$\frac{1}{16}$-DIN PROFILER CONTROLLER
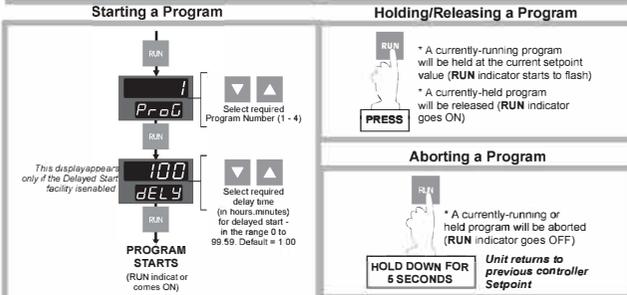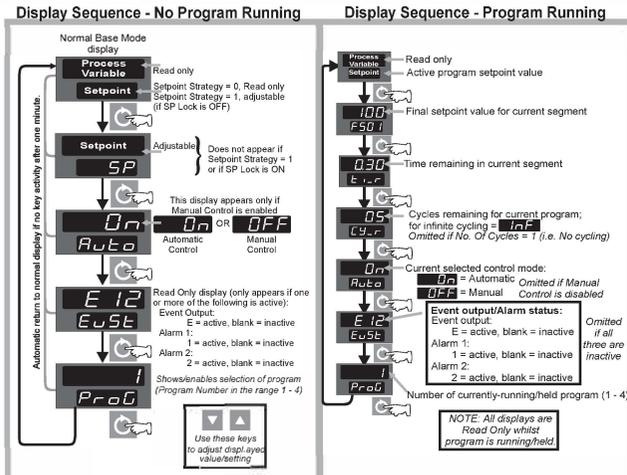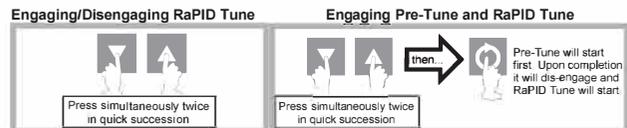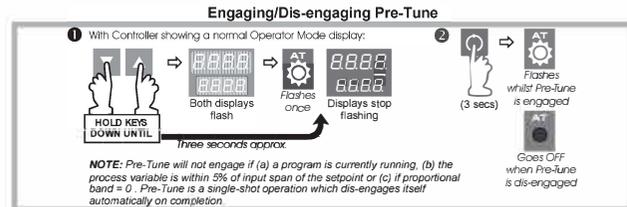# CONCISE PRODUCT MANUAL (59228-4)

BASE MODE

NOTE: Set all Base Mode, Configuration Mode and Set Up Mode parameters as desired before starting normal operations.

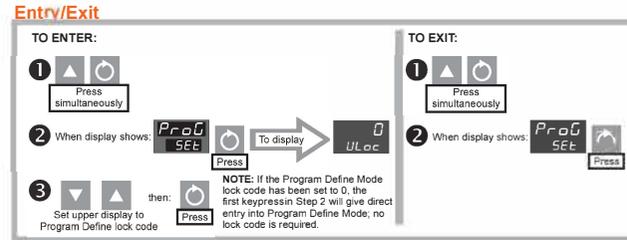### Display Sequence - No Program Running

Normal Base Mode display

Process Variable — Read only
Setpoint — Setpoint Strategy = 0, Read only Setpoint Strategy = 1, adjustable (if SP Lock is OFF)

Setpoint — Adjustable
SP — Does not appear if Setpoint Strategy = 1 or if SP Lock is ON

On / Auto OR OFF — This display appears only if Manual Control is enabled
Automatic Control / Manual Control

E 12 / EuSt — Read Only display (only appears if one or more of the following is active):
Event Output: E = active, blank = inactive
Alarm 1: 1 = active, blank = inactive
Alarm 2: 2 = active, blank = inactive

1 / ProG — Shows/enables selection of program (Program Number in the range 1 - 4)

Use these keys to adjust displayed value/setting

Automatic return to normal display if no key activity after one minute.

