HD38

SL 6.0

6 steps ventilation +thermoregulation

Handbook

CE

HEAT
ON

SPEED VENTILATION
1 2 3 4 5 6

COOL
ON

ALARM
MIN MAX

HEAT °C VENT MIN VENT MAX VENT COOL ALARM

HD38 Six Steps-Controller

POLA®
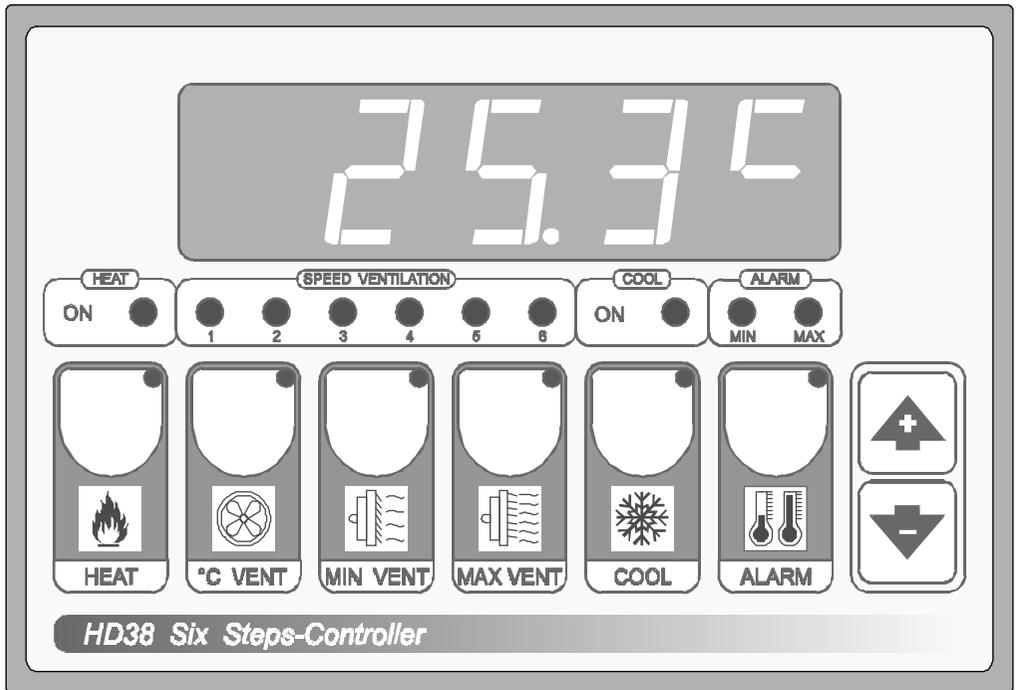
HEAT TEMPERATURE SETTING.

HEAT TEMPERATURE SETTING.
Press **HEAT** (key lamp flashes):
This messagge will be displayed instead of the *°Set Heat temperature value*.
Press **+** or **-** to modify, press **HEAT** to exit.

`HEAt`

VENTILATION TEMPERATURE SETTING.

Press **°C VENT** (key lamp flashes):
This messagge will be displayed instead of the *°Set Ventilation temperature value (start first speed)*.
Press **+** or **-** to modify, press **VENT** to confirm.

`uEnt`

If the minimum speed is set to **0**, this messagge appears instead of the *Set Shutter Running Time* (in seconds or in minutes*).
Press **+** or **-** to modify, press **VENT** to confirm.

`t.on`

At this point: this messagge will be displayed instead of the *Shutter Dwell Time* (in seconds or in minutes*).
Press **+** or **-** to modify, press **VENT** to confirm.

`t.oF`

At this point: this messagge will be displayed instead of the *Shut Speed Number.*
Press **+** or **-** to modify, press **VENT** to exit.

`PArt`

MINIMUM SPEED VENTILATION SETTINGS.
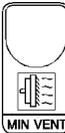
Press **MIN VENT** :
This messagge will be displayed instead of the *°Minimum Ventilation Speed.*
Press **+** or **-** to modify, press **MIN VENT** to exit.

`SP._ _`

MAXIMUM SPEED VENTILATION SETTINGS.
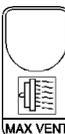
Press **MAX VENT** :
This messagge will be displayed instead of the *°Maximum Ventilation Speed.*
Press **+** or **-** to modify, press **MAX VENT** to exit.

`SP.¯ ¯`

COOLING TEMPERATURE SETTINGS.

Press **COOL** :
This messagge will be displayed instead of the *°Set Cool temperature value.*
Press **+** or **-** to modify, press **COOL** to exit.

