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
HEAT (*1)	HEAT On	1	3-4
COOL	COOL On	2	5-6
HUM	HUM On	3	7-8
DEHM (*1)	DEHM On	4	9-10
MIN	MIN ALARM On (n.c.)	7 *	6-7-8 *
MAX	MAX ALARM On (n.c.)	7 *	6-7-8 *
C.AIR	CHANGE AIR On	6 *	3-4-5 *
IDEAL	Ok temperature		

(*)   Available only with **HPAL** optional slot.
(*1) Action light (**HEAT**-**COOL**) flash during delay time (see **COSt** function *t.on-t.Of*).

INSTALLATION

How to connect the sensors
Connect the sensor provided as shown in the diagram. For remote connections use a standard 0.5-square millimeter two-pole wire , taking great care   over the connections, by insulating and sealing the joins carefully. *-O.C.-* is displayed when the temperature sensor wiring is open, *-S.C.-* is displayed when the temperature sensor wiring is short circuit.
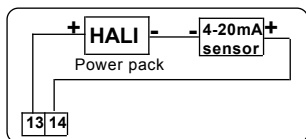
How to connect the line
Connect 220V line on terminals **L-N**.
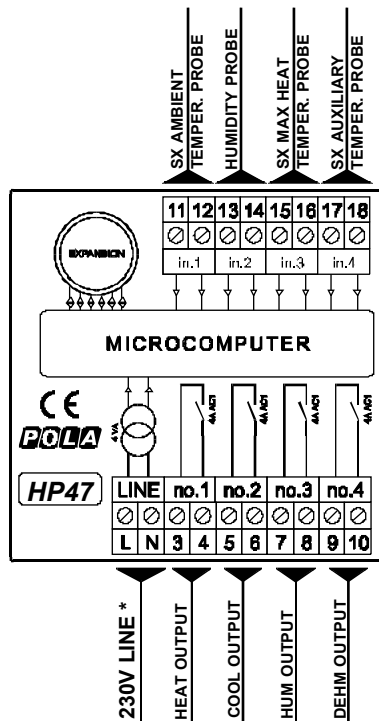Protect supply with adequate fuse.

How to connect the contacts
Connect terminals on the terminal block (contacts up to 4AMP.AC1)
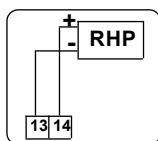
RHP sensor probe connection

4-20mA sensor probe connection

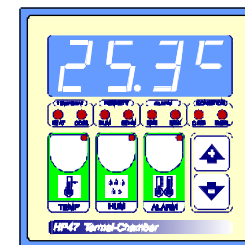* Other power voltage if you required

POLA ® CE EMC LVD

981116

HP47
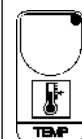CE
SL 2.0
Handbook

Thermal chamber controller
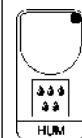

MAIN SETTING (Run Mode)

TEMPERATURE SETTING
Press **TEMP** (key lamp flashes):
this message will be displayed instead of the °
Set temperature value .
Press **+** or **-** to modify, press **TEMP** to confirm.
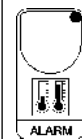
`t.SEt`

HUMIDITY SETTING.
Press **HUM** (key lamp flashes):
this message will be displayed instead of the *%RH Set Humidity value* .
Press **+** or **-** to modify, press **HUM** to confirm.

`H.SEt`

ALARM TEMPERATURE SETTING.
Press **ALARM** (key lamp flashes):
this message will be displayed instead of the °
Set Minimum alarm temperature value .
Press **+** or **-** to modify, press **ALARM** to confirm.

`AL._ _`

At this point:
this message will be displayed instead of the
° *Set Maximum alarm temperature value* .
Press **+** or **-** to modify, press **ALARM** to exit.

`AL.⎺⎺`

TEMPERATURE AND PROGRAM STATE VIEWING

With **TEMP** key lamp light (press **TEMP** key) ambient temperature is displayed.
With **HUM** key lamp light (press **HUM**) ambient humidity is displayed.
For viewing other parameters press these keys for at least two seconds:
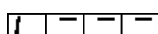
Key	Message	Meaning	Notes
TEMP	*t.AuS*	° Aux Temp viewing	(*1)
HUM	*t. - - -*	° Max Heat viewing	
ALARM	*C.Air*	C.Air minutes count down	not in C.AIR
"	*On.C.A*	C.Air end minutes	in C.AIR
"	*-oF-*	C.Air not active	

*1) This probe show only Aux. temperature.

VIEWING TEMPERATURE RECORDING

Press **+** : `H` will be displayed followed by
° *Maximum Temperature Recording.*

Press **-** : `H` will be displayed followed by
° *Minimum Temperature Recording.*

Values recorder are memory permanent stored: for memory clear keep pushed **+** keys for more than 3 seconds: **CLEA** message will be composed on display before clearing operation.

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 than repeatly **ALARM** 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 **ALARM** to confirm.
The next system constant will then appear.
You can press **ALARM** for a least two second to escape and return to the *Run Mode* .

