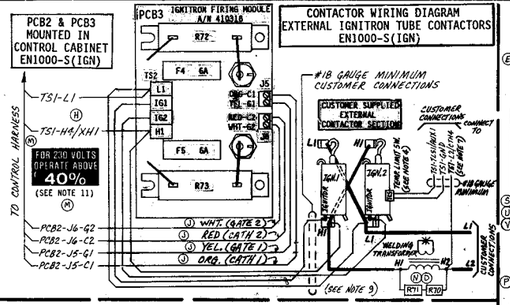
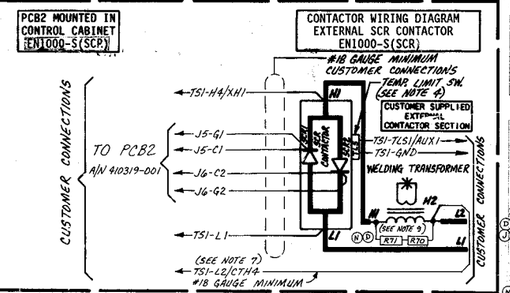
PCB2 & PCB3 MOUNTED IN CONTROL CABINET EN1000-S(IGN)

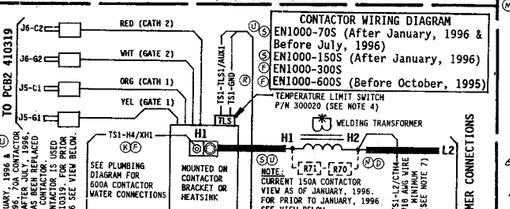


CONTACTOR WIRING DIAGRAM
EXTERNAL IGNITRON TUBE CONTACTORS
EN1000-S(IGN)

PCB2 MOUNTED IN CONTROL CABINET EN1000-S(SCR)

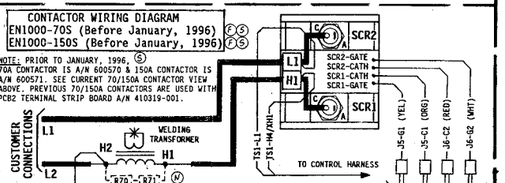


CONTACTOR WIRING DIAGRAM
EXTERNAL SCR CONTACTOR
EN1000-S(SCR)



CONTACTOR WIRING DIAGRAM
EN1000-70S (After January, 1996 & Before July, 1996)
EN1000-150S (After January, 1996)
EN1000-300S
EN1000-600S (Before October, 1995)

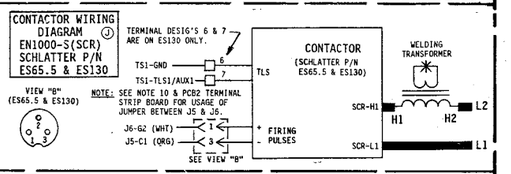
NOTE: AFTER JANUARY, 1996 & BEFORE JULY, 1996, 70A CONTACTOR IS A/N 600570 & 150A CONTACTOR IS A/N 600571. AFTER JULY, 1996, 70A CONTACTOR IS A/N 600570 & 150A CONTACTOR IS A/N 600604. PREVIOUS 70A CONTACTOR IS USED BY CURRENT 150A CONTACTOR. PREVIOUS 150A CONTACTOR IS USED BY CURRENT 300A CONTACTOR. SEE VIEW BELOW. AFTER JANUARY, 1996 SEE VIEW BELOW.



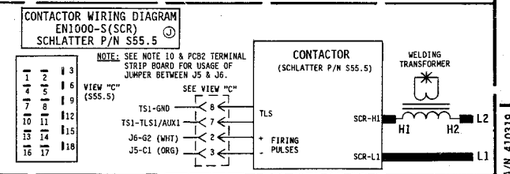
CONTACTOR WIRING DIAGRAM
EN1000-70S (After January, 1996)
EN1000-150S (Before January, 1996)

NOTE: PRIOR TO JANUARY, 1996, 70A CONTACTOR IS A/N 600570 & 150A CONTACTOR IS A/N 600571. SEE CURRENT 70/150A CONTACTOR VIEW ABOVE. PREVIOUS 70/150A CONTACTORS ARE USED WITH PCB2 TERMINAL STRIP BOARD A/N 410319-001.

