 Ea. Label, Danger, Hazardous Voltage...	460142/RM/156103C
1 Ea. Label, Danger, Voltage and Flash Hazard...	460143/RM/156103A
1 Ea. Label, Voltage Hazard, Earth Gnd...	460144/RM/156103D
1 Ea. Label, Caution, Water Hose Burst Hazard...	460145/RM/156103E
1 Ea. Label, Warning, Hazardous Voltage...	460146/RM/156103B
1 Ea. Label, Caution, Do not Pinch Wires...	460170
1 Ea. Resistor, Power, 2000 Ohm, 10W (for 575 VAC)	600048
1 Ea. Jumper, T51, (for 380 VAC)	325225

When Control is wired for either 230/460/575 VAC Operation, add quantity one (1) T51 Label P/N 460201 for 380 VAC Operation.

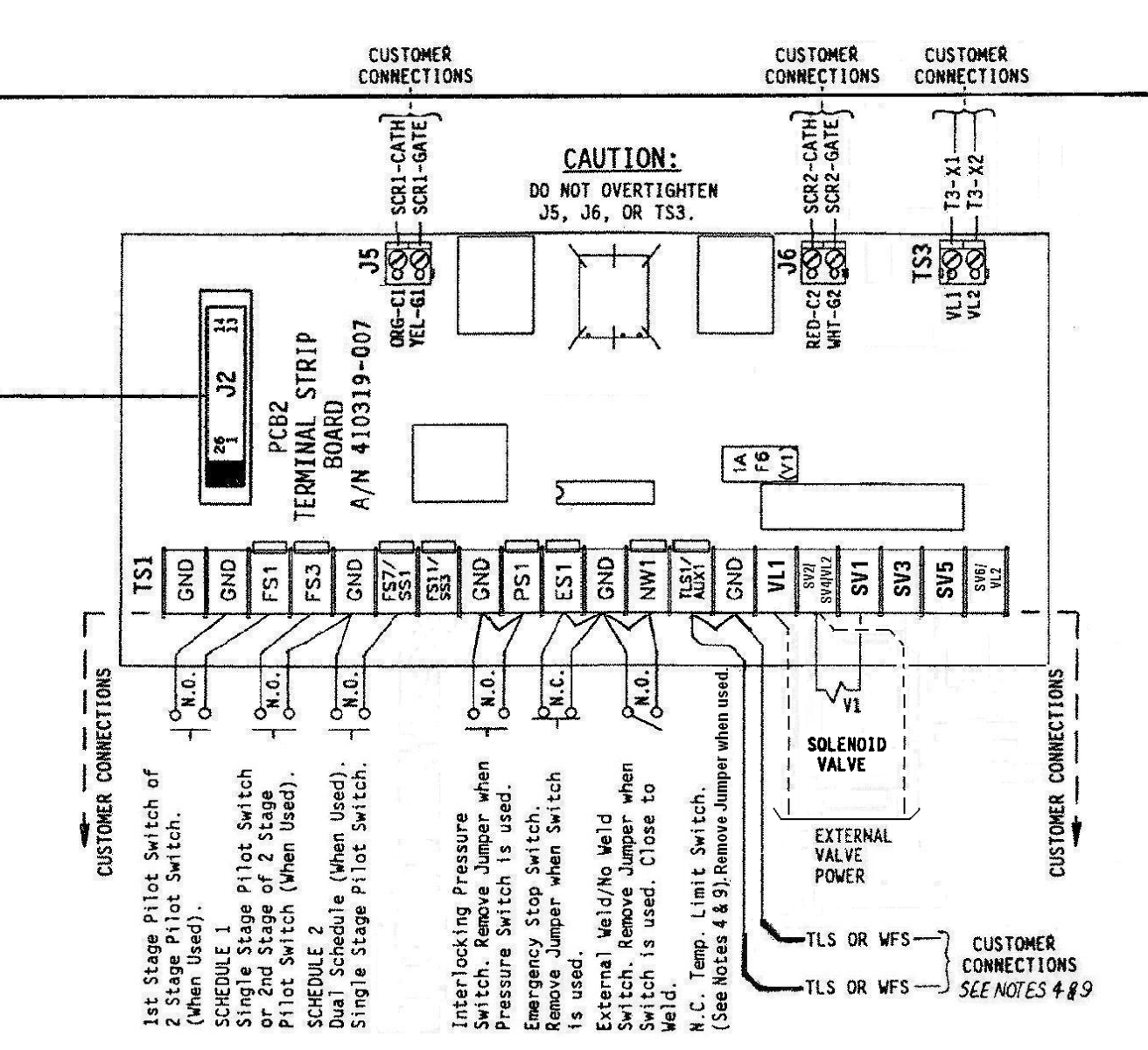
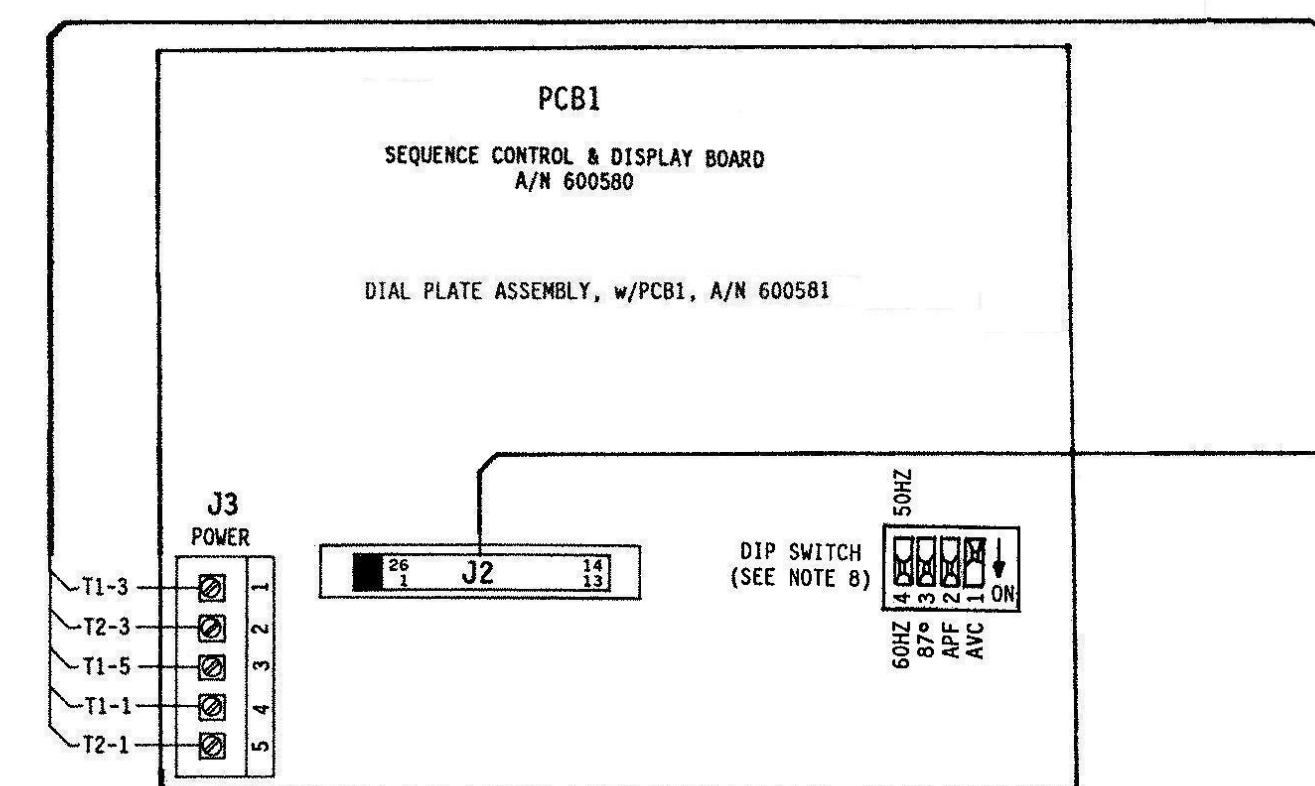
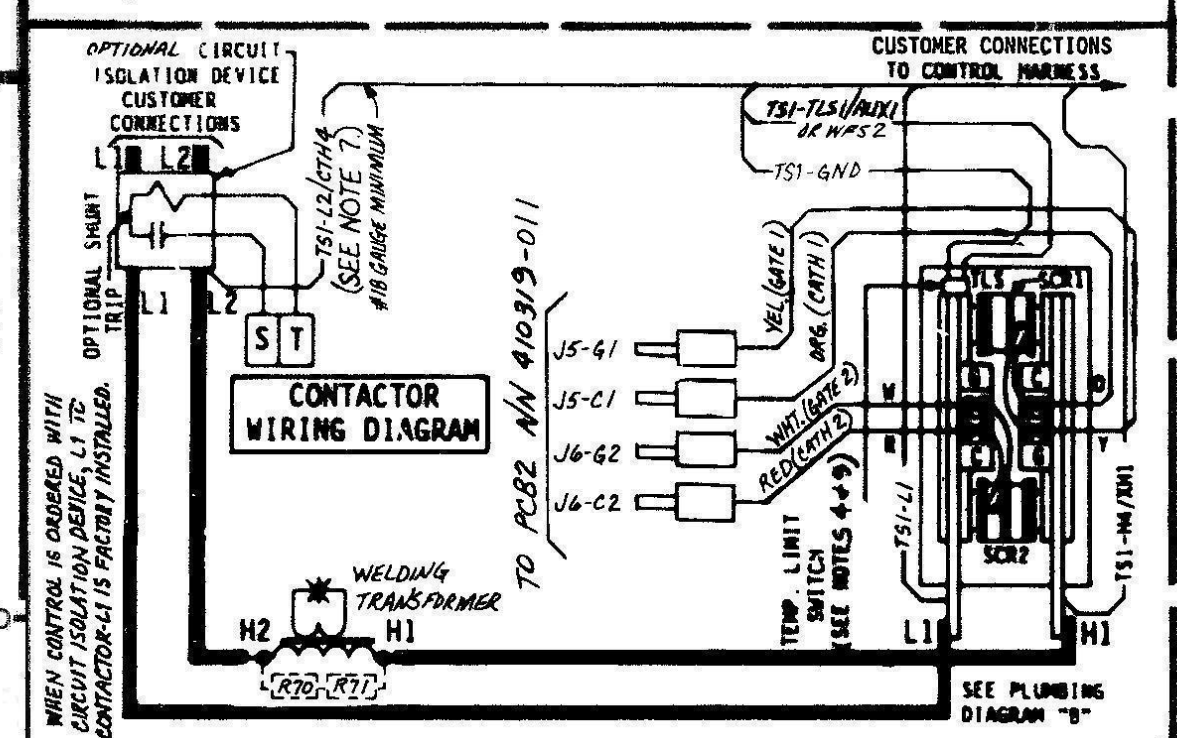
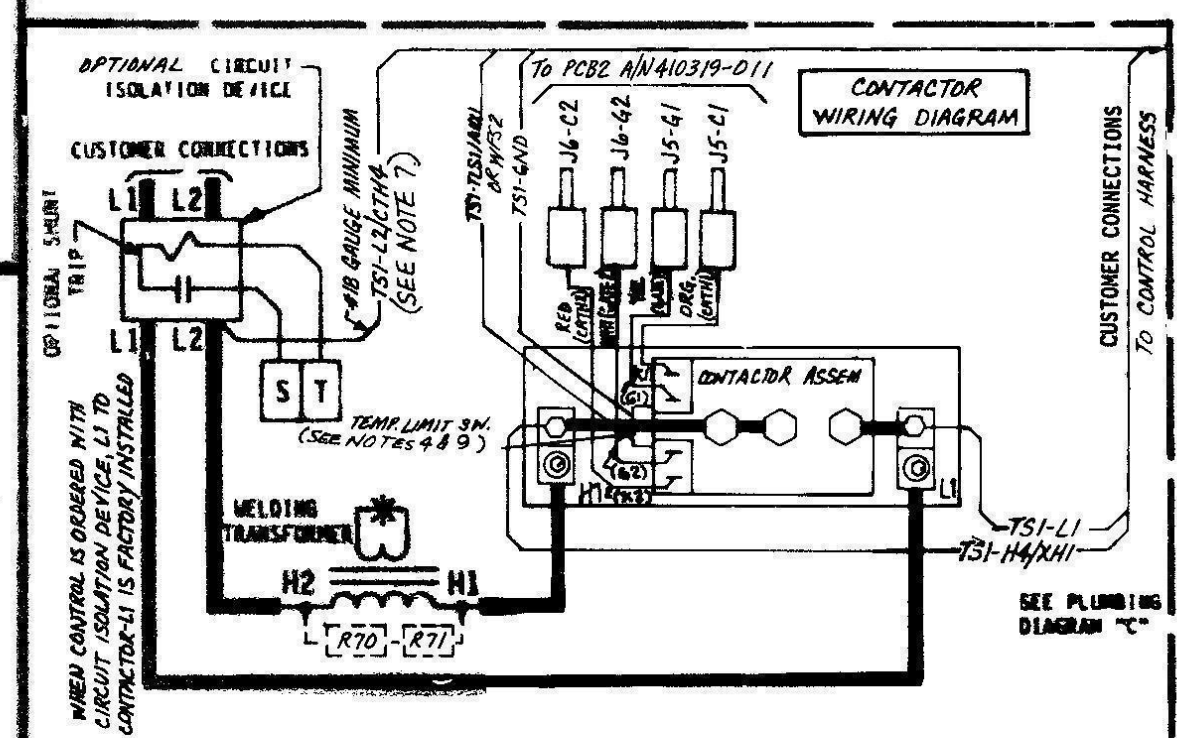
When Control is wired for 380 VAC Operation, add quantity one (1) T51 Label 460105 for 230/460/575 VAC Operation.