Mess.	Value	Meaning	Notes
r.HEA	**-1.0°**	° HEAT setting referring to t.SEt	***1)**
r.COL	**1.0°**	° COOL setting referring to t.SEt	***1)**
r.Hun	**-5.0H**	%RH HUM referring to H.SEt	***1)**
r.dEH	**5.0H**	%RH DEHM referring to H.SEt	***1)**
d.HEA	**0.5°**	° HEAT differential	***1)**
d.COL	**0.5°**	° COOL differential	***1)**
d.Hun	**1.0H**	%RH HUM differential	***1)**
d.dEH	**1.0H**	%RH DEHM differential	***1)**
t.HEA	**25.0°**	° Max Heat set (Max Heat On)	***2)**
n.CHA	**0**	Daily number C.AIR	***3)**
d.CHA	**0'**	Minutes dutation C.AIR	***3)**
Huny	**=1**	Humidity sensor type	***4)**
tEnP	**=1**	Temperature representation (=1°C, =2°F)	***5)**
Ad.t1	**0.0°**	° Input ambient temperature correction (+ or -)	***6)**
Ad.Hu	**0.0H**	%RH ambient humidity correction (+ or -)	***6)**
Ad.t3	**0.0°**	° Input Max Heat temperature correction (+ or -)	***6)**
Ad.t4	**0.0°**	° Input Aux temperature correction (+ or -)z	***6)**

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

*2) Over this temperature **HEAT** and **DEHM** are Off (Max Heat On): in this condition lamps **HEAT** and **DEHM** are flashes.

*3) Available only with **HPAL** optional slot.

*4) **HP47** can be configurated in these different humidity sensor type:

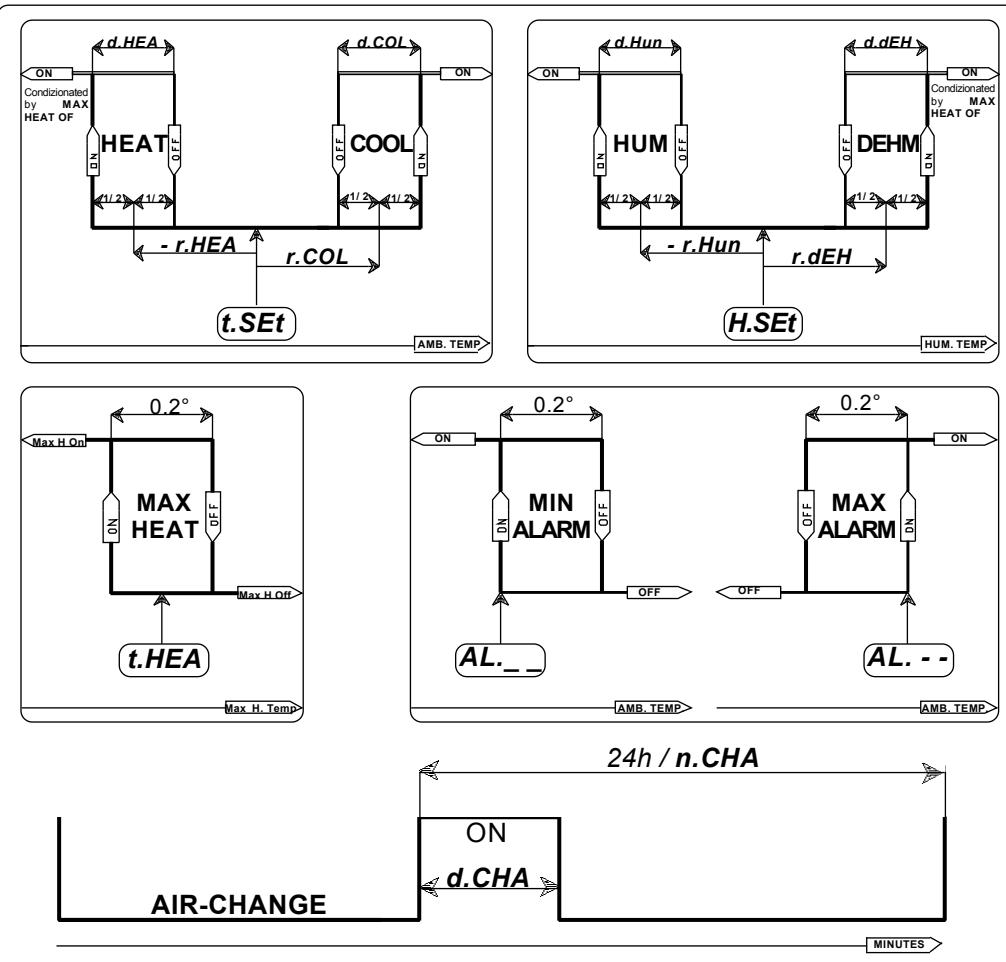   *Huny =1* : **0-20mA** sensor (**RHP** type): direct connect.
   Huny =2 : **4-20mA** sensor: to call for a **HALI** power pack.

*5) *tEnP =1* : ; **°C** Temperature range.
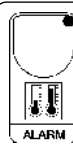   *tEnP =2* ; **°F** Temperature range.

*6) You can correct the readings on the sensor (**+** or **-**).

OPERATIVE DIAGRAMS

PRESET PROGRAMS

At delivery this processor is ready programmed with the following (variable) settings.
To return to these settings at any time:
Power off the processor, press **ALARM** key and keep it pressed giving power on: **boot** message will be displayed (release now **ALARM** key).

   t.SEt = **10.0°**   *H.SEt* = **80.0H**   *AL. _ _* = **-50.0°**   *AL. - -* = **50.0°**

COST value are shown in **COST** paragraph.

"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 relays "**N° Relay**") and push **ALARM** for activing relay.
Pushing again **+** for increase relay number previous relay is disactivated. You can press **ALARM** for a least two seconds to escape and return to the *Run Mode*.