`COOL`

* See **Cost**, *tinE* function.

ALARM PARAMETER SETTING.
Press **ALARM** (key lamp flashes):
This messagge will be displayed instead of the
°Set Minimum Alarm temperature value.
Press **+** or **-** to modify, press **ALARM** to confirm.

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

VIEWING TEMPERATURE RECORDING

Press **+** : will be displayed followed by
°Maximum Temperature Recording.
Press **-** : 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 messagge will be composed on display before clearing operation.

COSt PROGRAMMING (System constants)
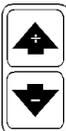
These settings refer to the mode of operation of the system and must be made on initial start-up. Press **- / + / HEAT** together at least one second:
the message **C.O.S.t.** will be displayed.
The COST messagge are displayed in sequence if you press **+** to go forward or **-** to go back.
When you reach the messagge required (see table below) press **+** or **-** to set a new value and then **ALARM** to confirm.
The next system constant will then appear.
You can press **HEAT** to escape and return to the *Run Mode*.

Mess.	Valore	Significato	Note
r.1	**0.0°**	°C VENT.1 start setting referring to **vEnt** set.	***1)**
r.2	**1.0°**	°C VENT.2 start setting referring to VENT 1 start.	***1)**
r.3	**1.0°**	°C VENT.3 start setting referring to VENT 2 start.	***1)**
r.4	**1.0°**	°C VENT.4 start setting referring to VENT 3 start.	***1)**
r.5	**1.0°**	°C VENT.5 start setting referring to VENT 4 start.	***1)**
r.6	**1.0°**	°C VENT.6 start setting referring to VENT 5 start.	***1)**
d.vEn	**0.2°**	°C Ventilation differential	***1)**
S.vEn	**0"**	Ventilation step on dalay seconds	
d.HEA	**0.2°**	°C Heat differential	***1)**
d.COL	**0.2°**	°C Cool differential	***1)**
tinE	**= 1**	*t.on* - *t.oF* setting mode (=1 seconds, =2 minutes)	***2)**
StEP	**= 1**	Ventilation setting mode.	***3)**
tYPE	**= 1**	Start Ventilation actioning mode	***4)**
tEnP	**= 1**	Temperature representation (=1 °C, =2 °F)	***5)**
Ad.tE	**0.0°**	°C input sensor temperature correction (+ or -)	***6)**

*1) For more details see *Operative Diagrams*

*2) *tinE= 1* : *t.on* - *t.oF* setting mode (see **VENT** key) in seconds.
    tinE= 2 : *t.on* - *t.oF* setting mode (see **VENT** key) in minutes.

*3) *StEP= 1* : Ventilation in speed regulation mode.
    StEP= 2 : Ventilation in on-off mode (progression regulator)*.
        * To obtain this type of functioning, the **41-42** terminals has to be connected.

*4) Different mode of ventilator initial start-up optionally settable useful for speed regulation (step from **0** to **1** speed).
    tYPE= 1 : 0 to 1 step become in normal mode.
    tYPE= 2 : 0 to 1 step become with a momentary **10** seconds at speed **2**.
    tYPE= 3 : 0 to 1 step become with a momentary **5** seconds at speed **3**.
    tYPE= 4 : 0 to 1 step become with a momentary **5** seconds at speed **4**.

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

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

PRESET PROGRAMS *(Bootstrap)*

At delivery this processor is ready programmed with the following (variable) settings.
To return to these settings at any time.
Press **+ / - / ALARM** keys together for at least one second:
boot messagge will be displayed.

HEAt = 20.0°   vEnt = 25.0°   t.on=10"   t.OF= 60"   PArt= 0
SP._ _ = 0   SP.-- = 6   COOL=30.0° AL._ _= 10.0° AL.- - = 40.0°
COST value are shown in **COST** paragraph.

"HAND MODE"

In some start-up conditions may be useful to work in "hand" mode.
Press **+** / **-** / **MIN VENT** keys together for least one second:
 HAnd messagge 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 **MIN VENT** to escape and return to the *Run Mode.*


STATUS 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	Output contacts
HEAT	HEAT On	HPAL 1/HDY6 1	HPAL 3-4/HDY6 3-4
VENT 1	SPEED 1	HD38-1	HD38 3-5
VENT 2	SPEED 2	HD38-2	HD38 3-6
VENT 3	SPEED 3	HD38-3	HD38 3-7
VENT 4	SPEED 4	HD38-4	HD38 3-8
VENT 5	SPEED 5	HD38-5	HD38 3-9
VENT 6	SPEED 6	HD38-6	HD38 3-10
COOL	COOL On	HDY6 2	HDY6 5-6
AL. MIN	MINIMUM ALARM On	HPAL 2/HDY6 3	HPAL 7-8/HDY6 7-8
AL. MAX	MAXIMUM ALARM On	HPAL 2/ HDY6 3	HPAL 7-8/HDY6 7-8

Relative light (**1-2-3-4-5-6**) flash during VENT time cycling, or during *r.vEn* (see COSt) time delay.

