

ENTRON™

Controls for Resistance Welding EN1501

Constant Current Seam Welding Controls



- **Constant Current**
Quick response algorithms use learned weld current characteristics to compensate for weld current changes.
- **Simple to Program**
Push-buttons and a three-step procedure make easy work of programming any welding schedule.
- **Two Year Warranty**
A two year warranty is offered on all ENTRON parts and assemblies. Expert phone support and application service are available at no cost.
- **Change Current “On the Fly”**
While welding, change current “on the fly” with Manual Current Adjust (optional).
- **Direct Replacement for EN500**
- **Unique Design**
Specifically designed for ALL types of seam welding, including roll spot.

Features

- Seam Sequence
- Preheat/Postheat
- Continuous/Intermittent
- Up/Down Slope
- Beat/Non-Beat Operation
- End of Sequence Output
- Optional Manual Current Adjust
- Hierarchical Initiation Structure

Capabilities

- 50 Unique Schedules
- Weld & Valve Control Relays
- One Valve Output
- Multiple Job Set-ups
- Easy to Program
- Program Only the Functions Required
- Spot/Roll Spot

Constant Current

- Primary or Secondary Sensing
- Two minute Set-Up Procedure
- No Transformer Turns Ratio Calculation Required
- Constant Current Program Modes:
 - Percent Current Steps
 - Secondary Current Kiloamperes Proportional to Maximum Current
- Range: 1,000 to 50,000 Secondary Amperes
- Current Monitor with Hi/Lo Limits

Exclusive ENTRON two year warranty

EN1501 Series Controls

Constant Current Seam Welding Controls

Date: May 2006

Supersedes: New

SPECIFICATIONS

Constant Current Operation

Primary or Secondary Sensing
Two minute Set-Up Procedure
No Transformer Turns Ratio Calculation
Constant Current Program Modes: Percent Current Steps; Proportional to Maximum Current
Range: 1,000 to 50,000 Secondary Amperes
Current Monitor with Hi/Lo Limits

Absolute Count: Push Button Data Entry with Display

Squeeze Count: 0 to 99 cyc, 50/60 Hz
Preheat Count: 0 to 99 cyc, 50/60 Hz
Weld Count: continuous seam or intermittent seam
Cool Count: 0 to 99 cyc, 50/60 Hz
Postheat Count: 0 to 99 cyc, 50/60 Hz
Hold Count: 0 to 99 cyc, 50/60 Hz
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
Seam Weld (Continuous and Intermittent)
Multi-Weld Count/Multi-Current Select
Pre-Heat/Post-Heat
Priority heat select individual or switch on the fly with compensation on
Switch weld schedule on the fly upon limit switch input

Additional Features

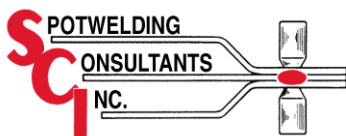
Error Code/Fault Outputs
87° First Half Cycle Delayed Firing,
Anti-Saturation Circuit
Dynamic Automatic Power Factor
Equalization
Dynamic Automatic Voltage Compens-
ation, $\pm 20\%$ of Nominal Line
Emergency Stop Circuit
Interlocking Pressure Switch Circuit
Single Stage Pilot/2 Stage Pilot
Beat/Non-Beat Operation
Operational Lights: Power On
Weld Current
Indicator Lights for all functions on
display panel
Valve Transformer: 50VA 230/460-
150V
Single Valve output standard, all
controls
(Optional) Change Current "On the
Fly" (while welding) with Manual
Current Adjust

The EN1501 Series Control is ideal for programming schedules where changing conditions in the secondary are of concern and current compensation is desired. The EN1501 Series Control provides a constant current operation in tandem with the basic EN1000 Series Control functions.

- Store up to 40 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
- Single contactor circuitry; Process control outputs
- Additional Standard Features:
 - Priority Heat Select
 - Contactors Failed Detection (Circuit breaker with shunt trip, optional)
- Control can be INTERFACED with external Programmable Logic Control (PLC); Advanced interfaces available
- Constant current operation provides push button data entry with a 4-digit display of current settings for primary sensing
- No transformer turns ratio calculations are required for constant current set-up or operation
- Easy to program, quick, three-step set-up; Quick response algorithms use learned weld current characteristics to compensate for weld current changes
- Current monitor with Hi/Lo current limits factory set at $\pm 10\%$ of nominal current setting or adjustable to any desired Hi/Lo limit
- Meets or exceeds RWMA/NEMA standards



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Contact SCI for additional information and pricing.
(888) 255-6780 toll free order line
(972) 475-0874 phone • (972) 475-5024 fax
4209 Industrial • Rowlett, Texas 75088



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