Display Sequence - Program Running

Process Variable Setpoint — Read only / Active program setpoint value

100 / FSoi — Final setpoint value for current segment

030 / t_r — Time remaining in current segment

05 / CY_r — Cycles remaining for current program; for infinite cycling = InF
Omitted if No. Of Cycles = 1 (i.e. No cycling)

On / Auto — Current selected control mode:
On = Automatic (Omitted if Manual Control is disabled)
OFF = Manual

E 12 / EuSt — Event output/Alarm status:
Event output: E = active, blank = inactive
Alarm 1: 1 = active, blank = inactive
Alarm 2: 2 = active, blank = inactive
Omitted if all three are inactive

1 / ProG — Number of currently-running/held program (1 - 4)

NOTE: All displays are Read Only whilst program is running/held.

Starting a Program

1 / ProG — Select required Program Number (1 - 4)

100 / dELY — This display appears only if the Delayed Start facility is enabled / Select required delay time (in hours.minutes) for delayed start - in the range 0 to 99.59. Default = 1:00

PROGRAM STARTS (RUN indicator comes ON)

Holding/Releasing a Program

RUN / PRESS
* A currently-running program will be held at the current setpoint value (RUN indicator starts to flash)
* A currently-held program will be released (RUN indicator goes ON)

Aborting a Program

HOLD DOWN FOR 5 SECONDS
* A currently-running or held program will be aborted (RUN indicator goes OFF)
Unit returns to previous controller Setpoint

Tuning

Engaging/Dis-engaging Pre-Tune

With Controller showing a normal Operator Mode display:
Both displays flash / Flashes once / Displays stop flashing
(3 secs) / Flashes whilst Pre-Tune is engaged
Goes OFF when Pre-Tune is dis-engaged
HOLD KEYS DOWN UNTIL — Three seconds approx.

NOTE: Pre-Tune will not engage if (a) a program is currently running, (b) the process variable is within 5% of input span of the setpoint or (c) if proportional band = 0. Pre-Tune is a single-shot operation which dis-engages itself automatically on completion.

Engaging/Disengaging RaPID Tune
Press simultaneously twice in quick succession

Engaging Pre-Tune and RaPID Tune
Press simultaneously twice in quick succession / then
Pre-Tune will start first. Upon completion it will dis-engage and RaPID Tune will start.

⚠ WARNING: This product can expose you to chemicals including arsenic, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

---

PROGRAM DEFINE MODE

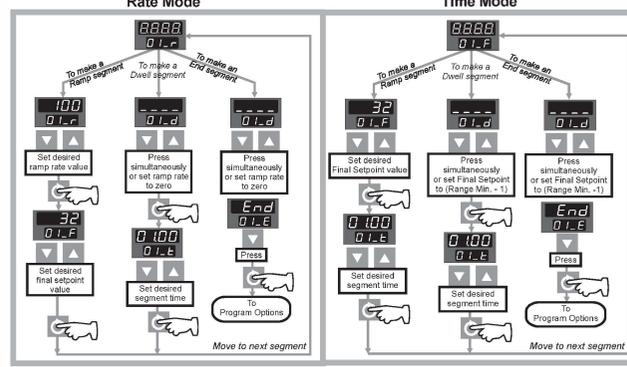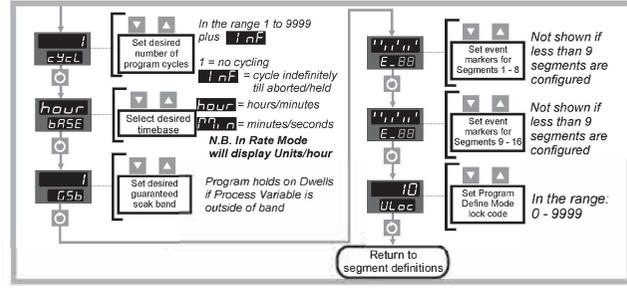NOTE: Set all Configuration Mode and Set Up Mode parameters as desired before defining programs.

Entry/Exit

TO ENTER:
1. Press simultaneously
2. When display shows: ProG SEt / Press / To display: 0 ULoc
3. Set upper display to Program Define lock code / then / Press

NOTE: If the Program Define Mode lock code has been set to 0, the first keypress in Step 2 will give direct entry into Program Define Mode; no lock code is required.

TO EXIT:
1. Press simultaneously
2. When display shows: ProG SEt / Press

Basic Steps in Creating a Program
1. Define the program segments.
2. Set the Program Options as required.

