EV9346 Digital controller with 6 outputs for electric pizza ovens, with rapid heating function

(E) ENGLISH

1 IMPORTANT

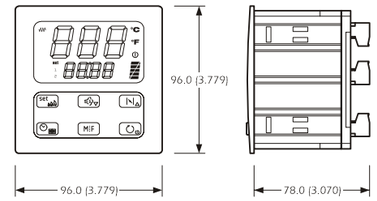
1.1 Important

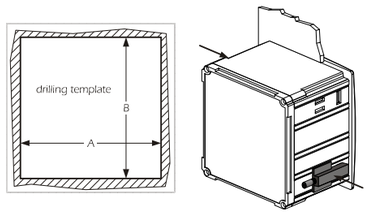
Read these instructions carefully before installation and use and follow all recommendations regarding installation and for the electric connection; keep these instructions for future reference.

The instrument must be disposed of according to local Standards regarding the collection of electric and electronic appliances.

1.2 Dimensions and installation

Panel, with supplied screw bracket; dimensions in mm (in).





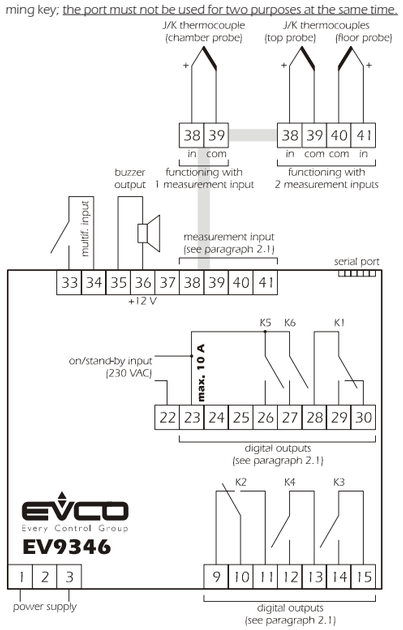
DIMENS.	MINIMUM	TYPICAL	MAXIMUM
A	92.0 (3.622)	92.0 (3.622)	92.8 (3.653)
B	92.0 (3.622)	92.0 (3.622)	92.8 (3.653)

Installation recommendations:

- the thickness of the panel must not exceed 4,0 mm (0,157 in)
- position the brackets as indicated in the drawing in this paragraph; moderate the coupling torque
- make sure that the work conditions (temperature of use, humidity, etc.) lie within the limits indicated in the technical data
- do not install the instrument in proximity of heat sources (resistances, hot air pipes etc.) appliances with strong magnets (large diffusers etc.), places subject to direct sunlight, rain, humidity, excessive dust, mechanical vibrations or shocks
- in compliance with Safety Standards, the protection against any contact with the electric parts must be ensured via correct installation of the instrument. All parts that ensure protection must be fixed in a way such that they cannot be removed without the aid of a tool.

1.3 Electric connection

With reference to the wiring diagram: the serial port is the communication port with the supervising system (through a serial interface, via TTL, with MODBUS communication protocol) or with the programming key; the port must not be used for two purposes at the same time.



Recommendations for the electric connection:

- do not operate on the terminal boards using electric or pneumatic screwdrivers
- if the instrument has been taken from a cold place to a hot one, the humidity could condense inside. Wait about one hour before applying power
- make sure that the power supply voltage, frequency and operational electric power correspond to those of the local power supply
- disconnect the power supply before performing any type of maintenance
- equip the probes with a protection able to insulate them against any contact with metal parts or use isolated probes
- do not use the instrument as a safety device
- for repairs and information regarding the instrument, contact the Evco sales network.

2 PRELIMINARY CONSIDERATIONS

2.1 Preliminary considerations

The instrument can be configured to function with 1 measurement input (default, chamber probe) or with 2 measurement inputs (top probe and floor probe).

