

⚠ 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.

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

⚠ CAUTION

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

PARTS LIST - CONTROL SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1	600528-010	600528-011	Assem., Dial Plate, w/Sw. Assem., EN1000, Consisting of: Assem., Dial Plate, w/Sw. Assem. & Keylock, EN1000, Consisting of:
1	PCB1	600531-001	Assem., Switch, Sequence Control & Display Board
1	SW1	540251-002	Assem., Switch, Keylock, Momentary, SPST
1		515104	Panel, Display Window, Red Filter, EN1000
1		565003	Weld Plug, 3/4" Diam., Black
1	J2-J2	322470	Assem., Harness, Seq. Control Bd. to Terminal Strip Bd.
1	J3	322476	Assem., Harness, Power, EN1000-IMU(SCR)
1	PWR.LT.	305001	Lamp, Neon, Red, 230V
1	WLD.LT.	305002	Lamp, Neon, Clear, 230V

PARTS LIST - CONTACTOR SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS1	335034	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, FNO-R-1/4 or KLDR-1/4
1	F1	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319-001)
1	F1	325024	Assem., Wire, Surge Resistor, 18 Ga., Black
1	PCB2	410319-001	Assem., PCB, Terminal Strip Board, EN1000-IMU(SCR)
1		510280	Plate, Mounting, Integrated Modular Unit (IMU)
1		525142	Bracket, Mounting Plate Support, (IMU)
1		700105	Manual, EN1000
1		421188	Logic Diagram, EN1000 Control
1		421424	Wiring Diagram, EN1000-IMU(SCR)

Optional Keylock when specified by customer. See Note 6. Pack Key in Poly Bag P/N 900148 & attach to inside of Dial Plate w/Yellow Tape P/N 900118.

See Drawing #440450-004 for mounting detail of Integrated Modular Unit (IMU).

