



EN6021 SCHEDULE WORKSHEET

SCHEDULE # _____

SQUEEZE DELAY TIME _____ Cycles

SQUEEZE TIME _____ Cycles

VALVE MODE No Valve V1 V2 V1+V2 V3 V1+V3 V2+V3 V1+V2+V3

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 _____ %

STACK-UP MONITOR Enable STACK-UP LIMIT HIGH _____ mil

STACK-UP LIMIT LOW _____ mil

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

AIR OVER OIL BLOCKING DELAY _____ Cycles

OFF TIME _____ Cycles

CURRENT OFFSET _____ % Change all schedules

IMPULSES _____

CYCLE MODE Non-Repeat Repeat Chained Successive Wait-Here

Highlighted Parameters are programmable only if enabled.

File Edit Setup About



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

Schedule

VALVE MODE

- No Valve
- V1
- V2
- V1+V2
- V3
- V1+V3
- V2+V3
- V1+V2+V3

PSENSE

- Off
- Rising
- Falling

CYCLE MODE

- Non-Repeat
- Repeat
- Chained
- Successive
- Wait-Here

Encircled parameters are programmable only if enabled.

Squeeze Delay [] Cycles

Squeeze [] Cycles

Valve []

PV [] PSI

Psense [Off]

[] PSI

Force monitor

Enable

High [] PSI Pre limit

Low [] PSI [] %

Stack-up monitor

Enable

High [] mil

Low [] mil

Weld1 [] Cycles

Regulation Mode

Phase shift heat [] %

OR

Constant Current [] kA

Pulse width monitor

Enable

High [] %

Low [] %

Current monitor

Enable

High [] kA Pre limit

Low [] kA [] %

Cool1 [] Cycles

Slope [] Cycles

Weld2 [] Cycles

Regulation Mode

Phase shift heat [] %

OR

Constant Current [] kA

Pulse width monitor

Enable

High [] %

Low [] %

Current monitor

Enable

High [] kA Pre limit

Low [] kA [] %

Cool2 [] Cycles

Hold [] Cycles

Off [] Cycles

Impulses []

Air over Oil

Blocking delay [] Cycles

Current offset

Offset value [] %

Change all schedules

Cycle Mode []

SCHEDULE # _____**EVENT 1** OUTPUT CHANNEL
STATE
INTERVAL Disable Output # _____ Off On Squeeze Delay (Advance) Squeeze (Intensify) Weld1 2-Stage Cool1 Slope Weld2 Cool2 Hold

DELAY

_____ Cycles

EVENT 2 OUTPUT CHANNEL
STATE
INTERVAL Disable Output # _____ Off On Squeeze Delay (Advance) Squeeze (Intensify) Weld1 2-Stage Cool1 Slope Weld2 Cool2 Hold

DELAY

_____ Cycles

EVENT 3 OUTPUT CHANNEL
STATE
INTERVAL Disable Output # _____ Off On Squeeze Delay (Advance) Squeeze (Intensify) Weld1 2-Stage Cool1 Slope Weld2 Cool2 Hold

DELAY

_____ Cycles

EVENT 4 OUTPUT CHANNEL
STATE
INTERVAL Disable Output # _____ Off On Squeeze Delay (Advance) Squeeze (Intensify) Weld1 2-Stage Cool1 Slope Weld2 Cool2 Hold

DELAY

_____ Cycles



File Edit Setup About



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

Schedule

Event

Output Channel

State

Interval

Delay(cycles)

1

2

3

4

OUTPUT CHANNEL

Disable
Output 1-32

STATE

Off
On

INTERVAL

Squeeze Delay (Advance)
Squeeze (Intensify)
Weld1
2-Stage
Cool1
Slope
Weld2
Cool2
Hold

DELAY

0-99

Status





EN6021

COUNTER WORKSHEET

COUNTER ENABLE

Enable

MAX PART COUNT _____

WELDS PER PART _____



EN6021

CALIBRATION WORKSHEET

TOROID SENSITIVITY _____ mV/kA

MAX SECONDARY CURRENT _____ kA

URNS RATIO _____ : 1

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

STACK-UP CALIBRATION:

PT1: _____ mA → 0 mil

PT2: _____ mA → _____ mil

Highlighted Parameters are programmable only if enabled.

