

HP44

SL 2.0

Quad-zone controller



Handbook

MAIN SETTINGS (Run mode)

These settings are only concerning the user and are made during the run mode as follows.

AUTO/HAND SELECTION.

Press **SCAN** several times to move to Zone required (Zone light comes on).



Press **MODE** (key lamp flashes):

This message referring to the set condition, will be displayed (**Auto**= Automatic, **-on-**= always On, **-oF-** = always Off).

Press **+** or **-** to modify, press **MODE** to escape.



Auto

-on-

-oF-

SET MODE.

Press **SCAN** several times to move to the zone to program (Zone light comes on).



Press **SET** (key lamp flashes):

This message will be displayed instead of the ° Set Zone value select.

Press **+** or **-** to modify, press **SET** to confirm.

SEt.1

Example ZONE 1

At this point this message will be displayed instead of the ° Set Minimum Temperature value.

Press **+** or **-** to modify, press **SET** to confirm.

AL.1

Example ZONE 1

At this point this message will be displayed instead of the ° Set Minimum Temperature value.

Press **+** or **-** to modify, press **SET** to confirm.

AL.1

Example ZONE 1

INPUT DISPLAY.

Press **SCAN** several times to move to the Zone to display (Zone light comes on).



The display will show the value measured by the temperature sensor of the selected area.

If you press **SCAN** for more than one second, it is automatically activated (light on).

Press **SCAN** to again to stop automatic scanning.

Scanning time is programmed in **COST**.



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Example °C temperature viewing

COSt PROGRAMMING (System constants)



These settings refer to the mode of operation of the system and must be made on initial start-up.

Press - / + together for at least one second. the message **C.O.S.t.** will be displayed.

Press then repeatedly **SCAN** until interested variable's message is displayed (see table below) ; variable value and related message will be displayed.

Press + or - to set a new value and then **SCAN** to confirm.

The next system constant will then appear.

You can press **SCAN** for a least two second to escape and return to the *Run Mode*.

Mess.	Value	Meaning	Notes
dIF.1	0.2°	° Zone 1 differential	*1)
dIF.2	0.2°	° Zone 2 differential	*1)
dIF.3	0.2°	° Zone 3 differential	*1)
dIF.4	0.2°	° Zone 4 differential	*1)
rEL.1	0.0°	° setting shift referring to the Set 1	*1)
rEL.2	0.0°	° setting shift referring to the Set 2	*1)
rEL.3	0.0°	° setting shift referring to the Set 3	*1)
rEL.4	0.0°	° setting shift referring to the Set 4	*1)
InPu	=4	number of Zones (probes) connected	*1)
tyPE	=1	Actioning type	
SCAN	2.0"	Scanning time in seconds	*2)
i.1	=1	Inputs 1 selection (1/14)	
i.2	=1	Inputs 2 selection (1/14)	*3)
i.3	=1	Inputs 3 selection (1/14)	*3)
i.4	=1	Inputs 4 selection (1/14)	*3)
Ad.t1	0.0°	°Input 1 correction (+ or -)	*3)
Ad.t2	0.0°	°Input 2 correction (+ or -)	*4)
Ad.t3	0.0°	°Input 3 correction (+ or -)	*4)
Ad.t4	0.0°	°Input 4 correction (+ or -)	*4)

*1) For more details see *Operative Diagrams*.

*2) HP44 can be configured in these different actioning type:

=1 : 4 absolute Sets type HEAT .

=2 : 4 absolute Sets type COOL.

=3 : 4 Sets type HEAT (1 absolute + 3 relative).

=4 : 4 Sets type COOL (1 absolute + 3 relative).

For more details see *Operative diagrams*.

following

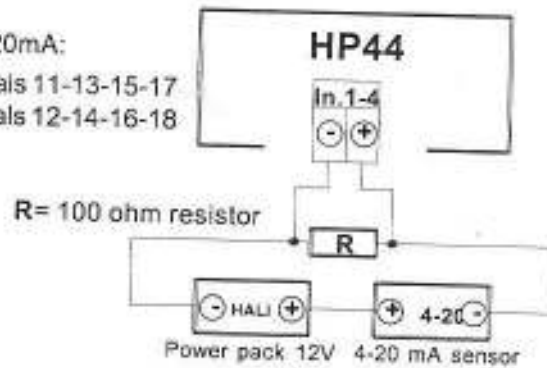
*3) These types of input can be set for each Zone:

