EN7000 Models 1 & 2
SINGLE PHASE AC Constant Current Control / Proportional Force Control for 50/60 Hz spot/projection welding applications.

**FEATURES**

- 256 weld programs (schedules).
- 2 Weld Intervals: Pre-heat + Main weld.
- Single SCR and main valve (WAV) output.
- 7 auxiliary valves under program control.
- 16 Inputs/16 Outputs (short circuit protected).
- Secondary or Primary current regulation.
- Ethernet (2-ports).
- RS232 port.
- RS485 port.
- Analog Port connects to Proportional Valve for weld force control, or can output a measured current waveform.
- Electrode manager (Stepper Functions).
- Current and force monitor.

**MODEL 1**

- Gear plate mount / Remote mount.
- Pendant, Modbus, NetFlash programming.

**MODEL 2**

- Panel mount.
- Touch display, Pendant, Modbus, NetFlash programming.

**Timing Parameters**

- Presqueeze
- Squeeze
- Pre-heat
- Cool1
- Upslope
- Main heat
- Cool2
- Downslope
- Pulses
- Hold
- Off

**Control Features**

- Aux valve control
- Current monitor
- Force monitor
- Spot weld

Complete EN7000 Model 1 system, suitable for applications up to 150 kVA.

Complete EN7000 Model 2 system, suitable for applications up to 150 kVA.
**NetFlash PC Software for Ethernet (option)**

Easy to use networked PC. Access iPAK, WS2003, EN7000

- PC Programming /Monitoring software
- Live data-logging RECORD function with time stamp.
- Backup and Restore functions for program/data
- For control types EN7000/iPAK/WS2003. Only one software copy needed.
- Firmware update utility.

**WSP/3 Pendant (option)**

Easy, intuitive 4 line display

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**MULTIPLE COMMUNICATIONS SUPPORT**:

Modbus-TCP/IP (Ethernet), Modbus-RTU (RS485), RS232 all built-in. Ethernet/IP and other Fieldbuses supported via external adapter option.

**MULTIPLE CONTROL METHODS**: Discrete I/O plus analog 0-10V. Modbus-TCP/IP (Ethernet), Modbus-RTU (RS485)

**PROGRAMMING METHODS**: Pendant (RS232), HMI RS485, HMI or PC Software Ethernet TCP/IP.

**DATA-LOGGING**: Internal data-logging up to 6000 records. Data can be recorded to hard drive through NetFlash.
EN7000 Models 3 & 4

SINGLE PHASE AC and 3-PHASE DC constant current control and proportional force control for 50/60 Hz spot, projection and Seam welding applications.

**FEATURES**

- 256 weld programs (schedules).
- 3 weld Intervals — Pre-heat + Main weld + Post heat.
- Cascade / multivalve operation.
- Up to 8 SCR and 8 main valve (WAV) outputs.
- 7 auxiliary valves under program control.
- 16 Inputs/ 16 Outputs (short circuit protected).
- Secondary or Primary current regulation.
- Ethernet (2-Ports).
- RS232 Port.
- RS485 Port.
- Analog Port connects to Proportional Valve for weld force control, or can output a measured current waveform.
- Force profiling.
- Electrode manager (Stepper functions) for up to 8 electrodes.
- Current and force monitor.
- Seam mode—change programs ‘on the fly’, up to 8 MOTOR command outputs.

**MODEL 3**

- Gear plate mount / Remote mount.
- Pendant, Modbus, NetFlash programming.

**MODEL 4**

- Panel mount.
- Touch display, Pendant, Modbus, NetFlash programming.

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Example: Complete EN7000 Model 3 system, suitable for applications up to 150 kVA.

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Example: Complete EN7000 Model 4 system, suitable for applications up to 150 kVA.

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**Timing Parameters**

<table>
<thead>
<tr>
<th>Presqueeze</th>
<th>Squeeze</th>
<th>Pre-heat</th>
<th>Cool1</th>
<th>Upslope</th>
<th>Main heat</th>
<th>Cool2</th>
<th>Downslope</th>
<th>Post-heat</th>
<th>Pulses</th>
<th>Hold</th>
<th>Off</th>
</tr>
</thead>
</table>

**Control Features**

- 8 valve control
- Current monitors
- Force monitors
- Spot or Seam weld
- Cascade Welds
- MultiValve Welds
- 3-phase DC
NetFlash PC Software for Ethernet (option)
Easy to use Networked PC. Access iPAK, WS2003, EN7000.

- PC Programming /Monitoring software
- Live data-logging RECORD function with timestamp
- Backup and Restore functions for program/data
- For control types EN7000/iPAK/WS2003. Only one software copy needed.
- Firmware update utility.

WSP/3 Pendant (option)
Easy, intuitive 4 line display

MULTIPLE COMMUNICATIONS SUPPORT:
Modbus-TCP/IP (Ethernet), Modbus-RTU (RS485), RS232 all built-in. Ethernet/IP and other Fieldbuses supported via external adapter option.

MULTIPLE CONTROL METHODS: Discrete I/O plus analog 0-10V, Modbus TCP/IP (Ethernet), Modbus-RTU (RS485).

PROGRAMMING METHODS: Pendant (RS232), HMI RS485, HMI or PC software Ethernet TCP/IP.

DATA-LOGGING (Spot mode): Internal data-logging up to 6000 records. Data can be recorded to hard drive through NetFlash.