



CAUTION - READ MANUAL & ALL NOTES BEFORE INSTALLING OR OPERATING CONTROL - SEE NOTE 1. NO CIRCUIT CALIBRATION OR ADJUSTMENT EVER REQUIRED.

- 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 Jumper #1 on T8 & TS19. Connect Jumper #13 to R2-X-2. For 230 VAC Operation - Use Jumper #2 on T8 & TS19. Connect Jumper #13 to R2-X-1. For 575 VAC Operation - FACTORY WIRED ONLY. Replace T8 with P/N 311019. Wire per Note 2.
 - For 230 VAC Operation - Use Jumper #2 on T8 & TS19. Connect Jumper #13 to R2-X-1. For 575 VAC Operation - FACTORY WIRED ONLY. Replace T8 with P/N 311019. Wire per Note 2.
 - For 380 VAC Operation - Use Jumper #3 on T8 & TS19. Connect Jumper #13 to R2-X-1. For 575 VAC Operation - FACTORY WIRED ONLY. Replace T8 with P/N 311019. Wire per Note 2.
 - For 575 VAC Operation - FACTORY WIRED ONLY. Replace T8 with P/N 311019. Wire per Note 2.

- The Termination Plug A/N 422330 will ALWAYS be located in the "J-OUT" socket on the Firing Board of the last numbered Contactor in the Cascade arrangement.
- 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.
- After January, 2002, this Wiring Diagram #421214-024 for EN1000 (SCR) Cascade/Multi-Valve Controls will be replaced by the following Wiring Diagrams:
#421214-001, EN1000 (SCR) Cascade/Multi-Valve, 230 VAC Operation.
#421214-002, EN1000 (SCR) Cascade/Multi-Valve, 380 VAC Operation.
#421214-003, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-004, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-005, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-006, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-007, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-008, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-009, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-010, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-011, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-012, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-013, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-014, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-015, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-016, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-017, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-018, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-019, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-020, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-021, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-022, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-023, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-024, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-025, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-026, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-027, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-028, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-029, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-030, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-031, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-032, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-033, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-034, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-035, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-036, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-037, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-038, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-039, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-040, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-041, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-042, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-043, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-044, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-045, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-046, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-047, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-048, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-049, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.
#421214-050, EN1000 (SCR) Cascade/Multi-Valve, 575 VAC Operation.

PARTS LIST - CONTROL SECTION		421214-024 A	
QTY.	DESIG.	PART NO.	DESCRIPTION
1	PCB1	600558	Assem., Dial Plate, EN1000 Cascade, Consisting of:
1	1	600541-001	Assem. Switch, Front Panel Display Board
1	2	540248	Illustrated Panel, Dial Plate, EN1000 Cascade/Multi-Valve
1	1	515096	Display Window, Panel, Red Filter, Cont. & Valve, EN1000 Cascade
1	1	515104	Display Window, Panel, Red Filter, LED, EN1000 Cascade
1	1	410324	Assem., PCB, Contactor Weld & Indicator Board, EN1000 Casc.
1	1	PCB3	Assem., PCB, Program Board, EN1000 Cascade/Multi-Valve
6	1	600531-001	Assem., Switch, Keylock, Momentary, SPST
1	1	565003	Hole Plug, 3/4" Diam., Black, (For Keylock Hole)
1	1	J3	Assem., Harness, Power, Door Mounted
1	1	J3	Assem., Harness, Power, Side Mounted
1	1	J4-J4-J4	Assem., Harness, Seq. Display Bd./Program Bd./LED Indicator Bd.
1	1	J4A-J4A-J4A	Assem., Harness, Program Bd./Output Bd./Input Bd., Door Mt'd
1	1	J4A-J4A-J4A	Assem., Harness, Program Bd./Output Bd./Input Bd., Side Mt'd
1	1	J7-IN	Assem., Harness, Program Bd. to Firing Board, Door Mounted
1	1	J7-IN	Assem., Harness, Program Bd. to Firing Board, Side Mounted

