

# ENTRON™

## EN1000 Series Controls Multiple Schedule/Multiple Sequence Controls

Date: April 2014      Supersedes: November 2012

### SPECIFICATIONS

#### Absolute Count: Push Button Data Entry with Display

Squeeze Count:	0 to 99 cycles, 50/60 Hz
Weld Count/Heat Count:	0 to 99 cycles, 50/60 Hz
Cool Count:	0 to 99 cycles, 50/60 Hz
Hold Count:	0 to 99 cycles, 50/60 Hz
Off Count:	0 to 99 cycles, 50/60 Hz
Weld Impulse Counter:	1 to 99 Impulses
Slope Control/Up and Down Slope:	0 to 99 cycles, 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



*Exclusive ENTRON two year warranty*

# EN1000 Series Controls

## Multiple Schedule/Multiple Sequence Controls

D Cabinet



E Cabinet



T Cabinet



S Cabinet

**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

### OPTIONS:

- RS485 implemented with 2 wire ENBUS using non-proprietary protocol; Controls can be networked through remote terminals (RT4jr.) or use PC compatible ENLINK software to download, store or edit weld control data
- RS232 Single point communications
- IPS, IPC, IPSC, Integrated Pressure Sense, Control or Sense and Control Program 50 Unique Pressures, or Trigger Levels
- MM2, Memory Module provides backup for all data of EN1000 Series Controls
- S49, External Binary Select, allows remote binary selection of any of 50 schedules
- Valve Select 1 of 7
- Shunt Trip Breaker
- Ground Fault Detection

CABINET STYLE & DIMENSIONS				CONTACTOR STYLE & RATINGS					
STYLE	H	W	D	AIR COOLED		WATER COOLED			
FP	279 mm • 11"	279 mm • 11"		PLEASE CONTACT FACTORY					
B	222 mm • 8-3/4"	222 mm • 8-3/4"	296 mm • 11-3/4"	150A	300A				
S	222 mm • 8-3/4"	222 mm • 8-3/4"	419 mm • 16-1/2"	150A	300A	1200A			
E	533 mm • 21"	222 mm • 8-3/4"	419 mm • 16-1/2"		300A	1200A	1800A	2200A	3200A
C	508 mm • 20"	406 mm • 16"	254 mm • 10"		300A	1200A			
D or T	610 mm • 24"	645 mm • 25-3/8"	254 mm • 10"			1200A	1800A	2200A	3200A
L	914 mm • 36"	797 mm • 31-3/8"	254 mm • 10"					2200A	3200A

All SCR contactors complete with temperature limit switch.

Consult factory for Circuit Breaker pricing. 100, 200 and 400 ampere Circuit Breakers are available in D & T cabinets with right-hand,

flange mounted operator installed within the cabinet. Consult factory for availability of 600 and 800 ampere Circuit Breaker.

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

Contact your ENTRON Controls  
Representative or Your Local Resistance  
Welding Equipment Source

## ENTRON™

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