

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

421367 A

QTY.	DESIG.	PART NO.	DESCRIPTION
1	PCB1	600640	Assem., Dial Plate, w/Sw. Assem., EN2130, Consisting of: Assem., Switch, Sequence Control & Display Board Illustrated Panel, Dial Plate, EN2130, "B" Cabinet Panel, Display Window, Red Filter, EN2130 Hole Plug, 3/8" Diam., Black, (For Rotary Bd. Hole)
1		600642	
1		540290	
1		515104	
1		565013	
X	PCB11	410350	Optional Assem., PCB, Rotary Input Board (RIB) Knob, Skirted Round, w/o Indicator, Black Assem., Harness, Ctrl Bd. to Rotary Input Bd., 7" Long
X		319008	
X	J4-J4	322447	
1	J2-J2	322349	Assem., Harness, Control Bd. to Terminal Strip Bd.
1	J3	322359-007	

PARTS LIST - CONTACTOR/POWER SECTION

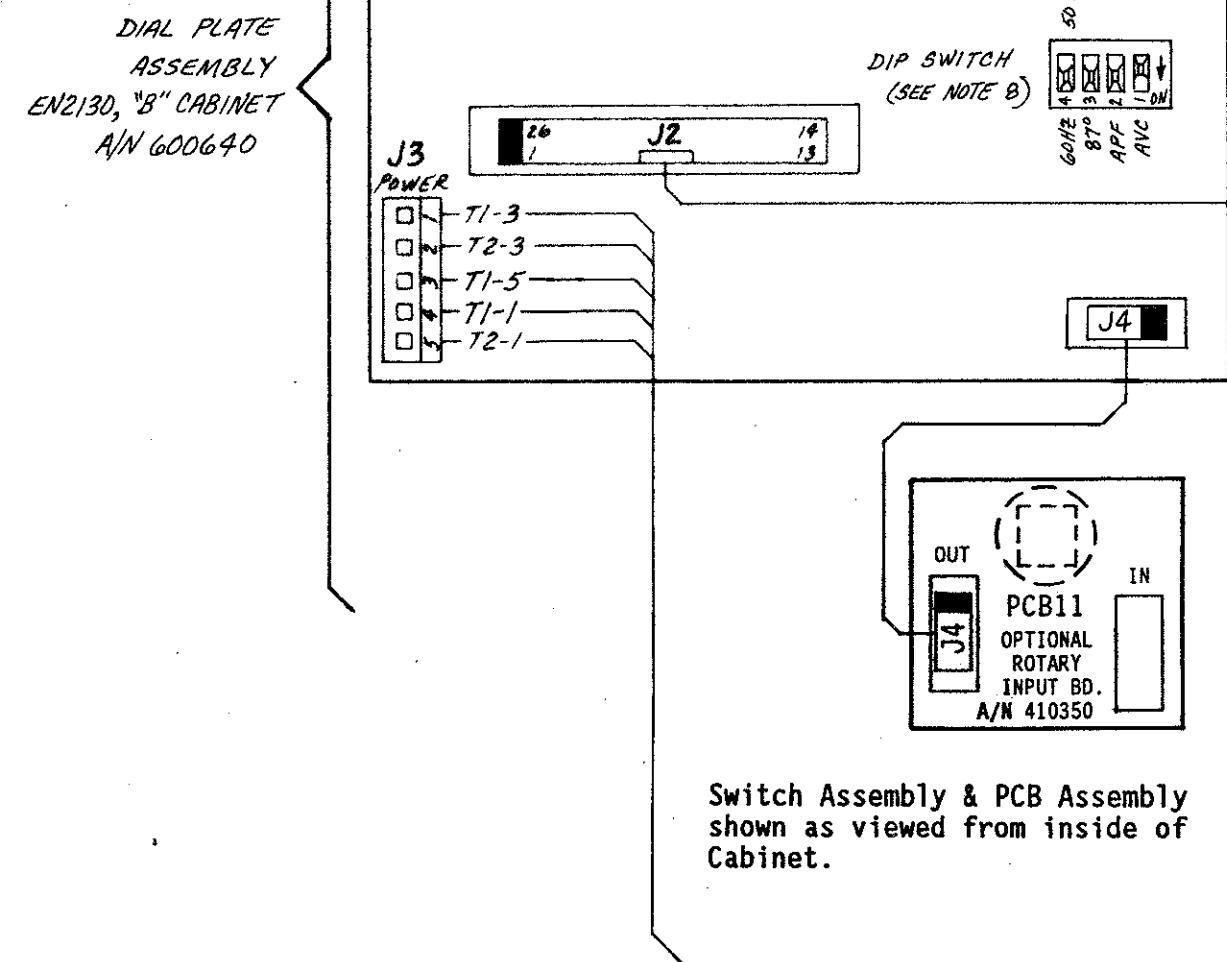
QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS1	600630	Terminal Block, 1 Pole, 600V
1	TS4	335007	Terminal Strip, 2 Pin, (For IDS), (Part of J3 Harness)
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Sense, (Part of J3 Harness)
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V
1	F1	307024	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	410333-003	Assem., PCB, Terminal Strip Bd., EN2130, "B" Cabinet
1	F6(PCB2)	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410333-003)
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		700153	Manual, EN2130
1		421369	Logic Diagram, EN2130 Control
1		421367	Wiring Diagram, EN2130-Series, "B" Cabinet

