

NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.

CAUTION Control shipped wired for 460 VAC Operation unless otherwise specified - See Note 2.

PARTS LIST - CONTROL SECTION

421368-002

QTY.	DESIG.	PART NO.	DESCRIPTION
1	PCB1	600641	Assem., Dial Plate, w/Sw. Assem., EN2150, Consisting of:
1		600639	Assem., Switch, Sequence Control & Display Board
1		540291	Illustrated Panel, Dial Plate, EN2150, "B" Cabinet
1		515104	Panel, Display, Window, Red Filter, EN2150
1		565013	Hole Plug, 3/8" Diam., Black, (For Rotary Bd. Hole)
X	PCB11	410350	Optional Assem., PCB, Rotary Input Board (RIB)
X	J4-J4	319008	Knob, Skirted Round, w/o Indicator, Black
X		322447	Assem., Harness, Ctrl Bd. to Rotary Input Bd., 7" Long
1	J2-J2	322349	Assem., Harness, Control Bd. to Terminal Strip Bd.
1	J3	322359-009	Assem., Harness, Power, EN2150, 380 VAC Operation

PARTS LIST - CONTACTOR/POWER SECTION

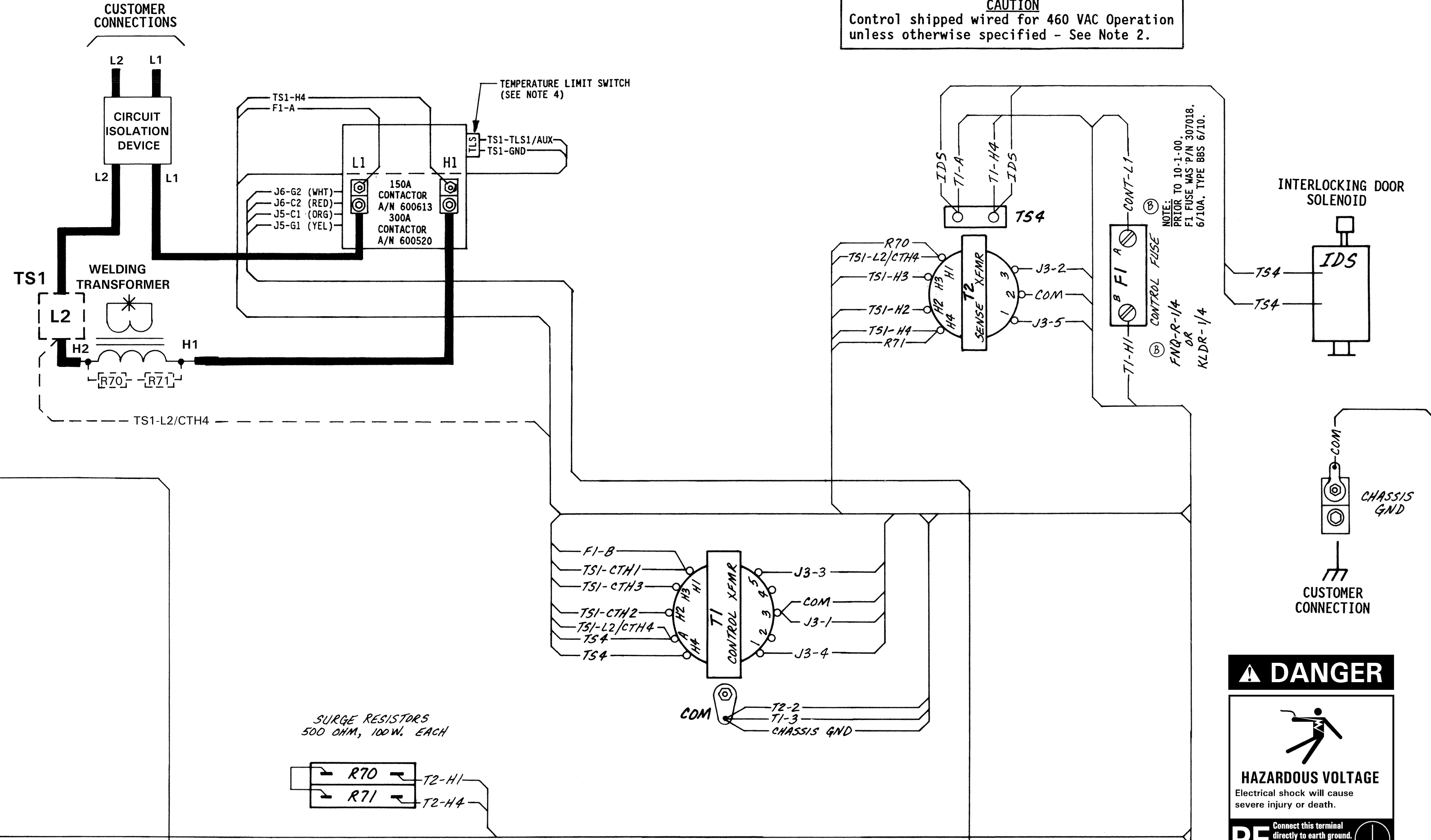
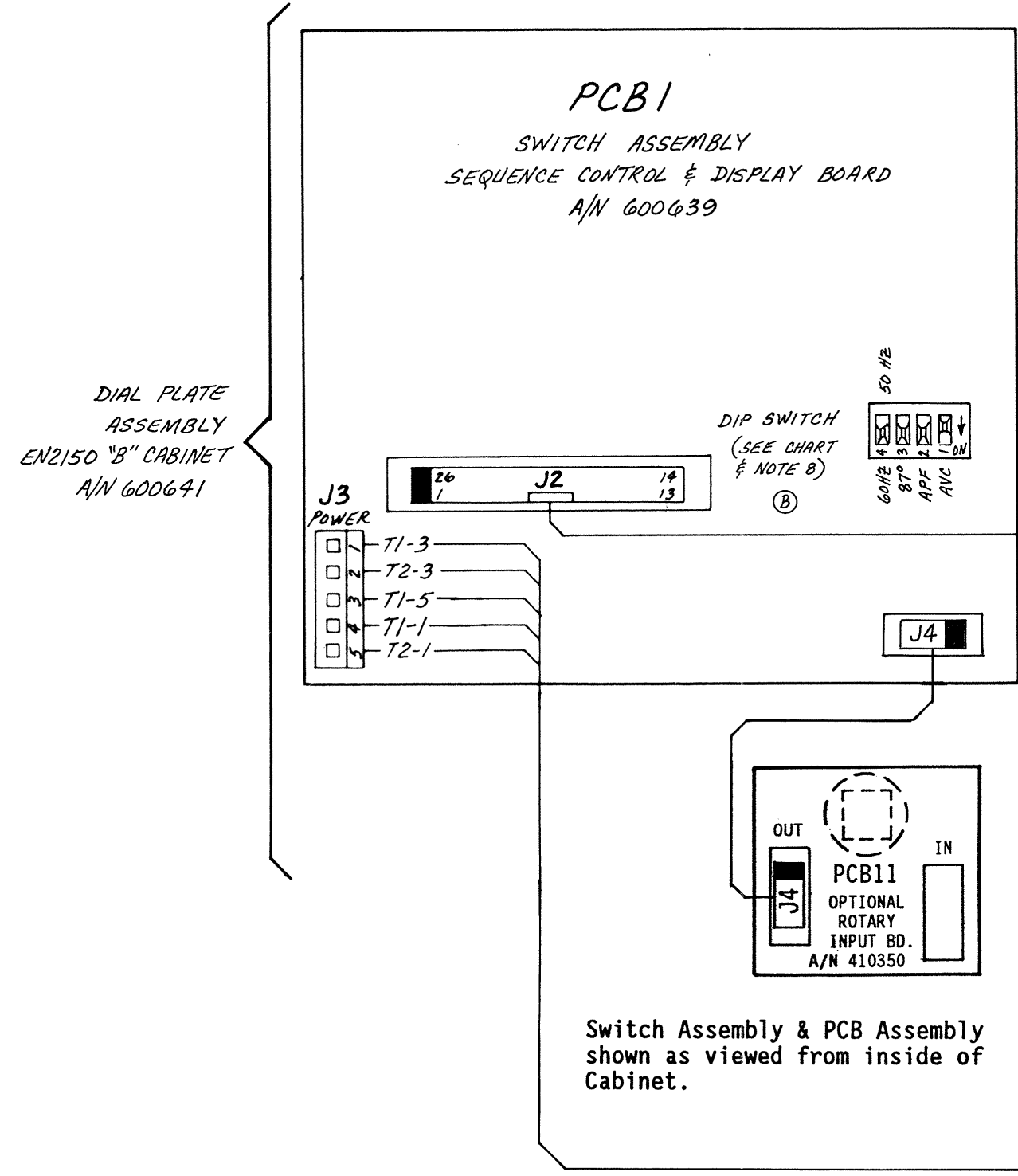
QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS1	600630	Terminal Block, 1 Pole, 600V
1	TS4	335007	Terminal Strip, 2 Pin, (For IDS), (Part of J3 Harness)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	F1	307024	Fuse, Control, 1/4A, FNQ-R-1/4 or KLDR-1/4
*	R74	600048	Resistor, Power, 2000 Ohm, 10W, (For 575V)
2	R70, 71	225016	Resistor, Power, Surge, 500 Ohm, 100W
1	(R70, 71)	325024	Assem., Wire, Surge Resistor, 18 Ga., Black
1		600613	Assem., Contactor, Thyristor, Air, 150A, 460/575V, w/TLS
1		600520	Assem., Contactor, Thyristor, Air, 300A, 460/575V, w/TLS
1	TLS	300020	Switch, Temp. Limit, (N.C.), (Part of 600613/600520)
1	PCB2	410333-009	Assem., PCB, Terminal Strip Bd., EN2150, "B" Cab., 380V
1	F6(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410333-009)
1	(PCB2)	510236-001	Plate, Mounting, Terminal Strip Board
1		346004	Lug, Screw, Chassis GND, 2/0 Wire
1		565001	Hole Plug, 1" Diam., Black
1	IDS	600044	Assem., Interlocking Door Solenoid
1		314001	Coil Assem., Only, IDS
1		510001	Cabinet, Control Style "B", Bench
1		510004	Door, Cabinet, "B", "Bench
4		580001	Jumper, Terminal Strip Board, TS1, Voltage #1 & #2
1		700154	Manual, EN2150
1		421370	Logic Diagram, EN2150 Control
1		421368-002	Wiring Diagram, EN2150-Series, "B" Cab., 380 VAC Op.

