

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

WARNING: HIGH VOLTAGE

VOLTAGES PRESENT IN THIS CONTROL CAN CAUSE SEVERE OR FATAL INJURIES. NOTE: EVEN THOUGH SUPPLY POWER TO THIS UNIT HAS BEEN DISCONNECTED, THERE MAY BE VOLTAGES IN THIS CONTROL ORIGINATING FROM OTHER SOURCES.

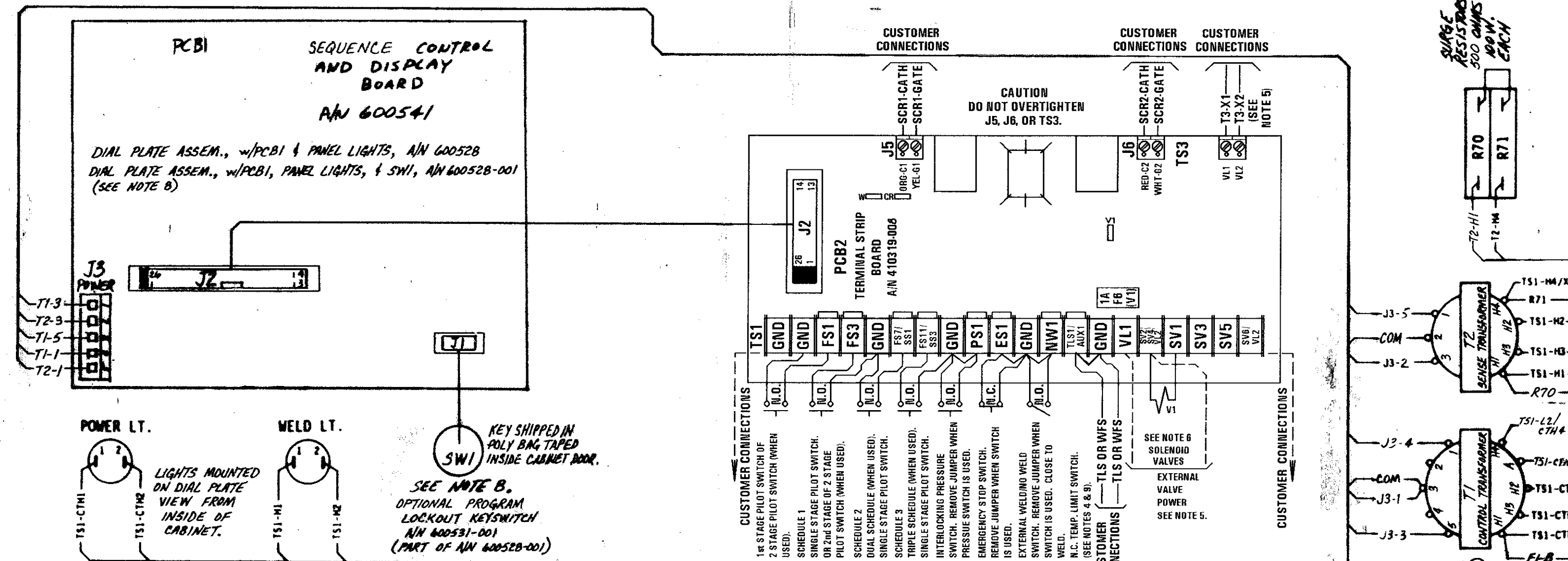
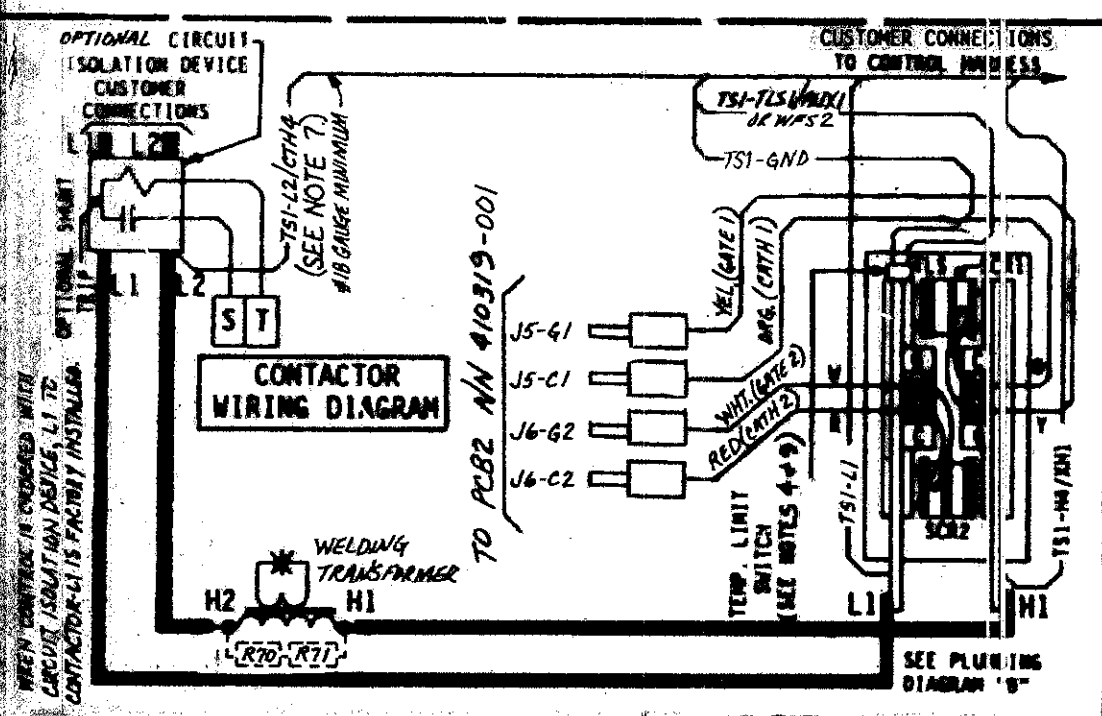
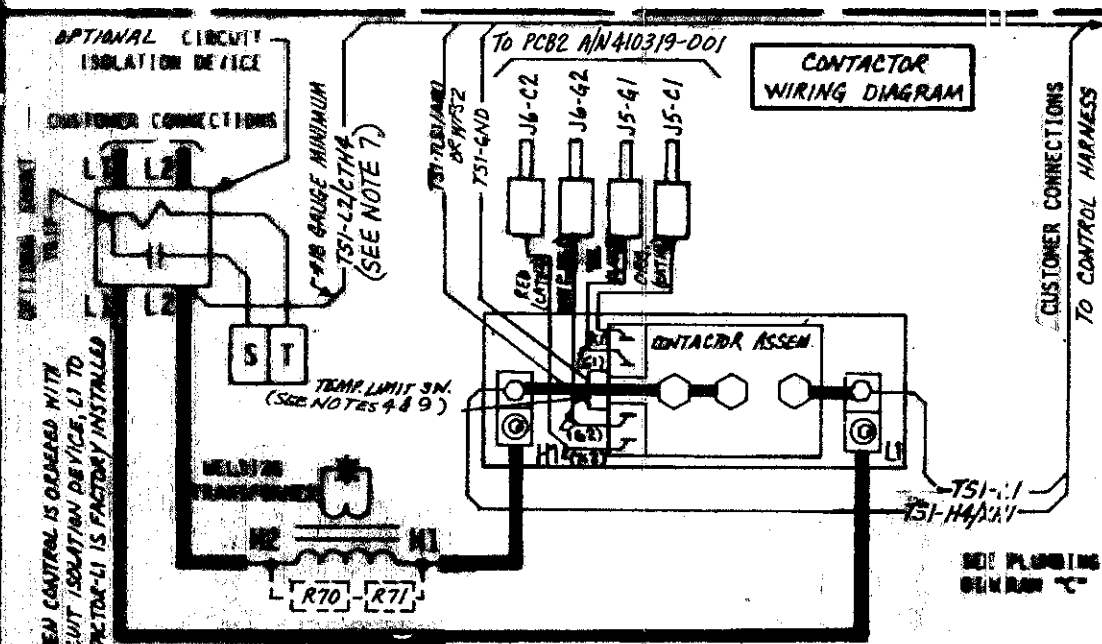
FOR ALL VOLTAGE POTENTIAL TO BE REMOVED FROM THIS CONTROL, POWER MUST BE REMOVED FROM ALL EXTERNAL CONTROL CIRCUITS CONNECTED TO TERMINALS IN THIS CABINET.