OPERATIVE DIAGRAMS

If Minimum speed is programmed to 0 **(SP._ _=0)**, when the ventilation is off it is possible to insert a cyclical operation of minimum speed, compound with a time of ventilators turn on **(t.on)**, with a time of ventilators turn off **(t.oF)**, and with selected speed number during fan's shuttered operation **(Part)**.

V6 ON
CONDIZIONATED
BY SP. - -

d.vEn

V6

d.vEn

V5

d.vEn

V4

d.vEn

V3

d.vEn

V2

d.vEn

V1

t.on   t.oF   t.on   t.oF

r.2   r.3   r.4   r.5   r.6

Step from **0** to **1** speed become according to chosed **COSt** function *tYPE*.

vEnt + r.1

d.HEA

ON

HEAT OFF

HEAt

amb.temp

d.COL

ON

OFF **COOL**

COOL

amb.temp

0.2°

ON

MIN ALARM OFF

AL._ _

amb.temp

0.2°

OFF **MAX ALARM** ON

AL.- -

amb.temp
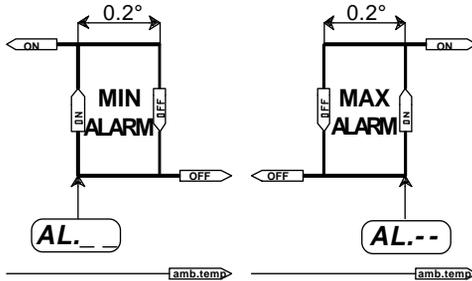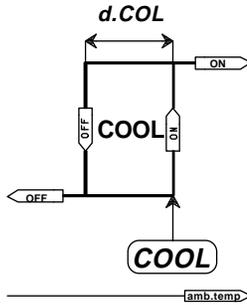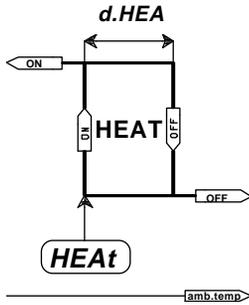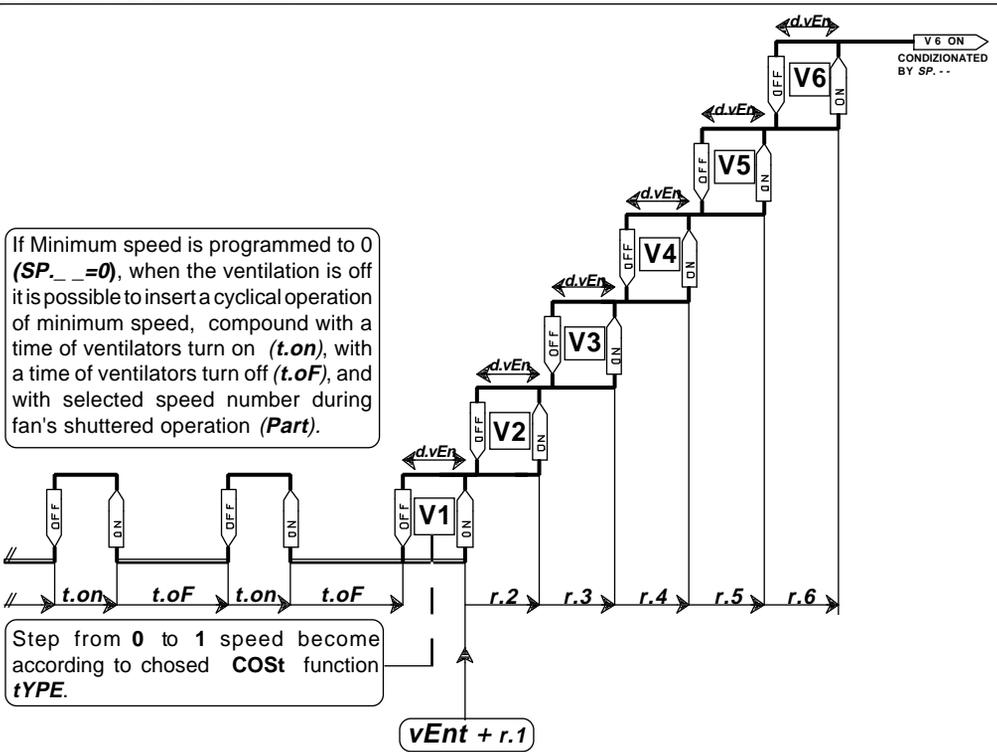
INSTALLATION

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

Output **3-4......13-14** contacts are N.O. (Normally Opened free of voltage) on wich is apliable a 4AMP AC1 maximum load.

