

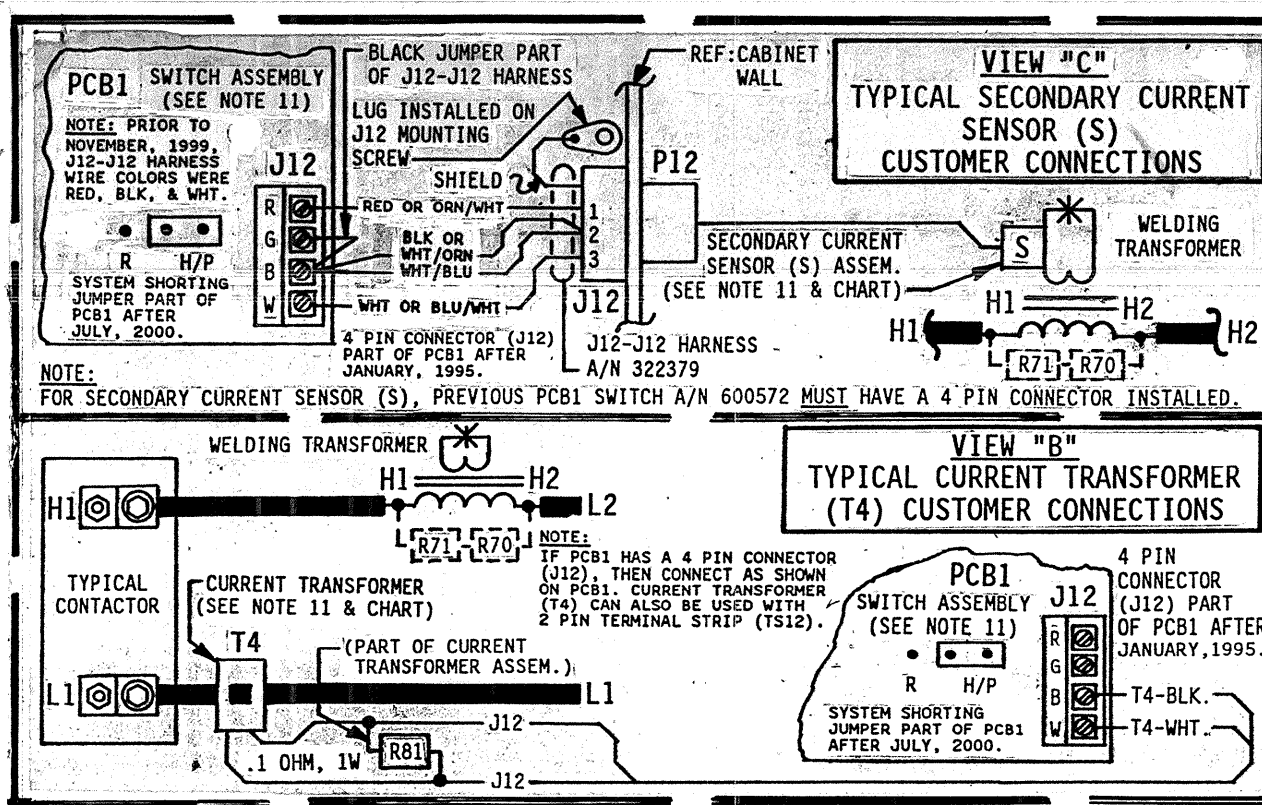
CAUTION - READ MANUAL & ALL NOTES BEFORE INSTALLING OR OPERATING CONTROL. SEE NOTE 1.

