

⚠ 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 hoses can burst and damage controls.

| QTY. | DESIG. | PART NO. | DESCRIPTION |
|------|--------------------|--|---|
| 1 | PCB1 | 600574-013 600574-014 | Assem., Dial Plate, w/Sw. Assem., EN1001, Consisting of: Assem., Dial Plate, w/Sw. Assem. & Keylock, EN1001, Consisting of: Switch, Sequence Control & Display Board |
| 1 | SW1 | 600572-002 600531-001 540245-002 515104 565003 | Assem., Switch, Keylock, Momentary, SPST Illustrated Panel, Dial Plate, EN1001 Panel, Display Window, Red Filter, EN1001 Hole Plug, 3/4" Diam., Black |
| 1 | J2-J2-32 | 322337-004 322476 | HARNESSE ASSEM. CTRL. BD. TO TERM. BD. TO 1 OF 7 BD. Assem., Harness, Power, EN1001-IMU(SCR) |
| 1 | PWR.LT. WLD.LT. | 305001 305002 | Lamp, Neon, Red, 230V Lamp, Neon, Clear, 230V |

| 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 210198 | Resistor, Power, Surge, 500 Ohm, 100W Resistor, Metal Oxide, 1 Ohm, 1W, (Part of Current Xfrm) |
| 1 | F1 | 308010 | Fuseholder, 1 Pole, Mini, 600V |
| 1 | F1 | 307024 | Fuse, Control, 1/4A, 500V-AC or KLDOR-VA |
| 1 | F6,7,8(PCB2) | 307022 | Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319-001) |
| 1 | (R70,71) | 325024 | Assem., Wire, Surge Resistor, 18 Ga., Black |
| 1 | PCB2 | 410319-001 | Assem., PCB, Terminal Strip Board, EN1001-IMU(SCR) |
| 1 | PCB4 | 410328 | PCB ASSEM. 1 OF 7 VALVE SELECT |
| 1 | T4 | SEE CHART | Assem., Transformer, Current, 200:5, P2 |
| 1 | T4 | SEE CHART | Assem., Transformer, Current, 500:5, P10 |
| 1 | T4 | SEE CHART | Assem., Transformer, Current, 1000:5, P10 |
| 1 | J12-J12 | 600590 322379 | Assem., Secondary Current Sensor (S) Assem., Harness, Secondary Current Sensor |
| 1 | S6 | 600667 | Assem., Secondary Current 6" Coil Rogowski |
| 1 | S10 | 421271 | Assem., Secondary Current 10" Coil Rogowski |
| 1 | J12-J12 | 322475 | Assem., Harness, Secondary current, Rogowski Coil |
| 1 | | 510280 | Plate, Mounting, Integrated Modular Unit (IMU) |
| 1 | | 525142 | Bracket, Mounting Plate Support, (IMU) |
| 1 | | 700120 | Manual, EN1001 |
| 1 | | 421271 | Logic Diagram, EN1001 Control |
| 1 | | 421423-003 | WIRING DIAGRAM, EN1001/VS-IMU(SCR) |

Optional Keylock when specified by customer. See Note 8. Pack Key in Poly Bag P/N 900148 & attach to inside of Dial Plate w/Yellow Tape P/N 900118.
 See Current Sensing Coil/Sensor Application Chart.
 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" PHSMs, Phil., Black..... P/N 557004

