



# EN6041 SCHEDULE WORKSHEET

SCHEDULE # \_\_\_\_\_

CONTACTOR # \_\_\_\_\_

SQUEEZE TIME \_\_\_\_\_ Cycles

VALVE SELECTION ☐ V1 ☐ V2 ☐ V3 ☐ V4 ☐ V5 ☐ V6 ☐ V7 ☐ V8

SQUEEZE PRESSURE/FORCE (PV) \_\_\_\_\_ PSI / Lb / mA

PRESSURE/FORCE SENSE MODE ☐ Off ☐ Rising ☐ Falling

PRESSURE/FORCE MONITOR ☐ Enable P/F TRIGGER \_\_\_\_\_ PSI / Lb / mA

P/F LIMIT HIGH \_\_\_\_\_ PSI / Lb / mA

P/F LIMIT LOW \_\_\_\_\_ PSI / Lb / mA

PRESSURE/FORCE PRE-LIMIT MONITOR ☐ Enable P/F PRE-LIMIT \_\_\_\_\_ %

WELD1 TIME \_\_\_\_\_ Cycles

WELD1 REGULATION MODE ☐ Phase Shift  
– or – ☐ Constant Current

WELD1 HEAT \_\_\_\_\_ %

WELD1 CURRENT \_\_\_\_\_ kA

WELD1 PULSE WIDTH MONITOR ☐ Enable

PW1 HIGH \_\_\_\_\_ %

PW1 LOW \_\_\_\_\_ %

WELD1 CURRENT MONITOR ☐ Enable

CURRENT1 LIMIT HIGH \_\_\_\_\_ kA

CURRENT1 LIMIT LOW \_\_\_\_\_ kA

CURRENT1 PRE-LIMIT MONITOR ☐ Enable

CURRENT1 PRE-LIMIT \_\_\_\_\_ %

COOL1 TIME \_\_\_\_\_ Cycles

SLOPE TIME \_\_\_\_\_ Cycles

WELD2 TIME \_\_\_\_\_ Cycles

WELD2 REGULATION MODE ☐ Phase Shift  
– or – ☐ Constant Current

WELD2 HEAT \_\_\_\_\_ %

WELD2 CURRENT \_\_\_\_\_ kA

WELD2 PULSE WIDTH MONITOR ☐ Enable

PW2 HIGH \_\_\_\_\_ %

PW2 LOW \_\_\_\_\_ %

WELD2 CURRENT MONITOR ☐ Enable

CURRENT2 LIMIT HIGH \_\_\_\_\_ kA

CURRENT2 LIMIT LOW \_\_\_\_\_ kA

CURRENT2 PRE-LIMIT MONITOR ☐ Enable

CURRENT2 PRE-LIMIT \_\_\_\_\_ %

COOL2 TIME \_\_\_\_\_ Cycles

HOLD TIME \_\_\_\_\_ Cycles

OFF TIME \_\_\_\_\_ Cycles

IMPULSES \_\_\_\_\_

CURRENT OFFSET \_\_\_\_\_ % ☐ Change all schedules

CYCLE MODE ☐ Non-Repeat ☐ Chained ☐ Successive

Highlighted Parameters are programmable only if enabled.



New



Open



Save



Upload



Download



Error



Counter



Event



Schedule



Config



IO Map



Error Map



Sequencer



Calibration



Weld log



Error log



Hardware



Print



Machine



No weld



Sequencer



Error log



Hardware

Start

Schedule

Event

Counter

Stepper

Config

IO Map

Error Map

Sequencer

Calibration

Weld log

Error log

Hardware

## Schedule

## VALVE SELECTION

Check Mark indicates  
specified Valve is On

## PSENSE

Off

Rising

Falling

## CYCLE MODE

Non-Repeat

Chained

Successive

Encircled parameters  
are programmable  
only if enabled.