WARNING: HIGH VOLTAGE

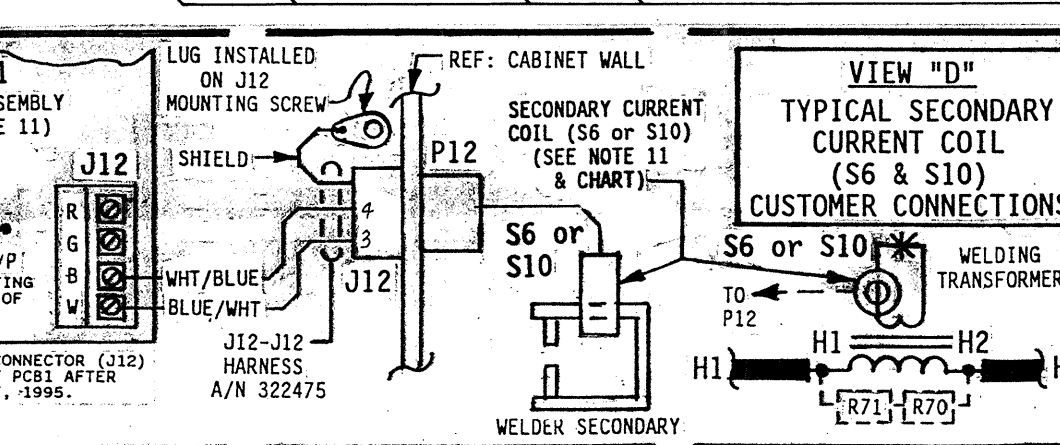