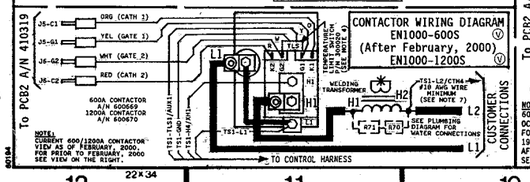
CONTACTOR WIRING DIAGRAM
EN1000-S(SCR)
SCHLATTER P/N ES65.5 & ES130



CONTACTOR WIRING DIAGRAM
EN1000-S(SCR)
SCHLATTER P/N SS5.5



CONTACTOR WIRING DIAGRAM
EN1000-600S (After February, 2000)
EN1000-1200S



NOTE: CURRENT 600/1200A CONTACTOR VIEW AS OF FEBRUARY, 2000. FOR PRIOR TO FEBRUARY, 2000 SEE VIEW ON THE RIGHT.

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 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 - FACTORY WIRED ONLY. SEE VIEW "A".
   Replace T3 with P/N 311016. Wire per View "A". 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.
3. 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. EN1000-S(IGN) & EN1000-S(SCR):
   When used, connect customer provided Normally Closed (N.C.) Temperature Limit Switch (TLS) across TS1-TLS1/AUX1 & TS1-GND and remove jumper between TS1-TLS1/AUX1 & TS1-GND.
   EN1000-150S, EN1000-300S, EN1000-600S, & EN1000-1200S:
   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.
5. 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.
6. 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 "A" on TS3.
   When TS1-SV5 & TS1-SV6 is used as a Process output use Jumper "B" on TS3.
   CAUTION: Do not overtighten TS3
   WARNING: Use of Jumper "B" bypasses control relay contacts to allow a process output without an initiation. SEE MANUAL.
7. Connect TS1-L2/CTH4 to L2/H2 side of Welding Transformer Primary.
8. When Optional Program Lockout is specified by customer. Dial Plate A/N 600528-001 replaces A/N 600528. Add Switch P/N 600531-001 & remove Hole Plug P/N 565003.
9. EN1000-S(IGN) & EN1000-S(SCR):
   Remove all connections from previously existing firing circuits to L1, L2/H2, & H1 also Ignitor leads or SCR Gate leads & SCR Cathode leads. All previously existing surge Resistors or Rectifiers must be disconnected prior to installation of this control.
   CAUTION: On EN1000-S(SCR), Do not overtighten J5 & J6.
10. For External SCR Contactor firing with SCHLATTER P/N SS5.5, ES65.5, & ES130 Contactors. Do NOT make J5 & J6 connections as shown on PCB2. See EN1000-S(SCR) Contactor Wiring Diagram with SCHLATTER Contactors. Install Jumper on PCB2 Terminal Strip Board between J5-2 (Yellow) & J6-1 (Red). Make connections from J5-1 (Orange) & J6-2 (White) on PCB2 to SCHLATTER Contactor per correct External SCR Contactor Wiring Diagram.
11. CAUTION: Do NOT set Current Control below 40% for 230 Volt Operation with Ignitron Tube Contactor.

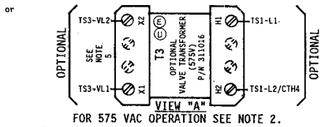
FOR SERVICE ON THIS CONTROL
CONTACT YOUR MACHINE DEALER
OR
ENTRON CONTROLS INC.
DIRECTLY: (630) 682-9800
448 EAST RAMEY ROAD
CAROL STREAM, IL 60188
FAX # (630) 682-2374

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

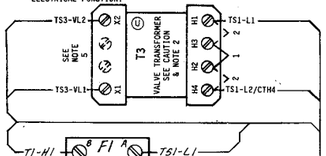
CAUTION
Control Shipped Wired for 460 VAC
Unless otherwise specified - See Note 2.

CAUTION
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.



FOR 575 VAC OPERATION SEE NOTE 2.

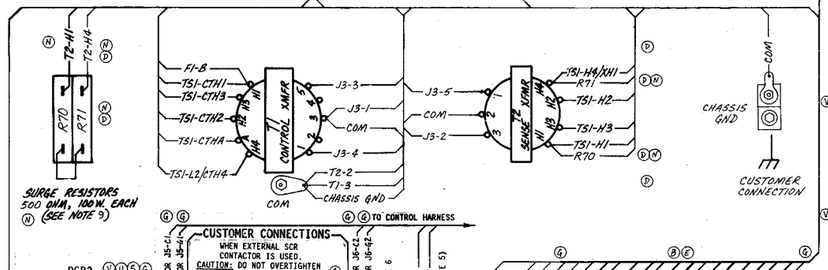
U NOTE: SCREW TERMINAL POSITIONS SHOWN IN DASHED LINES ARE PART OF T3 P/N 311001 AFTER 6-16-97. THE NEW SCREWS PERFORM NO ELECTRICAL FUNCTION.