Contactor

Squeeze

Valve

V1

V2

V3

V4

V5

V6

V7

V8

PV

Psense

Force monitor

Enable

High

Low

PSI

PSI

Pre limit

PSI

PSI

Weld1

Regulation Mode

Phase shift heat

Constant Current

Cycles

kA

Cycles

Cool1

Cycles

Slope

Cycles

Weld2

Regulation Mode

Phase shift heat

Constant Current

Cycles

kA

Cycles

Cool2

Cycles

Hold

Cycles

Off

Cycles

Impulses

Cycle Mode

Pulse width monitor

Enable

High

Low

kA

kA

Pre limit

kA

PSI

Pre limit

PSI

Pulse width monitor

Enable

High

Low

kA

kA

Pre limit

kA

PSI

Pre limit

PSI

Current offset

Offset value

PSI

Change all schedules

Status

**SCHEDULE # \_\_\_\_\_**

|                |                                     |                                                                                                                                                                                                            |                                                                                                                                                                                                                 |
|----------------|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>EVENT 1</b> | OUTPUT CHANNEL<br>STATE<br>INTERVAL | <input type="checkbox"/> Disable<br><input type="checkbox"/> Off<br><input type="checkbox"/> Squeeze<br><input type="checkbox"/> Weld1<br><input type="checkbox"/> Slope<br><input type="checkbox"/> Cool2 | <input type="checkbox"/> Output # _____<br><input type="checkbox"/> On<br><input type="checkbox"/> 2-Stage<br><input type="checkbox"/> Cool1<br><input type="checkbox"/> Weld2<br><input type="checkbox"/> Hold |
|                | DELAY                               | _____ Cycles                                                                                                                                                                                               |                                                                                                                                                                                                                 |
| <b>EVENT 2</b> | OUTPUT CHANNEL<br>STATE<br>INTERVAL | <input type="checkbox"/> Disable<br><input type="checkbox"/> Off<br><input type="checkbox"/> Squeeze<br><input type="checkbox"/> Weld1<br><input type="checkbox"/> Slope<br><input type="checkbox"/> Cool2 | <input type="checkbox"/> Output # _____<br><input type="checkbox"/> On<br><input type="checkbox"/> 2-Stage<br><input type="checkbox"/> Cool1<br><input type="checkbox"/> Weld2<br><input type="checkbox"/> Hold |
|                | DELAY                               | _____ Cycles                                                                                                                                                                                               |                                                                                                                                                                                                                 |
| <b>EVENT 3</b> | OUTPUT CHANNEL<br>STATE<br>INTERVAL | <input type="checkbox"/> Disable<br><input type="checkbox"/> Off<br><input type="checkbox"/> Squeeze<br><input type="checkbox"/> Weld1<br><input type="checkbox"/> Slope<br><input type="checkbox"/> Cool2 | <input type="checkbox"/> Output # _____<br><input type="checkbox"/> On<br><input type="checkbox"/> 2-Stage<br><input type="checkbox"/> Cool1<br><input type="checkbox"/> Weld2<br><input type="checkbox"/> Hold |
|                | DELAY                               | _____ Cycles                                                                                                                                                                                               |                                                                                                                                                                                                                 |
| <b>EVENT 4</b> | OUTPUT CHANNEL<br>STATE<br>INTERVAL | <input type="checkbox"/> Disable<br><input type="checkbox"/> Off<br><input type="checkbox"/> Squeeze<br><input type="checkbox"/> Weld1<br><input type="checkbox"/> Slope<br><input type="checkbox"/> Cool2 | <input type="checkbox"/> Output # _____<br><input type="checkbox"/> On<br><input type="checkbox"/> 2-Stage<br><input type="checkbox"/> Cool1<br><input type="checkbox"/> Weld2<br><input type="checkbox"/> Hold |
|                | DELAY                               | _____ Cycles                                                                                                                                                                                               |                                                                                                                                                                                                                 |



New



Open



Save



Upload



Download



Error



Counter



Stepper



Config



IO Map



Error Map



Sequencer



No weld



Print



Machine



Calibration



Weld log



Error log



Hardware

Start Schedule Event Counter Stepper Config IO Map Error Map Sequencer Calibration Weld log Error log Hardware

Schedule

Event

1

Output Channel

State

Interval

Delay(cycles)

2

3

4

OUTPUT  
CHANNEL  
Disable  
Output 1-32STATE  
Off  
OnINTERVAL  
Squeeze  
2-Stage  
Weld1  
Cool1  
Slope  
Weld2  
Cool2  
HoldDELAY  
0-99

Status

**EN6041****COUNTER WORKSHEET**

COUNTER ENABLE

☐ Enable

MAX PART COUNT \_\_\_\_\_

WELDS PER PART \_\_\_\_\_

**EN6041****CALIBRATION WORKSHEET**

TOROID SENSITIVITY \_\_\_\_\_ mV/kA

MAX SECONDARY CURRENT \_\_\_\_\_ kA

TURNS RATIO \_\_\_\_\_ : 1

AC LINE VOLTAGE SETTING \_\_\_\_\_ V

IPC FORCE CALIBRATION: ☐ Enabled (using Configure Menu)

PT1: \_\_\_\_\_ mA → \_\_\_\_\_ LB

PT2: \_\_\_\_\_ mA → \_\_\_\_\_ LB

IPS FORCE CALIBRATION: ☐ Enabled (using Configure Menu)

PT1: \_\_\_\_\_ mA → \_\_\_\_\_ LB

PT2: \_\_\_\_\_ mA → \_\_\_\_\_ LB

Highlighted Parameters are programmable only if enabled.