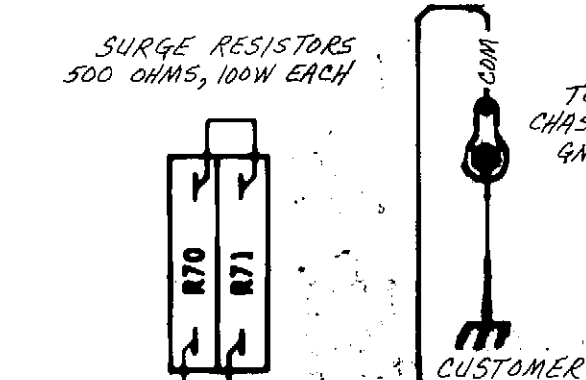
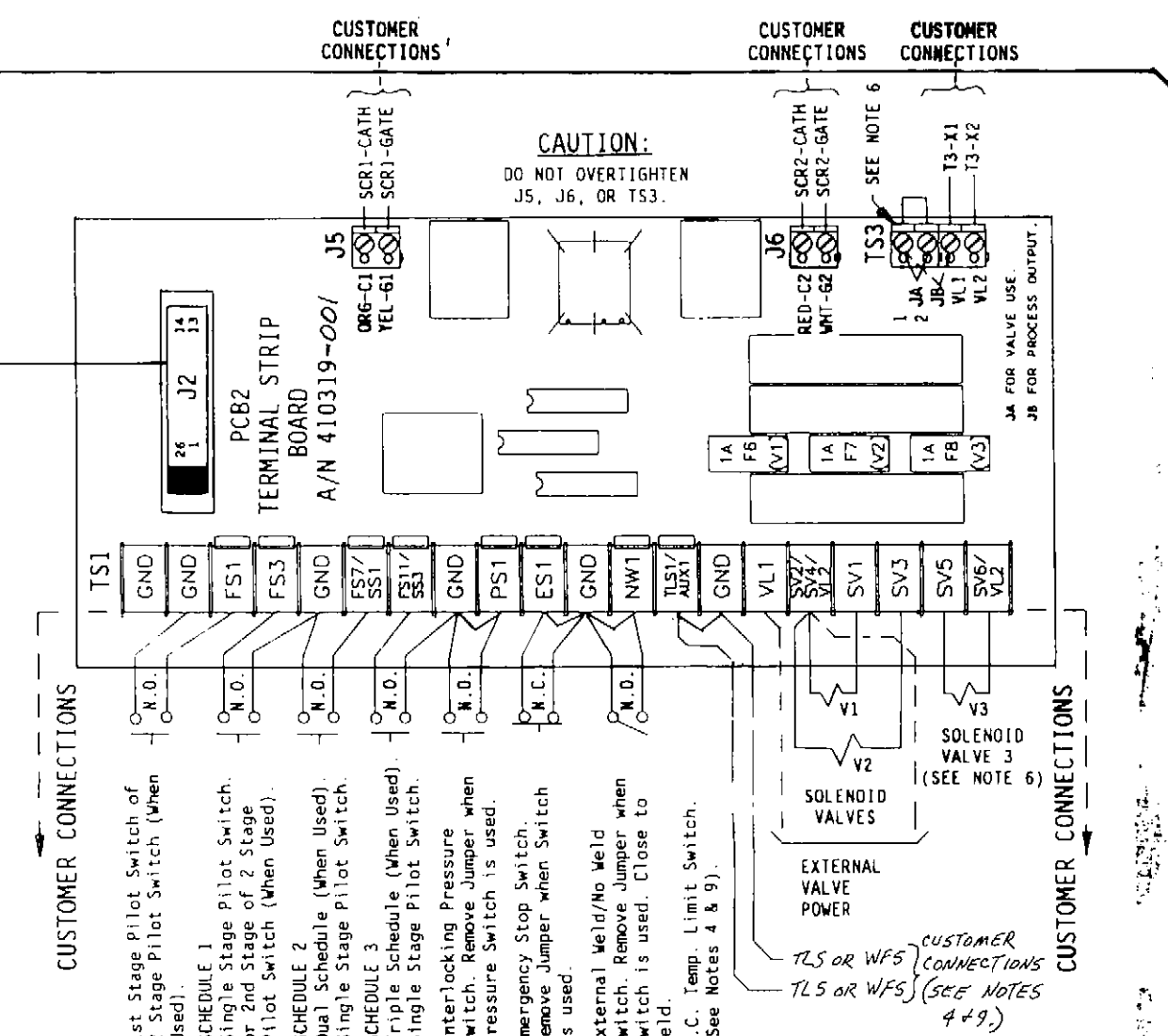
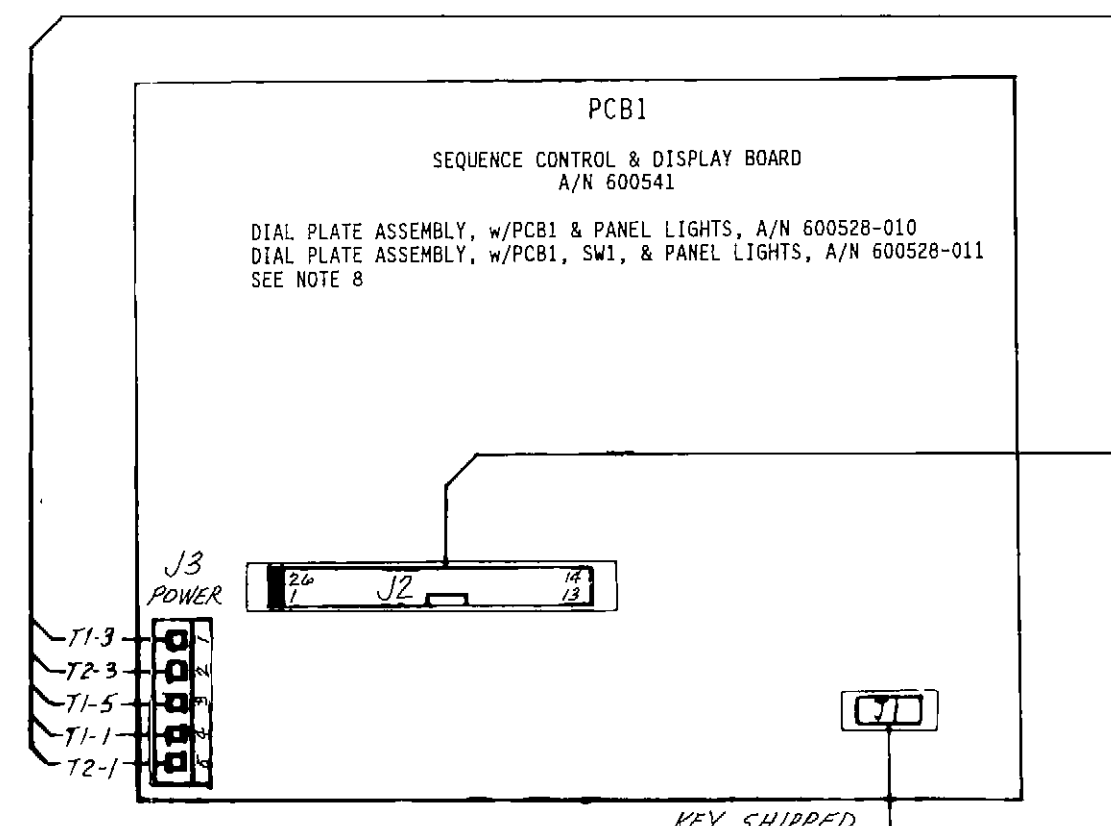
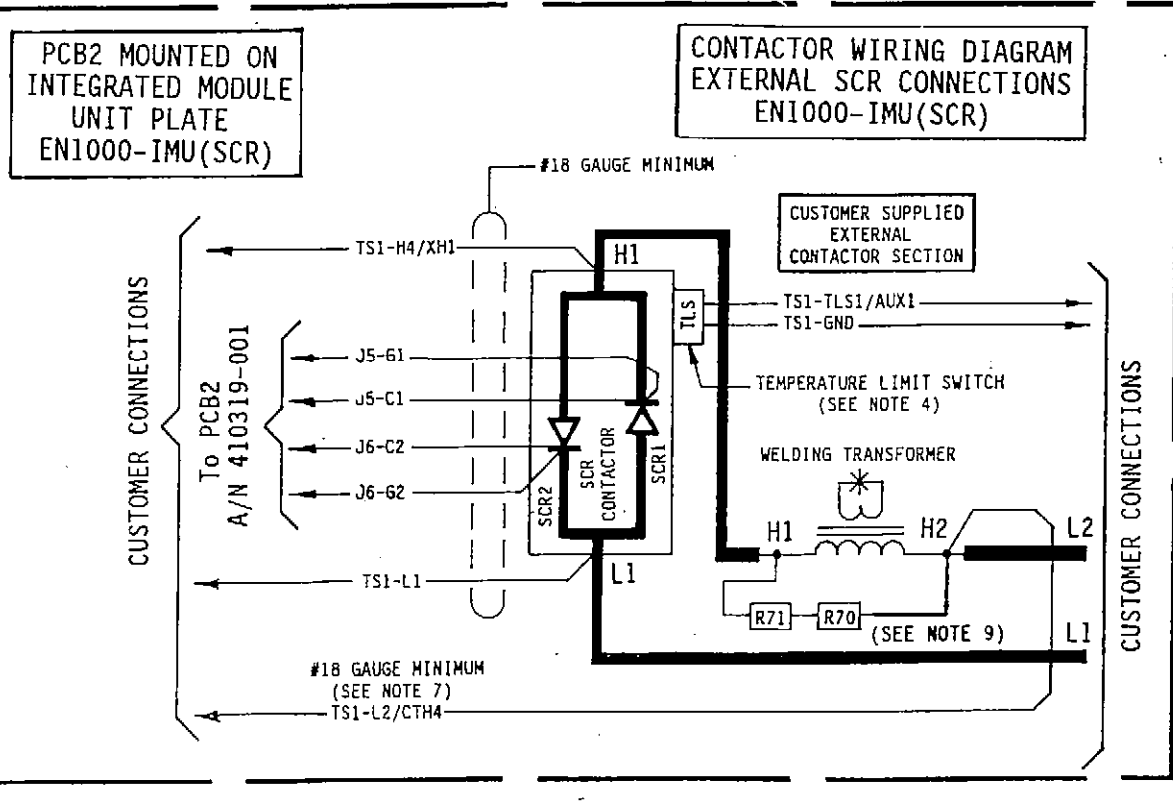
Tape one (1) Poly Bag P/N 900148 to Integrated Modular Unit (IMU) using Tape P/N 900118, & include the following in the bag:
4 Each #6-32 x 1/4" PHMS, Phil., Black..... P/N 557004

