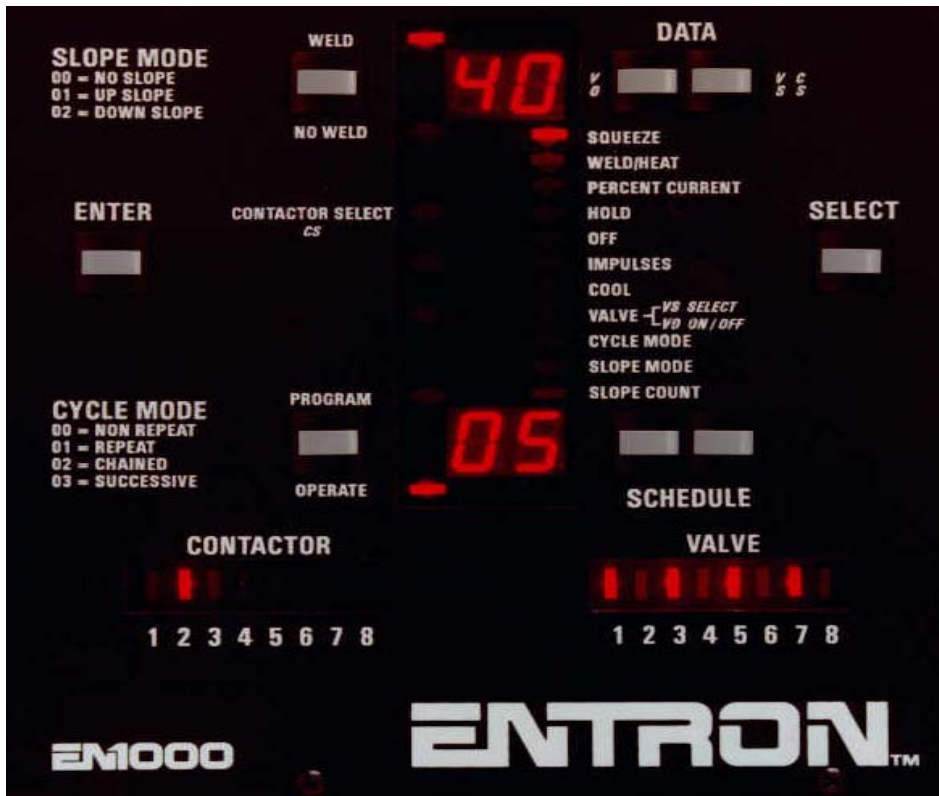


ENTRON™

Controls for Resistance Welding

EN1000

Cascade/Multi-Valve Controls



- **Functional Flexibility**
Performs both Cascade and Multi-Valve operations. Store as many as 13 parameters in each of 100 unique schedules.
- **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 its maximum capability to assure performance at customary operating levels. ENTRON – the only resistance welding controls with the excellent performance history.

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

- 100 Unique Schedules
- Chained & Successive Modes
- Repeat & Non-Repeat
- Weld & Valve Control Relays
- 8/16 Valve Output Available
- Multiple Weld Programming
- Multiple Job Set-Ups
- Easily Programmed
- Program Only the Functions Required
- Up to 8 SCRs



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**

All cabinet doors equipped with vault locking mechanism to ensure security.

- **Flexible Applications**

EN1000 Cascade/Multi-Valve Controls can be applied to mat welders, pass-through welders, special machines, robotic equipment for welding materials of unequal thickness and coated materials.

- **Multiple Cabinet Options**

Available in D, T, L, H, G, U cabinet styles with front or side-mounted control panels.



T Cabinet



D Cabinet



UF Cabinet



US Cabinet



Unique to ENTRON. All EN1000 Cascade/Multi-Valve Controls and cabinets feature provisions for field installation or change of circuit breakers.



T. J. SNOW CO., INC.

1-800-NOW-SNOW

<http://www.tjsnow.com>

ENTRON™

ENTRON Controls, LLC.
601 High Tech Court
Greer, SC 29650
(864) 416-0190
FAX (864) 416-0195
www.entroncontrols.com
e-mail: info@entroncontrols.com

RWMA
MEMBER

780046-0406

ENTRON™

EN1000 Series Cascade/Multi-Valve Controls Multiple Schedule/Multiple Sequence Controls

Date: April 2006 Supercedes: October 2001

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

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
- Indicator Lights: Weld Contactor Output Position Indicators
Valve Output Position Indicators
- Indicator Lights for all functions on display panel
- Valve Transformer: 150VA 230/460-115V, Standard
- Order 1 - 8 contactors; 8 Valve outputs standard, all controls



Exclusive ENTRON two year warranty

EN1000 Series Cascade/Multi-Valve Controls

Multiple Schedule/Multiple Sequence Controls



The EN1000 Cascade/Multi-Valve Series Control is ideal for programming schedules for single or multiple transformer resistance welding machines with multiple valve operations.

- Store up to 100 UNIQUE SCHEDULES
 - Every parameter of each schedule individually accessible
 - Each schedule can store 13 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 8 VALVE CIRCUITS, STANDARD
 - Independently selectable and programmable
- Control can be configured with 1 to 8 CONTACTORS, independently selectable and programmable
- 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		
D or T	610 mm 24"	645 mm 25-3/8"	254 mm 10"	Firing Circuit or 300A	1200A		
LS or LF	914 mm 36"	794 mm 31-3/8"	254 mm 10"	Firing Circuit or 300A	1200A	1800A	
HS or HF	1067 mm 42"	949 mm 37-3/8"	254 mm 10"	Firing Circuit or 300A	1200A	1800A	2200A
GS or GF	1219 mm 48"	949 mm 37-3/8"	254 mm 10"		1200A	1800A	2200A
US or UF	1524 mm 60"	949 mm 37-3/8"	254 mm 10"		1200A	1800A	2200A

- Vault Closing Door Mechanism Standard on all enclosures.
- Water barrier between contactors and electronic components in L, H, G, and U Cabinets.
- All SCR contactors complete with temperature limit switch.

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



T. J. SNOW CO., INC.

1-800-NOW-SNOW

<http://www.tjsnow.com>

ENTRON™

ENTRON Controls, LLC.
601 High Tech Court
Greer, SC 29650
(864) 416-0190
FAX (864) 416-0195
www.entroncontrols.com
e-mail: info@entroncontrols.com

RWMA
MEMBER

750038-0406