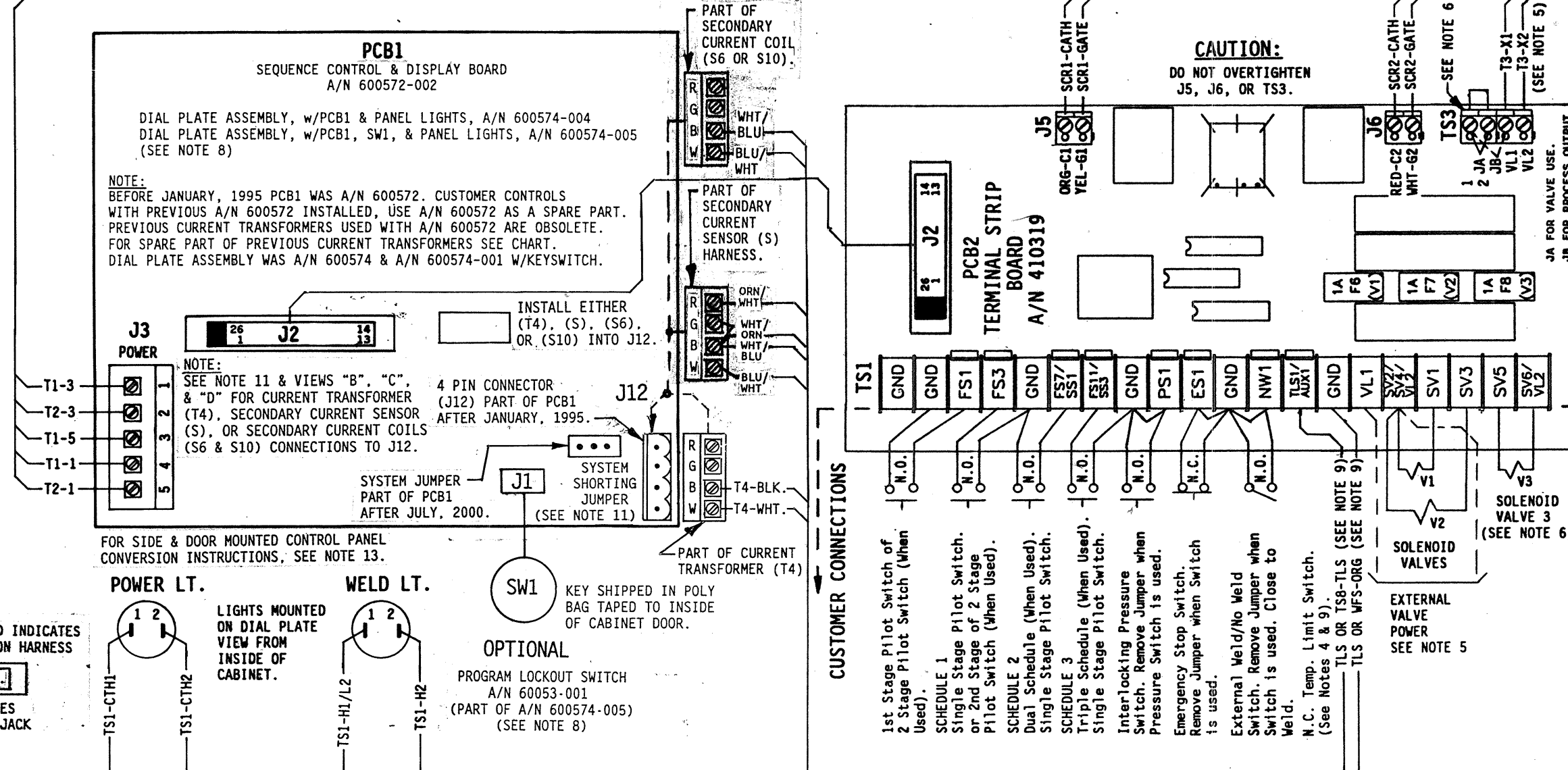
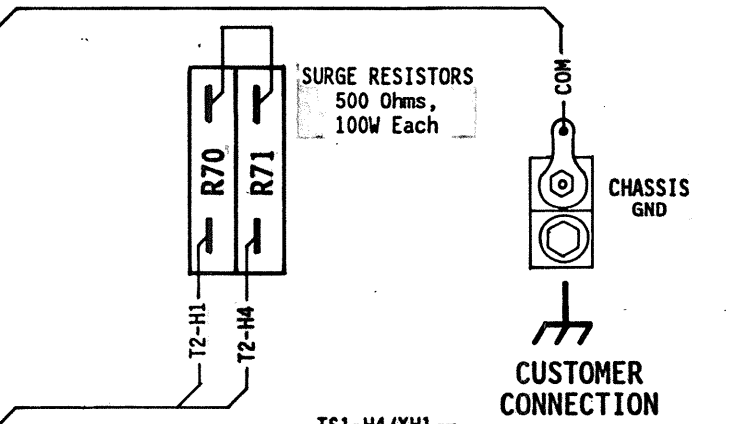
CAUTION

