



# ENTRON™

## Controls for Resistance Welding

### EN6041



## Single Phase AC Cascade Constant Current Controls

### Cascade Firing of up to 8 Contactors

- Part of the EN6000 Series family with common hardware and programming
- 300 Amp air-cooled and 1200, 1800, 2200 & 3200 Amp water-cooled Contactors available
- Shorted contactor detection on all contactors
- Extremely flexible Heat Control allows 2 welds for every schedule programmed to Constant Current or Phase Shift Current on any contactor individually selectable
- 8 independent Valve Outputs control relay protected and monitored
- Standard I/O features provide additional 16 inputs and 8 outputs as compared to EN6021 Controls
- Similar in programming and operation to EN1000 Series Controls
- Only one Primary or Secondary Coil required

### Constant Current

- Control adjusts current output every cycle.
- No setup necessary for constant current operation.
- When optional secondary or primary coil is used, secondary amps are directly displayed.
- Current High, Low and Pre limits.
- Results of last weld available immediately.
- Pulse Width Monitor

### PLC Compatible

- PLC compatible via EtherNet/IP or MODBUS Function Code 04, 16 and 43 through low-cost serial (RS232 and RS485) or ethernet interfaces
- Design custom operator interface
- Actuate Weld Control Inputs from PLC, minimal interconnecting wires required
- Use weld control I/O for remote PLC I/O



## ENLINK 6041

*Standard with  
every control !*

Communication software provides PC interface for USB or Ethernet interfaces.

### Features

- USB B interface for ENLINK programming
- USB A Memory Stick Jack for Schedule backup
- USB A Memory Stick Jack for Weld Log and Error Log storage
- Spot or Pulsation Sequence
- Programmable options: Slope, Preheat, Quench, Temper, Postheat
- Linked Programs
- External Schedule Select
- Event Outputs
- Advanced Error Outputs
- 100 Programs
- Non-Repeat
- Water Saver Timer
- Programming in phase shift or kA
- 24 VDC flexible I/O (40 in/24 out); some mapable between weld functions, events and simple I/O sequences (32 in/24 out available for sequencer) with output protection
- I/O Sequencer/Programmer
- Stepper with Force and Current Presets
- Diverse schedule capabilities provide maximum application versatility
- 2) each 4-20 mA / 0-10V analog input & output provided for pressure sensing & control
- Program Select
- Weld Log (57,600 entries) and Error Log (1,000 entries) with real time clock
- Shorted contactor detection

### Options

- Detachable 128 x 64 dots graphic (8 lines) LCD Program Pendant (RPP2) with data backup and 10' cable
- Primary or Secondary coils
- Program Lockout
- Operation Mode Switch (OMS) – Program Lockout & Weld/No Weld
- Error Reset Switch (ERS)
- Pressure Sense & Proportional Valve
- Isolation Contactor
- GFI for portable guns
- Water Flow Switch
- RS232/485/Ethernet communication card
- USB Memory stick for backup
- Communication Services Controller

*Exclusive ENTRON two year warranty*

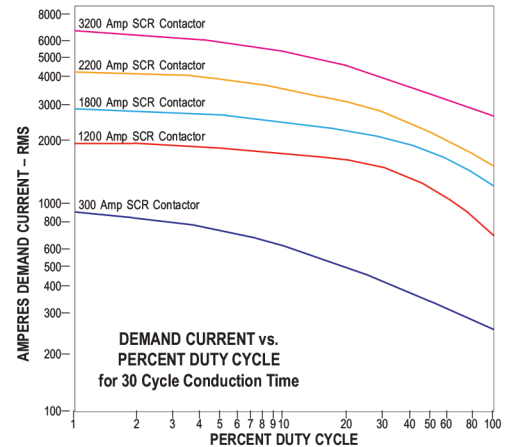


4 Cascade  
Control in  
'G' Cabinet



## Available Contactor Sizes:

300, 1200, 1800, 2200, 3200 Amp



## Options (Expanded Capabilities require additional software and/or hardware)

### TO PROGRAM, YOU WILL NEED:

#### Program Pendant (RPP2)

(P/N 730014-001)  
Detachable, hand-held pendant accesses all programmable variables and displays current and status.



- OR -

#### ENLINK 6041

(P/N 730015-001)  
Communication software provides PC interface for remote programming and monitoring of control.



### • Pressure Sense and Control Hardware

Using provided analog I/O or additional hardware:

- Differential sensors (P/N 730005-008)
- Single-ended sensors (P/N 730005-005)
- Proportional valves:  
1/2" port (P/N 730005-007)  
1 1/4" port (P/N 730005-006)



### • Communication Cards

(P/N 730014-007 & 730014-013)  
Provides ability to network multiple controls using ENLINK 6041.



### • External USB & Ethernet Connectors

(P/N 730014-002)



### TO MEASURE CURRENT IN AMPS, YOU WILL NEED:

#### Secondary Rogowski Coils

(S5 - P/N 730014-005; S8 - P/N 730014-006)  
Available in 5" or 8" diameters. Provides actual secondary amperage measurements.



- OR -

Coil as part of Weld Transformer.

- OR -

**Primary Coil**  
(P/N 313022)



### • Operation Mode Switch (OMS)

(P/N 730014-004)



### • Program Lockout (PLS)

(P/N 730014-009)



### • Error Reset Switch (ERS)

(P/N 730014-015)



### • Data storage on USB memory stick

(P/N 730014-003)



### • Communication Services Controller (CSC)

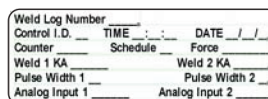
(P/N 730014-016)

Provides bridge to ControlLogix, Web Browser ENLINK, and FTP Services



### • RS232 Printer

(P/N 730014-011)



### • Water Flow Switch

(P/N 730005-009)



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