MANUFACTURING INSTRUCTIONS:
See Drawing #610526 for Layout/Assembly of Front Panel.
See Drawing 600554 for Mechanical Assembly Instructions.
See Drawing 440454 for Packing Instructions.

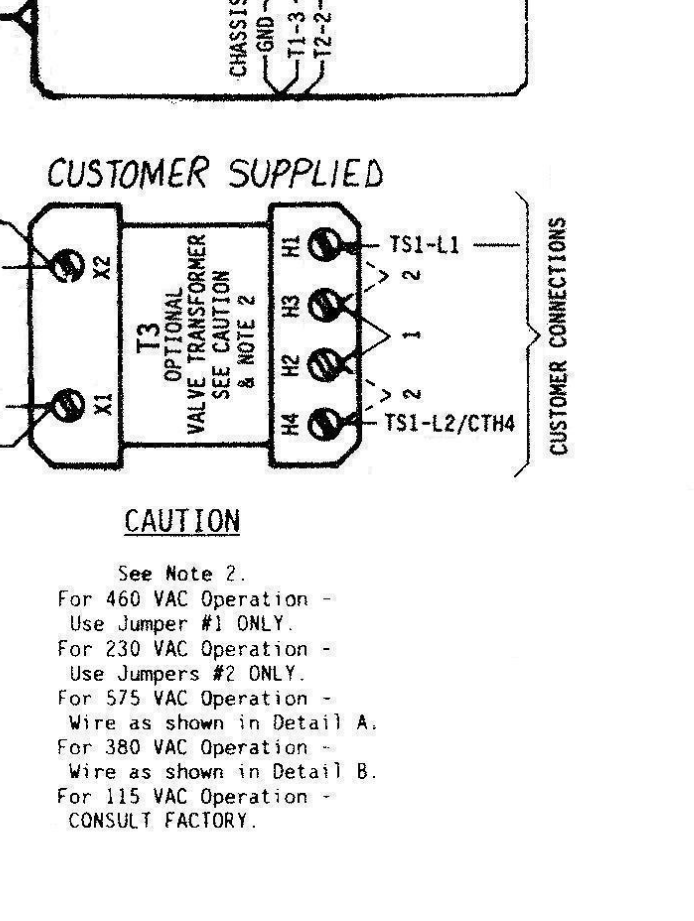
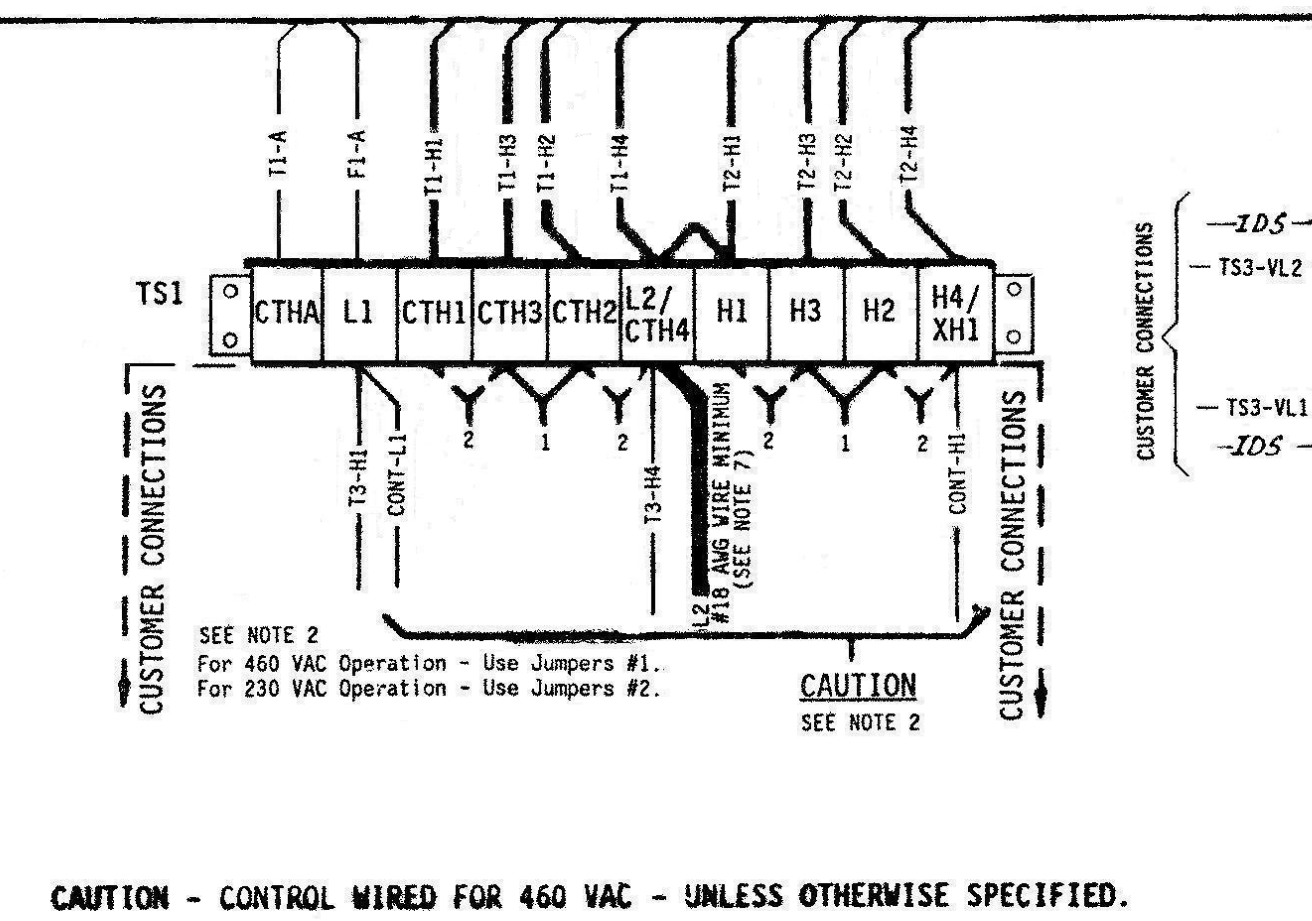