ENLINK 6021 COUNTER WORKSHEET

File Edit Setup About

New Open Save Upload Download Error Counter Stepper Weld log Error log Sequencer Print Machine

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

Part Counter (PCTR)

Part count done

Max part count

Weld Counter (WCTR)

Weld count done

Welds per part

Counter enable

ENLINK 6021 CALIBRATION WORKSHEET

File Edit Setup About

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

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

Toroid Sensitivity mV/kA

Max secondary current kA

Turns ratio :1

Stack-up calibration

PT1: mA --> mil

PT2: mA --> mil

Zero= 4.7 mA

Max= 1082 mil

Last weld: 8 mA

IPC force calibration

PT1: mA --> LB

PT2: mA --> LB

Zero= 4 mA

Max= 7850 LB

Last weld: 4 mA

IPS force calibration

PT1: mA --> LB

PT2: mA --> LB

Zero= 4 mA

Max= 7850 LB

Last weld: 4 mA

Encircled parameters are programmable only if enabled.



EN6021 CONFIGURE WORKSHEET

WELD MODE Spot Seam1 Seam2
 RETRACTION MODE Off Momentary Maintained
 ON ERROR OUTPUT 17 Continue Stop on fault Head lock on fault
 SCHEDULE SELECT Internal External

 CURRENT FEEDBACK Primary Secondary Secondary with Primary Coil
 SEQUENCER Off On
 BEAT MODE Non-Beat Beat during SQZ Beat during SQZ + WELD Enable Wait-Here
 AIR-OVER-OIL MODE Off Without Retraction With Retraction
 RETRACT OPEN _____ Cycles
 RETRACT CLOSE _____ Cycles
 PRESSURE CONTROL MODE None P Sensing P Control P Sensing + Control
 FORCE UNITS PSI Lb mA Calibrated Lb
 CYLINDER INSIDE DIAMETER _____ Inches
 BACKGROUND PRESSURE _____ PSI / Lb
 WATER SAVER DELAY _____ Seconds
 USE SCHEDULE # _____
 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 Off On
 HALF CYCLE MODE Off + - AC
 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.



Weld mode

Retraction mode

On error output PO17

Schedule select

Use schedule

Max. current offset %

AVC
AVC mode

Nominal voltage V

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

Current feedback

Sequencer

Beat mode

AC line voltage monitor

Enable

Max voltage V

Min voltage V

Log recording mode

Change recording mode

Stop when log is full

Rewrite when log is full

Air-over-oil
Work mode

Retract open Cycles

Retract close Cycles

Analog units

Input1

Input2

Output1

Output2

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

Control ID number

Blanking Cycles

Power factor %

Pendant display return Minutes

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

Bold function indicates default value

ENTRON EN6021 P2 & P10 OUTPUTS WORKSHEET

OUTPUT	FUNCTION	Event	PLC	USE
PO1 P2-1	EOS Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO2 P2-2	Not Ready Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO3 P2-3	Tip Dress Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO4 P2-4	Retraction Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO5 P2-5	Count End Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO6 P2-6	Error Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO7 P2-7	Step End Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO8 P2-8	Interlock Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO9 P2-11	Water Saver Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO10 P2-12	Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO11 P2-13	Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO12 P2-14	Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO13 P2-15	Not used Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO14 P2-16	Not used Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO15 P2-17	Not used Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO16 P2-18	Not used Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO17 P10-1	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO18 P10-2	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO19 P10-3	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO20 P10-4	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO21 P10-5	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO22 P10-6	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO23 P10-7	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO24 P10-8	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO25 P10-10	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO26 P10-11	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO27 P10-12	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO28 P10-13	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO29 P10-14	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO30 P10-15	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO31 P10-16	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	
PO32 P10-17	Error Map Sequencer	<input type="checkbox"/>	<input type="checkbox"/>	

Bold function indicates default value

P1 WELD CONTROL		
IN/OUT	FUNCTION	USE
SV1 P1-2	Solenoid Valve 1	
SV2 P1-3	Solenoid Valve 2	
SV3 P1-4	Solenoid Valve 3	
FS1 P1-7	Foot Switch 1	
FS2 P1-8	Foot Switch 2	
FS3 P1-10	Foot Switch 3	
FS4 P1-11	Foot Switch 4	
ES1 P1-13	Emergency Stop*	
TC1 P1-14	Temperature Limit Switch Contactor*	
NW1 P1-16	External Weld/ No Weld Input*	
PS1 P1-17	Pressure Switch*	
P7 ANALOG I/O		
IN/OUT	FUNCTION	USE
IN1 P7-9	PV <input type="checkbox"/> Sequencer <input type="checkbox"/>	
IN2 P7-10	Stack-up <input type="checkbox"/> Sequencer <input type="checkbox"/>	
OUT1 P7-11	PV <input type="checkbox"/> Sequencer <input type="checkbox"/>	
OUT2 P7-12	Sequencer <input type="checkbox"/> Not used <input type="checkbox"/>	
P14 AC OUT		
OUTPUT	FUNCTION	USE
PO33 P14-1	Valve 1 AC Output	
PO34 P14-3	Valve 2 AC Output	
PO35 P14-5	Valve 3 AC Output	
PO36 P14-7	EOS <input type="checkbox"/> Not Ready <input type="checkbox"/> Tip Dress <input type="checkbox"/> Retraction <input type="checkbox"/> Count End <input type="checkbox"/> Error <input type="checkbox"/> Step End <input type="checkbox"/> Interlock <input type="checkbox"/> Water Saver <input type="checkbox"/>	

* Jumper when not used.