ENLINK6041

ENLINK 6041 COUNTER WORKSHEET

File Edit Setup About

New Open Save Upload Download Error Counter Stepper Weld log Error log Sequencer No weld Print Machine

ENTRON

Start

Schedule

Event

Counter

Stepper

Config

IO Map

Error Map

Sequencer

Calibration

Weld log

Error log

Hardware

Part Counter (PCTR)

Part count done

0

Max part count

Weld Counter (WCTR)

Weld count done

0

Welds per part

☐ Counter enable

ENLINK6041

ENLINK 6041 CALIBRATION WORKSHEET

File Edit Setup About

New Open Save Upload Download Error Counter Stepper Weld log Error log Sequencer No weld Print Machine

ENTRON

Start

Schedule

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Config

IO Map

Error Map

Sequencer

Calibration

Weld log

Error log

Hardware

Toroid Sensitivity

mV/kA

Max secondary current

kA

Turns ratio

:1

AC Line Voltage Setting

V

IPC force calibration

PT1:

mA →

LB

PT2:

mA →

LB

Zero=

4

mA

Max=

7850

LB

Last weld:

\*\* \*

mA

Copy to PT1

Copy to PT2

IPS force calibration

PT1:

mA →

LB

PT2:

mA →

LB

Zero=

4

mA

Max=

7850

LB

Last weld:

\*\* \*

mA

Copy to PT1

Copy to PT2

Encircled parameters are programmable only if enabled.



# EN6041 CONFIGURE WORKSHEET

USE SCHEDULE # \_\_\_\_\_

ON ERROR OUTPUT 17    ☐ Continue    ☐ Stop on fault    ☐ Head lock on fault  
SCHEDULE SELECT    ☐ Internal    ☐ External  
2-PALM MODE    ☐ Off    ☐ On  
CURRENT FEEDBACK    ☐ Primary    ☐ Secondary    ☐ Secondary with Primary Coil  
SEQUENCER    ☐ Off    ☐ On  
PRESSURE CONTROL MODE    ☐ Off    ☐ IPS    ☐ IPC    ☐ IPSC  
FORCE UNITS    ☐ PSI    ☐ Lb    ☐ mA    ☐ Calibrated Lb

CYLINDER INSIDE DIAMETER \_\_\_\_\_ Inches

BACKGROUND PRESSURE \_\_\_\_\_ PSI / Lb

WATER SAVER DELAY \_\_\_\_\_ Seconds

MAX CURRENT OFFSET \_\_\_\_\_ %

AVC MODE    ☐ Disable    ☐ Maximum \_\_\_\_\_ %

NOMINAL VOLTAGE \_\_\_\_\_ V

AC LINE VOLTAGE MONITOR    ☐ Enable

MAX VOLTAGE \_\_\_\_\_ V

MIN VOLTAGE \_\_\_\_\_ V

ANALOG UNITS    INPUT1    ☐ V    ☐ mA  
                         INPUT2    ☐ V    ☐ mA  
                         OUTPUT1    ☐ V    ☐ mA  
                         OUTPUT2    ☐ V    ☐ mA

87 DEGREE DELAY    ☐ Disable    ☐ Enable

HALF CYCLE MODE    ☐ Off    ☐ Positive    ☐ Negative    ☐ Alternate

REMOTE COMMUNICATION    ☐ MB Ethernet    ☐ MB RS232 RTU    ☐ MB RS485 RTU  
                                         ☐ Label Printing    ☐ EIP+MB Ethernet

CONTROL ID # \_\_\_\_\_

CONTROL DESCRIPTION \_\_\_\_\_

BLANKING \_\_\_\_\_ Cycles

POWER FACTOR \_\_\_\_\_ %

PENDANT DISPLAY RETURN \_\_\_\_\_ Minutes

LOG RECORDING MODE    ☐ Stop when log is full    ☐ Rewrite when log is full

Highlighted Parameters are programmable only if enabled.



New



Open



Save



Upload



Download



Error



Counter



Stepper



Config



IO Map



Error Map



Sequencer



No weld



Print



Machine



Calibration



Error log



Weld log



Hardware



Start | Schedule | Event | Counter | Stepper | Config | IO Map | Error Map | Sequencer | Calibration | Weld log | Error log | Hardware

Use schedule

 %

On error output PO17

Schedule select

 V

2-Palm mode

Current feedback

 V

Sequencer

 V**LOG RECORDING MODE**

"Change recording mode" must be checked to enable editing of this parameter.