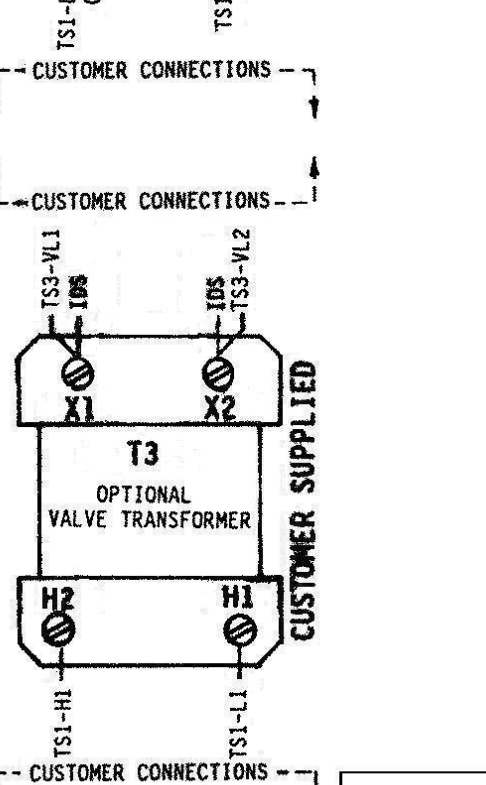
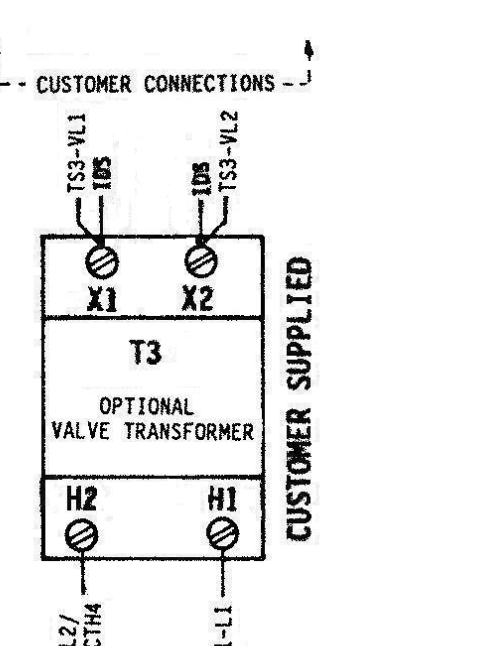
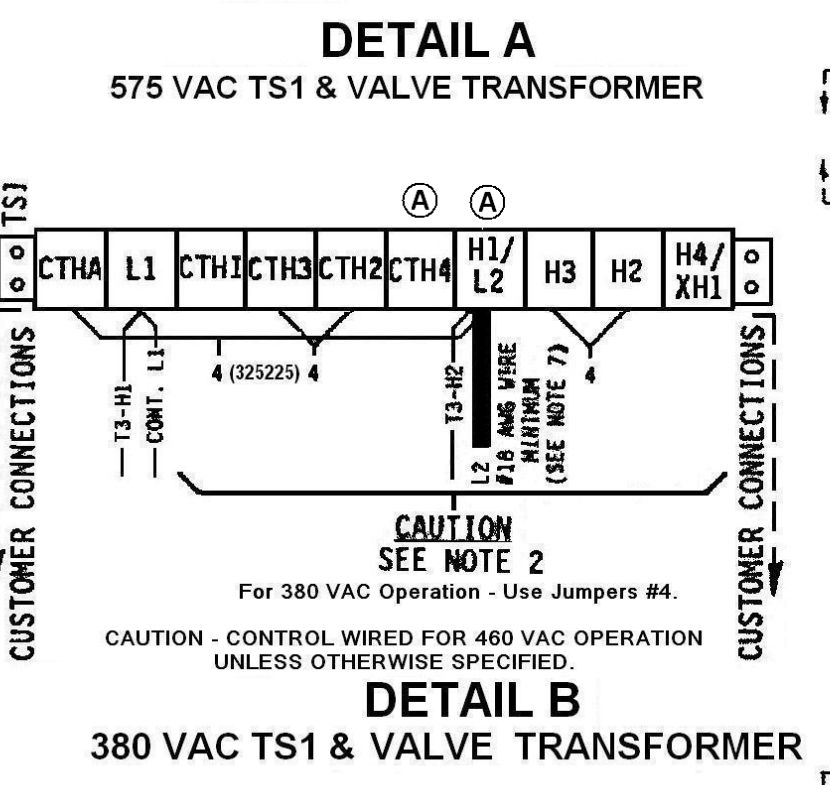
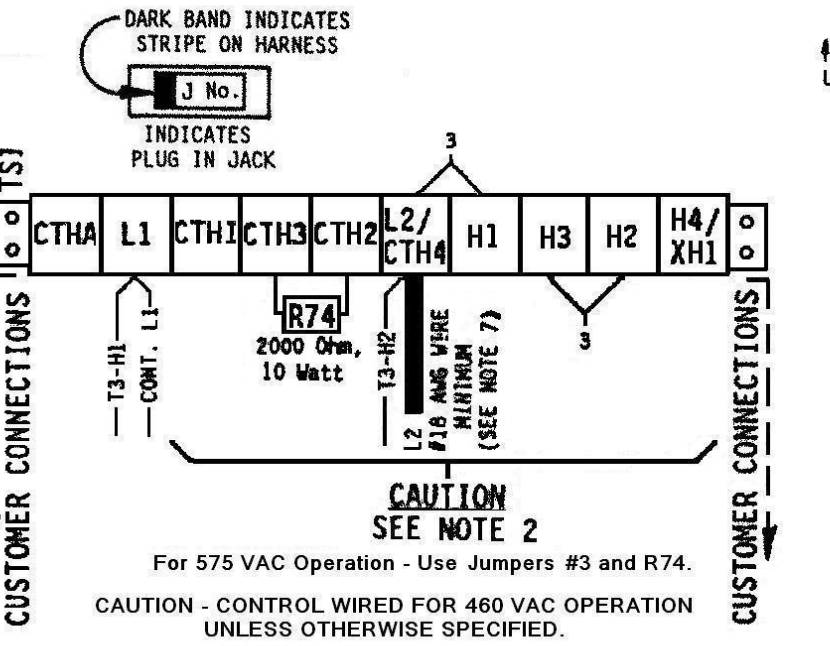
REV	AUTH	DESCRIPTION	DRWN	CHK'D	BY	DATE
—	—	ORIGINAL RELEASE	—	—	—	—