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.

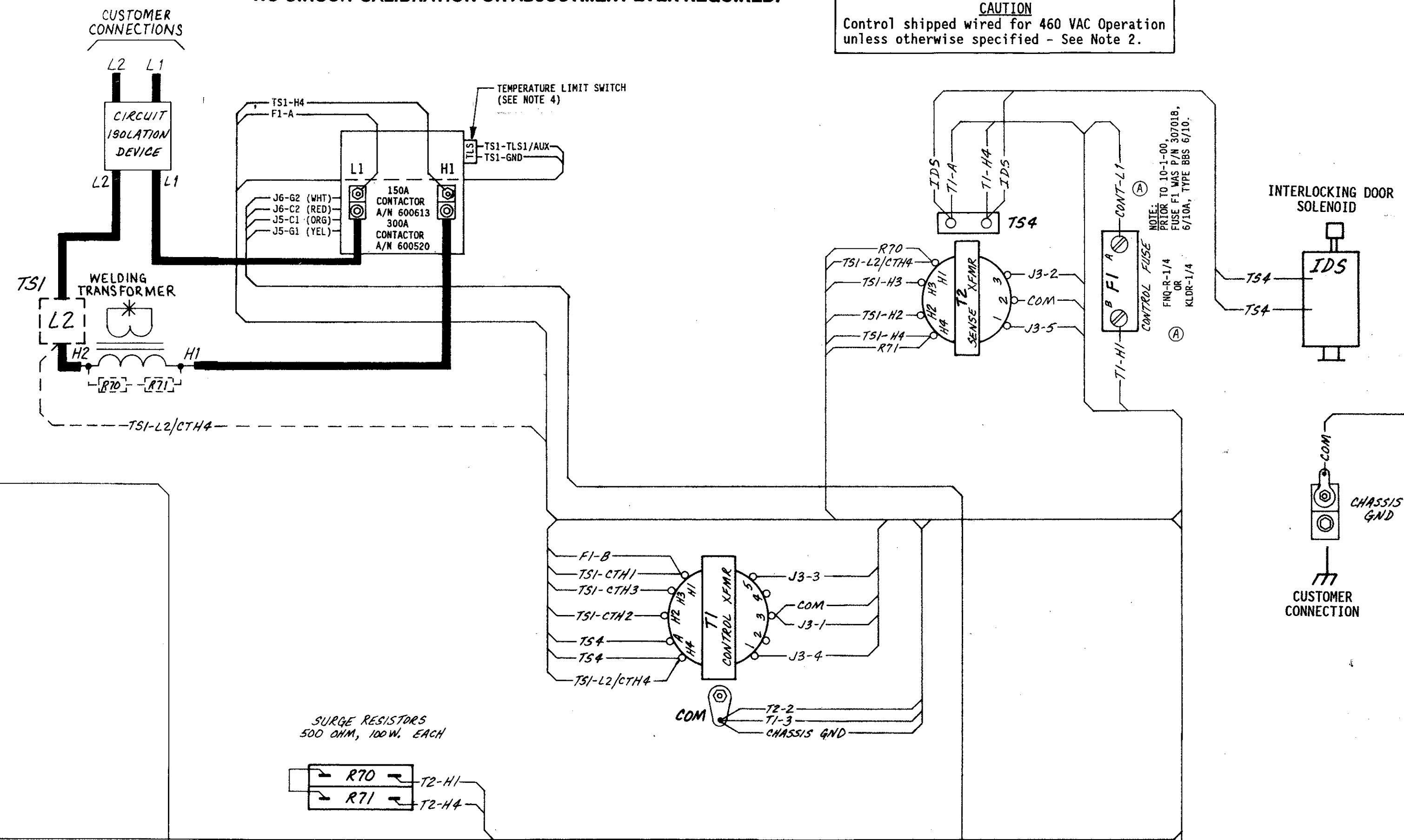
\* Substitution or Addition of parts when 575V Control is specified. SEE DRAWING #421452 FOR EN2130SP-SERIES, WITH OR WITHOUT ROTARY INPUT BOARD, SP=EN2130 CONTROL IN "S" CABINET.