**Log recording mode**☐ Change recording mode☒ Stop when log is full☐ Rewrite when log is full**AC line voltage monitor**☐ Enable V V**Analog units****Control description**

(20 characters)

Pressure control

Force units

Cylinder inside diameter

 Inches

Background pressure

 PSI

Water saver delay

 Seconds

87 degree delay

Half cycle mode

Remote communication

Blanking

 Cycles

Power factor

 %

Pendant display return

 Minutes

Status

Encircled parameters are programmable only if enabled.



| INPUT                 | FUNCTION                                | SOURCE              | USE |
|-----------------------|-----------------------------------------|---------------------|-----|
| <b>PI1</b><br>P3-1    | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI2</b><br>P3-2    | <b>Parts Counter Reset</b><br>Sequencer | <b>Local</b><br>PLC |     |
| <b>PI3</b><br>P3-3    | <b>Error Reset</b><br>Sequencer         | <b>Local</b><br>PLC |     |
| <b>PI4</b><br>P3-4    | <b>TT1</b><br>Sequencer                 | <b>Local</b><br>PLC |     |
| <b>PI5</b><br>P3-5    | <b>Interlock</b><br><b>Sequencer</b>    | <b>Local</b><br>PLC |     |
| <b>PI6</b><br>P3-6    | <b>Edit Lock</b><br>Sequencer           | <b>Local</b><br>PLC |     |
| <b>PI7</b><br>P3-7    | <b>Escape</b><br>Sequencer              | <b>Local</b><br>PLC |     |
| <b>PI8</b><br>P3-8    | <b>Back Step</b><br>Sequencer           | <b>Local</b><br>PLC |     |
| <b>PI9</b><br>P3-11   | <b>2nd Stage</b><br><b>Sequencer</b>    | <b>Local</b><br>PLC |     |
| <b>PI10</b><br>P3-12  | <b>SchSelect1</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI11</b><br>P3-13  | <b>SchSelect2</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI12</b><br>P3-14  | <b>SchSelect3</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI13</b><br>P3-15  | <b>SchSelect4</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI14</b><br>P3-16  | <b>SchSelect5</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI15</b><br>P3-17  | <b>SchSelect6</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI16</b><br>P3-18  | <b>SchSelect7</b><br>Sequencer          | <b>Local</b><br>PLC |     |
| <b>PI17</b><br>P11-1  | <b>Stepper Reset</b><br>Sequencer       | <b>Local</b><br>PLC |     |
| <b>PI18</b><br>P11-2  | <b>Weld Counter Reset</b><br>Sequencer  | <b>Local</b><br>PLC |     |
| <b>PI19</b><br>P11-3  | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI20</b><br>P11-4  | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI21</b><br>P11-5  | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI22</b><br>P11-6  | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI23</b><br>P11-7  | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI24</b><br>P11-8  | <b>Not used</b><br>Sequencer            | <b>Local</b><br>PLC |     |
| <b>PI25</b><br>P11-10 | <b>TSS1</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI26</b><br>P11-11 | <b>TSS2</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI27</b><br>P11-12 | <b>TSS3</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI28</b><br>P11-13 | <b>TSS4</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI29</b><br>P11-14 | <b>TSS5</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI30</b><br>P11-15 | <b>TSS6</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI31</b><br>P11-16 | <b>TSS7</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |
| <b>PI32</b><br>P11-17 | <b>TSS8</b><br><b>Sequencer</b>         | <b>Local</b><br>PLC |     |

**Bold function** indicates default value

| OUTPUT               | FUNCTION                         |                          |              |                          | USE |
|----------------------|----------------------------------|--------------------------|--------------|--------------------------|-----|
| <b>PO1</b><br>P2-1   | <b>EOS</b><br>Sequencer          | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO2</b><br>P2-2   | <b>Not Ready</b><br>Sequencer    | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO3</b><br>P2-3   | <b>Tip Dress</b><br>Sequencer    | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO4</b><br>P2-4   | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO5</b><br>P2-5   | <b>Count End</b><br>Sequencer    | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO6</b><br>P2-6   | <b>Error</b><br>Sequencer        | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO7</b><br>P2-7   | <b>Step End</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO8</b><br>P2-8   | <b>Interlock</b><br>Sequencer    | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO9</b><br>P2-11  | <b>Water Saver</b><br>Sequencer  | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO10</b><br>P2-12 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO11</b><br>P2-13 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO12</b><br>P2-14 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO13</b><br>P2-15 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO14</b><br>P2-16 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO15</b><br>P2-17 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO16</b><br>P2-18 | <b>Not used</b><br>Sequencer     | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO17</b><br>P10-1 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO18</b><br>P10-2 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO19</b><br>P10-3 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO20</b><br>P10-4 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO21</b><br>P10-5 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO22</b><br>P10-6 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO23</b><br>P10-7 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |
| <b>PO24</b><br>P10-8 | <b>Error Output</b><br>Sequencer | <input type="checkbox"/> | Event<br>PLC | <input type="checkbox"/> |     |