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

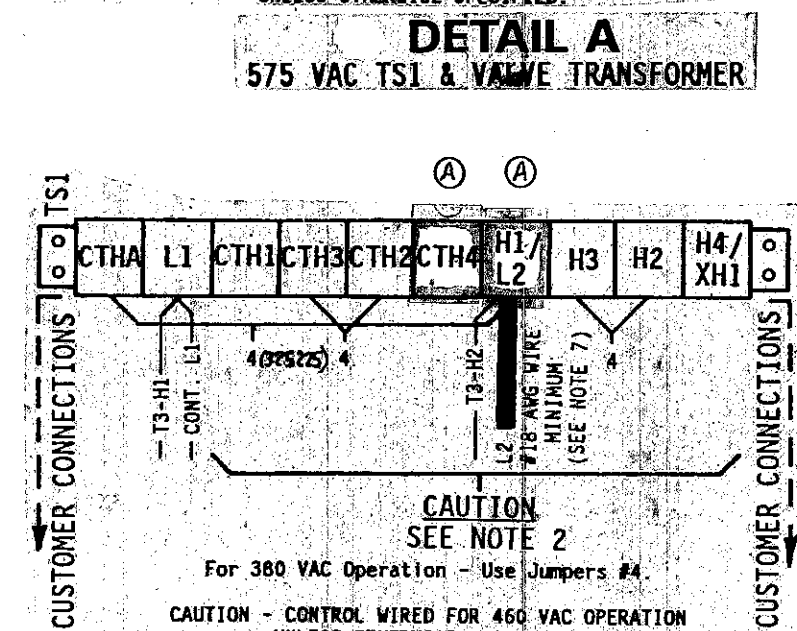
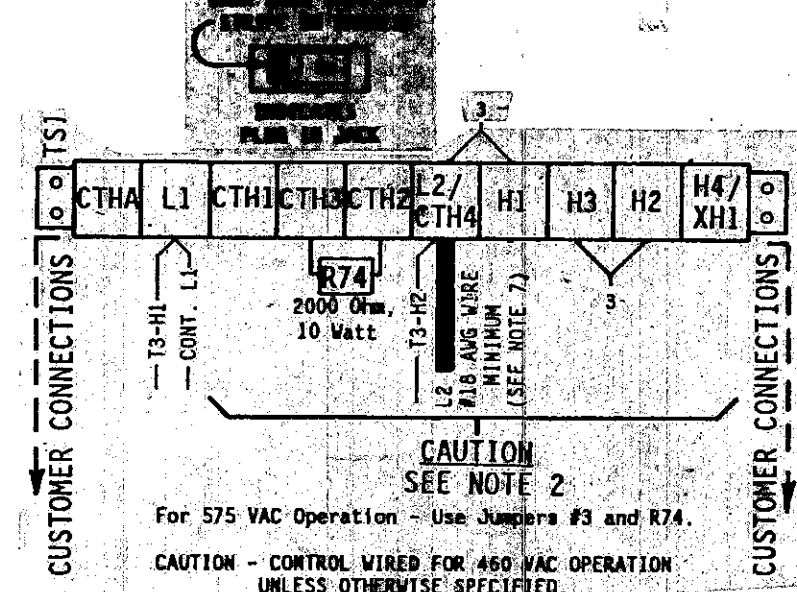
CAUTION
DO NOT OPERATE WITHOUT WATER ON
POWER ON WITHOUT WATER FLOW MAY CAUSE DAMAGE TO CONTROL.
TURN POWER OFF WHEN CONTROL IS NOT IN USE.