Defining Segments

Rate Mode
8888 / O1.r
To make a Ramp segment / To make a Dwell segment / To make an End segment
100 / O1.r — Set desired ramp rate value
_ _ _ / O1.d — Press simultaneously or set ramp rate to zero
_ _ _ / O1.d — Press simultaneously or set ramp rate to zero
32 / O1.F — Set desired final setpoint value
End / O1.E — Press / To Program Options

Move to next segment

Time Mode
8888 / O1.F
To make a Ramp segment / To make a Dwell segment / To make an End segment
32 / O1.F — Set desired Final Setpoint value
O1.d — Press simultaneously or set Final Setpoint to (Range Min. - 1)
O1.d — Press simultaneously or set Final Setpoint to (Range Min. -1)
0100 / O1.t — Set desired segment time
0100 / O1.t — Set desired segment time
End / O1.E — Press / To Program Options

Move to next segment

Program Options

1 / cYcL — Set desired number of program cycles
In the range 1 to 9999 plus InF
1 = no cycling
InF = cycle indefinitely till aborted/held

hour / bASE — Select desired timebase
hour = hours/minutes
mn.n = minutes/seconds
N.B. In Rate Mode will display Units/hour

1 / GSb — Set desired guaranteed soak band
Program holds on Dwells if Process Variable is outside of band

10 / ULoc — Set Program Define Mode lock code
In the range: 0 - 9999

E.01 — Set event markers for Segments 1 - 8
Not shown if less than 9 segments are configured

E.00 — Set event markers for Segments 9 - 16
Not shown if less than 9 segments are configured

Return to segment definitions
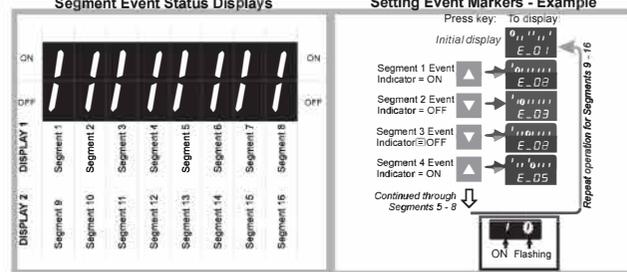
Segment Event Status
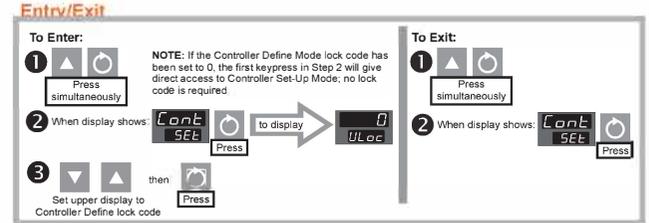Every segment has an associated event indicator which may be set ON or OFF as required.

Segment Event Status Displays
DISPLAY 1: ON / OFF — Segment 1, Segment 2, Segment 3, Segment 4, Segment 5, Segment 6, Segment 7, Segment 8
DISPLAY 2: Segment 9, Segment 10, Segment 11, Segment 12, Segment 13, Segment 14, Segment 15, Segment 16

Setting Event Markers - Example
Press key: To display:
Initial display: E.01
Segment 1 Event Indicator = ON: E.02
Segment 2 Event Indicator = OFF: E.03
Segment 3 Event Indicator = OFF: E.02
Segment 4 Event Indicator = ON: E.05
Continued through Segments 5 - 8
Repeat operation for Segments 9 - 16
ON Flashing

Default Values and Adjustment Ranges

Parameter	Range Minimum	Range Maximum	Default
Ramp Rate	0 (Dwell Segment) −1 (End Segment)	9999 then INF	100
Final (End of Ramp) Setpoint	Range Minimum	Range Maximum	Range Minimum
Segment Time	00:00	99:59	01:00
Number of Cycles	1	9999 then INF	1
Guaranteed Soak Band	1	Span plus OFF	OFF

CONTROLLER SET-UP MODE

NOTE: Set all Configuration Mode parameters as desired before adjusting Set Up Mode parameters.

Entry/Exit

To Enter:
1. Press simultaneously
2. When display shows: Cont SEt / Press / to display: 0 ULoc
3. Set upper display to Controller Define lock code / then / Press

To Exit:
1. Press simultaneously
2. When display shows: Cont SEt / Press

NOTE: If the Controller Define Mode lock code has been set to 0, the first keypress in Step 2 will give direct access to Controller Set-Up Mode; no lock code is required.

