



421214-048

PARTS LIST - CONTROL SECTION

QTY	DESIG.	PART NO.	DESCRIPTION
1	PCB1	600685	Assm., Dial Plate, EN1000 Cascade, Consisting of:
1		540248	Assm., Switch, Front Panel Display Board
1		515093	Display Window, Panel, Red Filter, Cont. & Valve, EN1000 Cascade
1		515104	Display Window, Panel, Red Filter, LED, EN1000 Cascade
1		410324	Assm., PCB, Control Weld & Valve Indicator Board, EN1000 Casc.
1		410347	Assm., PCB, RS485 Driver Bd.
1	PCB3	410321	Assm., PCB, Program Board, EN1000 Cascade/Multi-Valve
1	SW1	600551-001	Assm., Switch, Keylock, Interconnect, 3PS
1		56503	Hole Plug, 3/4" Dia., Black, (For Keylock Hole)
1		322340-004	Assm., Harness, Power, Door Mounted
1	J3	322341-004	Assm., Harness, Power, Side Mounted
1	J4-J4-J4-J4	322523	Assm., Harness, Seq. Disp. Bd./Prm. Bd./LED Indicator Bd./485 Driver Bd.
1	J4A-J4A-J4A	322449	Assm., Harness, Program/Output/Input/Valve Extension, Door Mt'd.
1	J4A-J4A-J4A-J4A	322436	Assm., Harness, Program/Output/Input/Valve Extension, Side Mt'd.
1	J4A-J4A-J4A-J4A	322436	Assm., Harness, Seq. Display Bd./Prm. Bd./LED Indicator Bd./485 Driver Bd.
1	J37-IN	322435	Assm., Harness, Term Output Bd. to Valve Extension Term Bd.
1	J37-IN	322436	Assm., Harness, Term Bd. to Firing Board, Door Mounted
1	J37-IN	322437	Assm., Harness, Program Bd. to Firing Board, Side Mounted

PARTS LIST - CONTACTOR SECTION

QTY	DESIG.	PART NO.	DESCRIPTION
1	TS6	335017	Terminal Strip, 2 Pin, 15A, (For WFS)
1	TS19	335024	Terminal Strip, 6 Pin, 20A
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T2	310002	Transformer, Valve, 150VA, 230/460V
1	T8	311017	Transformer, Valve, 150VA, 575V
1	T8	311019	Transformer, Valve, 150VA, 380/408/415V
1	T8	311022	Transformer, Valve, 250VA
1	T8	311021	Transformer, Valve, 500VA
2	T8	325149	Assm., Wire, Valve Transformer, 22 Ga., Black
1-3		341040	Insulator, Standoff, L2 Bus Bar
1		346011	Lug, Screw, 1/4" Bolt to 2/0 Wire, L1, L2, & H1
1		346015	Lug, Screw, 1/4" Bolt to Dual 2/0 Wire, L2 Bus Bar
1		346002	Lug, Screw, 1/4" Bolt to 4/0 Wire, L1, L2, & H1
1		346006	Lug, Screw, 1/4" Bolt to Dual 4/0 Wire, L2 Bus Bar
1		346005	Lug, Screw, 1/4" Bolt to 350 MCM Wire, L1, L2, & H1
1		346003	Lug, Screw, 1/4" Bolt to Dual 350 MCM Wire, L2 Bus Bar
1		346003	Lug, Screw, 1/4" Bolt to 500 MCM Wire, L1, L2, & H1
1		346016	Lug, Screw, 1/4" Bolt to Dual 500 MCM Wire, L2 Bus Bar
1	J485-J485	90058	Cable, WFS, 4-24 GA. W/LS. 450/575V
1		600520-004	Assm., Contactor, Air, 300A, W/LS, 460/575V
1		600520-004	Assm., Contactor, Air, 300A, W/LS, 460/575V, w/o L1 Lug
1-8		600598	Assm., Contactor, Water, 1200A, 460/575V
1-8		600549	Assm., Contactor, Water, 1800A, 460/575V
1-8		600535	Assm., Contactor, Water, 2200A, 460/575V
2	J485-J485	55186	CONDUCTOR, 9 PIN, SCREW TERMINAL, APPROX. 600520-004
1		300020	Switch, Temp. Limit, (N.C.), (Part of 600520-004)
1		530021	Plate, Mounting, 1800/2200A Contactor
1		559136	Bracket, Mounting, 1800/2200A Contactor Plate
1		529035-001	Bracket, Mounting, 300A Contactor
1-8		600547-005	Assm., Power Supply, Selectable 230/380/460/575V, Consisting of:
1		600548-003	Transformer, 500VA, (Part of 600547-005)
1		225016	Resistor, Power, Surge, 500 Ohm, 100W, (Part of 600547-005)
1		325024	Assm., Wire, Surge Resistor, 18 Ga., Black, (Part of 600547-005)
1-8		PCB7-1 thru 8	Assm., PCB, Firing Board, Cascade, (Mounted on Power Supply)
1		322348	Assm., Harness, Firing Bd., Input to Output
1		322330	Assm., Termination JIN-JOUT Harness, Cascade Firing Bd. (SEE NOTE 7)
1		600448	Assm., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1		308010	Fuseholder, 1 Pole, Mini, 600V, WPC-(LBS)
1		307024	Fuse, Control, 1/4A, FKO-A-1/4 or RLD-1/4
1		307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410322)
1		PCB12	Assm., PCB, 9-16 Valve Extension Terminal Strip Output Bd.
1		410329-001	Assm., PCB, Chassis, (N.C.), Cascade Firing Bd., Cascade
1		410329	Assm., PCB, Terminal Strip Input Bd., Cascade
1		410322	Assm., PCB, Terminal Strip Output Bd., Cascade
1		510326	Plate Mounting, Terminal Strip Input & Output Boards