PARTS LIST - CONTROL SECTION		421210-033	
QTY	DESIG.	PART NO.	DESCRIPTION
1	PCB1	60052B	ASSEM., DIAL PLATE, EN1000, CONSISTING OF ASSEM., DIAL PLATE, 6000 WIRE SWITCH, CONTAINER
1	SW1	600541	SWITCH ASSEM., SEQUENCE CONTROL & DISPLAY BD.
1		600531-001	SWITCH ASSEM., KEY LOCK, MOMENTARY, SPST
1		510251	ILLUSTRATED PANEL, DIAL PLATE, EN1000
1		51104	PANEL, DISPLAY WINDOW, RED FILTER, EN1000
1		565003	JOLE PLUG, 3/4" DIAM., BLACK
1	J2-J2	SEE CHART	HARNESS ASSEM., CTRL. BD. TO TERMINAL
1	J3	SEE CHART	Harness Assem. Power, EN1000-FPX(SCR)
1	PLM.LT.	305001	Lamp, Neon, Red, 230V
1	MLD.LT.	305002	Lamp, Neon, Clear, 230V

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 first 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 (T51) similar to ENTRON P/N 310020 be provided and connected to T51-TLS1/AUX1 & T51-GND. Jumper not required between T51-TLS1/AUX1 & T51-GND. Note: T51 should open at temperatures greater than or equal to 150°F.
 - VALVE USAGE: T51-SV1 & T51-SV2/SV4/VL2 can ONLY be used for Solenoid Valve. Valve 2 and Valve 3 are used to Disable SCR1 & SCR2 for % Cycle Operation. See Application Note 700114 for more information. See chart for "FPX" designation.
 - Connect T51-L2/CTM# to L2/H2 side of Welding Transformer primary
 - When Optional Program Lockout is specified by customer, Dial Plate A/N 60052B-301 replaces A/N 60052B. Add Switch P/N 600531-001 & remove Hole Plug P/N 565003.
 - When T51 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.
 - After October, 1997, this Wiring Diagram #421210-017 for EN1000-FPX(SCR), 11 x 11 Flat Plate Control replaces Wiring Diagram #421210-007 for EN1000-FP(SCR), 11 x 11 Flat Plate Control. See chart for "FPX" designation.
 - For SP1000-FP(SCR), 11 x 11 Flat Plate Control. See Wiring Diagram #421210-002.

