

ENTRON

SINGLE PHASE AC RESISTANCE WELDING CONTROL

EN6021

ENLINK 6021

Standard with every control



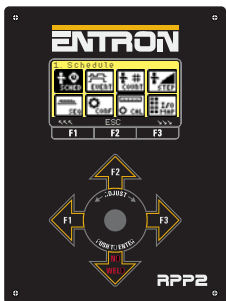
USB and ETHERNET INTERFACES

USB FLASH MEMORY



For STORAGE and BACKUP of
SCHEDULE DATA and WELD LOG

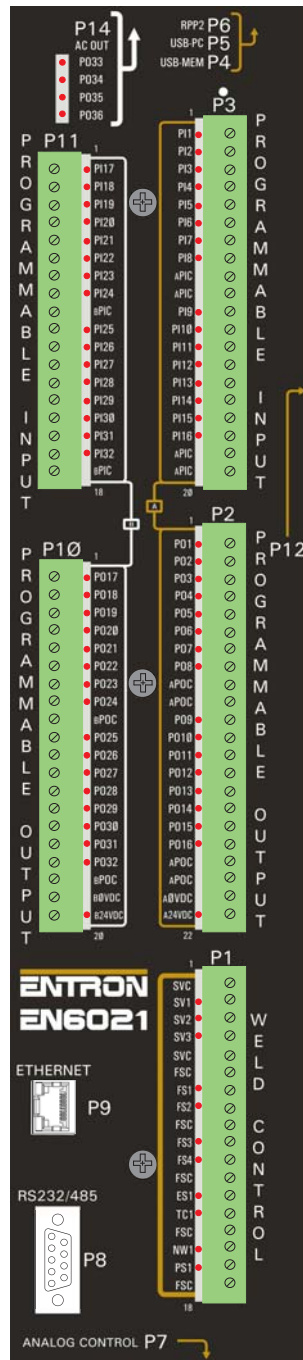
INTUITIVE OPERATOR INTERFACE



RPP2

128 x 64 Dots Graphic
Display with 8 lines of text
Joy Stick Data Entry
Simple Programming
Detachable/Hand Held

EN6021 is part of
the EN6000 Series family
(EN6001....EN6041)



FEATURES

- 100 Programs
- Windows: Current High, Low and Pre limits
- Advanced Error Outputs
- Weld Log / Error Log
- Hardware status indicators
- Force control and force sensing
- Current and Force Stepper with Presets
- Event Outputs
- Integrated Sequencer with diverse instruction set
- Shorted contactor detection

I/O

- 8) inputs and 3) outputs dedicated to weld control
- 24 VDC flexible I/O (24 in/16 out); some mappable between weld functions, events, simple I/O sequences and remote PLC I/O
- 24V Outputs have current limited outputs with short circuit protection
- 2) each 4-20 mA or 0-10V Analog inputs and outputs for sequencer and force control
- Optional 16) 24 VDC inputs and 16) 24 VDC outputs to use in sequencer
- Optional 4) programmable 120 VAC outputs

PLC Compatibility

- PLC compatible via EtherNet/IP or MODBUS Function Code 04, 16 and 43 through low-cost serial (RS232 and RS485) or ethernet interfaces
- Use weld control I/O for remote PLC I/O
- Map weld control functions for PLC control
- Design custom operator interfaces
- Read and write Schedule and Control data
- Interface to other force systems
- Read weld logs remotely

**DESIGNED, BUILT,
SUPPORTED IN THE USA**

ENLINK 6021

Standard with every control

SINGLE USER (USB) and NETWORK (ETHERNET) PROGRAMMING SOFTWARE

SCHEDULE

The SCHEDULE interface allows users to configure various control parameters. It includes sections for Sequence Delay, Cycles, Force monitor, and Stack up monitor. Each section has multiple sub-sections with adjustable values and checkboxes for enabling or disabling features. The interface is organized into a grid-like layout with clear labels and input fields.

EVENT

The EVENT interface displays a table of events. The columns are: Event, Output Channel, State, Interval, and Delay (cycles). The table lists several events, including POB (Part Over Bound) and Disable, with their respective states and intervals. The interface also includes a 'Counter enable' checkbox at the bottom.

COUNTER

The COUNTER interface shows settings for Part Counter (PCTR) and Weld Counter (WCTR). The PCTR section includes 'Part count done' (437) and 'Max part count' (9999). The WCTR section includes 'Weld count done' (8) and 'Welds per part' (1). There is a 'Counter enable' checkbox at the bottom.

STEPPER

The STEPPER interface displays a table of stepper control parameters. The columns are: Step, Count, Heat (%), Current (A), and Force (N). Below the table is a graph showing Force (N) vs. Count, with a red line representing the force profile and a blue line representing the current profile. The graph shows a peak in force around count 100.

CONFIG

The CONFIG interface contains various configuration options. It includes sections for Weld mode, Retraction mode, On error output, Schedule select, 2-Palm mode, Current feedback, Sequencer, Heat mode, Air-over mode, Force units, Force units, Background pressure, Water saver delay, AC line voltage monitor, and Analog units. Each section has a dropdown menu or input field for selection.

I/O MAP

The I/O MAP interface shows Programmable Input (PI) and Programmable Output (PO) functions. The PI section lists functions like EIOS, Tip dress, and Error. The PO section lists functions like EIOS, Tip dress, and Error. Each function is associated with a specific input or output channel.

ERROR MAP

The ERROR MAP interface displays a table of error codes and descriptions. The columns are: Error, Output port, and Error. The table lists various error codes, such as 1 Configuration error, 2 Calibration error, and 3 Sequencer error, along with their corresponding output ports and descriptions.

SEQUENCER

The SEQUENCER interface displays a table of sequence steps and their parameters. The columns are: Line, Statement, Value, Statement, Value, Status, and OR. The table lists various sequence steps, including 'If input', 'Delay', 'Spot weld with Schedule', and 'Jump to'. Each step has associated values and a status indicator.

CALIBRATION

The CALIBRATION interface shows various calibration settings. It includes sections for Torque Sensitivity, Max secondary current, Turn ratio, IFS force calibration, and IFS force calibration. Each section has input fields for values and checkboxes for enabling or disabling features.

WELD LOG

The WELD LOG interface displays a table of weld log entries. The columns are: Record, Sub, Counter, Force, Current, Heat, Time, Date, and Shift up. The table lists various weld log entries, including 'Weld log workpiece' and 'Last weld log workpiece'.

ERROR LOG

The ERROR LOG interface displays a table of error log entries. The columns are: Record, Error, Time, Date, and Status. The table lists various error log entries, including 'High force', 'Low line voltage', and 'P1-HW error'.

HARDWARE

The HARDWARE interface shows a table of hardware expansion inputs and outputs. The columns are: Input Ports, Expansion Inputs, Output Ports, and Expansion Outputs. The table lists various hardware components, including 'Input Ports', 'Expansion Inputs', 'Output Ports', and 'Expansion Outputs'.