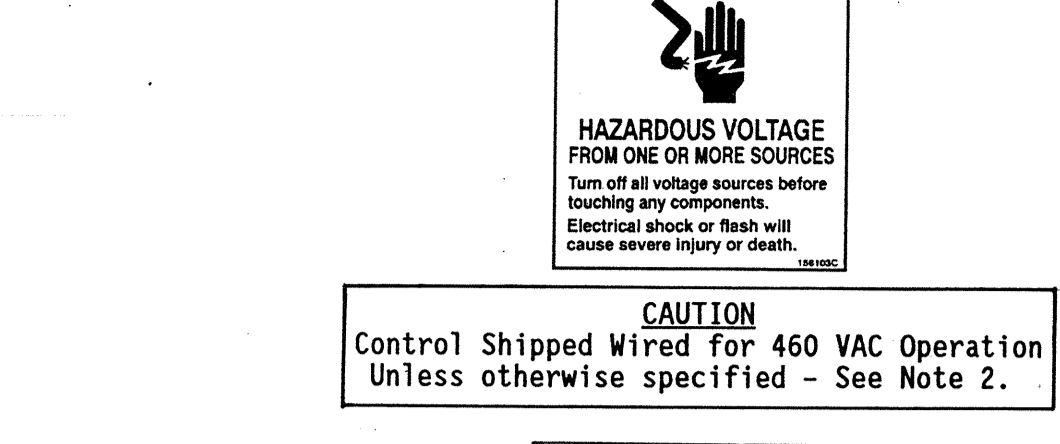
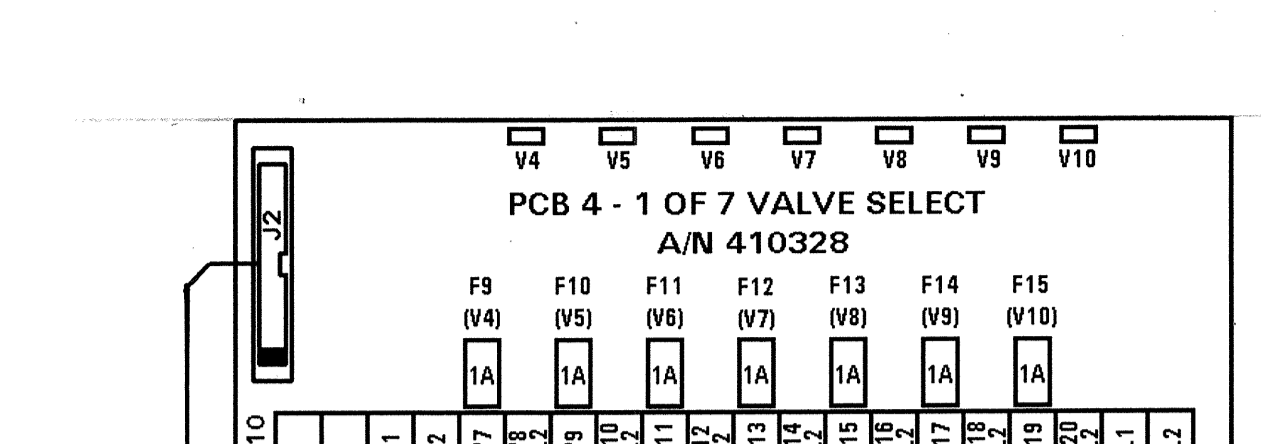
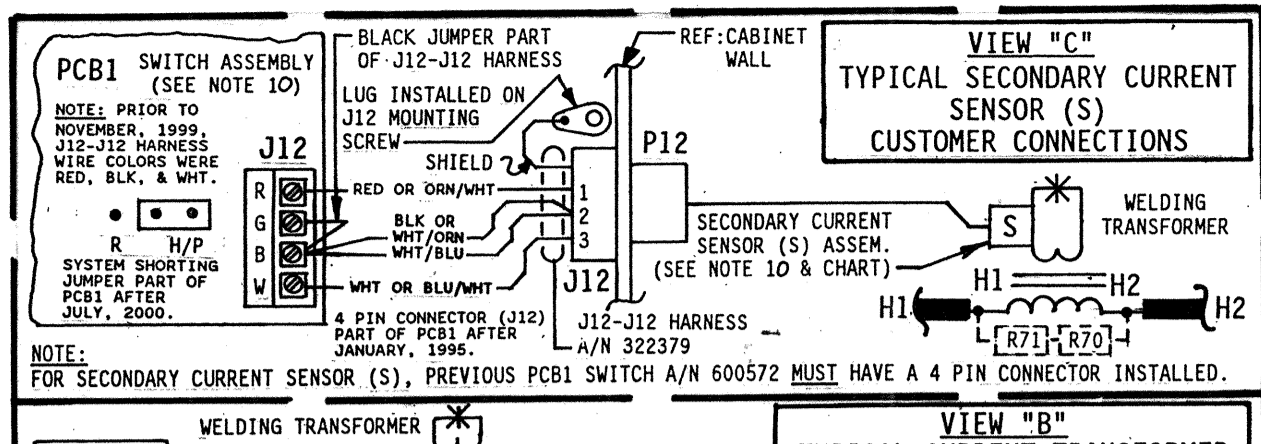
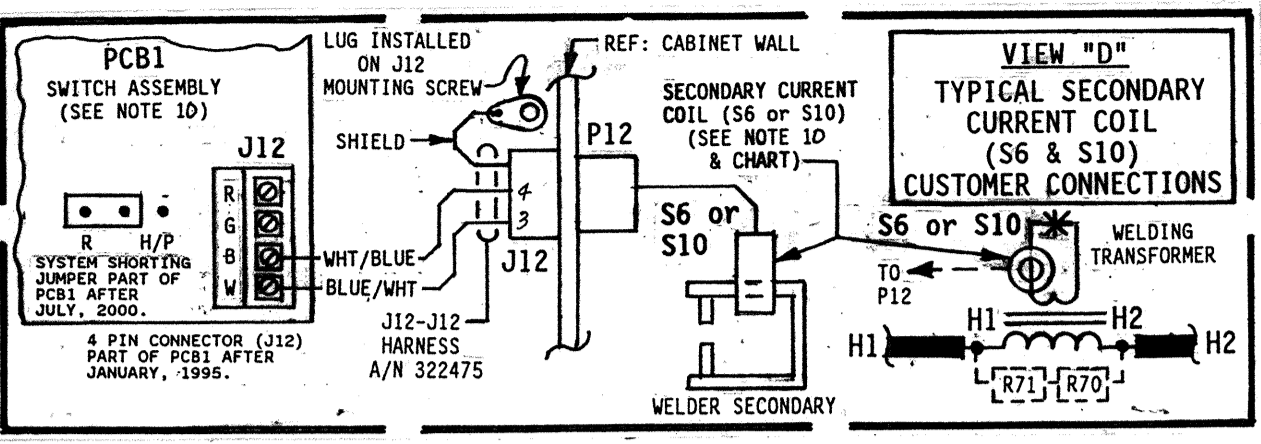
1 Each Label, "DANGER, HAZARDOUS VOLTAGE..." P/N 460142/RWMA156103C
 1 Each Label, "DANGER, VOLTAGE AND FLASH HAZARD..." P/N 460143/RWMA156103A
 1 Each Label, "VOLTAGE HAZARD... EARTH GND..." P/N 460144/RWMA156103B
 1 Each Label, "CAUTION, WATER HOSE BURST HAZARD..." P/N 460145/RWMA156103E
 1 Each Label, "WARNING, HAZARDOUS VOLTAGE..." P/N 460146/RWMA156103H
 1 Each Label, "CAUTION, DO NOT PUNCH WIRES..." P/N 46017
 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 #600574 for Mechanical Assembly Instructions.
 See Drawing #440480 for Packing Instructions.
 See Drawing #440457 for Current Transformer Assembly.
 See Drawing #440458 for Secondary Current Sensor Assembly.

