Controls for Resistance Welding

EN1000

Cascade/Multi-Valve Controls

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

• 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.

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.

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
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, ±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
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

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<th>D</th>
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- Vault Closing Door Mechanism Standard on all enclosures.
- All SCR contactors complete with temperature limit switch.

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

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