X Optional. Add quantity one (1) PCB11 Rotary Input Board when specified by customer. Remove Hole Plug P/N 565013 when PCB11 is specified. Supply quantity one (1) each of J4-J4 Harness Assembly & Knob when Optional PCB11 is specified.

* Substitution or Addition of parts when 575V Control is specified.

See Drawing #600567 for Mechanical Assembly Instructions.
See Drawing #440269 for Packing Instructions, "B" Cabinet.
See Drawing #440353 for Label Locations, "B" Cabinet.

MANUFACTURING INSTRUCTIONS

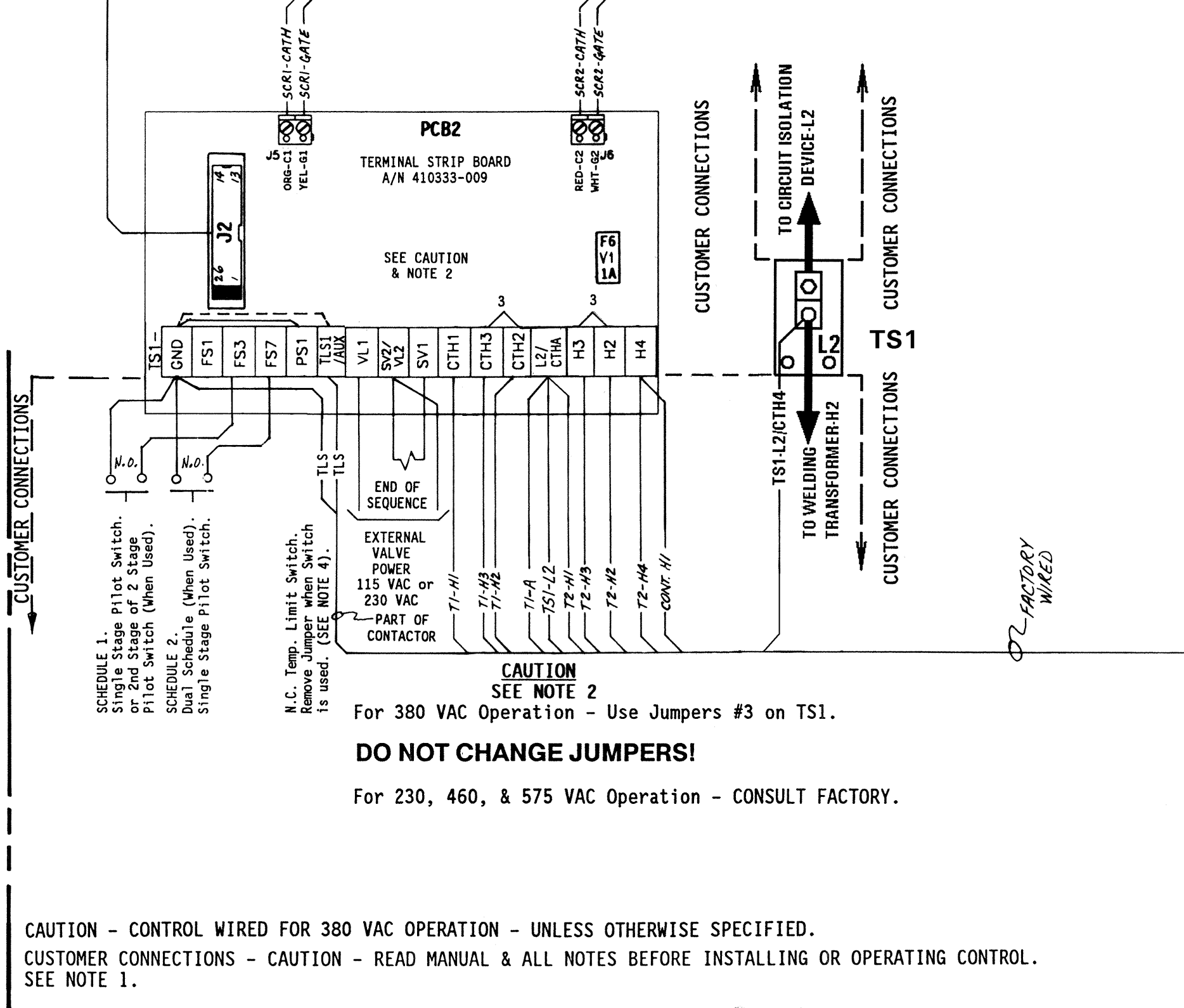


DIP SWITCH POSITION FOR ON/OFF SETTING	PROGRAMMABLE POWER FACTOR (PP) SETTING			
	PP = 991 WITH 87° DELAY FUNCTION OFF	PP = 991 WITH 87° DELAY FUNCTION ON	PP = 401 WITH 87° DELAY FUNCTION ON	PP = 001 WITH 87° DELAY FUNCTION ON (SEE NOTE)
AVC POSITION 1 (SEE NOTE BELOW)	OFF	OFF	OFF	OFF
APF POSITION 2	OFF	ON	OFF	OFF
87° POSITION 3	OFF	OFF	ON	OFF
50/60Hz POSITION 4 (SEE NOTE BELOW)	ON (60Hz)	ON (60Hz)	ON (60Hz)	ON (60Hz)