1 Each Label, "DANGER, HAZARDOUS VOLTAGE..." P/N 460142/RWMA156103C
1 Each Label, "DANGER, VOLTAGE AND FLASH HAZARD..." P/N 460143/RWMA156103A
1 Each Label, "VOLTAGE HAZARD...EARTH GND..." P/N 460144/RWMA156103D
1 Each Label, "CAUTION, WATER HOSE BURST HAZARD..." P/N 460145/RWMA156103E
1 Each Label, "WARNING, HAZARDOUS VOLTAGE..." P/N 460146/RWMA156103B
1 Each Label, "CAUTION, DO NOT PUNCH WIRES..." P/N 460170
1 Each Resistor, Power, 2000 Ohm, 10W, (For 575 VAC)..... P/N 600048
1 Each Jumper, TSI, (For 380 VAC)..... P/N 325225

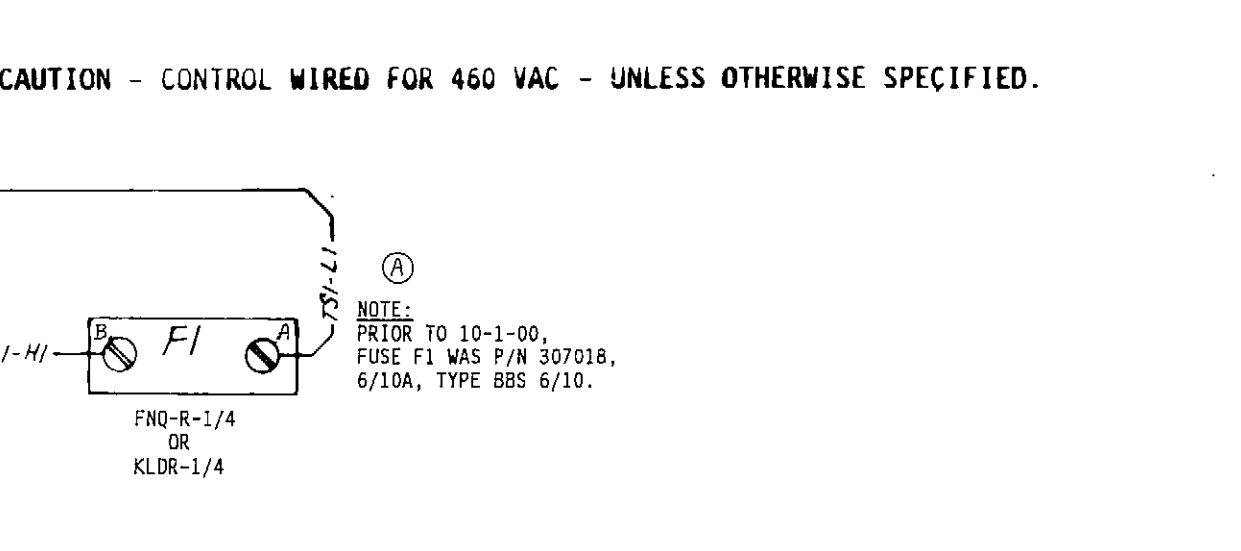
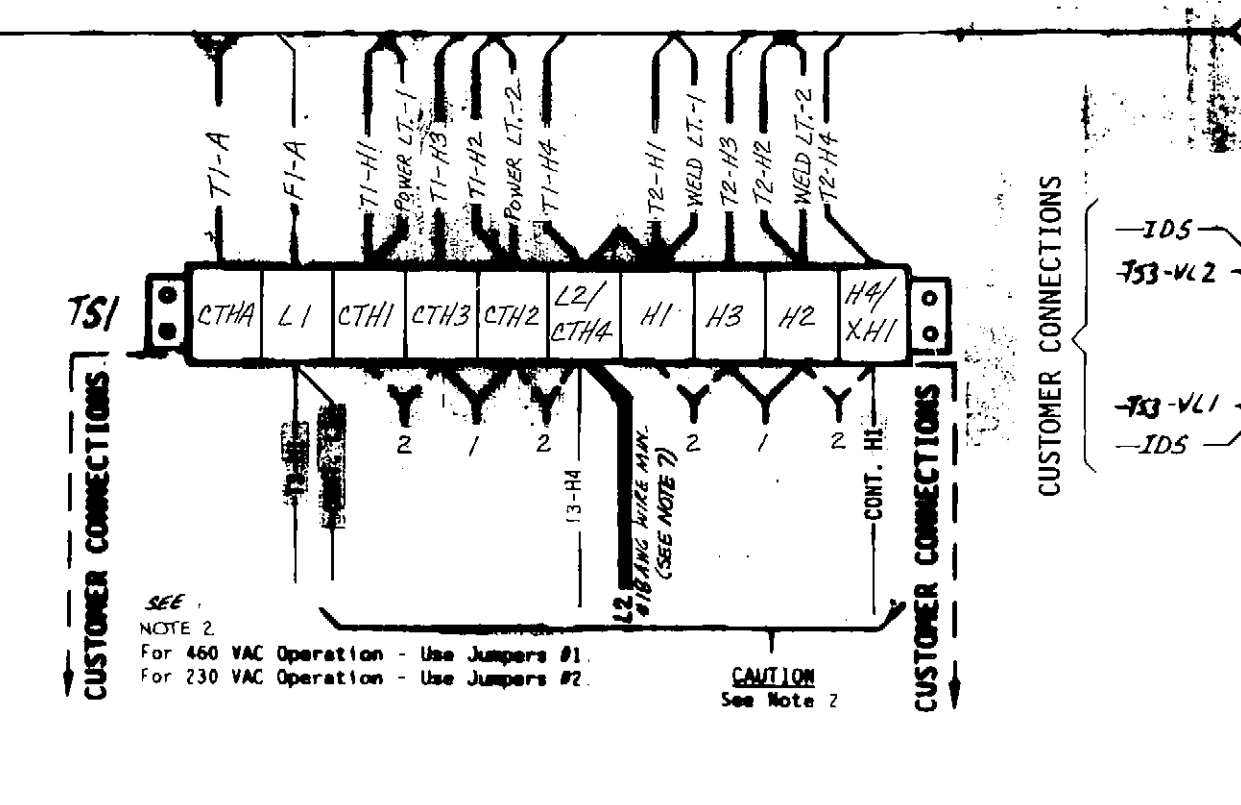