ENTRON						
SCALE	DATE	DRAWN BY	CHK'D BY	APPROVED BY		
2/13/98	DEC					
TOLERANCE UNLESS SPECIFIED						
ANGLES:	± 1°	REV LTR	REVISED			
DECIMALS:	± .010	B	APPROVED BY			
FRACTIONS:	± 1/64	DATE	10/9/12	DCS		
WIRING DIAGRAM, EN2000-FPX(SCR), 11x11 FLAT PLATE CONTROL						
WIRED FOR SELECTABLE 230/380/460/575 VAC OPERATION						
(FOR FPX DESIGNATION, SEE CHART)						
REV	AUTH	DESCRIPTION	DRWN	CHK'D	BY	DATE
—	—	—	—	—	—	—
NEXT ASSM/USED ON			DRAWING NUMBER			REV
			421283-004			B

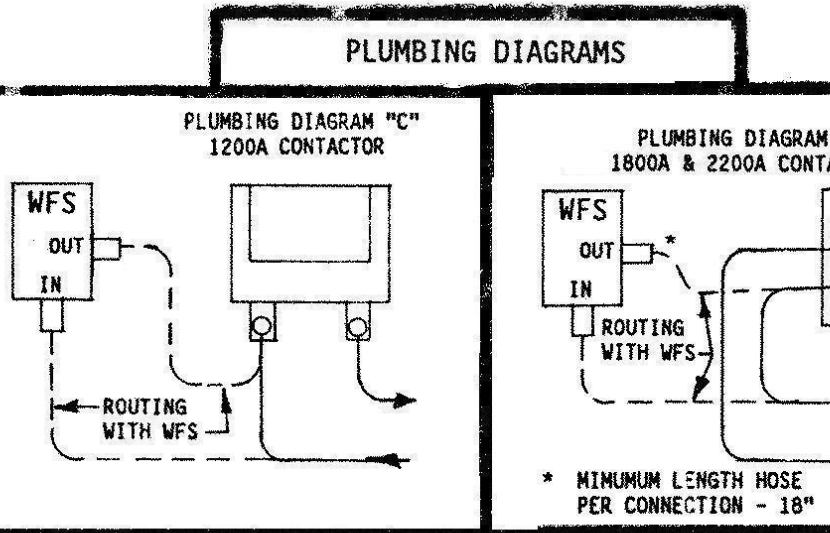
TYPICAL CONNECTION FOR CUSTOMER SUPPLIED CONTACTORS



