QUICK START - PROGRAMMING PARAMETERS

In order to adjust parameter values, parameter lock jumper must be set in unlocked position (see figure 3).

Figure 3

Upon startup take note of indicated temperature units, °C or °F.
(Change of temperature units is shown in advanced settings.)

NOTE: SP1 is temperature setting to control relay 1.
SP2 is temperature setting to control relay 2.

Access only to Set Points SP1 and SP2 (without code protection):

- Press SET key. Out1 LED and out1 set point value will flash on the display.
- Modify the out1 set point value using the UP and DOWN keys.
- Press SET key to store the out1 set point value and advance to out2 set point value.
- Modify the out2 set point value using the UP and DOWN keys.
- Press SET key to store the value and return to home screen.

ADVANCED - PROGRAMMING PARAMETERS

Access to all parameters (code protected):

- Press SET for 8 seconds. The access code value 0 is shown on the display.
- Using the UP and DOWN buttons, set the code (factory-set code is 0).
- Press SET to confirm the code. If it is correct, the first parameter label will be shown on the display (SP1).
- Move to the desired parameter with the UP and DOWN keys.
- Press SET to see the value of the parameter.
- Modify the value with the UP and DOWN keys.
- Press SET to store value.
- Press SET and DOWN to quit programming, or wait 1 minute for the TIMEOUT.

Resetting the parameter pass code

The parameter code can be set to zero by holding the SET key and turning the controller off then on again.

LED INDICATIONS

Out1: Indicates relay 1 On or Off as per parameter H2. If H2=dir, with relay 1 On, LED lit, if H2=inv, with relay 1 On, LED off. It blinks when SP1 is displayed.

Out2: Indicates relay 2 On or Off as per parameter H3. If H3=dir, with relay 2 On, LED lit, if H3=inv, with relay 2 On, LED off. It blinks when SP2 is displayed.

Error Messages

Under normal operation, the temperature of the probe selected by P4 will be displayed, the following messages may also appear:

- **Err** Memory reading error.
- **ErP** Error of the probe not shown on the display.
- **AH1** Maximum temperature alarm, probe 1.
- **AL1** Minimum temperature alarm, probe 1.
- **AH2** Maximum temperature alarm, probe 2.
- **AL2** Minimum temperature alarm, probe 2.
- **ooo** Open probe.
- **---** Shorted probe.

-Push and hold SET until "0" on screen
-Release SET
-Push/Release SET
-"SP1" on screen
-Push/Release SET
-Use UP Arrow to goto "72"
-Push/Release SET
-Use UP Arrow to goto "SP2"
-Push/Release SET
-Use UP Arrow togo "80"
-Push/Release SET
Continue List...
-Use UP Arrow to goto "H6"
-Push/Release SET
-confirm "NTC"
-Push/Release SET
-Press SET and DOWN ARROW at the Same time and Display will show inside Temperature. Unplug, Programming Done.
To Make corrections, start at beginning above, but when "0" appears UP Arrow to "7" and Push/Release SET

	Description	Units	Range	Factory Value
SP1	Set point 1	Degrees	r4 to r6	10.0
SP2	Set point 2	Degrees	r5 to r7	10.0
r0	Dependency SP1 to SP2	Option	Ind or dep	ind
r1	Differential for SP1	Degrees	0.1 to 20.0	1.0
r2	Differential for SP2	Degrees	0.1 to 20.0	1.0
r3	Band differential	Degrees	0.1 to 20.0	1.0
r4	Lowest value for SP1	Degrees	-99.9 to r6	-99.9
r5	Lowest value for SP2	Degrees	-99.7 to r7	-99.9
r6	Highest value for SP1	Degrees	r4 to 302	302
r7	Highest value for SP2	Degrees	r5 to 302	302
r8	Regulation or Operating Mode	Option	On1, On2, nEU	On1
A0	Alarm Differential	Degrees	0.1 to 20.0	0.1
A1	Maximum alarm probe 1	Degrees	0.1 to 99.9	99.9
A2	Maximum alarm probe 2	Degrees	0.1 to 99.9	99.9
A3	Minimum alarm probe 1	Degrees	0.1 to 99.9	99.9
A4	Minimum alarm probe 2	Degrees	0.1 to 99.9	99.9
A5	Alarm verification time	h-m(*)	0.0 to 18.0	18.0
A6	Alarm probe 1 selection	Option	AHL, Ano, AH, AL	AHL
A7	Alarm probe 2 selection	Option	AHL, Ano, AH, AL	AHL
c0	Minimum relay stop time	Minutes	0 to 240	0
c1	Operation relay 1	Option	dir or inv	dir
c2	Operation relay 2	Option	dir or inv	dir
c3	Fail Safe Operation relay 1	Option	Opn or Clo	Opn
c4	Fail Safe Operation relay 2	Option	Opn or Clo	Opn
P0	Temperature Units Selection	Option	°C or °F	°C
P1	Calibration Probe 1	Degrees	-20 to 20	0.0
P2	Calibration Probe 2	Degrees	-20 to 20	0.0
P3	Decimal Point	Option	no or yes	yes
P4	Probe to be displayed	Option	sd1 or sd2	sd1
P5	Number of Probes	Option	1 or 2	1
H0	Factory Reset Values	Option	0	0
H1	Keypad tamper protection	Option	no or yes	no
H2	Operation of Out1 LED	Option	dir or inv	dir
H3	Operation of Out2 LED	Option	dir or inv	dir
H4	Address for serial communication	Range	0-999	0
H5	Access code to parameters	Range	0-999	0
H6	Probe Type Selection	Option	Ptc or ntc	PTC

(*) h-m are data in format XX.Y where XX are hours and Y tens of minutes.