

ENTRON™

Controls for Resistance Welding EN1000

Multiple Schedule/Multiple Sequence Controls



- **Simple to Program**
Push buttons and a short three-step procedure make easy work of programming any possible welding schedule.
- **New Design Reduces Cost**
Simplified design significantly reduces production costs which are passed on to you.
- **Quality Tested to Performance Extremes**
Each unit is tested to insure maximum performance at customary operating levels. The Entron resistance welding control has consistently offered an excellent performance history.
- **Application Flexibility**
Designed for use with single phase welding machines, rocker arm and press type welders, brazing and robotic equipment, and special machines.

Features

- Spot Sequence
- Pulsation Sequence
- Up & Down Slope
- Quench/Temper
- Forge Delay
- Multiple Weld/Multiple Current Sequence
- Preheat / Postheat
- External Schedule Select
- Process & Error Outputs
- Seam Sequence

Capabilities

- 50 Unique Schedules
- Chained & Successive Modes
- Repeat & Non Repeat
- Weld & Valve Control Relays
- 3 Valve Output
- Multiple Weld Programming
- Multiple Job Set-Ups
- Easily Programmed
- Program Only the Functions Required



Exclusive ENTRON two year warranty

Advantages

- **Design Simplicity**

Design simplicity is the key to our ability to manufacture the highest quality weld control with the best delivery, least maintenance, and lowest out of warranty service in the industry.

- **Field Expandable**

Entron can provide retrofit controls suitable for any manufacturer's controls of any age, type or sequence for installation in the field.

- **Vault Closing Door Mechanism**

D & T cabinet doors equipped with vault locking mechanism to ensure security.

- **Flexible Applications**

EN1000 Single Contactor Controls can be applied to spot welders, seam welders, special machines, or robotic equipment for welding materials of unequal thickness and coated materials.

- **Multiple Cabinet Options**

Available in D, T, E, S cabinet styles with front or side-mounted control panels.

- **Available Options**

Remote Data Entry
Program Lockout Switch
RS 232 Port Interface
Schedule Select
Valve Select (1 of 7) Option
RS485

D Cabinet



T Cabinet



S Cabinet



T. J. SNOW CO., INC.

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EN1000 Series Controls Multiple Schedule/Multiple Sequence Controls

Date: April 2006 Supercedes: August 2000

SPECIFICATIONS

Absolute Count: Push Button Data Entry with Display

Squeeze Count:	0 to 99 cyc, 50/60 Hz
Weld Count/Heat Count:	0 to 99 cyc, 50/60 Hz
Cool Count:	0 to 99 cyc, 50/60 Hz
Hold Count:	0 to 99 cyc, 50/60 Hz
Off Count:	0 to 99 cyc, 50/60 Hz
Weld Impulse Counter:	1 to 99 Impluses
Slope Control/Up and Down Slope:	0 to 99 cyc, 50/60 Hz
Digital Phase Shift Current Control, 10 to 99% in 1% current steps, all weld current functions	
It is NOT necessary to program functions NOT required, program only functions required	



Standard RWMA/NEMA Programmable Functions

Including the following as examples:

- Up Slope and Down Slope
- Quench/Temper
- Pulsation Sequence
- Multi-Weld Count/Multi-Current Select
- Pre-Heat/Post-Heat
- Forge Delay
- Seam Weld (Continuous and Intermittent)

4 Cycle Modes

- Non-Repeat: Single Schedule upon initiation
- Repeat: Single Schedule repeated with pilot circuit held closed
- Successive: Upon each initiation, unique successive schedules are automatically selected
- Chained: Multiple schedules can be linked to operate sequentially upon a single initiation

Additional Features

- Error Code/Fault Outputs
- 87° First Half Cycle Delayed Firing, Anti-Saturation Circuit
- Dynamic Automatic Power Factor Equalization
- Dynamic Automatic Voltage Compensation, $\pm 20\%$ of Nominal Line
- Emergency Stop Circuit
- Interlocking Pressure Switch Circuit
- Single Stage Pilot/2 Stage Pilot, Beat/Non-Beat Operation
- Operational Lights: Power On
Weld Current
- Indicator Lights for all functions on display panel
- Valve Transformer: 150VA 230/460-115V, E, D & T Cabinets
50VA 230/460-115V, S Cabinet
- 3 Valve outputs standard, all controls
Valve select 1 of 7, optional

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EN1000 Series Controls

Multiple Schedule/Multiple Sequence Controls



The **EN1000 Series Control** is ideal for programming schedules for welding coated materials, aluminum, other non-ferrous metals, special alloys, multiple thickness of materials and many special part configurations.

- Store up to 50 **UNIQUE SCHEDULES**
 - Every parameter of each schedule individually accessible
 - Each schedule can store 11 distinct and totally different parameters
 - All schedules retained in memory with power off
 - It is **NOT NECESSARY** to program functions not required
- Four Cycle Modes can be programmed for complex welding schedules
- Select and Program up to 3 **VALVE CIRCUITS, STANDARD**
 - Independently selectable and programmable
- Single contactor circuitry
 - Process control outputs
- Additional Standard Features:
 - External Schedule Select
 - Contactor Failed Detection (Circuit breaker with shunt trip, optional)
- Control can be **INTERFACED** with external Programmable Logic Control (PLC); Advanced interfaces available

CABINET STYLE & DIMENSIONS				CONTACTOR STYLE & RATINGS			
STYLE	H	W	D	AIR COOLED	WATER COOLED		
FP	279 mm 11"	279 mm 11"			Please Contact Factory		
S	222 mm 8-3/4"	222 mm 8-3/4"	419 mm 16-1/2"	300A	1200A		
E	533 mm 21"	222 mm 8-3/4"	419 mm 16-1/2"	300A	1200A	1800A	2200A
D or T	610 mm 24"	645 mm 25-3/8"	254 mm 10"	300A	1200A	1800A	2200A

All SCR contactors complete with temperature limit switch.

Circuit Breakers available in D and T cabinets only. Consult factory for Circuit Breaker pricing. 100, 200 and 400 ampere Circuit Breakers are available in D and T cabinets with right hand, flange mounted operator installed within the cabinet. Consult factory for availability of 600 and 800 ampere Circuit Breakers.

See **COMPREHENSIVE PRICE LIST** for a complete list of Options, Circuit Breakers, Accessories and Special Features.



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