PARTS LIST - CONTACTOR SECTION			
QTY.	DESIG.	PART NO.	DESCRIPTION
1	TS11	335034	Terminal Strip, 10 Pin, 20A, ("L" Cabinet)
1	TS11	335024	Terminal Strip, 10 Pin, 20A, ("D/T" Cabinet)
1	TS19	335024	Terminal Strip, 6 Pin, 20A
1	T1	310001	Transformer, Control, (Part of J3 Harness)
1	T8	311092	Transformer, Valve, 150VA, 230/460V
1	T8	311017	Transformer, Valve, 150VA, 575V
1	T8	311019	Transformer, Valve, 150VA, 380/408/415V
1	T8	312012	Transformer, Valve, 250VA, 460/480/415V
1	T8	311021	Transformer, Valve, 500VA
2	(T8)	325149	Assem., Wire, Valve Transformer, 22 Ga., Black
1-8		600547-005	Assem., Power Supply, Selectable 230/380/460/575V, Consisting of:
1-8	T2	600548-003	Transformer, Sense, (Part of 600547-005)
1-8	R1.2	322342	Resistor, Power, Surge, 500 Ohm, 100W, (Part of 600547-005)
1-8	(R1.2)	325024	Assem., Wire, Surge Resistor, 18 Ga., Black, (Part of 600547-005)
1-8	PCB7-1 thru -8	410323-001	Assem., PCB, Firing Board, Cascade, (Mounted on Power Supply)
1	JIN-JOUT	322348	Assem., Harness, Firing Bd., Input to Output
1	JOUT	322338	Assem., Termination Plug, Cascade Firing Bd. (SEE NOTE 7)
1	J74	600648	Assem., Resistor, Power, 2000 Ohm, 10W, (For 575V)
1	F1	308010	Fuseholder, 1 Pole, Mini, 600V, HPC-L(BBS)
1	F2	307022	Fuse, Control, 1/4" Dia. x 1/4" Dia. x 1/4" Dia.
1	F6-14	307022	Fuse, 1 Amp, Slow Blow, 2AG, (Part of 410322)
1	PCB2	346004	Lug, Screw, Chassis GND, 5/16" Bolt to 2/0 Wire
1	PCB4	410329	Assem., PCB, Terminal Strip Input Bd., Cascade
1		410322	Assem., PCB, Terminal Strip Output Bd., Cascade
1		510236	Plate Mounting, Terminal Strip Input & Output Boards
1		510247	Cabinet, Control, Style "D/T"
1		510257	Cabinet, Control, Style "LS/LF"
1		700112	Manual, EN1000 Cascade
1		421386	Logic Diagram, EN1000 Cascade
1		421214-024	Wiring Diagram, EN1000 (SCR), Cascade/Multi-Valve

CAUTION
All Power Supply's MUST have Jumper #13 wired for the same voltage.

OPTIONAL Keylock when specified by customer. See Note 8. Pack key in poly bag P/N 900148 & attach to door w/ yellow tape P/N 900118.

X Optional.

△ For External 1 thru 4 SCR Contactors, use "D/T" Cabinet.

□ For External 5 thru 8 SCR Contactors, use "L" Cabinet.

■ Substitution or addition of part when 575V control is specified.

Install quantity one (1) Terminal Strip (TS11). For "L" Cabinet, use P/N 335034 & for "D/T" Cabinet, use P/N 600561.

***** For 1 or 2 Cascade External SCR Firing Control in "T" Cabinet, substitute J7-IN Harness 322346-001 for 322346-001. For 1 or 2 Cascade External SCR Firing Control in "D" Cabinet, substitute J7-IN Harness 322347-001 for 322347-001. For 3 or 4 Cascade External SCR Firing Control in "D/T" Cabinet, substitute JIN-JOUT Harness 322348-002 for 322348-002 between Firing Boards 2 & 3. For 5 thru 8 Cascade External SCR Firing Control in "D/T" Cabinet, substitute JIN-JOUT Harness 322348-005 for 322348-005 between Firing Boards 4 & 5. For 7 or 8 Cascade External SCR Firing Control in "L" Cabinet, substitute JIN-JOUT Harness 322348-004 for 322348-004 between Firing Boards 6 & 7.

MANUFACTURING INSTRUCTIONS:
SEE DRAWINGS #440024, #515055, & #510095 FOR MECHANICAL ASSEMBLY INSTRUCTIONS.
See Drawing #440093 for Crating Instructions.
See Drawing #440428 for Label Locations.
For 1 thru 4 External SCR Contactors, use Rear Panel 494141.
For 5 thru 8 External SCR Contactors, use Rear Panel 494182.

REV	AUTH	DESCRIPTION	CHK BY	DATE
		ORIGINAL RELEASE		

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

NOTICE
FOR SERVICE ON THIS CONTROL
Contact Your Machine Dealer
ENTRON CONTROLS INC.
DIRECTLY: (630) 682-8600
465 EAST RANDY ROAD
CAROL STREAM, IL 60188
FAX # (630) 682-3374

ENTRON CONTROLS INC.

SCALE	DATE	DRAWN BY	CHK'D BY	APPROVED BY

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

REV	DATE	REV LTR	APPROVED BY

WIRING DIAGRAM, EN1000 (SCR) CASCADE/MULTI-VALVE CONTROL - 8 CONTACTORS/8 VALVE OUTPUT CIRCUITS - WIRED FOR SELECTABLE 230/380/460/575 VAC OPERATION

NEXT ASSM/USED ON: DRAWING NUMBER: REV

421214-024 A