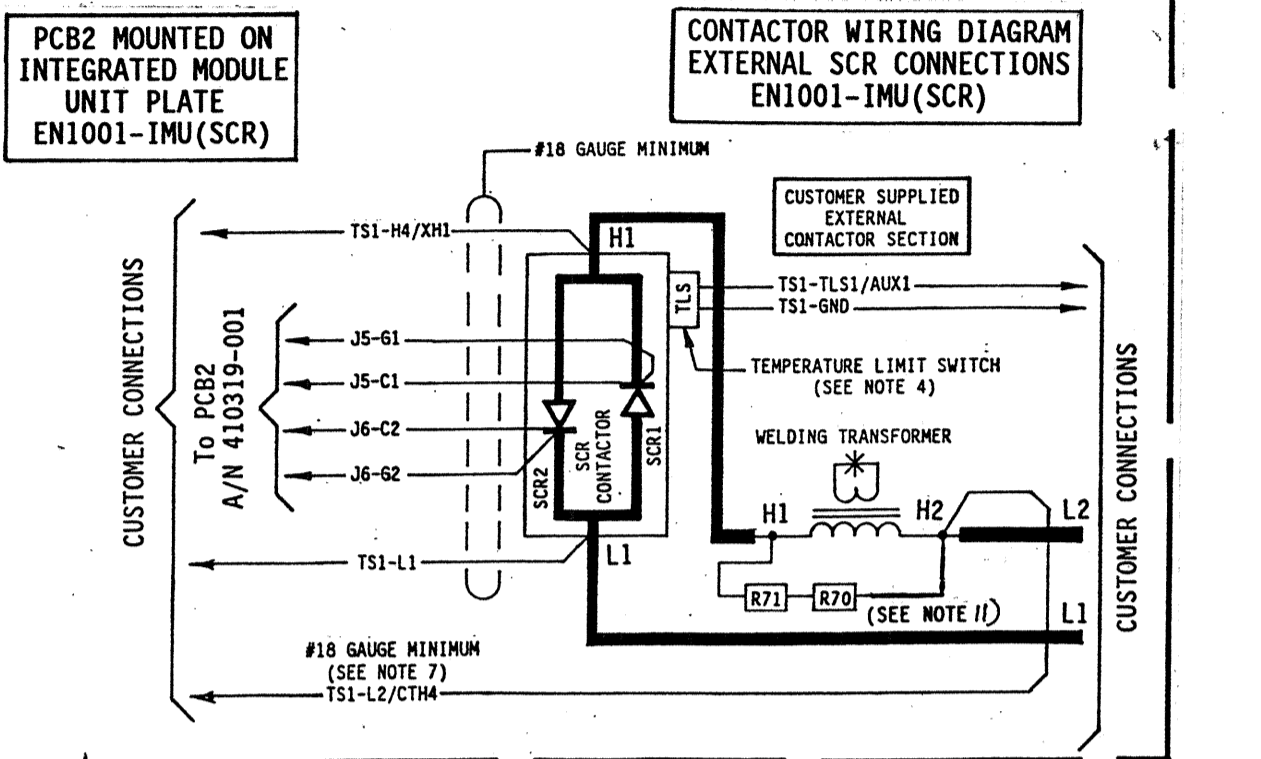
| REV | AUTH | DESCRIPTION | DRWN | CHKD |
|-----|------|------------------|------|------|
| | | ORIGINAL RELEASE | | |