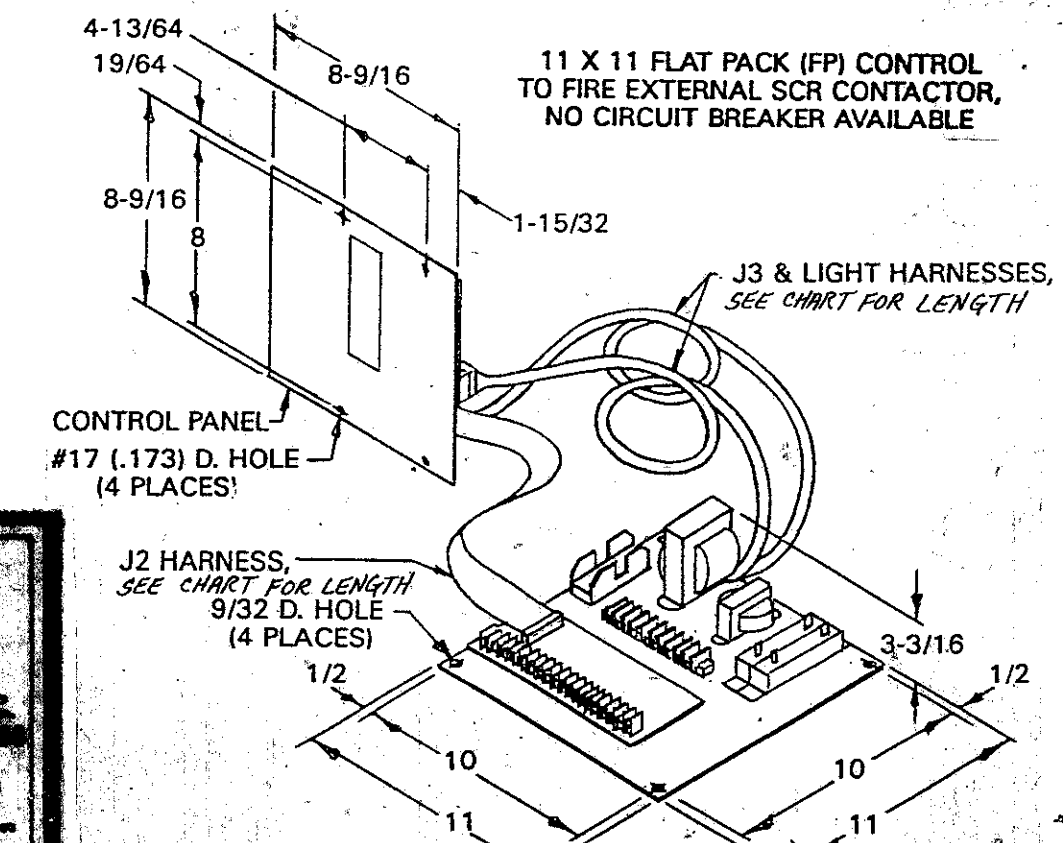


J2-J2 HARNESS & J3 HARNESS LENGTH CHART

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
FP4	4 FEET LONG	322437-001	322438-001
FP5	5 FEET LONG	322437-002	322438-002
FP6	6 FEET LONG	322437-003	322438-003
FP7	7 FEET LONG	322437-004	322438-004
FP8	8 FEET LONG	322437-005	322438-005
FP9	9 FEET LONG	322437-006	322438-006
FP10	10 FEET LONG	322437-007	322438-014

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.

11 X 11 FLAT PACK CONTROL MOUNTING DRAWING



PARTS LIST - CONTACTOR SECTION

QTY	DESIG.	PART NO.	DESCRIPTION
1	T51	535036	Terminal Strip, 10 Pin. (Part of J3 HARNESS)
1	T1	310001	Transformer, Control. (Part of J3 HARNESS)
1	T2	310002	Transformer, Same. (Part of J3 HARNESS)
2	R70, 71	225016	Resistor, Power, Surge, 500 OHM, 100W
1	F1	308010	Fuseholder, SINGLE POLE, 400V
1	F1	307024	Fuse, Control, 1/4A, FNO-8-1/4 or KLR-8-1/4
3	F2, 7, 8 (PCB2)	307022	FUSE, 1 AMP, SLOW BLOW, 250V (PART OF 410319-001)
1	(R70, 71)	325024	Wire Assem., Surge I
1	PCB2	410319-008	PCB ASSEM., TEL. <i>Im Really Part of 410319-008</i>
	510245		Assem., 11 x 11 FLAT PLATE, EN1000-FPX(SCR)
	700114		Application Note, EN1000/1/2 Control
	700105		Manual, EN1000
	421193		Logic Diagram, EN1000-FPX(SCR)
	421210-033		Wiring Diagram, EN1000-FPX(SCR), 11 x 11 FLAT PLATE

- Optional Keylock when specified by customer. See Note 6. Pack Key in Poly bag 900148 & attach to inside of Dial Plate w/Yellow Tape 900116. See Drawing #440450-001 for mounting detail of Flat Plate (FP).
- Tape one (1) Poly Bag P/N 900148 to Flat Plate using Tape P/N 900118, & include the following in the bag:
- 4 Each #6-32 x 1/4" PHMS, Phil., Black P/N 557004
 - 4 Each #6-32 x 1/4" A/F Hex Nut P/N 557018
 - 4 Each #6-32 x 1/2" Standoffs P/N 555031
 - 4 Each #6-32 x 1/4" PHMS, Phil., Brite P/N 557003
 - 1 Each Label, Danger, Hazardous Voltage... P/N 460142/RWMA1561036
 - 1 Each Label, Danger, Voltage and Flash Hazard... P/N 460143/RWMA1561036
 - 1 Each Label, Voltage Hazard... Earth GND... P/N 460144/RWMA1561036
 - 1 Each Label, Caution, Water Hose Burst Hazard... P/N 460145/RWMA1561036
 - 1 Each Label, Warning, Hazardous Voltage... P/N 460146/RWMA1561036
 - 1 Each Label, Caution, Do Not Pinch Wires... P/N 460170
 - 1 Each Resistor, Power, 2000 Ohm, 10W, (For 575 VAC) P/N 600048
 - 1 Each Jumper, T51, (For 380 VAC) P/N 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 P/N 460105 for 230/460/575 VAC Operation.

MANUFACTURING INSTRUCTIONS:
See Drawing #600526 for Layout/Assembly of Front Panel.
See Drawing #600554 for Mechanical Assembly Instructions.
See Drawing #440454 for Packing Instructions.

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