VOLTAGES PRESENT IN THIS CONTROL CAN CAUSE SEVERE OR FATAL INJURIES. 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.

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.

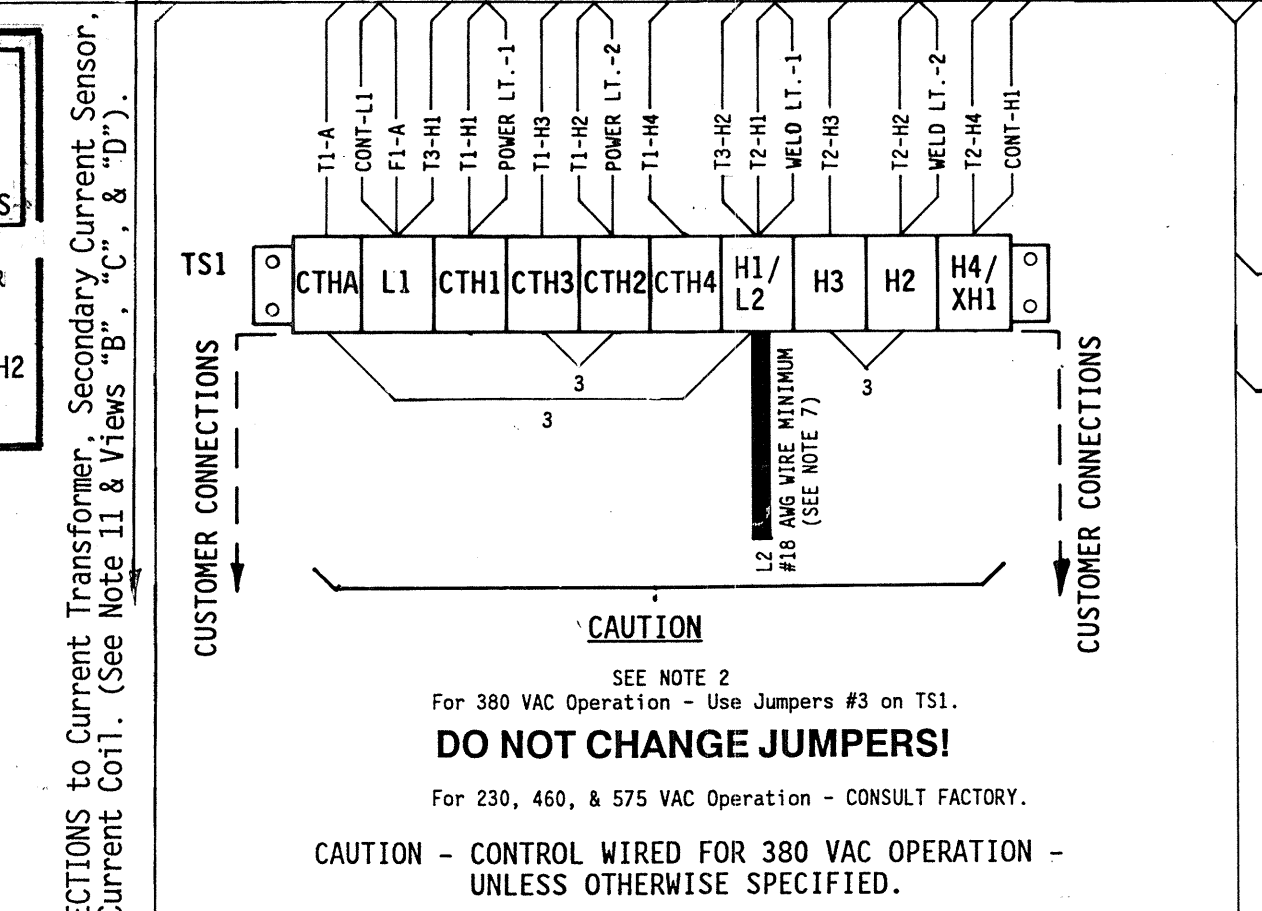


Control Shipped Wired for 380 VAC Unless otherwise specified - See Note 2.