ENTRON

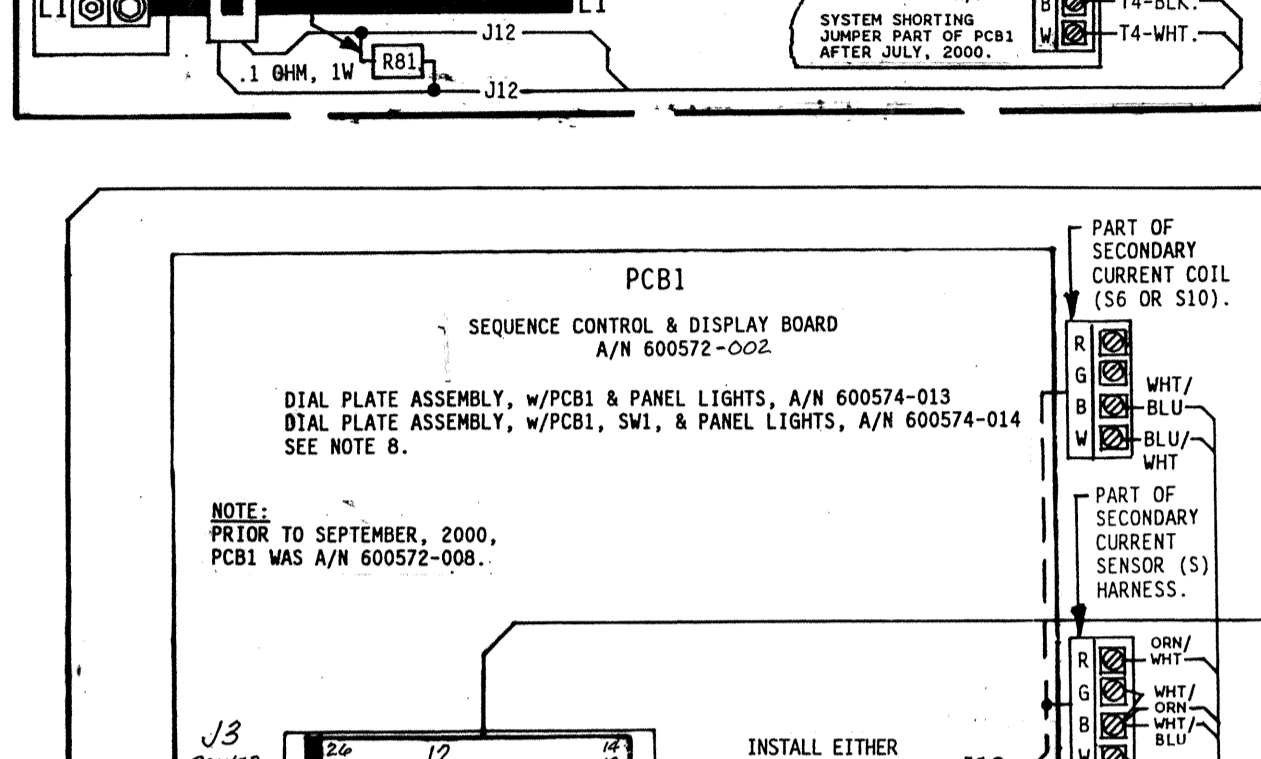
| SCALE | DATE | DRAWN BY | CHK'D BY | APPROVED BY |
|--|--------|----------------|-------------|-------------|
| 1/10/03 | | RHL | | |
| TOLERANCE UNLESS SPECIFIED | | REVISED | | |
| ANGLES: | ± 1/2° | REV LTR | APPROVED BY | |
| DECIMALS: | ± .010 | DATE | | |
| FRACTIONS: | ± 1/64 | | | |
| WIRING DIAGRAM, EN1001/VS-IMU(SCR). | | | | |
| WIRED FOR SELECTABLE 230/380/460/575VAC OPERATION. | | | | |
| NEXT ASSM/USED ON | | DRAWING NUMBER | | REV |
| | | 421423-003 | | |



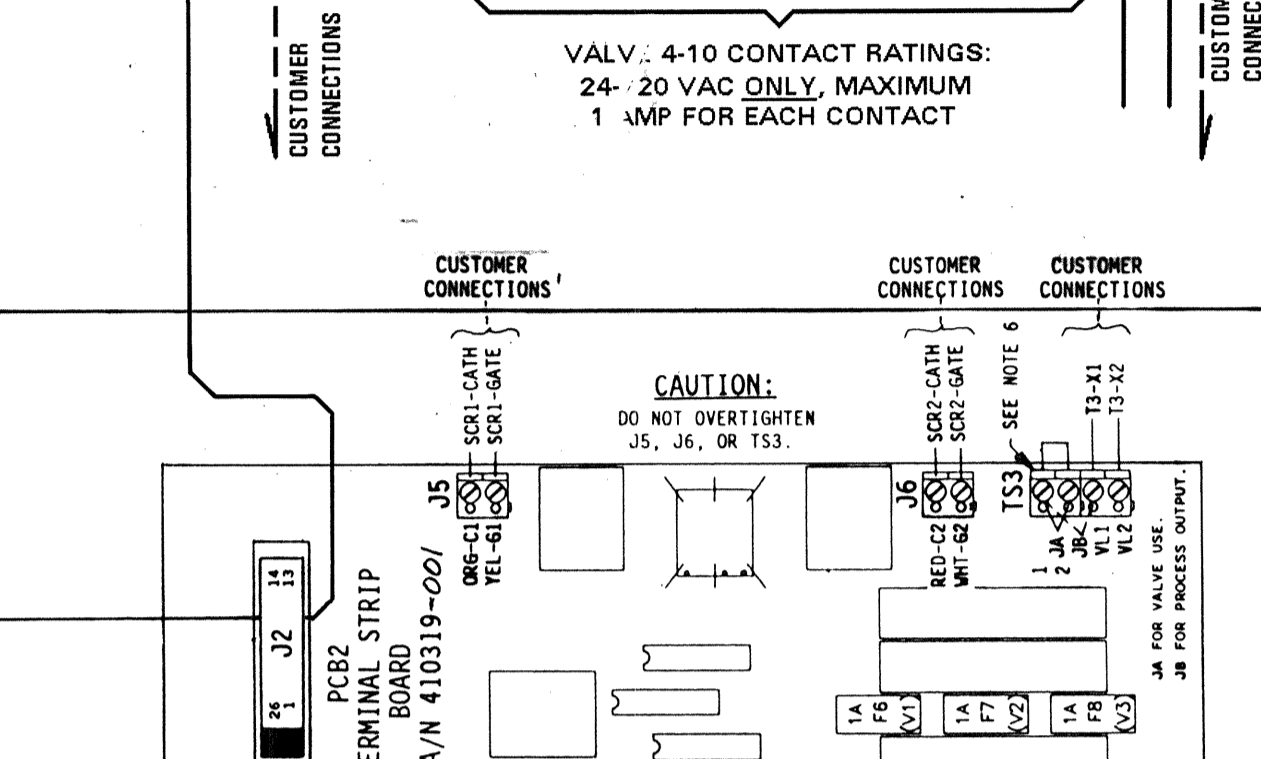
TYPICAL CONNECTIONS FOR CUSTOMER SUPPLIED CONTACTORS.