- NOTES:
- It is recommended that Control Wiring (i.e.: initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher).
 - For 460 VAC Operation - Use Jumper #1 on T3 & T51. As shipped unless otherwise specified. For 230 VAC Operation - Use Jumper #2 on T3 & T51. For 575 VAC Operation - Use Jumpers #3 and 2000 Ohm, 10 Watt R74 on T51. See Detail A for 575 VAC T51 and for 575 VAC Customer supplied Valve Transformer. For 380 VAC Operation - Use Jumpers #4 on T51. See Detail B for 380 VAC T51 and for 380 VAC Customer supplied Valve Transformer. For 115 VAC Operation - CONSULT FACTORY.
 - For Single Stage Pilot Operation - Connect pilot switch to T51-F53 & T51-GND. No Jumpers required across T51-F51 & T51-GND. For Two Stage Pilot Operation - Connect 1st stage pilot switch to T51-F51 & T51-GND. Connect 2nd stage pilot switch to T51-F53 & T51-GND. For DUAL COUNT/DUAL CURRENT (Dual Weld/Dual Heat) or TRIPLE COUNT/TRIPLE CURRENT (Triple Weld/Triple Heat) or External Schedule Selection, SEE MANUAL.
 - It is recommended that a Temperature Limit Switch (TLS) similar to ENTRON P/N 300020 be provided and connected to T51-TLS1/AUX1 & T51-GND. Jumper not required between T51-TLS1/AUX1 & T51-GND. NOTE: TLS should open at Temperatures greater than or equal to 150°.