**Bold function** indicates default value

| P1 WELD CONTROL      |                                                                                |     |
|----------------------|--------------------------------------------------------------------------------|-----|
| IN/OUT               | FUNCTION                                                                       | USE |
| <b>SV1</b><br>P1-2   | Solenoid Valve 1                                                               |     |
| <b>SV2</b><br>P1-3   | Solenoid Valve 2                                                               |     |
| <b>SV3</b><br>P1-4   | Solenoid Valve 3                                                               |     |
| <b>FS1</b><br>P1-7   | Foot Switch 1                                                                  |     |
| <b>FS2</b><br>P1-8   | Foot Switch 2                                                                  |     |
| <b>FS3</b><br>P1-10  | Foot Switch 3                                                                  |     |
| <b>FS4</b><br>P1-11  | Foot Switch 4                                                                  |     |
| <b>ES1</b><br>P1-13  | Emergency Stop*                                                                |     |
| <b>N/U</b><br>P1-14  | Not Used                                                                       |     |
| <b>NW1</b><br>P1-16  | External Weld/<br>No Weld Input*                                               |     |
| <b>PS1</b><br>P1-17  | Pressure Switch*                                                               |     |
| P1A VALVE OUTPUTS    |                                                                                |     |
| OUTPUT               | FUNCTION                                                                       | USE |
| <b>SV4</b><br>P1A-1  | Valve 4 Output                                                                 |     |
| <b>SV5</b><br>P1A-2  | Valve 5 Output                                                                 |     |
| <b>SV6</b><br>P1A-3  | Valve 6 Output                                                                 |     |
| <b>SV7</b><br>P1A-4  | Valve 7 Output                                                                 |     |
| <b>SV8</b><br>P1A-5  | Valve 8 Output                                                                 |     |
| P7 ANALOG I/O        |                                                                                |     |
| IN/OUT               | FUNCTION                                                                       | USE |
| <b>IN1</b><br>P7-9   | <b>PV</b> <input type="checkbox"/><br>Sequencer <input type="checkbox"/>       |     |
| <b>IN2</b><br>P7-10  | <b>Not used</b> <input type="checkbox"/><br>Sequencer <input type="checkbox"/> |     |
| <b>OUT1</b><br>P7-11 | <b>PV</b> <input type="checkbox"/><br>Sequencer <input type="checkbox"/>       |     |
| <b>OUT2</b><br>P7-12 | <b>Not used</b> <input type="checkbox"/><br>Sequencer <input type="checkbox"/> |     |

\* Jumper when not used.

**Bold function** indicates default value



New



Open



Save



Upload



Download



Error



Counter



Stepper



Config



IO Map



Error log



Sequencer



Weld log



No weld



Sequencer



Calibration



Print



Machine



Start | Schedule | Event | Counter | Stepper | Config | IO Map | Error Map | Sequencer | Calibration | Weld log | Error log | Hardware

## Programmable Input (PI)

Function Source

Expansion

|          |                      |                      |                      |
|----------|----------------------|----------------------|----------------------|
| 1        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 2        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 3        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 4        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 5        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 6        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 7        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 8        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 9        | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 10       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 11       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 12       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 13       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 14       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 15       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| 16       | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Analog 1 | <input type="text"/> | <input type="text"/> | <input type="text"/> |
| Analog 2 | <input type="text"/> | <input type="text"/> | <input type="text"/> |

## Programmable Output (PO) function

Expansion

|          |                      |                      |
|----------|----------------------|----------------------|
| 1        | <input type="text"/> | <input type="text"/> |
| 2        | <input type="text"/> | <input type="text"/> |
| 3        | <input type="text"/> | <input type="text"/> |
| 4        | <input type="text"/> | <input type="text"/> |
| 5        | <input type="text"/> | <input type="text"/> |
| 6        | <input type="text"/> | <input type="text"/> |
| 7        | <input type="text"/> | <input type="text"/> |
| 8        | <input type="text"/> | <input type="text"/> |
| 9        | <input type="text"/> | <input type="text"/> |
| 10       | <input type="text"/> | <input type="text"/> |
| 11       | <input type="text"/> | <input type="text"/> |
| 12       | <input type="text"/> | <input type="text"/> |
| 13       | <input type="text"/> | <input type="text"/> |
| 14       | <input type="text"/> | <input type="text"/> |
| 15       | <input type="text"/> | <input type="text"/> |
| 16       | <input type="text"/> | <input type="text"/> |
| Analog 1 | <input type="text"/> |                      |
| Analog 2 | <input type="text"/> |                      |