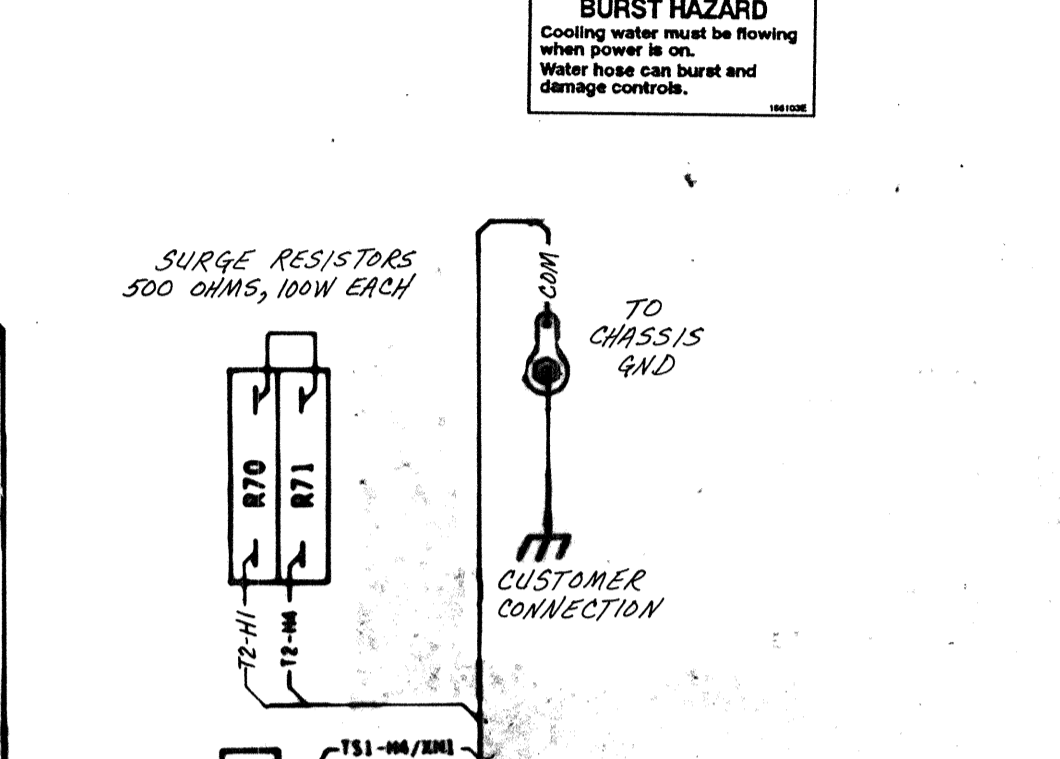
TYPICAL CURRENT TRANSFORMER (T4) CUSTOMER CONNECTIONS



VALV. 4-10 CONTACT RATINGS: 24-20 VAC ONLY, MAXIMUM 1 AMP FOR EACH CONTACT



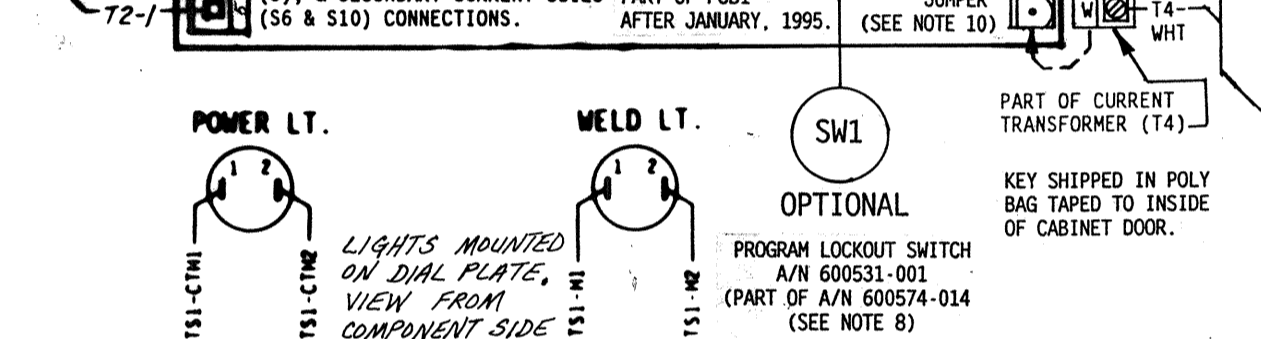
CAUTION: DO NOT OVERTIGHTEN JS, J6, OR TS3.