NOTE: PP = 004 WITH 87° DELAY ON IS EQUIVALENT TO AN AUTOMATIC POWER FACTOR. FOR ANY OF THE FOUR DIFFERENT POSSIBLE SETTINGS SHOWN ABOVE FOR PP, THE DIP SWITCH POSITIONS FOR AVC & 50/60Hz CAN BE CHANGED BETWEEN EITHER "ON" OR "OFF".

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 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) SEE MANUAL.
- EN2150-150B & EN2150-300B:
ENTRON supplies Temperature Limit Switch (TLS) P/N 300020 and provides connections to TS1-TLS1/AUX & TS1-GND. Jumper not required between TS1-TLS1/AUX & TS1-GND.
NOTE: TLS Thyristor will open at temperatures greater than or equal to 150° F.
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- Connect TS1-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 settings of the four position DIP switch on PCB1 (A/N 600639). 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.



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

VOLTAGE FLASH HAZARD
Turn off all voltage sources before removing or replacing fuse. Electrical shock or flash will cause severe injury or death.

NOTICE
FOR SERVICE ON THIS CONTROL
Contact Your Machine Dealer Or
ENTRON CONTROLS LLC,
DIRECTLY: (864) 416-0190
601 HIGH TECH COURT
GREER, SC 29650
FAX# (864) 416-0195

DANGER
HAZARDOUS VOLTAGE
Electrical shock will cause severe injury or death.
PE Connect this terminal directly to earth ground.

INSTRUCTIONS TO CONVERT A EN2150 "B" CABINET CONTROL FROM 230/460 VAC OPERATION TO 380 VAC OPERATION.
On Control Transformer T1 terminal "H4", disconnect the two (2) wires from TS1-L2/CTH4 (Violet) and WELD L.T.1 (Violet).
NOTE: Terminal "TS1-L2/CTH4" was previously "TS1-L2/CTH4" on Terminal Strip Board. Do NOT remove TS4 (Black) wire on TI-H4.
On Control Transformer T1, connect the two (2) wires from TS1-L2/CTH4 (Violet) and WELD L.T.1 (Violet) to terminal "A".
On PCB2 Terminal Strip Board, previous terminal "TS1-L2/CTH4" now becomes "TS1-L2/CTH4". The Terminal Strip Board for 380 VAC Operation now becomes A/N 410333-009. Use Jumpers #3 on PCB2 Terminal Strip Board. Do NOT use Jumpers #1 & #2 from previous Wiring Diagram #421262 on the Terminal Strip Board (PCB2).

REV	AUTH	DESCRIPTION	DATE	CHK'D BY	DATE

ENTRON CONTROLS INC

SCALE	DATE	DRAWN BY	CHK'D BY	APPROVED BY
	8/27/07	DPDII		

TOLERANCE UNLESS SPECIFIED: ANGLES: ± 1° DECIMALS: ± .010 FRACTIONS: ± 1/64 DATE: 27 AUG 07 DPDII

REV	AUTH	DESCRIPTION	DATE	CHK'D BY	DATE

WIRING DIAGRAM, EN2150-SERIES, "B" CABINET, 380 VAC Operation with or without ROTARY INPUT BOARD

REV	AUTH	DESCRIPTION	DATE	CHK'D BY	DATE

NEXT ASSM/USED ON: EN2150-150B EN2150-300B DRAWING NUMBER: 421368-002