Status

| ERROR | OUTPUT<br>17-32* | DESCRIPTION                 | ERROR | OUTPUT<br>17-32* | DESCRIPTION               |
|-------|------------------|-----------------------------|-------|------------------|---------------------------|
| 1     |                  | Configuration error         | 49    |                  | High force pre-warn       |
| 2     |                  | Calibration error           | 50    |                  | Low force pre-warn        |
| 3     |                  | Schedule error              | 51    |                  | High current 1 pre-warn   |
| 4     |                  | Sequencer error             | 52    |                  | Low current 1 pre-warn    |
| 5     |                  | Event error                 | 53    |                  | High current 2 pre-warn   |
| 6     |                  | Counter error               | 54    |                  | Low current 2 pre-warn    |
| 7     |                  | Stepper error               | 55    |                  | Reserved                  |
| 8     |                  | I/O map error               | 56    |                  | Reserved                  |
| 9     |                  | E-stop error                | 57    |                  | Reserved                  |
| 10    |                  | TC1 (Contactor) error       | 58    |                  | Reserved                  |
| 11    |                  | P1-NW error                 | 59    |                  | Reserved                  |
| 12    |                  | PS error                    | 60    |                  | Reserved                  |
| 13    |                  | SCR short                   | 61    |                  | Reserved                  |
| 14    |                  | Second Stage error          | 62    |                  | Reserved                  |
| 15    |                  | Pressure Sense error        | 63    |                  | Reserved                  |
| 16    |                  | Interlock error             | 64    |                  | Reserved                  |
| 17    |                  | High force                  | 65    |                  | Battery low               |
| 18    |                  | Low force                   | 66    |                  | Use schedule error        |
| 19    |                  | High current 1              | 67    |                  | Reserved                  |
| 20    |                  | Low current 1               | 68    |                  | Reserved                  |
| 21    |                  | High current 2              | 69    |                  | Reserved                  |
| 22    |                  | Low current 2               | 70    |                  | Reserved                  |
| 23    |                  | High line voltage           | 71    |                  | Reserved                  |
| 24    |                  | Low line voltage            | 72    |                  | Reserved                  |
| 25    |                  | PCTR counter end            | 73    |                  | Weld Log full             |
| 26    |                  | Stepper end                 | 74    |                  | Weld Log warn             |
| 27    |                  | High pulse width1           | 75    |                  | Error Log full            |
| 28    |                  | Low pulse width1            | 76    |                  | Error Log warn            |
| 29    |                  | High pulse width2           | 77    |                  | Flash RAM error           |
| 30    |                  | Low pulse width2            | 78    |                  | Reserved                  |
| 31    |                  | Tip dress pre-warn          | 79    |                  | Reserved                  |
| 32    |                  | AVC error                   | 80    |                  | Reserved                  |
| 33    |                  | Power on with STARTs closed | 81    |                  | Reserved                  |
| 34    |                  | 2-palm error                | 82    |                  | Reserved                  |
| 35    |                  | PNW (Pendant No-Weld)       | 83    |                  | Reserved                  |
| 36    |                  | TT1 (Transformer) error     | 84    |                  | Reserved                  |
| 37    |                  | Safety Relay error          | 85    |                  | Reserved                  |
| 38    |                  | No 24V for CPU I/O ports    | 86    |                  | Reserved                  |
| 39    |                  | No 24V for Expansion Board  | 87    |                  | Reserved                  |
| 40    |                  | Reserved                    | 88    |                  | Reserved                  |
| 41    |                  | Reserved                    | 89    |                  | Reserved                  |
| 42    |                  | Reserved                    | 90    |                  | Reserved                  |
| 43    |                  | Reserved                    | 91    |                  | Reserved                  |
| 44    |                  | Reserved                    | 92    |                  | Pressure Sensor not ready |
| 45    |                  | Reserved                    | 93    |                  | Reserved                  |
| 46    |                  | Reserved                    | 94    |                  | Second Stage not ready    |
| 47    |                  | Reserved                    | 95    |                  | Pressure Sense not ready  |
| 48    |                  | Reserved                    | 96    |                  | Interlock not ready       |

\* NOTE: Control can stop on Error 17 if set in Configuration Menu.

ENLINK6041
ENLINK 6041 ERROR WORKSHEET
File Edit Setup About
New Open Save Upload Download Error Counter Stepper Weld log Error log Sequencer No weld Print Machine
ENTRON