NOTE: If, on entry into Controller Set-Up Mode, the upper display shows all decimal points ON, one or more Configuration Mode parameters have been changed, causing all Controller Set-Up Mode parameters to be defaulted. To clear this display, alter the value/setting of any Controller Set-Up Mode parameter.

Configurator Mode Parameter List

Parameter	Legend	Function	Adjustment Range
Input Filter Time Constant	FiLt	Removes extraneous pulses from process (PV) input.	OFF, 0.5 secs to 100.0 secs in 0.5-second increments
Process Variable Offset	OFFS	Offset PV + actual PV = PV value used	±input span
Output Power 1	Out1	Current Output 1 power level	0 to 100% (read only)
Output Power 2 [5]	Out2	Current Output 2 power level	0 to 100% (read only)
Proportional Band 1 (PB1)	Pb1	Proportion of input span over which Output 1 power level is proportional to the PV value	0.0 to 999.9% of input span
Proportional Band 2 (PB2) [1,5]	Pb2	Proportion of input span over which Output 1 power level is proportional to the PV value	0.0 to 999.9% of input span
Reset [1]	rSEt	Integral Time Constant	1sec to 99min 59sec and OFF
Rate [1]	rAtE	Derivative Time Constant	00sec to 99min 59sec
Overlap/ Deadband [1,5]	OL	Portion of PB1 + PB2 in which both outputs are active (overlap - positive value) or inactive (deadband - negative value)	−20% to +20% of PB1 + PB2
Manual Reset (Bias) [1]	bi.AS	Bias (percentage of output power) applied to output power	0% to 100% (Output 1 only); −100% to +100% (Output 1 & Output 2)
ON/OFF Differential [2]	di.F1	Output 1 only	0.1% to 10.0% of input span
	di.F2	Output 2 only	
	di.FF	Outputs 1 & 2	
Setpoint Lock	SPL	Enables/disables setpoint (SP) adjustment in Base Mode	OFF - SP adjustable ON - SP not adjustable
Recorder Output Scale Maximum (if option is fitted)	roPH	Process variable or setpoint value (as appropriate) for which the recorder output is a maximum	−1999 to 9999 (decimal point position as for input range)
Recorder Output Scale Minimum (if option is fitted)	roPL	Process variable or setpoint value (as appropriate) for which the recorder output is a minimum	−1999 to 9999 (decimal point position as for input range)
Output 1 Power Limit [1]	OPh1	Limits Output 1 power level to protect the process	0% to 100% of full power
Output 1 Cycle Time (not with linear output)	Ct1	Limits the frequency of operation of the output relay to optimise relay lifetime	0.5, 1, 2, 4, 8, 16, 32, 64, 128, 256 or 512 seconds
Output 2 Cycle Time (not with linear output)	Ct2	Limits the frequency of operation of the output relay to optimise relay lifetime	0.5, 1, 2, 4, 8, 16, 32, 64, 128, 256 or 512 seconds
Process High Alarm 1 value [3]	h_A1	If Alarm 1 is a Process High Alarm, the value of process variable at or above which the alarm will be active	Input Range Minimum to Input Range Maximum
Process Low Alarm 1 value [3]	L_A1	If Alarm 1 is a Process Low Alarm, the value of process variable at or below which the alarm will be active	Input Range Minimum to Input Range Maximum
Band Alarm 1 value [3]	b_A1	If Alarm 1 is a Band Alarm, the band of process variable value, centred on the setpoint, outside which the alarm will be active	0 to input span from (program) setpoint
Deviation Alarm 1 value [3]	d_A1	If Alarm 1 is a Deviation Alarm, gives a value above (positive) or below (negative) the setpoint. If the process variable deviates from the setpoint by a margin greater than this value, the alarm becomes active.	±(input span) from (program) setpoint
Alarm 1 Hysteresis	AHY1	Defines a hysteresis band on the "safe" side of the Alarm 1 value	1 to 250 units
Process High Alarm 2 value [3]	h_A2	If Alarm 2 is a Process High Alarm, the value of process variable at or above which the alarm will be active	Input Range Minimum to Input Range Maximum
Process Low Alarm 2 value [3]	b_A2	If Alarm 2 is a Process Low Alarm, the value of process variable at or below which the alarm will be active	Input Range Minimum to Input Range Maximum
Band Alarm 2 value [3,7]	L_A2	If Alarm 2 is a Band Alarm, the band of process variable value, centred on the setpoint, outside which the alarm will be active	0 to input span from (program) setpoint