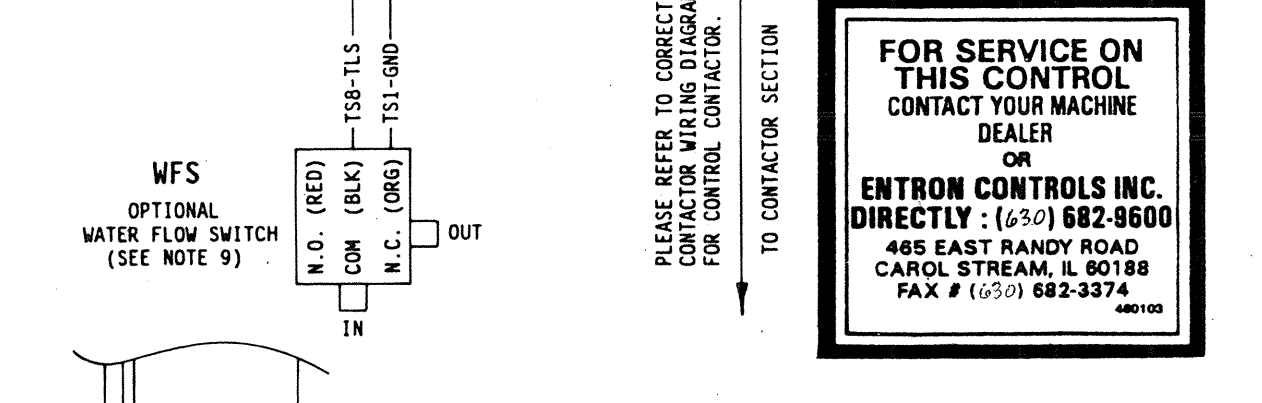


CURRENT SENSING COIL/SENSOR APPLICATION CHART

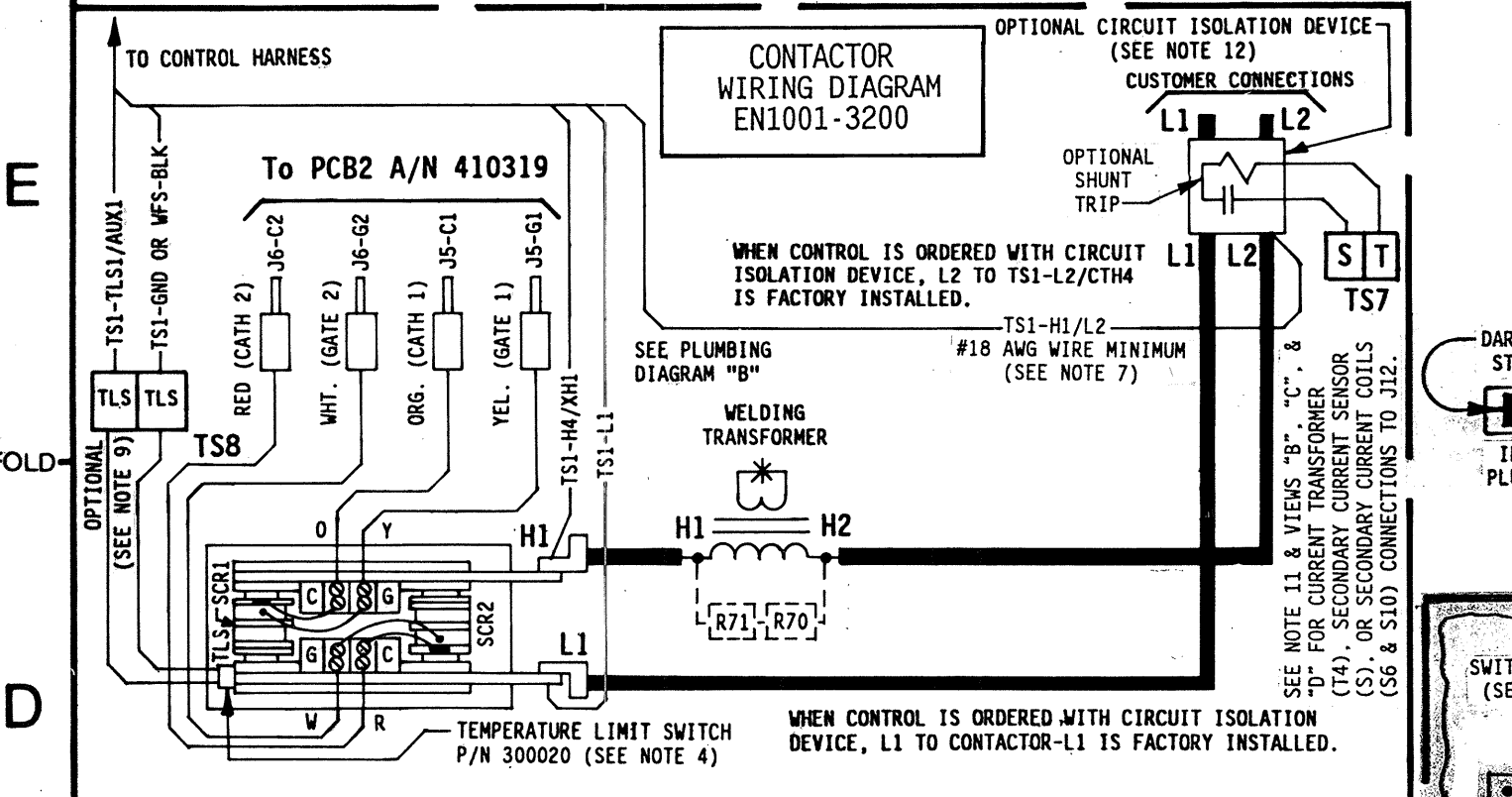
COIL/SENSING MODEL NUMBER	CURRENT TRANSFORMER, SECONDARY CURRENT SENSOR, OR SECONDARY CURRENT COIL PART NUMBER	3200A CONTACTOR SIZE
P10 - 1000-5	A/N 600577-001 OBSOLETE	X
P10 - 1000-5	A/N 600577-004	X
P20 - 2000-5	A/N 600696	X
S	A/N 600590 & A/N 322379	X
S6	A/N 600667 & A/N 322475	X
S10	A/N 600668 & A/N 322475	X