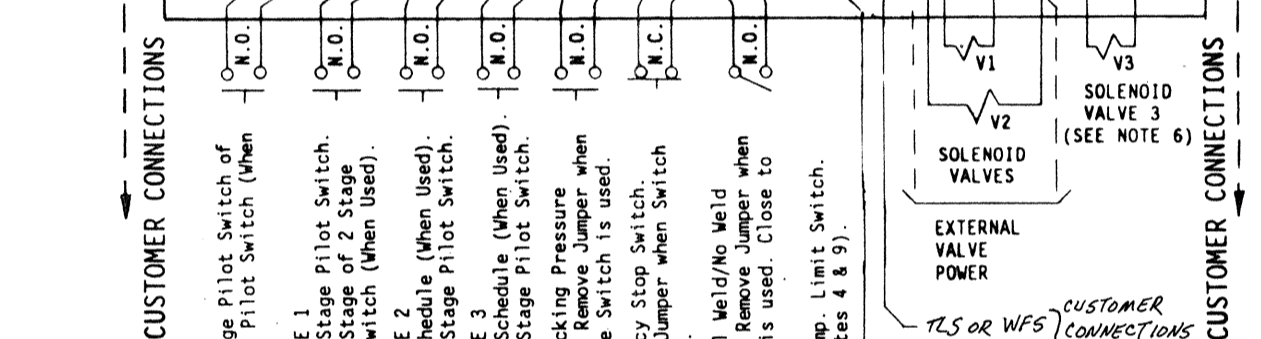
POWER LT. WELD LT. OPTIONAL



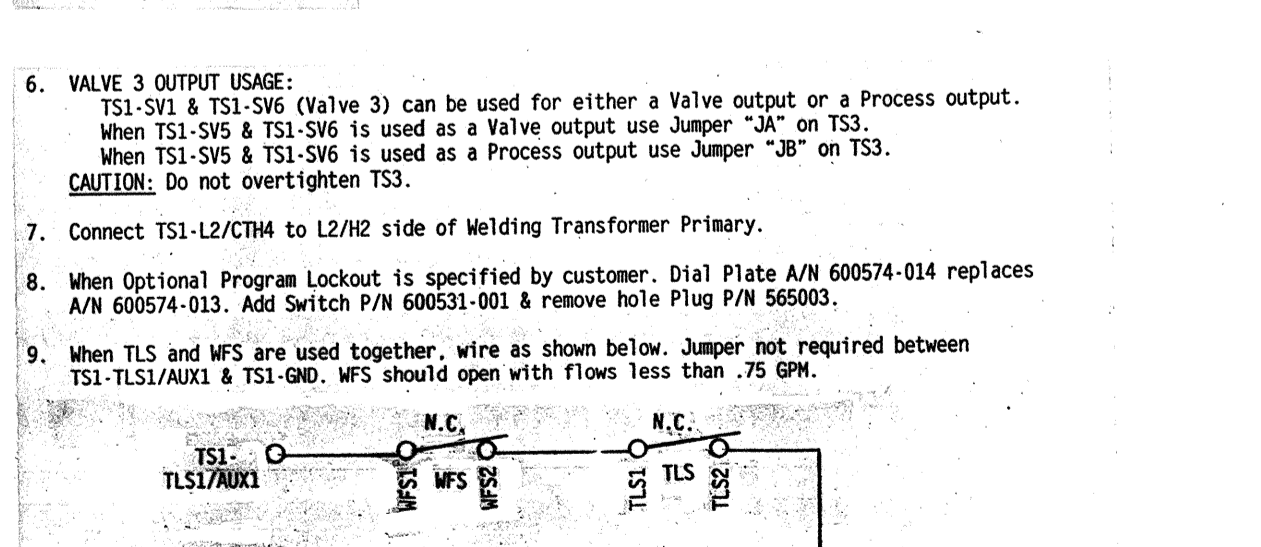
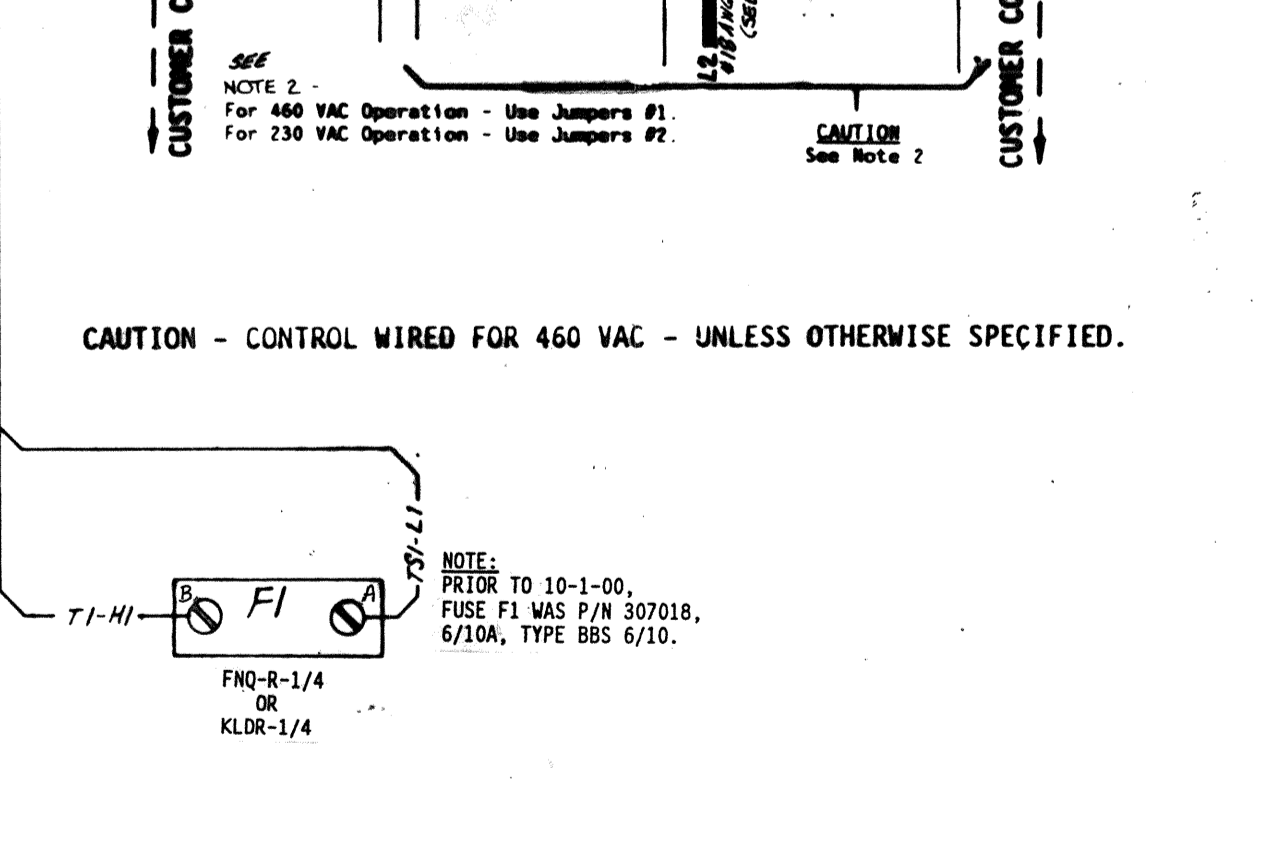
