

## INSTALLATION

### How to connect the sensors

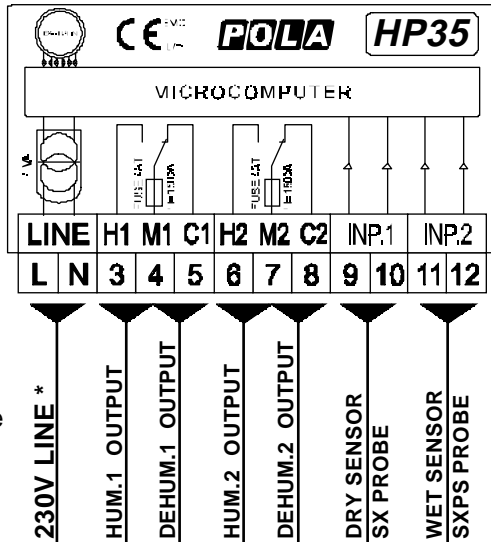
Connect the sensor provided as shown in the diagram. For remote connections use a standard 0.5-square millimeter two-pole wire, taking great care over the connections, by insulating and sealing the joins carefully. **-O.C.-** is displayed when the temperature sensor wiring is open, **-S.C.-** is displayed when the temperature sensor wiring is short circuit.

### How to connect the line

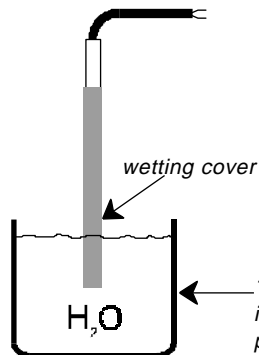
Connect line on terminals **L-N**.

### How to connect the contacts

Connect terminals on the terminal block (contacts up to 4AMP.AC1).



\* Other power voltage if you required.



**SXPS:** temperature probe for wet bulb (psychrometric system).  
Attention: deep only the terminal side of the wetting cover.

This water-container is not an item of our production.

As it company policy to continually improve the products the Manufacturers reserve the right to make any modifications thereto without prior notice. They cannot be held liable for any damage due to malfunction.

**POLA**® CE 980718

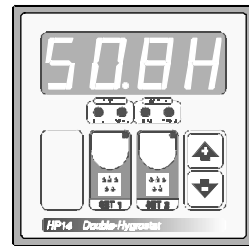
# HP35

SL 2.0

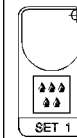
Psychrometer hygrostat controller

Handbook

CE



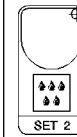
### MAIN SETTINGS (Run Mode)



#### SET 1 HUMIDITY SETTING.

Press **SET 1** (key lamp flashes):  
This message will be displayed instead of the % RH Set 1 Humidity value.  
Press + or - to modify. Press **SET 1** to confirm.

SET.1  
70.0H  
Example SET.1 = 70.0H

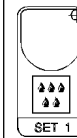


#### SET 2 HUMIDITY SETTING.

Press **SET 2** (key lamp flashes):  
This message will be displayed instead of the % RH SET 2 humidity value.  
Press + or - to modify. Press **SET 2** to confirm.

SET.2  
80.0H  
Example SET.2 = 80.0H

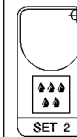
### PSYCHROMETER TEMPERATURE VIEWING



#### DRY BULB TEMPERATURE VIEWING:

Press **SET 1** for at least one seconds:  
This message will be displayed instead of the °C dry bulb temperature.

F.dry

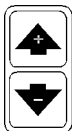


#### WET BULB TEMPERATURE VIEWING:

Press **SET 2** for at least one seconds:  
This message will be displayed instead of the °C wet bulb temperature.

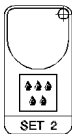
F.wet

## COST PROGRAMMING (System constants)



These settings refer to the mode 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 **SET 2** 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 **SET 2** to confirm.

The next system constant will then appear.

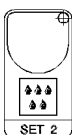
You can press **SET 2** for a least two second to escape and return to the *Run Mode*.

Mess.	Value	Meaning	Note
diF.1	1.0H	%RH SET 1 differential	*1)
diF.2	1.0H	%RH SET 2 differential	*1)
Ad.Hu	0.0H	°C dry sensor temperature correction (+ o -)	*2)
Ad.Hu	0.0H	°C wet sensor temperature correction (+ o -)	*2)

\*1) For more details see *Operating Diagram*.

\*2) You can correct the readings on the various sensors (**+** or **-**).

## PRESET PROGRAMS (Bootstrap)



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 **SET 2** key and keep it pressed giving power on:

**boot** message will be displayed (release now **SET 2** key).

**SEt.1=70.0H SEt.2=80.0H.**

The COST values are shown in *COST Programming*

## "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 **SET 2** for activating relay.

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

You can press **SET 2** for a least two seconds to escape and return to the *Run Mode*.

## STATE INDICATION LAMPS

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

Lamp.	State	N° Relay	Contacts
HUM (1)	Hum 1 On	1	3-4
DEHM (1)	Dehum 1 On	2	4-5
HUM (2)	Hum 2 On	3	6-7
DEHM (2)	Dehm 2 On	4	7-8

## PSYCHROMETER TABLE

Proposed table for correlate temperature difference between dry bulb / wet bulb and relative humidity.

It is supposed that water of wet bulb is pure, temperature probes are not irradiated by light and are located in a moved-air duct.

Data are linear-interpolated by **HP35** with 1/256 math precision degree.

	100%	80%	60%	40%	20%	0%	DRY TEMPER.
0,0°C	1,0°C	2,1°C	3,3°C	4,4°C	5,7°C		0°C
0,0°C	1,7°C	3,5°C	5,3°C	7,4°C	9,5°C		10°C
0,0°C	2,4°C	4,8°C	7,4°C	10,8°C	14,3°C		20°C
0,0°C	3,0°C	6,1°C	10,0°C	14,4°C	19,6°C		30°C
0,0°C	3,5°C	7,0°C	12,0°C	18,2°C	25,6°C		40°C
0,0°C	4,0°C	8,2°C	14,0°C	21,8°C	32,2°C		50°C
0,0°C	6,5°C	9,8°C	16,3°C	24,5°C	38,0°C		60°C
0,0°C	6,8°C	11,8°C	18,4°C	27,0°C	46,0°C		70°C
0,0°C	7,0°C	12,6°C	21,6°C	31,7°C	52,5°C		80°C
0,0°C	7,5°C	13,3°C	23,3°C	35,8°C	60,5°C		90°C
0,0°C	8,3°C	16,3°C	26,8°C	38,3°C	68,2°C		100°C

## OPERATIVE DIAGRAM