CAUTION - CONTROL WIRED FOR 380 VAC OPERATION - UNLESS OTHERWISE SPECIFIED.



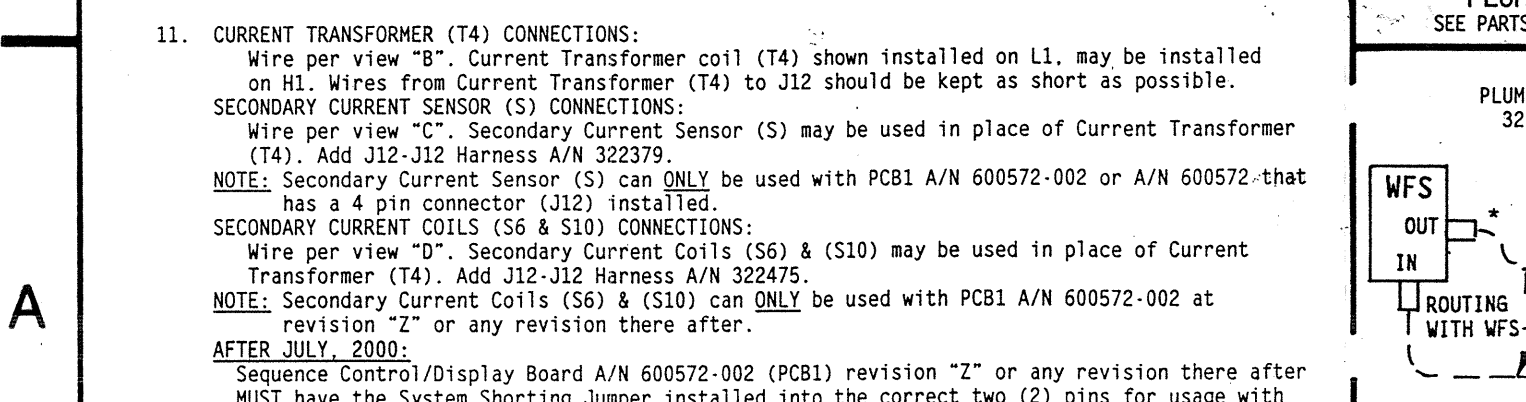
FOR SERVICE ON THIS CONTROL CONTACT YOUR MACHINE DEALER OR ENTRON CONTROLS INC. DIRECTLY: (630) 682-8600 465 EAST BASTY ROAD CAROL STREAM, IL 60188 FAX # (630) 682-3374



NOTES: 1. It is recommended that control wiring (i.e.: initiation, pressure switch, etc.) be physically separated from the high voltage wiring (115 volts or higher). 2. For 380 VAC Operation - Use Jumpers #3 on TS1. DO NOT CHANGE JUMPERS! For 230, 460, & 575 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.