	Input Connect	Range	Resolution	Dip Switch	Slot Conne.
1=	SX Pola (°C)	-50.0°C...+115.0°C	0.1°C	0	Nobody
2=	SX Pola (°F)	-58.0°F...+239.0°F	0.1°F	0	Nobody
3=	PT100 (°C)	-50.0°C...+300.0°C	0.2°C	1	HPT1
4=	PT100 (°F)	-58.0°F...+572.0°F	0.5°F	1	HPT1
5=	PT100 (°C)	-50.0°C...+300.0°C	1°C	1	Nobody
6=	PT100 (°F)	-58.0°F...+572.0°F	1°F	1	Nobody
7=	PT1000 (°C)	-200°C...+800°C	1°C	1	Nobody
8=	PT1000 (°F)	-328°F...+1472°F	2°F	1	Nobody
9=	Termocouple (°C)	-250°C...+1500°C	1°C	1	HTC1
10=	Termocouple (°F)	-418°F...+2732°F	2°F	1	HTC1
11=	4-20mA standard	0.0%...100.0%	0.1	0	100ohm
12=	F.F.U				
13=	F.F.U				
14=	F.F.U				

Notes:

tEnp= 11 : Connect Input 4-20mA:

- ⊖ terminals 11-13-15-17
- ⊕ terminals 12-14-16-18



Caution: Selected the pertaining slide/channel (Dip-Switch see *Installation*).

*4) You can correct the readings on the various sensors (+ or -).

PRESET PROGRAMS



This processor is ready programmed with the following (variable) settings. To return to these settings at any time:

Power off the processor, press **SCAN** key and keep it pressed giving power on: **boot** message will be displayed (release now **SCAN** key).

SEt.1/4= 25.0° AL-1/4= 10.0° AL-1/4= 40.0°

The **COSt** values are shown in **COSt** paragraphs.

"HAND" MODE

In some start-up conditions may be useful to work in "hand" mode:

Power off the processor, press **+** key and keep it pressed giving power on: **Hand** message will be displayed (release now **+** key).



Push **+** until is displayed number required to be handed (see table *State indication lamps*) and push **SCAN** for activating relay.

Pushing again **+** for increase relay number previous relay is disactivated.

You can press **SCAN** for a least two seconds to escape and return to the *Run*

Mode.

STATE INDICATION LAMPS

The light situated at the bottom of the display show the state of the various relays as set out below.

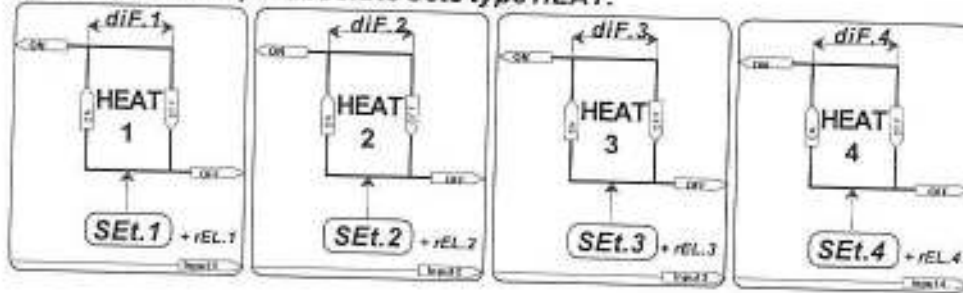
Lamp.	State	N° Relay	Contacts
HAND	Zone selected on HAND (Off/On)	-	-
ON	Zone selected On (1-2-3-4)	1-2-3-4	3-4/5-6/7-8/9-10
1	Zone 1 selected	-	
2	Zone 2 selected	-	
3	Zone 3 selected	-	
4	Zone 4 selected	-	
OR	Logic or relay On	6 *	3-4-5 *
ALARM	Min-Max alarm On (n.c.)	7 *	6-7-8 *

Lamp 1-2-3-4 flashing if Zone not viewing is in Alarm condition.

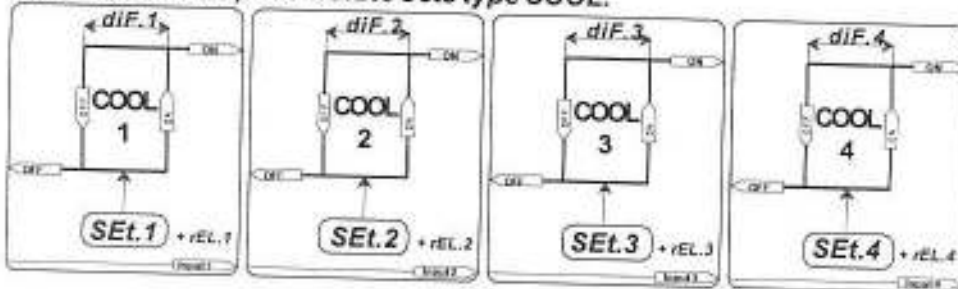
* Available only with **HPAL** slot option (see **HPAL** handbook).