Start Schedule Event Counter Stepper Config IO Map Error Map Sequencer Calibration Weld log Error log Hardware

| Error                           | Output port | Error                        | Output port |
|---------------------------------|-------------|------------------------------|-------------|
| 1: Configuration error          |             | 2: Calibration error         |             |
| 3: Schedule error               |             | 4: Sequencer error           |             |
| 5: Event error                  |             | 6: Counter error             |             |
| 7: Stepper error                |             | 8: I/O map error             |             |
| 9: E-stop error                 |             | 10: TC1(Contactor) error     |             |
| 11: P1-NW error                 |             | 12: PS error                 |             |
| 13: SCR short                   |             | 14: 2nd stage error          |             |
| 15: P sense error               |             | 16: Interlock error          |             |
| 17: High force                  |             | 18: Low force                |             |
| 19: High current 1              |             | 20: Low current 1            |             |
| 21: High current 2              |             | 22: Low current 2            |             |
| 23: High line voltage           |             | 24: Low line voltage         |             |
| 25: PCTR counter end            |             | 26: Stepper end              |             |
| 27: High pulse width1           |             | 28: Low pulse width1         |             |
| 29: High pulse width2           |             | 30: Low pulse width2         |             |
| 31: Tip dress Pre-warn          |             | 32: AVC error                |             |
| 33: Power on with STARTs closed |             | 34: 2-PALM error             |             |
| 35: PNW(Pendant No-weld)        |             | 36: TT1(Transformer) error   |             |
| 37: Safety relay error          |             | 38: No 24V for CPU I/O ports |             |
| 39: No 24V for expansion board  |             | 40: Reserved                 |             |
| 41: Reserved                    |             | 42: Reserved                 |             |
| 43: Reserved                    |             | 44: Reserved                 |             |
| 45: Reserved                    |             | 46: Reserved                 |             |
| 47: Reserved                    |             | 48: Reserved                 |             |
| 49: High force pre-warn         |             | 50: Low force pre-warn       |             |
| 51: High current 1 pre-warn     |             | 52: Low current 1 pre-warn   |             |
| 53: High current 2 pre-warn     |             | 54: Low current 2 pre-warn   |             |
| 55: Reserved                    |             | 56: Reserved                 |             |
| 57: Reserved                    |             | 58: Reserved                 |             |
| 59: Reserved                    |             | 60: Reserved                 |             |
| 61: Reserved                    |             | 62: Reserved                 |             |
| 63: Reserved                    |             | 64: Reserved                 |             |
| 65: Battery low                 |             | 66: Use schedule error       |             |
| 67: Reserved                    |             | 68: Reserved                 |             |
| 69: Reserved                    |             | 70: Reserved                 |             |
| 71: Reserved                    |             | 72: Reserved                 |             |
| 73: Weld log full               |             | 74: Weld log warn            |             |
| 75: Error log full              |             | 76: Error log warn           |             |
| 77: Flash RAM error             |             | 78: Reserved                 |             |
| 79: Reserved                    |             | 80: Reserved                 |             |
| 81: Reserved                    |             | 82: Reserved                 |             |
| 83: Reserved                    |             | 84: Reserved                 |             |
| 85: Reserved                    |             | 86: Reserved                 |             |
| 87: Reserved                    |             | 88: Reserved                 |             |
| 89: Reserved                    |             | 90: Reserved                 |             |
| 91: Reserved                    |             | 92: PS not ready             |             |
| 93: Reserved                    |             | 94: 2nd stage not ready      |             |
| 95: P sense not ready           |             | 96: Interlock not ready      |             |