Parameter	Legend	Function	Adjustment Range
Deviation Alarm 2 value [3,7]	d.A2	If Alarm 2 is a Deviation Alarm, gives a value above (positive) or below (negative) the setpoint. If the process variable deviates from the setpoint by a margin greater than this value, the alarm becomes active.	±(input span) from (program) setpoint
Alarm 2 Hysteresis	AHY2	Defines a hysteresis band on the "safe" side of the Alarm 2 value	1 to 250 units
Scale Range Decimal Point Position	rPnt	Defines decimal point position	0 (xxxx), 1 (xxx.x), 2 (xx.xx) or 3 (x.xxx)
Scale Range Maximum [4]	rhi	Defines the scaled input value when the process variable input is at its maximum value	–1999 to 9999
Scale Range Minimum [4]	rLo	Defines the scaled input value when the process variable input is at its minimum value	–1999 to 9999
Manual Control Enable/Disable	PoEn	Enables/disables selection of manual control	0 (disabled) or 1 (enabled)
Setpoint Strategy	SPSt	Determines whether or not the setpoint is adjustable in the normal Base Mode display	0 = not adjustable 1 = adjustable
Communications Write Enable/Disable [6]	CoEn	Enables/disables changing of parameter values via the communications link	0 (disabled) or 1 (enabled)
Controller Set-Up Mode Lock Code	Loc	Defines the four-digit code required to enter Controller set-Up Mode	0 to 9999

NOTES
1. Not operative if Proportional Band = 0.
2. Switching differential for ON/OFF control output (centred about Setpoint).
3. Optional; only one legend will appear for each alarm.
4. Only applicable if a DC linear input is fitted.
5. Only applicable if Output 2 is fitted as a secondary control (COOL) output.
6. Applicable only if the Communications Option is fitted.
7. When a program is running, respective to program setpoint.

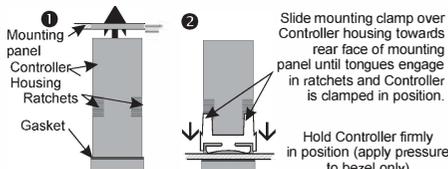## SERIAL (MODBUS) COMMUNICATIONS
Refer to the full manual for details of this option, available from your supplier.

INSTALLATION
CAUTION: Installation and configuration should be performed only by personnel who are technically-competent and authorised to do so. Local Regulations regarding electrical installation & safety must be observed.
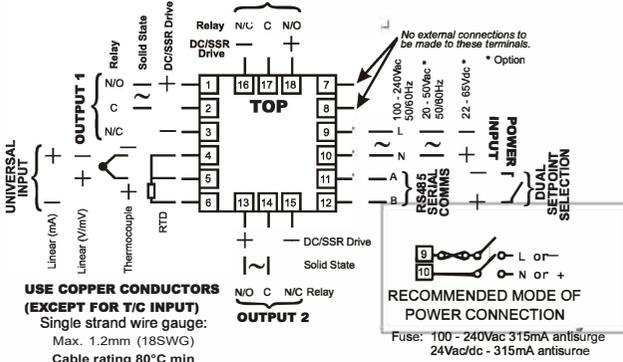
Panel-Mounting
The mounting panel must be rigid and may be up to 6.0mm (0.25 inches) thick. The cut-outs required for the Controllers are shown on the right. Controllers may be mounted side-by-side in a multiple installation for which the cut-out width (for n Controllers) is (48n-4)mm or (1.89n - 0.16) inches.

45mm +0.5 -0.0
45mm +0.5 -0.0

Slide mounting clamp over Controller housing towards rear face of mounting panel until tongues engage in ratchets and Controller is clamped in position.

