INSTALLATION

How to connect the sensors

Connect the provided sensor 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 response potentiometer

Connect the potentiometer of any value (max 10Kohm, recommended 1 Kohm) and connect the terminals **7-8**.

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.
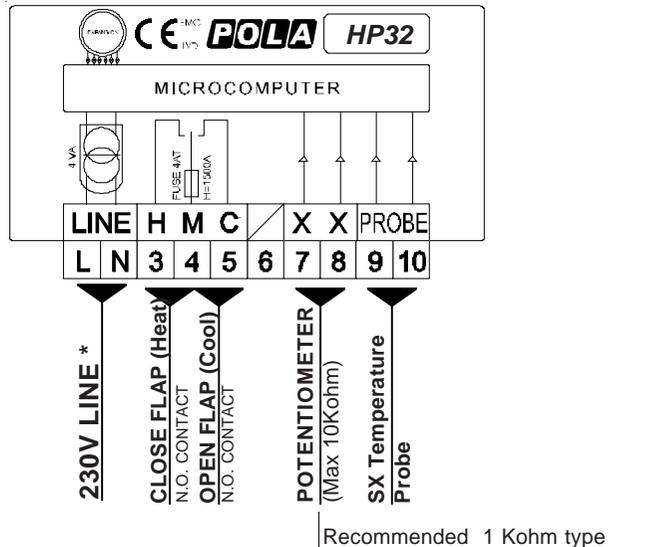
How to connect the line

Connect 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).

THERMON CE EMC IND POLA HP32

MICROCOMPUTER

4 VA · FUSE 4AT · H=1540A

LINE		H	M	C		X	X	PROBE	
L	N	3	4	5	6	7	8	9	10

230V LINE * — **CLOSE FLAP (Heat)** N.O. CONTACT — **OPEN FLAP (Cool)** N.O. CONTACT — **POTENTIOMETER** (Max 10Kohm) — **SX Temperature Probe**

Recommended 1 Kohm type

* Other power voltage if you required

HP32
SL 3.1
Proportional feedback
Handbook

25.3°C · HP32 Feedback

MAIN SETTINGS *(Run Mode)*

SETTING

Press **SET**:
This message will be displayed instead of the *°Set temperature value* .
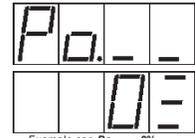Press **+** or **-** to modify, press **SET** to confirm.

t.SEt / 25.0°C
Example con **t.SEt** = 25.0°C

At this point: this message will be displayed instead of the *Position minimum opening % value*.
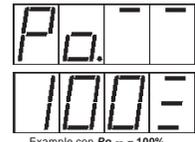Press **+** or **-** to modify, press **SET** to confirm.

Po.__ / 0°
Example con **Po.__** = 0%

At this point: this message will be displayed instead of the *Position maximum opening % value*.
Press **+** or **-** to modify, press **SET** to escape.

Po.-- / 100°
Example con **Po.--** = 100%
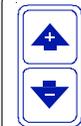
POSITION VIEWING

Press **SET** for at least one second (and not for more 5 seconds, because than an *Init* procedure is issued):
this message will be displayed instead of the *% positioning.*

53°
Example with percentual= **53%**

VIEWING AMBIENT TEMPERATURE RECORDING

Press **+** : F.___ will be displayed followed by *°Maximum Temperature Recording.*

Press **-** : F.___ will be displayed followed by *°Minimum Temperature Recording.*

Values are permanently stored in the memory: for deleting all values in the memory keep pushed **+** key for more than 3 seconds: **CLEA** message will appear on display before clearing operation.

FLAP POTENTIOMETER INITILIZATION PROCEDURE (Init)

Connect the potentiometer of any value (max 10Kohm, recommended 1 Kohm). It must be applied to the flap motor.
Having done this, proceed as follows to record the potentiometer values.
Press **SET** key for at least 5 seconds: when **Init** message will be displayed for more than one second release **SET** key. **HP32** closed the flap (light **CLOSE** flashes) and the potentiometer resistance value is displayed.
When the flap have completely closed, press **SET** to record the value: at this point **HP32** opens the flap (light **OPEN** flashes) and the potentiometer resistance value is displayed.
When the flap have completely opened, press **SET** to record the value.
HP32 then returns automatically to the Run mode.

COSt PROGRAMMING (System constants)

These settings refer to the operation mode of the system and must be made on initial startup. Press - / + at the same time for at least one second: the message **C.O.S.t.** will be displayed.
Press than repeatedly **SET** until the message regarding the chosen variable is displayed (see table below) : value of variable and message will be displayed.
Press + or - to set a new value and then press **SET** to confirm.
The next system constant will then appear.
You can press **SET** for at least 2 seconds to exit and return to the Run Mode.

Mess.	Value	Meaning	Note
ProP	4.0 °	°C Proportional range	*1
Pct.1	0	% Position flap to SET	*2
Pcn.1	5	% Neutral range	*3
Po.CL	0	Potentiometer resistor in flap closed position	*4
Po.OP	9999	Potentiometer resistor in flap open position	*4
tEnP	=1	Temperature representation	*5
Ad.tE	0.0 °	°C sensor temperature correction (+ or -)	*6

*1) For more details see *Operative Diagram.*
*2) Reached SET temperature (**SET** key in *Run Mode*) flap position is that value (**0** is fully closed).
*3) If swing occurs when searching for the position during flap operation (due to mechanical gearmotor histeresis), it raises the **Pcn.1** setting value until is eliminated.
*4) That values can be entered in manual or automatic mode are set by **Init** procedure.
*5) **tEnP =0** : °C Temperature range.
  tEnP =1 : °F Temperature range.
*6) You can correct the readings on the various sensors (**+** or **-**).

PRESET PROGRAMS (Bootstrap)

This processor is already programmed with the following (variable) settings.
To return to these settings at any time you may:
Power off the processor, press **SET** key and keep it pressed giving power on: **boot** message will be displayed (release now **SET** key).
t.SEt=25.0° Po._ _= 0 Po.- -=100 .
The COSt values are shown in *COSt Programming*

MANUAL MODE

In some start-up conditions may be useful to work in "manual" 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) and push **SET** for activing relay.
Pushing again **+** for increase relay number previous relay is disactivated.
You can press **SET** key for a least two seconds to escape and return to the *Run Mode.*

STATUS INDICATION LAMPS
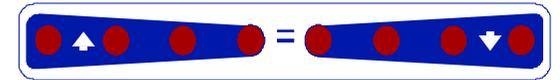
Swinging Ambient / Set temperature (t.SEt) indicator

Lamp.	Meaning	N° Relay	Contatcts
CLOSE	Close (Heat) On	1	3-4
OPEN	Open (Cool) On	2	4-5

OPERATIVE DIAGRAM

% Opening Flap

°Ambient temperature

ProP

t.SEt. with **Pct.1=0**