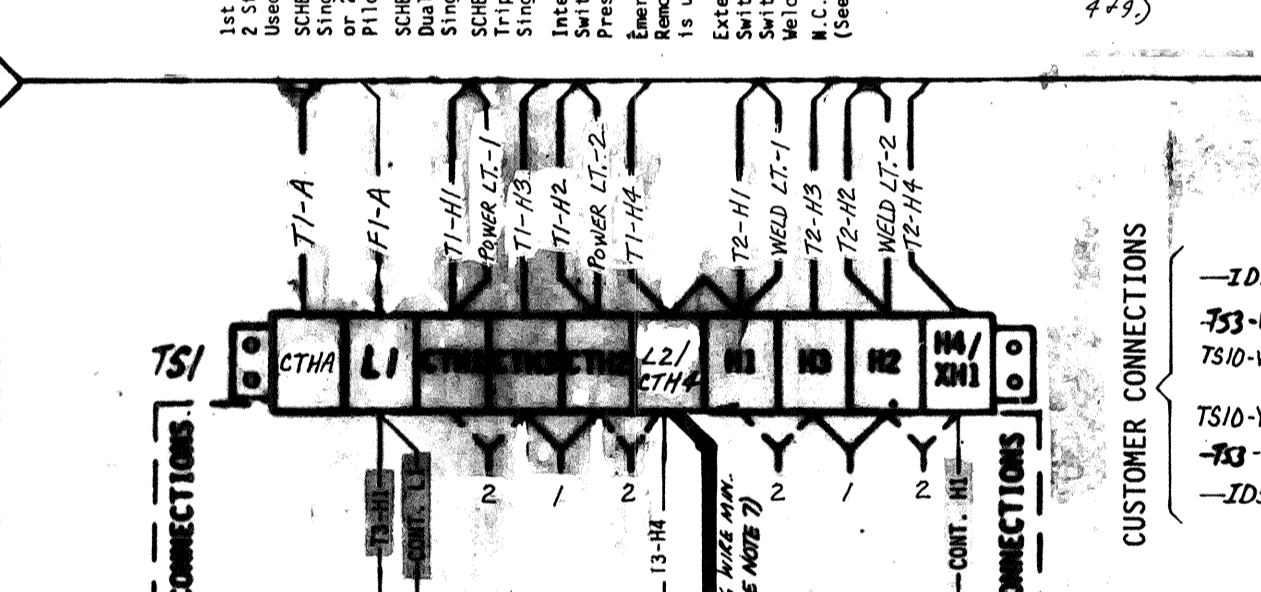
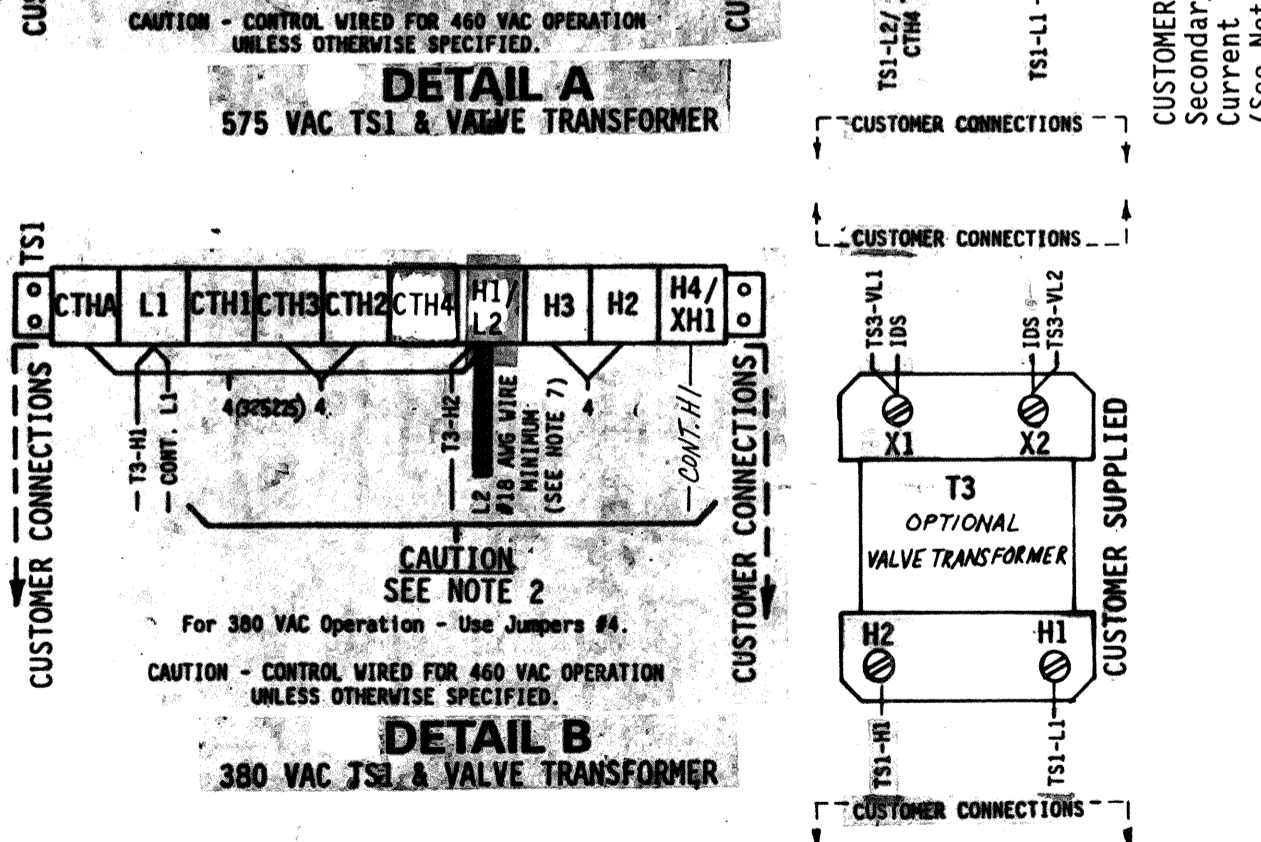
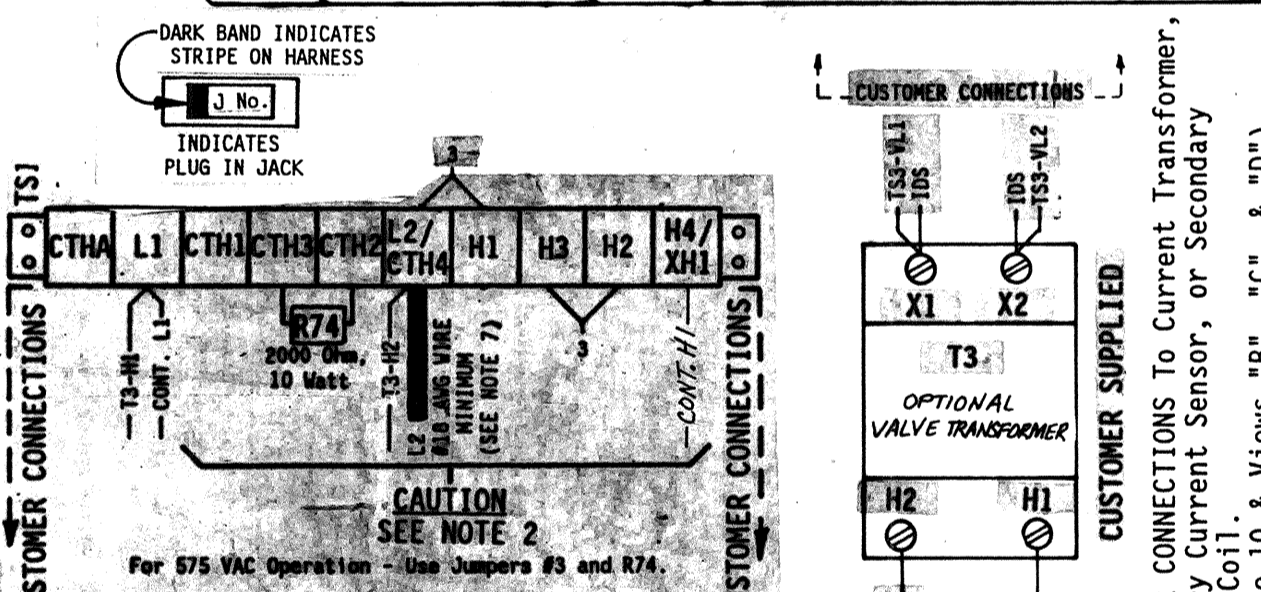
INSTALL EITHER (T4), (S), (S6), OR (S10) INTO J12.