Mounting panel
Controller Housing
Ratchets
Gasket

Hold Controller firmly in position (apply pressure to bezel only)

Caution: Do not remove the panel gasket. It is a seal against dust and moisture

WARNING: This product can expose you to chemicals including arsenic, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov

Rear Terminals

USE COPPER CONDUCTORS (EXCEPT FOR T/C INPUT)
Single strand wire gauge:
Max. 1.2mm (18SWG)
Cable rating 80°C min

RECOMMENDED MODE OF POWER CONNECTION
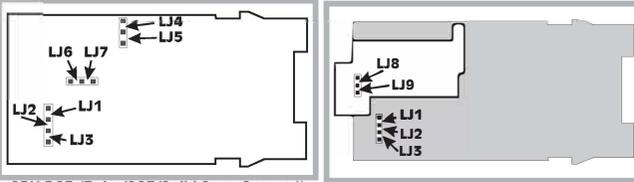Fuse: 100 - 240Vac 315mA antisurge
24Vac/dc - 315mA antisurge

OUTPUT 1: Always primary control (HEAT) output - Relay, SSR Drive, Solid State or DC.
OUTPUT 2: Secondary control (COOL) or Alarm Output - Relay, SSR Drive or Solid State. Event output or program active output - Relay, SSR Drive or Solid State.
OUTPUT 3: Alarm Output - Relay or SSR Drive. Recorder Output - DC only for setpoint or process variable.
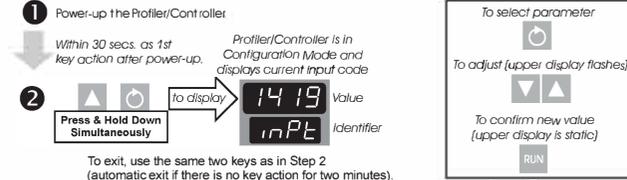
Input/Output Type Selection
To access link jumpers, REMOVE ALL POWER, grip the side edges of the front panel and pull the instrument out of its housing, *noting its orientation*. To replace, align the CPU PCB and PSU PCB (see right) with their guides in the housing, then slowly push the instrument into position.

Output 3 Option PCB
RS485 Serial Comms. Option PCB
VIEW FROM REAR OF UNHOUSED INSTRUMENT
DC Output 1 PCB (Option)
Output 2 Option PCB

LJ4 LJ5
LJ6 LJ7
LJ2 LJ1
LJ3
LJ8 LJ9
LJ1 LJ2 LJ3

CPU PCB (Relay/SSR/Solid State Output 1)

Input Type and Output 1 Type		
Input Type	Link Jumpers (CPU PCB)	
RTD	None (parked)	
DC (mV)	None (parked)	
T'couple	LJ3	
DC (mA)	LJ2	
DC (V)	LJ1	
Output 1 Type:		
Relay	LJ5 & LJ6	
Solid State	LJ5 & LJ6	
SSR Drive	LJ4 & LJ7	
DC (0 - 10V)	LJ8	
DC (0 - 20mA)	LJ9	
DC (0 - 5V)	LJ8	
DC (4 - 20mA)	LJ9	

CPU PCB (DC Output 1)

Output 2/Output 3 Type	
Output Type	Fitted
DC (0 - 10V)	LJ8
DC (0 - 20mA)	LJ9
DC (0 - 5V)	LJ8
DC (4 - 20mA)	LJ9

LJ9 LJ8
DC Output 2/3 Option PCB

CONFIGURATION MODE

Entry/Exit

1. Power-up the Profiler/Controller

Within 30 secs. as 1st key action after power-up,

2. Press & Hold Down Simultaneously

Profiler/Controller is in Configuration Mode and displays current input code

1419
inPt

to display Value / Identifier

To exit, use the same two keys as in Step 2 (automatic exit if there is no key action for two minutes).

To select parameter
To adjust (upper display flashes)
To confirm new value (upper display is static)