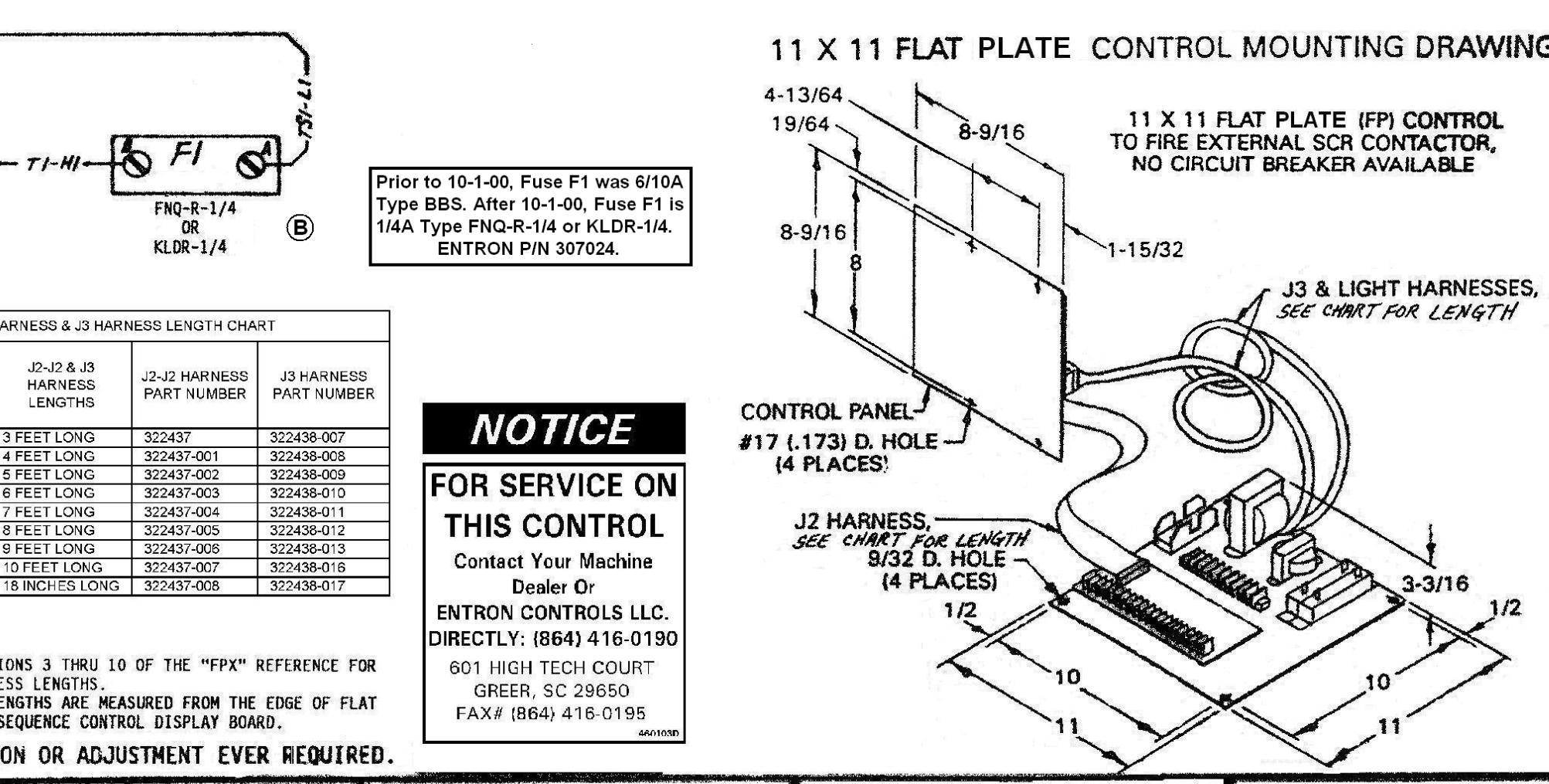
- Connect T51-L2/CTH4 to L2/H2 side of Welding Transformer primary.
- The Automatic Voltage Compensation (AVC), Automatic Power Factor (APF), 87 Delayed Firing, and 50Hz/60Hz Functions are determined by the setting of the four position DIP switch on PCB1 (A/N 600580). As shipped from the factory, AVC is off, APF is on, 87 Delayed Firing is on, and 60Hz operation is selected. To change any of these functions, see instructions in the manual.
- When TLS and WFS are used together, wire as shown below. Jumper not required between T51-TLS1/AUX1 & T51-GND. WFS should open with flows less than .75 GPM.



J2-J2 HARNESS & J3 HARNESS LENGTH CHART

FPX FLAT PLATE DESIGNATION FOR J2-J2 & J3 HARNESS LENGTHS	J2-J2 & J3 HARNESS LENGTHS	J2-J2 HARNESS PART NUMBER	J3 HARNESS PART NUMBER
FP3	3 FEET LONG	322437	322438-007
FP4	4 FEET LONG	322437-001	322438-005
FP5	5 FEET LONG	322437-002	322438-009
FP6	6 FEET LONG	322437-003	322438-010
FP7	7 FEET LONG	322437-004	322438-011
FP8	8 FEET LONG	322437-005	322438-012
FP9	9 FEET LONG	322437-006	322438-013
FP10	10 FEET LONG	322437-007	322438-016
FP15P	15 INCHES LONG	322437-008	322438-017

X = NUMBER DESIGNATIONS 3 THRU 10 OF THE "FPX" REFERENCE FOR J2-J2 & J3 HARNESS LENGTHS.
NOTE: HARNESS LENGTHS ARE MEASURED FROM THE EDGE OF FLAT PLATE TO SEQUENCE CONTROL DISPLAY BOARD.
NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.



NOTICE

FOR SERVICE ON THIS CONTROL

Contact Your Machine Dealer Or

ENTRON CONTROLS LLC.
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601 HIGH TECH COURT
GREER, SC 29650
FAX# (864) 416-0195