421214-048
WIRING DIAGRAM, INTERCONNECT WIRING OF RS485 DRIVER BOARD

7. The Termination Plug A/N 322340 will ALWAYS be located in the "J3-OUT" socket on the Firing Board of the last numbered Contactor in the Cascade arrangement.
8. When Optional Program Lockout is specified by customer, Add Switch P/N 600531-001 and Escutcheon P/N 460128 & remove Hole Plug P/N 565003.
9. When Optional Water Flow Switch (WFS) is required, add Terminal Strip TS6 (P/N 335017) and wire as shown. Remove Jumper between TS1-WFS1/AUX1 & TS1-GND.
NOTE: WFS will open with flow less than 75 GPM.
10. When Optional Circuit Isolation Device is required, list P/N and size of Circuit Isolation Device, and appropriate cabinet P/N.
11. DIP Switch settings for positions 1 thru 4 on RS485 Driver Board (PCB5) are set at the factory to default as a last location RS485 in an interconnect wiring arrangement. See DIP Switch Settings Chart to change the settings when this RS485 is used as a middle location. J485-J485 Cable Assembly can be used to interconnect to either an RT4 Control, another ENTRON Welding Control, or a NON-ENTRON device that has an RS485 Interface Board. See Wiring Diagram #421407 for Interconnect wiring of RS485 Driver Boards.

8. Optional Keylock when specified by customer. See Note 8. Pack key in poly bag P/N 900148 & attach to door w/light tape P/N 900118.
9. Optional.
10. Substitution or addition of part when 575V control is specified.
11. Optional Water Flow Switch Assembly (WFS). An additional Thirty-Six inches (36") of hose, P/N 900045 (as specified), and two (2) hose clamps, P/N 566010 are to be supplied. Add TS6 P/N 335017. See Note 9.
12. For 1 & 2 Cascade controls with 300A Contactors, use Contactors P/N 600520-004 For 3 thru 8 Cascade controls with 300A Contactor.
13. For 1 or 2 Cascade control in "T" Cabinet substitute J7-IN Harness 322340-001 for 322349.
14. For 1 or 2 Cascade control in "D" Cabinet substitute JIN-JOUT Harness 322348-001 for 322348.
15. For 1 or 2 Cascade control in "D" Cabinet substitute J4A-J4A-J4A-J4A Harness 322523-001 for 322449.
16. For 1 or 2 Cascade control in "T" Cabinet substitute J4A-J4A-J4A-J4A Harness 322523-001 for 322449.

MANUFACTURING INSTRUCTIONS:
SEE DRAWINGS #40024, #61505, & #61905 FOR MECHANICAL ASSEMBLY INSTRUCTIONS.
See Drawing #440093 for Crating Instructions.
See Drawing #440428 for Label Locations.

CAUTION
SEE NOTE 2.
Control Shipped is wired for 460 VAC operation unless otherwise specified.

ENTRON CONTROLS INC

SCALE DATE DRAWN BY CHK'D BY APPROVED BY
5/30/12 DCS

TOLERANCE UNLESS SPECIFIED
ANGLES: ± 5°
DECIMALS: ± .010
FRACTIONS: ± 1/64 DATE

WIRING DIAGRAM, EN1000/VE/485-SERIES CASC/MULTI-VALVE CTRL, 18" X 70"
WIRED FOR SELECTABLE 230/380/460/575V AC OPERATION

NEXT ASSM./USED ON DRAWING NUMBER REV
421214-048 orig