HPAL DOTATION CABLE

HPAL
POLA CE

RELAYS EXTENSION

230V LINE · HEAT · ALARM TEMP
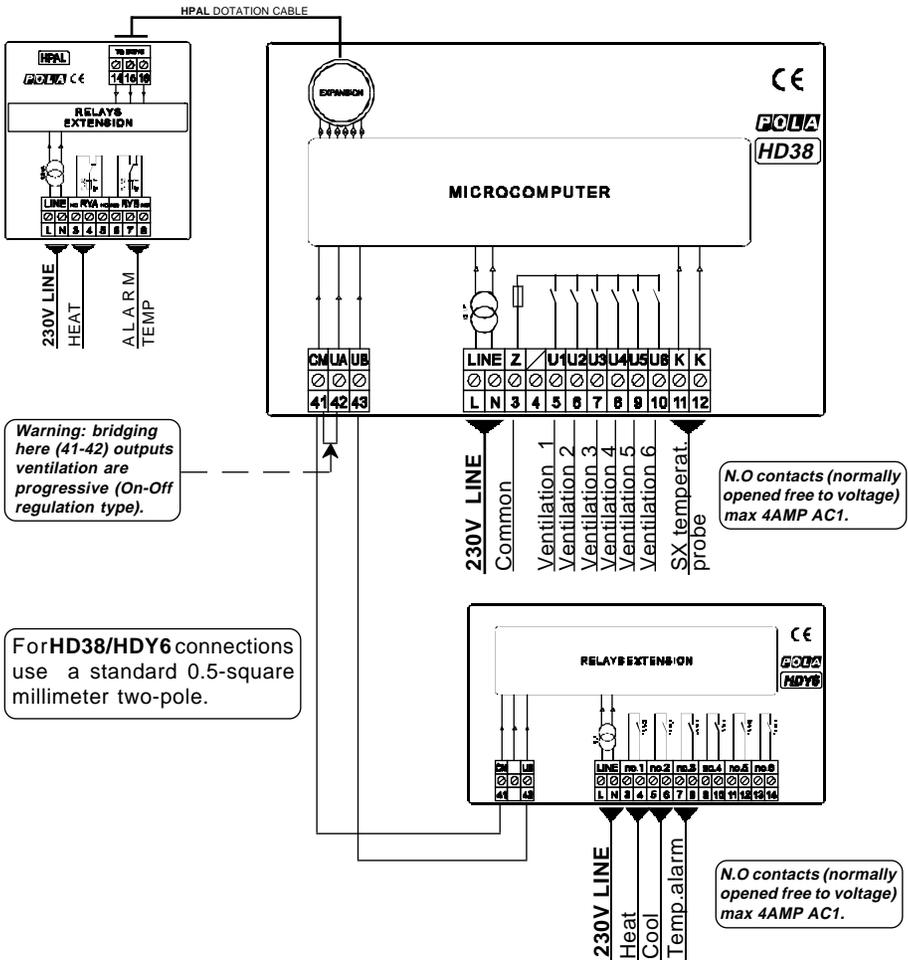
Warning: bridging here (41-42) outputs ventilation are progressive (On-Off regulation type).

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HD38

MICROCOMPUTER

EXPANSION

CM UA UB — 41 42 43

LINE Z U1 U2 U3 U4 U5 U6 K K — L N 3 4 5 6 7 8 9 10 11 12

230V LINE · Common · Ventilation 1 · Ventilation 2 · Ventilation 3 · Ventilation 4 · Ventilation 5 · Ventilation 6 · SX temperat. probe

N.O contacts (normally opened free to voltage) max 4AMP AC1.

For **HD38/HDY6** connections use a standard 0.5-square millimeter two-pole.

RELAYS EXTENSION

POLA
HDY6

230V LINE · Heat · Cool · Temp.alarm

N.O contacts (normally opened free to voltage) max 4AMP AC1.

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