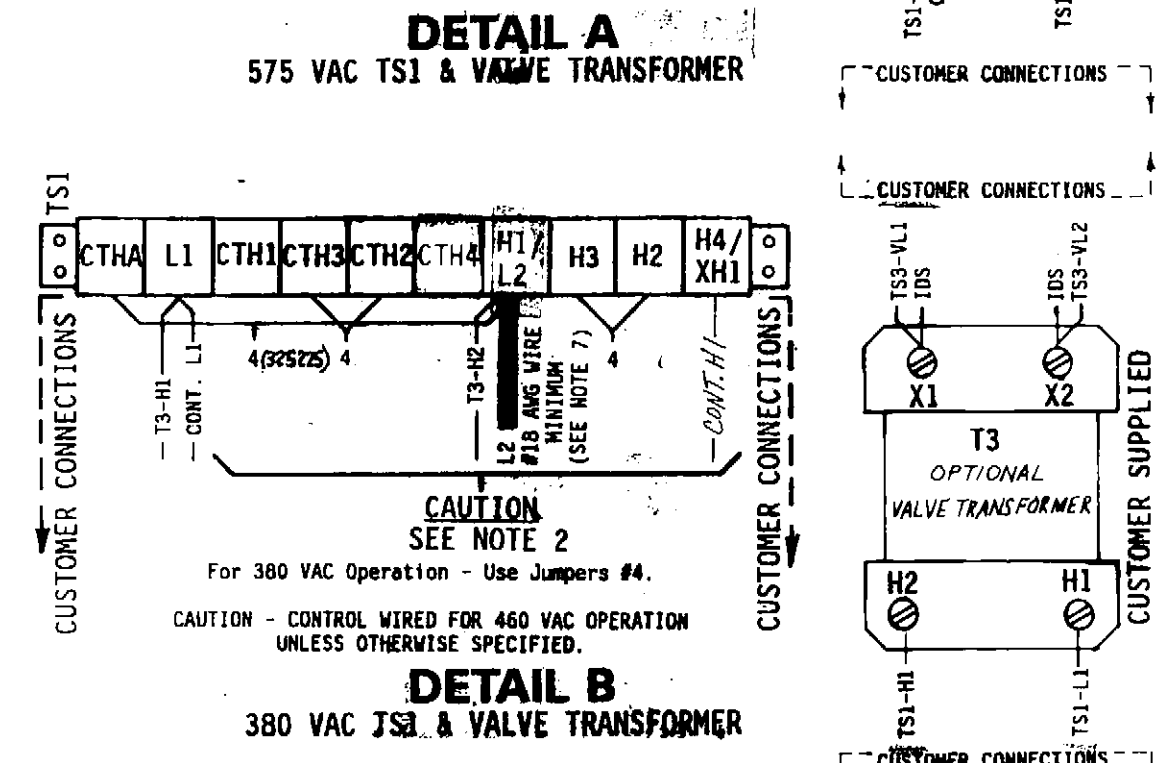
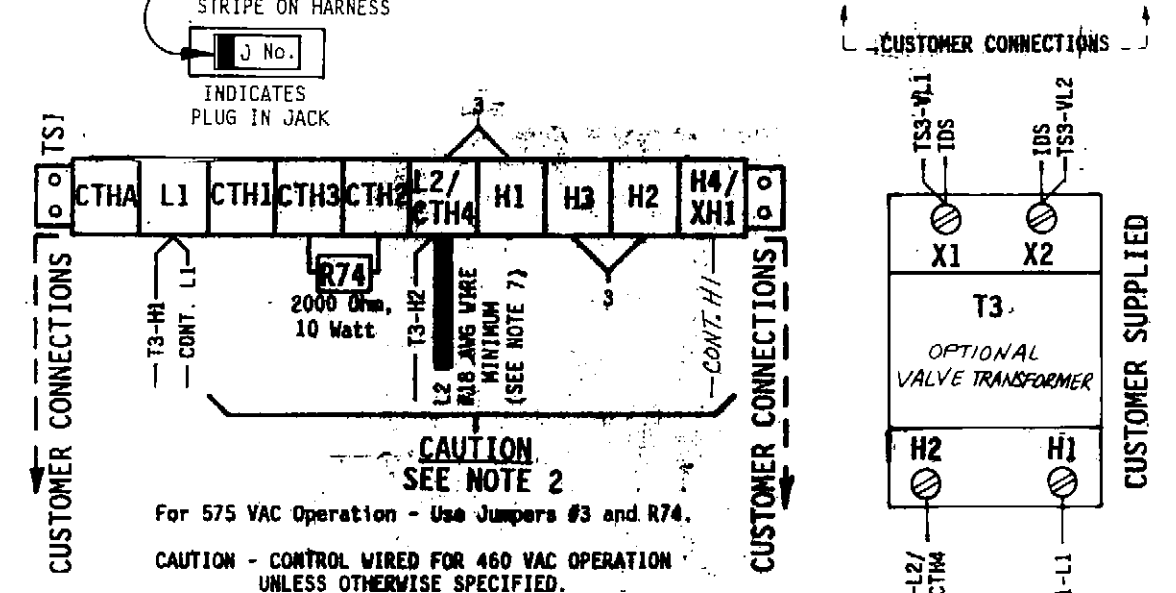
When Control is wired for either 230/460/575 VAC Operation, add quantity one (1) TSI Label P/N 460201 for 380 VAC Operation.
When Control is wired for 380 VAC Operation, add quantity one (1) TSI Label P/N 460105 for 230/460/575 VAC Operation.