OPERATIVE DIAGRAMS

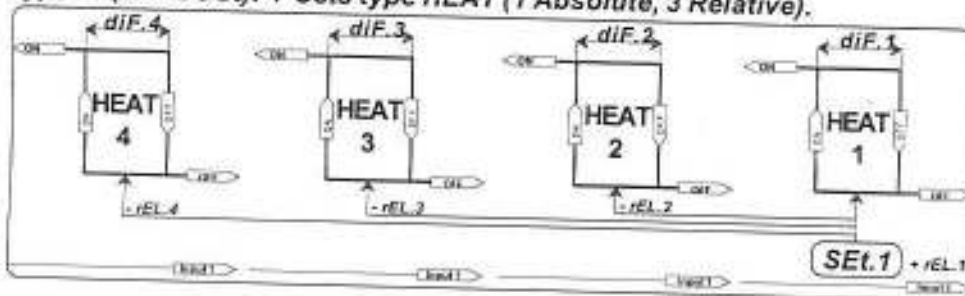
type=1 (see COST): 4 absolute Sets type HEAT.



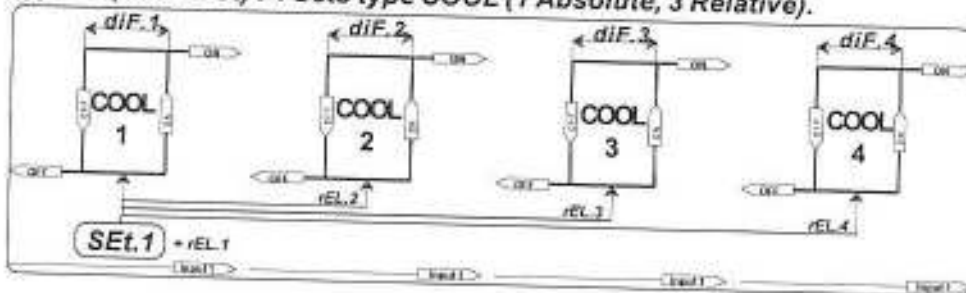
type=2 (see COST): 4 absolute Sets type COOL.



type=3 (see COST): 4 Sets type HEAT (1 Absolute, 3 Relative).



type=4 (see COST): 4 Sets type COOL (1 Absolute, 3 Relative).



INSTALLATION

For correct installation, follow the instructions below very carefully.
 You are recommended to install the controller properly so that it complies with current regulations, and also to use a max 4Amp.F fuse to prevent the relay output contacts from getting damaged and ensure they stay in perfect running order (terminals 3-4... 9-10 of the HP module connector).

How to connect the sensors

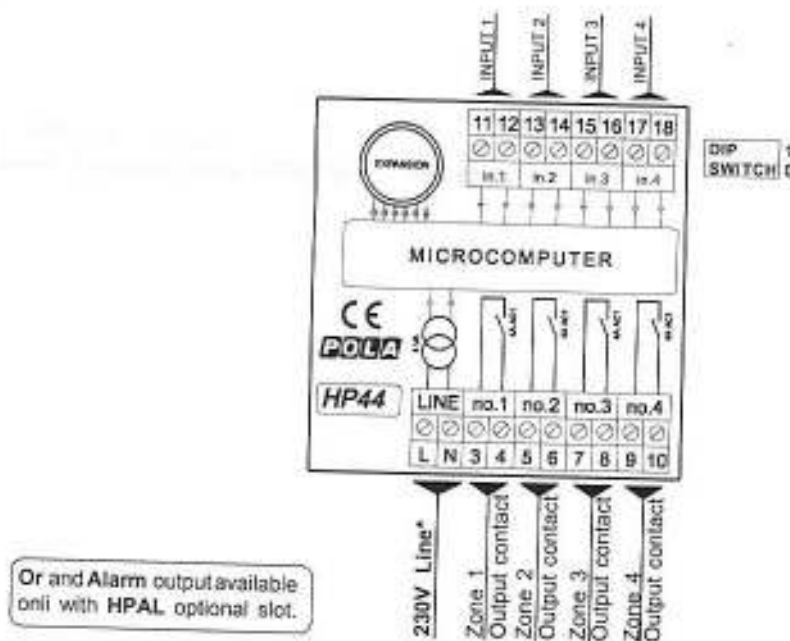
Connect the sensors provided as shown in the diagram (see following page). For remote connections use a standard 0.5-square millimetre two-pole wire for each sensor, taking great care over the connections, by insulating and sealing the joins carefully.

How to connect the line

Connect line on terminals L-N; protect supply with adequate fuse.

How to connect the contacts

Connect terminals 3-4...9-10 on the terminal block (contacts up to 4AMP,AC1) to the loads as shown in the diagram (see overleaf).



Or and Alarm output available only with HPAL optional slot.

* Other power voltage if you required.

Caution: Selected the 4 slide/channel (Dip-Switch); see par 1.2*3) table Dip-Switch.