RUN

Configuration Mode Parameter Sequence

Parameter	Legend	Description
Input Range	inPt	A four-digit code (see table on right)
Outpt 1 Action	CtrL	
	rEu	Reverse-acting
	d ir	Direct-acting
Alarm 1 Type	ALA1	
	P_h i	Process High Alarm
	P_Lo	Process Low Alarm
	dE	Deviation Alarm
	bAnd	Band Alarm
	nonE	No alarm
Alarm 2 Type	ALA2	As for Alarm 1 Type.
Alarm Inhibit	inh i	
	nonE	No alarms inhibited
	ALA1	Alarm 1 inhibited
	ALA2	Alarm 2 inhibited
	both	Alarm 1 & Alarm 2 inhibited
Program Ramp Mode	tYPE	
	rA	Rate Mode
	t i	Time Mode
Output 2 Usage (if fitted)	USE2	
	c o o L	Output 2 COOL output
	Ad_d	Alarm 2 output, direct
	A2_r	Alarm 2 output, reverse
	Or_d	Alarm 1 OR Alarm 2, direct
	Or_r	Alarm 1 OR Alarm 2, reverse
	Ad_d	Alarm 1 AND Alarm 2, direct
	Ad_r	Alarm 1 AND Alarm 2, reverse
	Pr_d	Profile Active output, direct
	Pr_r	Profile Active output, reverse
	Et	Event Output, direct
Output 3 Usage (if fitted)	USE3	
	A1_d	Alarm 1 output, direct
	A1_r	Alarm 1 output, reverse
	Or_d	Alarm 1 OR Alarm 2, direct
	Or_r	Alarm 1 OR Alarm 2, reverse
	Ad_d	Alarm 1 AND Alarm 2, direct
	Ad_r	Alarm 1 AND Alarm 2, reverse
	rcES	Recorder Output - SP H
	rcEP	Recorder Output - PV H
	Pr_d	Profile Active output, direct
	Pr_r	Profile Active output, reverse
	Et	Event Output, direct
LEDs Usage	LEdS	
	d ir	Ramp direction: ▲ = positive ▼ = negative ◆ = dwell
	outS	Output State: ◆ = Output 1 ON ◆ = Output 2 ON
Guaranteed Soak Enable/Disable	SoAP	EnAb Enabled (Manual holds at end d iSA Disabled of dwell until RUN key ___ Manual is pressed)
Delayed Start Enable/Disable	dLAY	EnAb Enabled d iSA Disabled
Power Loss Recovery	rec	cold Cold Start (return to Controller SP) hot Warm Start (resumes program)

Input Ranges

Type	Range	Code
T/C (R)	0 - 1650°C	1127
T/C (R)	32 - 3002°F	1128
T/C (S)	0 - 1649°C	1227
T/C (S)	32 - 3000°F	1228
T/C (J)	0.0 - 205.4°C	1415
T/C (J)	32.0 - 401.7°F	1416
T/C (J)	0 - 450°C	1417
T/C (J)	32 - 842°F	1418
T/C (J)	0 - 761°C	1419
T/C (J)	32 - 1401°F	1420
T/C (T)	–200 - 262°C	1525
T/C (T)	–328 - 503°F	1526
T/C (T)	0.0 - 260.6°C	1541
T/C (T)	32.0 - 501.0°F	1542
T/C (K)	–200 - 760°C	6726
T/C (K)	–328 - 1399°F	6727
T/C (K)	–200 - 1373°C	6709
T/C (K)	–328 - 2503°F	6710
T/C (L)	0.0 - 205.7°C	1815
T/C (L)	32.0 - 402.2°F	1816
T/C (L)	0 - 450°C	1817
T/C (L)	32 - 841°F	1818
T/C (L)	0 - 762°C	1819
T/C (L)	32 - 1403°F	1820
T/C (B)	211 - 3315°F	1934
T/C (B)	100 - 1824°C	1938
T/C (N)	0 - 1399°C	5371
T/C (N)	32 - 2550°F	5324
T/C (C/W5)	0 - 2316°C	5111
T/C (C/W5)	32 - 4201°F	5112
RTD	0 - 800°C	7220
RTD	32 - 1471°F	7221
RTD	32 - 571°F	2229
RTD	–100.9 - 100.0°C	2230
RTD	–149.7 - 211.9°F	2231
RTD	0 - 300°C	2251
RTD	0.0 - 100.9°C	2295
RTD	32.0 - 213.6°F	2296
RTD	–200 - 206°C	2297
RTD	–328 - 402°F	2298
RTD	–100.9 - 537.3°C	7222
RTD	–149.7 - 999.1°F	7223
DC	0 - 20mA	3413
DC	4 - 20mA	3414
DC	0 - 50mV	4443
DC	10 - 50mV	4499
DC	0 - 5V	4445
DC	1 - 5V	4434
DC	0 - 10V	4446
DC	2 - 10V	4450