4. EN1001-3200, "D/T" CABINET: ENTRON supplies Temperature Limit Switch (TLS) P/N 300020 and provides connections to TS1-TLS1/AUX1 & TS1-GND. Jumper not required between TS1-TLS1/AUX1 & TS1-GND. NOTE: TLS Thyristor will open at temperatures greater than or equal to 150°F. When external valve power is supplied to the control, remove and insulate leads TS3-VL1 & TS3-VL2 on the Terminal Strip Board (PCB2), (from T3-X1 & T3-X2). Connect external AC power supply (24-240 VAC) to TS1-VL1 & TS1-SV2/SV4/VL2. CAUTION: Do NOT overtighten TS3. VALVE 3 OUTPUT USAGE: TS1-SV5 & TS1-SV6 (Valve 3) can be used for either a Valve output or a Process output. When TS1-SV5 & TS1-SV6 is used as a Valve output use Jumper "JA" on TS3. When TS1-SV5 & TS1-SV6 is used as a Process output use Jumper "JB" on TS3. CAUTION: Do NOT overtighten TS3.

WARNING: Use of Jumper "JB" bypasses control relay contacts to allow a process output without an initiation. SEE MANUAL. 7. Connect TS1-H1/L2 to L2/H2 side of Welding Transformer Primary. (Factory wired on controls supplied with Circuit Isolation Device). 8. When Optional Program Lockout is specified by customer, Dial Plate A/N 600574-005 replaces A/N 600574-004. Add Switch P/N 600531-001 & remove Hole Plug P/N 565003. 9. When TLS and WFS are used together, add WFS P/N 600297 & Terminal Strip TS8 P/N 335017. Wire as shown below. Jumper not required between TS1-TLS1/AUX1 & TS1-GND. WFS will open with Flows less than .75 GPM.



11. CURRENT TRANSFORMER (T4) CONNECTIONS: Wire per view "B". Current Transformer coil (T4) shown installed on L1, may be installed on H1. Wires from Current Transformer (T4) to J12 should be kept as short as possible. SECONDARY CURRENT SENSOR (S) CONNECTIONS: Wire per view "C". Secondary Current Sensor (S) may be used in place of Current Transformer (T4). Add J12-J12 Harness A/N 322379. NOTE: Secondary Current Sensor (S) can ONLY be used with PCB1 A/N 600572-002 or A/N 600572-001 that has a 4 pin connector (J12) installed. SECONDARY CURRENT COILS (S6 & S10) CONNECTIONS: Wire per view "D". Secondary Current Coils (S6) & (S10) may be used in place of Current Transformer (T4). Add J12-J12 Harness A/N 322475. NOTE: Secondary Current Coils (S6) & (S10) can ONLY be used with PCB1 A/N 600572-002 at revision "Z" or any revision thereafter. AFTER JULY, 2000: Sequence Control/Display Board A/N 600572-002 (PCB1) revision "Z" or any revision thereafter MUST have the System Shorting Jumper installed into the correct two (2) pins for use with either a Current Transformer (T4), Secondary Current Sensor (S), or Secondary Current Coils (S6 & S10). See applicable View "B", "C", or "D" for correct Jumper installation.

PARTS LIST - CONTROL SECTION

QTY.	DESIG.	PART NO.	DESCRIPTION
1		600574-004	Assem., Dial Plate, w/Sw. Assem., EN1001, Consisting of: 600574-005
1	PCB1	600572-002	Assem., Switch, Sequence Control & Display Board
1	SW1	600531-001	Assem., Switch, Keylock, Momentary, SPST
1		540245	Illustrated Panel, Dial Plate, EN1001
1		515104	Panel, Display Window, Red Filter, EN1001
1		565003	Hole Plug, 3/4" Diam., Black

PARTS LIST - CONTACTOR SECTION

QTY.	DESIG.	PART NO.	DESCRIPTION
1	PWR. LT.	305001	Lamp, Neon, Red, 230V
1	WLD. LT.	305002	Lamp, Neon, Clear, 230V
1	J2-J2	322326	Assem., Harness, Ctrlr Bd. to Term. Bd.
1	J3	322325-010	Assem., Harness, Power, EN1000/EN1001, 380V

PARTS LIST - CONTACTOR SECTION (continued)

QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS1	335034	Terminal Strip, 10 Pin, (Part of J3 Harness)
1	TS7	335044	Terminal Strip, 2 Pin
1	TS8	335017	Terminal Strip, 2 Pin, (Part of 3200A CONTACTOR ASSEM.)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	T3	311019	Transformer, Valve, 150VA, 380/408/415V
2	(T3), R70,71	325149	Assem., Wire, Valve Transformer, 22 Ga., Black
1		225016	Resistor, Power, Surge, 500 Ohm, 100W
1	R81	210198	Resistor, Metal Oxide, 1 Ohm, 1W, (Part of Current Xfmr Assem.)
1	F1	306010	Fuseholder, 1 Pole, Mini, 600V
1	F2	307024	Fuse, Control, 1/4A, FNO-1/4 or KLD-1/4
3	F6,7,8(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410319)
1	(R70,71)	325024	Assem., Wire, Surge Resistor, 10 Ga., Black
1		600590	Assem., Secondary Current Sensor (S)
1	J12-J12	322379	Assem., Harness, Secondary Current Sensor
1		600533-013	Assem., Contactor, SCR, Water, 3200A, 460/575V, w/TLS
1		525136	Bracket, Mounting, 3200A Contactor
1		525035	Bracket, Mounting, 3200A Contactor
1	T4	SEE CHART	Assem., Transformer, Current, 2000:5, P20
1	T4	SEE CHART	Assem., Transformer, Current, 200:5, P2
1	T4	SEE CHART	Assem., Transformer, Current, 500:5, P5
1	T4	SEE CHART	Assem., Transformer, Current, 1000:5, P10
1	PCB2	346004	Lug, Screw, Chassis GND, 2/0 Wire
1	(PCB2)	410319	Assem., PCB, Terminal Strip Board, EN1000/EN1001
1		510236	Plate, Mounting, Terminal Strip Board
1	TLS	300020	Switch, Temperature Limit, (N.C.), (Part of 3200A CONT. ASSEM.)
1		900045	Hose, 3/8" I.D.
1		565010	Hose Clamp, 3/8" Hose
1		600179	Assem., Water Fitting, 3/8" Hose
1	WFS	600297	Assem., Water Flow Switch, 3/8" Hose
1	S6	600667	Secondary Current, 6" Coil Rogowski
1	S10	600668	Secondary Current, 10" Coil Rogowski
1	J12-J12	322475	Assem., Harness, Secondary Current, Rogowski Coil
1		550014	Valve Closing Door Mechanism, "D/TLS/LF" Cabinet
1		510242	Cabinet, Control, Style "D/T", w/DS Door, Cabinet, Control, Style "D/T"
1		700120	Manual, EN1001
1		421271	Logic Diagram, EN1001 Control
1		421269-023	Wiring Diagram, EN1001-3200A, "D/T" Cabinet

Optional, See Note 12. Optional Keylock when specified by customer. See Note 8. Pack Key in Poly bag 900148 & attach to Door w/Yellow Tape 900118. Supplied when optional Shut Trip (ST), 115V is specified. Optional Water Flow Switch Assembly & TS8. An additional Thirty-Six inches (36") of hose, P/N 900045 and two (2) hose clamps, P/N 565010 are to be supplied. See Note 9. See Current Sensing Coil/Sensor Application Chart.

MANUFACTURING INSTRUCTIONS: See Drawing #600562 for Mechanical Layout/Assembly of EN1001 "D/T" Cabinet. See Drawing #440366 for Inner Pack & use Carton #650016 for "D/T" Cabinet Packing Instructions. See Drawing #440337 for Circuit Breaker to L1 Contactor Cable connections. See Drawing #600526 for Layout/Assem. of Front Panel. See Drawing #440457 for Current Transformer Assembly. See Drawing #440458 for Secondary Current Sensor Assembly. See Drawing #440478 for Secondary Current Coil Assembly.

ENTRON CONTROLS INC. SCALE DATE DRAWN BY CHK'D BY APPROVED BY. WIRING DIAGRAM, EN1001-3200, "D" or "T" CABINET, WIRED FOR 380 VAC OPERATION. NEXT ASSM/USED ON DRAWING NUMBER REV. 421269-023

NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.