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

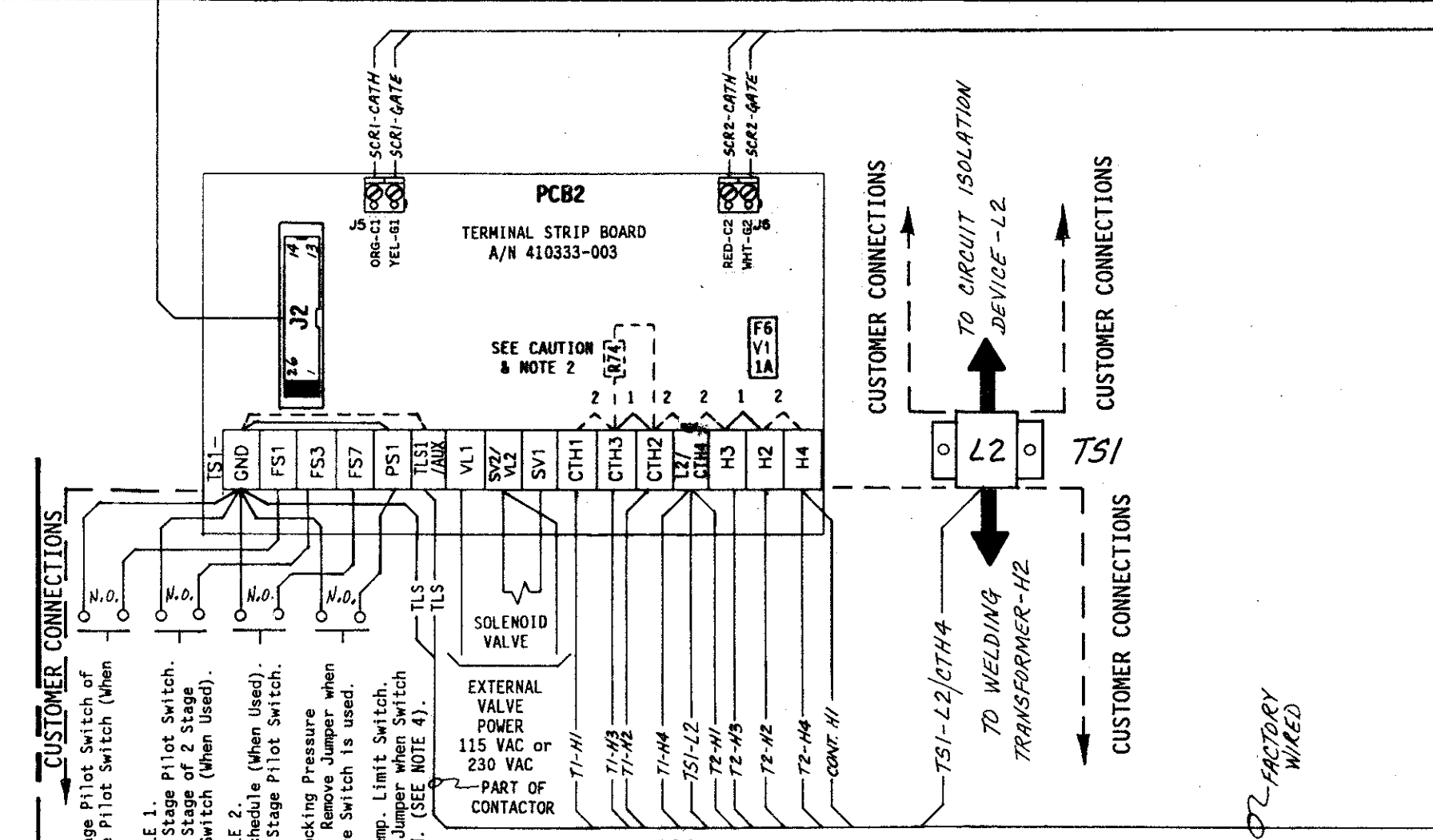
MANUFACTURING INSTRUCTIONS



Switch Assembly & PCB Assembly shown as viewed from inside of Cabinet.



SURGE RESISTORS 500 OHM, 100W EACH



**CAUTION**  
SEE NOTE 2  
For 460 VAC Operation - Use Jumpers #1. As shipped unless otherwise specified.  
For 230 VAC Operation - Use Jumpers #2.  
For 575 VAC Operation - FACTORY WIRED ONLY.  
Jumper #1 is used between H2 & H3  
Jumper #1 between CTH2 & CTH3 is removed & replaced by resistor R74 (2000 Ohm, 10 Watt).  
For 115 VAC or 380 VAC Operation - Consult Factory.

**CAUTION CONTROL WIRED FOR 460 VAC - UNLESS OTHERWISE SPECIFIED.**  
CUSTOMER CONNECTIONS - CAUTION - READ MANUAL & ALL NOTES BEFORE INSTALLING OR OPERATING CONTROL. SEE NOTE 1.

- 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 Jumpers #1 on TS1. As shipped unless otherwise specified.  
For 230 VAC Operation - Use Jumpers #2 on TS1.  
For 575 VAC Operation - FACTORY WIRED ONLY.  