MANUFACTURING INSTRUCTIONS:
See Drawing #600526 for Layout/Assembly of Front Panel.
See Drawing #600674 for Mechanical Assembly Instructions.
See Drawing #440480 for Packing Instructions.

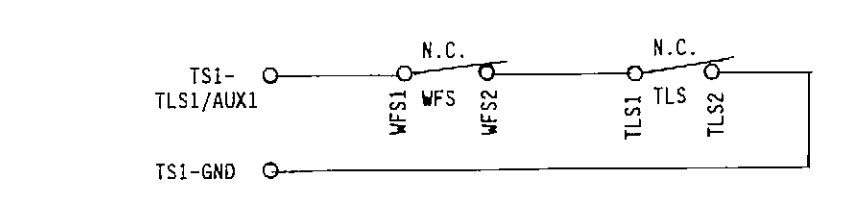
TYPICAL CONNECTIONS FOR CUSTOMER SUPPLIED CONTACTORS.



- 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 & TS1. As shipped unless otherwise specified.
For 230 VAC Operation - Use Jumper #2 on T3 & TS1.
For 575 VAC Operation - Use Jumpers #3 and 2000 Ohm, 10 Watt R74 on TS1. See Detail "A" for 575 VAC TSI and for 575 VAC Customer supplied Valve Transformer.
For 380 VAC Operation - Use Jumpers #4 on TS1. See Detail "B" for 380 VAC TSI and for 380 VAC Customer supplied Valve Transformer.
For 115 VAC Operation - CONSULT FACTORY.
 - For Single Stage Pilot Operation - Connect pilot switch to TSI-F53 & TSI-GND. No Jumpers required across TSI-F53 & TSI-GND.
For Two Stage Pilot Operation - Connect 1st stage pilot switch to TSI-F51 & TSI-GND. Connect 2nd stage pilot switch to TSI-F53 & TSI-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 TSI-TLS1/AUX1 & TSI-GND. Jumper not required between TSI-TLS1/AUX1 & TSI-GND.
NOTE: TLS should open at temperatures greater than or equal to 150°F.
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- VALVE 3 OUTPUT USAGE:
TS1-SV5 & TSI-SV6 (Valve 3) can be used for either a Valve output or a Process output. When TSI-SV5 & TSI-SV6 is used as a Valve output use Jumper "A" on T33.
When TSI-SV5 & TSI-SV6 is used as a Process output use Jumper "B" on T33.
CAUTION: Do not overtighten T33
- WARNING:** Use of Jumper "B" bypasses control relay contacts to allow a process output without an initiation. SEE MANUAL.
- Connect TSI-L2/CTH4 to L2/H2 side of Welding Transformer Primary.
- When Optional Program Lockout is specified by customer, Dial Plate A/N 600528-011 replaces A/N 600528-010. Add Switch P/N 600531-001 & remove Hole Plug P/N 565003.
- When TLS and WFS are used together, wire as shown below. Jumper not required between TSI-TLS1/AUX1 & TSI-GND. WFS should open with flows less than .75 GPM.



⚠ NOTICE
FOR SERVICE ON THIS CONTROL
Contact Your Machine Dealer Or
ENTRON CONTROLS INC.
DIRECTLY:(630) 682-9800
465 EAST RANDY ROAD
CAROL STREAM, IL 60818
FAX # (630) 682-3374

REV	AUTH	DESCRIPTION	DRWN BY DATE	CHKD BY DATE
A				

REV	AUTH	DESCRIPTION	DRWN BY DATE	CHKD BY DATE
A				