Bold function indicates default value



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

Programmable Input (PI)

Function		Source		Expansion	
	Source	Function	Source		Source
1					
2			17		
3			18		
4			19		
5			20		
6			21		
7			22		
8			23		
9			24		
10			25		
11			26		
12			27		
13			28		
14			29		
15			30		
16			31		
Analog 1			32		
Analog 2					

Programmable Output (PO) function

Expansion		Expansion	
	Source	Function	Source
1			33
2			34
3			35
4			36
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
Analog 1			
Analog 2			

Status

ERROR	OUTPUT 17-32*	DESCRIPTION	ERROR	OUTPUT 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		High Stack-up
8		I/O Map error	56		Low Stack-up
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			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			88		Reserved
41			89		
42			90		
43			91		Retraction input closed
44		Reserved	92		Pressure Sensor not ready
45		AC120V Safety Relay error	93		Retract not ready
46		Reserved	94		Second Stage not ready
47		No AC120V for Expansion Board	95		Pressure Sense not ready
48		Reserved	96		Interlock not ready

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

Error	Output port	Error	Output port
1: Configuration error	No output	2: Calibration error	No output
3: Schedule error	No output	4: Sequencer error	No output
5: Event error	No output	6: Counter error	No output
7: Stepper error	No output	8: I/O map error	No output
9: E-stop error	No output	10: TC1 (Contactor) error	No output
11: P1-NW error	No output	12: PS error	No output
13: SCR short	No output	14: 2 stage error	No output
15: P sense error	No output	16: Interlock error	No output
17: High force	No output	18: Low force	No output
19: High current 1	No output	20: Low current 1	No output
21: High current 2	No output	22: Low current 2	No output
23: High line voltage	No output	24: Low line voltage	No output
25: PCTR counter end	No output	26: Stepper end	No output
27: High pulse width1	No output	28: Low pulse width1	No output
29: High pulse width2	No output	30: Low pulse width2	No output
31: Tip dress Pre-warn	No output	32: AVC error	No output
33: Power on with STARTs closed	No output	34:	No output
35: PNW(Pendant No-weld)	No output	36: TT1 (Transformer) error	No output
37: Safety relay error	No output	38: No 24V for CPU I/O ports	No output
39: No 24V for expansion board	No output	40:	No output
41:	No output	42: Tip dress input on	No output
43:	No output	44: Reserved	No output
45: AC120V safety relay error	No output	46: Reserved	No output
47: No AC120V for expansion	No output	48: Reserved	No output
49: High force pre-warn	No output	50: Low force pre-warn	No output
51: High current 1 pre-warn	No output	52: Low current 1 pre-warn	No output
53: High current 2 pre-warn	No output	54: Low current 2 pre-warn	No output
55: High stack-up	No output	56: Low stack-up	No output
57: Reserved	No output	58: Reserved	No output
59: Reserved	No output	60: Reserved	No output
61: Reserved	No output	62: Reserved	No output
63: Reserved	No output	64: Reserved	No output
65: Battery low	No output	66: Use schedule error	No output
67: Reserved	No output	68: Reserved	No output
69: Reserved	No output	70: Reserved	No output
71: Reserved	No output	72: Reserved	No output
73: Weld log full	No output	74: Weld log warn	No output
75: Error log full	No output	76: Error log warn	No output
77: Flash RAM error	No output	78: Reserved	No output
79: Reserved	No output	80: Reserved	No output
81: Reserved	No output	82: Reserved	No output
83: Reserved	No output	84: Reserved	No output
85: Reserved	No output	86: Reserved	No output
87: Reserved	No output	88: Reserved	No output
89:	No output	90:	No output
91: Retraction input closed	No output	92: PS not ready	No output
93: Retract not ready	No output	94: 2-stage not ready	No output
95: P sense not ready	No output	96: Interlock not ready	No output

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, y=4.0-20.0mA or 0.0-10.0V	Set Analog Output 1 or 2 to specific current/voltage (set in Configure Menu)
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 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 When xx=All, if all Error are Off, jump to Step yyy
Seam-weld with Sch xxx	x=0-99	Execute seam weld sequence using Schedule xxx (0–99). SEQUENCER will continue with next statement when seam weld sequence has been started. Sequence will be ended when SEQUENCER implements Seam-weld end statement or when Start1 initiation switch is released.
Seam-weld end	N/A	Stop seam weld sequence.