Status

| OPERATION CODE            | RANGE                                     | FUNCTION                                                                                                                                                                                                                          |
|---------------------------|-------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Blank                     | N/A                                       | Not programmed (has no effect)                                                                                                                                                                                                    |
| Step xxx                  | 1 to 100                                  | Has no effect, but serves as target for Jump statement or as logical divider in program                                                                                                                                           |
| Sub xxx                   | 1 to 100                                  | Has no effect, but serves as target for Call SUB statement or as logical divider in program                                                                                                                                       |
| Await Plxx = On           | 1 to 32                                   | Waits for Input Plxx to be On                                                                                                                                                                                                     |
| Await Plxx = Off          | 1 to 32                                   | Waits for Input Plxx to be Off                                                                                                                                                                                                    |
| Set POxx = On             | 1 to 32                                   | Turns On Output POxx                                                                                                                                                                                                              |
| Set POxx = Off            | 1 to 32                                   | Turns Off Output POxx                                                                                                                                                                                                             |
| Set Flagxx = On           | 1 to 32                                   | Sets Flag xx On                                                                                                                                                                                                                   |
| Set Flagxx = Off          | 1 to 32                                   | Sets Flag xx Off                                                                                                                                                                                                                  |
| Delay xx.x Second         | 0.1–99.9 seconds                          | Waits for specified time                                                                                                                                                                                                          |
| Jump to step xxx          | 1 to 200                                  | Program continues at specified Step number                                                                                                                                                                                        |
| Call SUB xxx              | 1 to 100                                  | Program continues with subroutine at specified SUB number (maximum of 8 nesting levels)                                                                                                                                           |
| Return                    | N/A                                       | Return from subroutine                                                                                                                                                                                                            |
| Set Counterx = yyy        | x=1-8, y=1-999                            | Loads Counter x with value yyy (non-volatile)                                                                                                                                                                                     |
| Decrease Counterx         | 1 to 8                                    | Value in Counter x is reduced by 1 (non-volatile)                                                                                                                                                                                 |
| If Counterx>0, JP yyy     | x=1-8, y=1-200                            | If value in Counter x is greater than 0, jump to Step yyy                                                                                                                                                                         |
| If POxx = On, JP yyy      | x=1-32, y=1-200                           | If Output POxx is On, jump to Step yyy                                                                                                                                                                                            |
| If POxx = Off, JP yyy     | x=1-32, y=1-200                           | If Output POxx is Off, jump to Step yyy                                                                                                                                                                                           |
| If Flagxx = On, JP yyy    | x=1-32, y=1-200                           | If Flag xx is On, jump to Step yyy                                                                                                                                                                                                |
| If Flagxx = Off, JP yyy   | x=1-32, y=1-200                           | If Flag xx is Off, jump to Step yyy                                                                                                                                                                                               |
| If Plxx = On, JP yyy      | x=1-32, y=1-200                           | If Input Plxx is On, jump to Step yyy                                                                                                                                                                                             |
| If Plxx = Off, JP yyy     | x=1-32, y=1-200                           | If Input Plxx is Off, jump to Step yyy                                                                                                                                                                                            |
| Spot-weld with Sch xxx    | x=0-100                                   | Execute spot weld sequence using Schedule xxx (0–99). SEQUENCER will wait until weld reaches End of Sequence before continuing with next statement. If xxx set to 100, starting schedule selected by Internal or External Select. |
| Set Aoutx = yy.y mA / V   | x=1 or 2,<br>y=4.0-20.0mA<br>or 0.0-10.0V | Set Analog Output 1 or 2 to specific current/voltage (set in <b>Configure Menu</b> )                                                                                                                                              |
| If Ain1 > xx.x mA, JP yyy | x=4.0-20.0, y=1-200                       | If Analog Input 1 is greater than xx.x mA, jump to Step yyy                                                                                                                                                                       |
| If Ain1 < xx.x mA, JP yyy | x=4.0-20.0, y=1-200                       | If Analog Input 1 is less than xx.x mA, jump to Step yyy                                                                                                                                                                          |
| If Ain2 > xx.x mA, JP yyy | x=4.0-20.0, y=1-200                       | If Analog Input 2 is greater than xx.x mA, jump to Step yyy                                                                                                                                                                       |
| If Ain2 < xx.x mA, JP yyy | x=4.0-20.0, y=1-200                       | If Analog Input 2 is less than xx.x mA, jump to Step yyy                                                                                                                                                                          |
| End                       | N/A                                       | End of Sequence                                                                                                                                                                                                                   |
| If Errxx = On, JP yyy     | x=1-96 or Any, y=1-200                    | When xx=1-96, if Error xx is On, jump to Step yyy<br>When xx=Any, if one or multiple Errors are On, jump to Step yyy                                                                                                              |
| If Errxx = Off, JP yyy    | x=1-96 or All, y=1-200                    | When xx=1-96, if Error xx is Off, jump to Step yyy<br>When xx=All, if all Error are Off, jump to Step yyy                                                                                                                         |



New



Open



Save



Upload



Download



Error



Counter



Stepper



Config



IO Map



Error Map



Sequencer



No weld



Print



Machine



Calibration

Start

Schedule

Event

Counter

Stepper

Config

IO Map

Error Map

Sequencer

Calibration

Weld log

Error log

Hardware



ENTRON

| Line | Statement | Value | Statement | Value |
|------|-----------|-------|-----------|-------|
| 1    |           |       |           |       |
| 2    |           |       |           |       |
| 3    |           |       |           |       |
| 4    |           |       |           |       |
| 5    |           |       |           |       |
| 6    |           |       |           |       |
| 7    |           |       |           |       |
| 8    |           |       |           |       |
| 9    |           |       |           |       |
| 10   |           |       |           |       |
| 11   |           |       |           |       |
| 12   |           |       |           |       |
| 13   |           |       |           |       |
| 14   |           |       |           |       |
| 15   |           |       |           |       |
| 16   |           |       |           |       |
| 17   |           |       |           |       |
| 18   |           |       |           |       |
| 19   |           |       |           |       |
| 20   |           |       |           |       |
| 21   |           |       |           |       |
| 22   |           |       |           |       |
| 23   |           |       |           |       |
| 24   |           |       |           |       |
| 25   |           |       |           |       |
| 26   |           |       |           |       |

**PROGRAMMING STATEMENTS**

See previous page for complete list of operation codes and parameters which can be used in programming Sequencer statements.

Maximum of 200 statement lines are available in Sequencer.