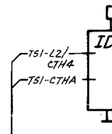
U NOTE: SCREW TERMINAL POSITIONS SHOWN IN DASHED LINES ARE PART OF 575V T3 P/N 311016 AFTER 6-16-97. THE NEW SCREWS PERFORM NO ELECTRICAL FUNCTION.

E CAUTION
SEE NOTE 2
For 460 VAC Operation - Use Jumper #1 ONLY.
For 230 VAC Operation - Use Jumper #2 ONLY.
For 575 VAC Operation - FACTORY WIRED ONLY.
SEE VIEW "A": REPLACE T3 WITH P/N 311016.
For 115 VAC or 380 VAC Operation - CONSULT FACTORY.

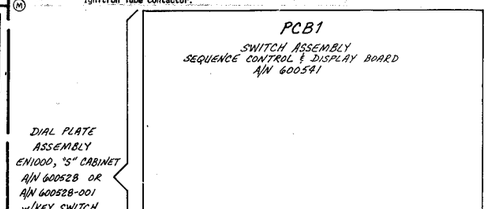
PLEASE REFER TO CORRECT CONTACTOR WIRING DIAGRAM FOR CONTACTOR



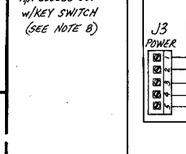
CAUTION
See Note 2
For 460VAC Operation-Use Jumpers #1.
For 230VAC Operation-Use Jumpers #2.
For 575VAC Operation-FACTORY WIRED ONLY.
Jumper #1 is used between H2 & H3
Jumper #1 between CTH2 & CTH3 is removed & replaced by resistor.
R74 (2000 ohm, 10 Watt).
For 115VAC or 380VAC Operation-Consult Factory



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

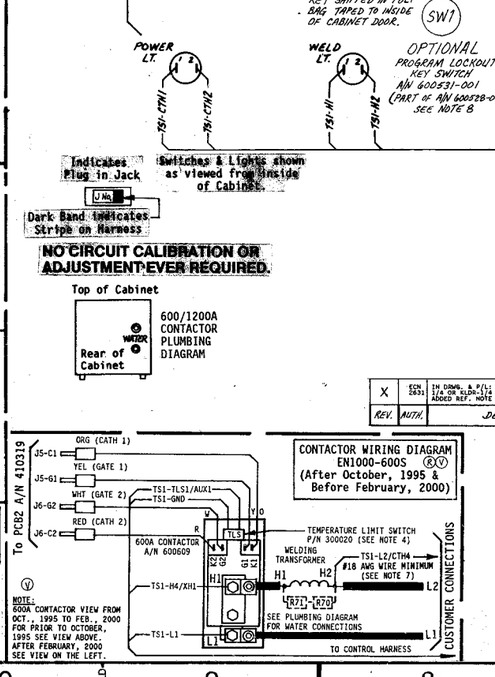


NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.



REV.	AUTH.	DESCRIPTION	DRAWN BY DATE	CHK'D BY DATE
X	ECN 2831	IN DRWG. & P/L: FUSE F1 PART NO. 307024, FNQ-R-1/4 OR KLDR-1/4 WAS 307018 BBS 6/10A, IN DRWG: ADDED REF. NOTE "PRIOR TO 10-1-00...";	DEC 10-6 CU 00	DEC 10-6 CU 00

CONTACTOR WIRING DIAGRAM
EN1000-600S (Ⓥ)
(After October, 1995 & Before February, 2000)



Ⓥ NOTE: 600A CONTACTOR VIEW FROM OCT., 1995 TO FEB., 2000 FOR PRIOR TO OCTOBER, 1995 SEE VIEW ABOVE. AFTER FEBRUARY, 2000 SEE VIEW ON THE LEFT.

REV.	AUTH.	DESCRIPTION	DRAWN BY DATE	CHK'D BY DATE
W	ECN 2599	FOR 1200A,600A,300A,150A,EXT SCR STOR, & EXT IGN TUBE CONTACTORS IN P/L:ADDED 1200A XTOR REF TO 150/300/600A XTOR COLUMN IN P/L:ADDED 1200A XTOR REF TO 70A XTOR COLUMN W/1200A XTOR 600609 & 1200A XTOR 600570 IN P/L:ADDED