CAUTION - CONTROL WIRED FOR 460 VAC - UNLESS OTHERWISE SPECIFIED.



- 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 TS1-FS3 & TS1-GND. No jumpers required across TS1-FS1 & TS1-GND.
For Two Stage Pilot Operation - Connect 1st stage pilot switch to TS1-FS1 & TS1-GND. Connect 2nd stage pilot switch to TS1-FS3 & TS1-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 TS1-TLS1/AUX1 & TS1-GND. Jumper not required between TS1-TLS1/AUX1 & TS1-GND.
NOTE: TLS should open at temperatures greater than or equal to 150°F.



11. EN1001-IMU(SCR): Remove all connections from previously existing firing circuits to L1, L2/H2, & H1 also SCR Gate leads & SCR Cathode leads. All previously existing Surge Resistors or Rectifiers must be disconnected prior to installation of this control.
 CAUTION: On EN1001-IMU(SCR), do NOT overtighten JS & JS6.

| COLLECTOR MODEL NUMBER | CURRENT TRANSFORMER SECONDARY CURRENT SENSOR PIN & CABINET SIZE | CONTACTOR SIZE |
|------------------------|---|----------------|
| P2-200S | A/N 600575-001 OBSOLETE | X |
| P2-200S | A/N 600575-003 | X |
| PS-500S | A/N 600576-001 OBSOLETE | X |
| PS-500S | A/N 600576-003 | X |
| P10-1000S | A/N 600577-001 OBSOLETE | X |
| P10-1000S | A/N 600577-003 | X |
| S | A/N 600580 & 322379 | X |
| S6 | A/N 600667 & 322475 | X |
| S10 | A/N 600668 & 322475 | X |

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 60188 FAX # (630) 682-3374

NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.