Parameter	Legend	Description
Start On (initial SP value at program start)	SEOn	Proc Setpoint at current PV value SEtP Setpoint at Controller SP value
Comms Protocol (If fitted)	brud	Mbo MODBUS with odd parity MbE MODBUS with even parity Mbn MODBUS with no parity
Comms. Baud Rate	Prot	1200, 2400, 4800 or 9600 Baud
Comms. Address	Addr	In the range 1 - 255
CJC Enable/Disable	CJC	EnAb Enabled d iSA Disabled
Controller Set-Up Mode Lock Code	Loct	Read Only display of lock code
Program Define Mode Lock Code	LocP	Read Only display of lock Code

When In Configuration Mode:
PRESS SIMULTANEOUSLY — to display Hardware Definition Code. Also to return to Configuration Mode.
2100 dEFn

With Hardware Definition Code displayed:
PRESS — to display one of:
nonE OPtn — No option
r485 OPtn
run OPtn

Hardware Definition Code

2100 dEFn

Output 1 Type
1 = Relay
2 = SSR Drive
3 = DC (0 - 10V)
4 = DC (0 - 20mA)
5 = DC (0 - 5v)
7 = DC (4 - 20mA)
8 = Solid State

Output 2 Type
0 = Not fitted
1 = Relay
2 = SSR Drive
3 = DC (0 - 10V)
4 = DC (0 - 20mA)
5 = DC (0 - 5v)
7 = DC (4 - 20mA)
8 = Solid State

Input Type
1 = RTD/Linear DC (mV)
2 = Thermocouple
3 = Linear DC (mA)
4 = Linear DC (V)

Output 3 Type
0 = Not fitted
1 = Relay
2 = SSR Drive
3 = DC (0 - 10V)
5 = DC (0 - 20mA)
7 = DC (4 - 20mA)

SPECIFICATION

UNIVERSAL INPUT
- Input impedance: Greater than 1MΩ resistive, except for DC mA (4.7Ω) and DC V (47kΩ)
- Isolation: Isolated from all outputs (except SSR Drive) at 240V AC

REMOTE RUN/HOLD INPUT (OPTION)
- Type: Voltage-free or TTL-compatible; edge-sensitive. ON-OFF: current program will run. OFF-ON: current program will be held
- Voltage-free operation: Contacts open = OFF (minimum contact resistance = 5000Ω). Contacts closed = ON (maximum contact resistance = 50Ω).

OUTPUTS
Relay
- Contact Type/Rating: Single Pole Double Throw (SPDT); 2A resistive at 120/240V AC.
- Lifetime: >500,000 operations at rated voltage/current. Isolated from all other inputs/outputs.

SSR Drive/TTL
- Drive Capability: SSR >4.2V into 1KΩ minimum.
- Isolation: Not isolated from input or other SSR Drive outputs.

Solid State
- Operating Voltage Range: 20 - 280V rms (47 - 63Hz)
- Current Rating: 0.01 - 1A (full cycle rms on-state @ 25°C); derates linearly above 40°C to 0.5A @ 80°C. Isolated from all other inputs/outputs

DC
- Resolution: 8 bits in 250mS (10 bits in 1S typical, >10 bits in >1S typical).
- Isolation: Isolated from all other inputs/outputs.

OPERATING CONDITIONS FOR INDOOR USE
- Ambient Temperature (Operating): 0°C to 55°C
- Ambient Temperature (Storage): –20°C to 80°C
- Relative Humidity: 20% - 95% non-condensing.
- Supply Voltage: 100 - 240Vac 50/60Hz (standard) 7.5VA 20 - 50V AC 50/60Hz (option) 7.5VA or 22 - 65V DC (option) 5W maximum

ENVIRONMENTAL
- Approvals: CE, UL & cUL.
- EMC: EN61326:2013. This is a class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.
- Safety Considerations: UL61010-1 Edition 3 & EN61010 version 2010.
- Front Panel Sealing: IP66

PHYSICAL
- Dimensions: Depth - 110mm (behind panel) Front Panel: Width - 48mm, Height - 48mm
- Mounting Terminals: Plug-in with panel mounting fixing strap. Panel cut-out 45mm x 45mm. Screw type (combination head).
- Weight: 0.21kg maximum

SAFETY AND WARNING SYMBOLS

⚡ Risk of electric shock.
⚠ Caution, refer to the manual.
∿ Alternating or direct current could be present.
▢ Equipment protected through-out by double insulation.