Use Jumper #1 between H2 & H3 on TS1. Use Resistor R74 (2000 Ohm, 10 Watt) in place of Jumper #1 between CTH2 & CTH3 on TS1.  
For 115 VAC or 380 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.
  - EN2130-150B & EN2130-300B:  
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 600642). 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.

**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.

**FOR SERVICE ON THIS CONTROL CONTACT YOUR MACHINE DEALER OR**  
ENTRON CONTROLS INC.  
DIRECTLY: (630) 882-9600  
465 EAST HANCOCK ROAD  
CAROL STREAM, IL 60188  
FAX # (630) 882-3374

REV.	AUTH.	DESCRIPTION	DATE	BY	DATE

ENTRON CONTROLS INC.

SCALE: DATE: DRAWN BY: CHK'D BY: APPROVED BY:

2-19 98 DEC DEC 2-19-98

TOLERANCE UNLESS SPECIFIED: REVISED

ANGLES: ± 1° REV. LTR. APPROVED BY:

DECIMALS: ± 0.010 DATE: 2-6-02 DEC

FRACTIONS: ± 1/64

WIRING DIAGRAM, EN2130-SERIES, "B" CABINET with or without ROTARY INPUT BOARD

REV. AUTH. DESCRIPTION DATE BY DATE

EN2130-150B EN2130-300B 421367- A