Functioning with 1 measurement input allows to independently set the power distributed to the top to that distributed to the floor. Functioning with 2 measurement inputs allows to independently set the top and floor work temperatures.

The utilities managed by the digital outputs (i.e. the K1 relays... K6) are the following:

RELAY	UTILITY MANAGED
K1	top
K2	floor
K3	alarm
K4	chamber light
K5	acoustics
K6	on/stand-by

To set the type of functioning (with 1 measurement input rather than 2) see paragraph 4.1.

2.2 Management of the utilities

Top.

If functioning with 1 measurement input:

- the output is switched on in cyclical mode, preferably when the top output is off (the parameter c1 establishes the cycle time. The procedure given in paragraph 4.3 can be used to set the duration of output switch-on, intended as a percentage of the time established with parameter c1)
- the cyclical activity is subject to the chamber temperature (chamber probe), to the work set-point and parameter r0.

If functioning with 2 measurement inputs:

- the output activity depends mainly on the floor temperature (floor probe), the floor set-point and parameter r0.

Floor.

If functioning with 1 measurement input:

- the output is switched on in cyclical mode, preferably when the top output is off (the parameter c1 establishes the cycle time. The procedure given in paragraph 4.3 can be used to set the duration of output switch-on, intended as a percentage of the time established with parameter c1)
- the cyclical activity is subject to the chamber temperature (chamber probe), to the work set-point and parameter r0.

If functioning with 2 measurement inputs:

- the output activity depends mainly on the floor temperature (floor probe), the floor set-point and parameter r6.

Alarm.

The output is activated during a temperature alarm.

Chamber light.

The output is activated in manual mode.

Through the multifunction input it is also possible to activate the output in remote mode.

Acoustics.

The output is activated during an alarm or an error, with continuous contribution.

On/Stand-by.

The output is activated during the "on" status (see paragraph 3.1).

3 USER INTERFACE

3.1 Preliminary considerations

The following functioning states exist:

- the "on" state (the instrument is powered and on: the regulators can be on)
- the "stand-by" state (the instrument is powered but switched off via software: the regulators are off)
- the "off" state (the instrument is not powered).

Successively, the term "switch-on" means the passage from the stand-by state to the on state. The term "switch-off" means the passage from the on state to the stand-by state.

When powered, the instrument re-proposes the state that it was in when the power supply was disconnected.

3.2 Instrument switch on/off

To pass from the stand-by state to the on state (and vice versa):

- make sure no procedure is in progress
- press ⏻ for 1s.

Through the on/stand-by input it is also possible to pass from the on state to the stand-by state in remote mode.

To pass from the on to the stand-by state in remote mode:

- activate the on/stand-by input (the instrument remains in the stand-by state for the entire duration of input activation).

If the on/stand-by input is active, it will not be allowed to pass from the stand-by state to the on state by pressing the ⏻ key.

3.3 The display

If functioning with 1 measurement input, if the instrument is in the on state:

- the upper part of the display will show the quantity established with parameter P5:
  - if P5 = 0, the display will show the chamber temperature
  - if P5 = 1, the display will show the work set-point
- the lower part of the display will show the size established with parameter P6:
  - if P6 = 0, the display will show the chamber temperature
  - if P6 = 1, the display will show the work set-point (in this case the "**set**" LED will be on).

See also paragraphs 3.4 and 3.6.

If functioning with 2 measurement inputs, if the instrument is in the on state:

- the upper part of the display will show the size established with parameter P5:
  - if P5 = 0, the display will show the top temperature
  - if P5 = 1, the display will show the top set-point
  - if P5 = 2, the display will show the floor temperature
  - if P5 = 3, the display will show the floor set-point
- the lower part of the display will show the size established with parameter P6:
  - if P6 = 0, the display will show the top temperature
  - if P6 = 1, the display will show the top set-point (in this case the "**set**" LED and the "**1**" LED will be on)
  - if P6 = 2, the display will show the floor temperature
  - if P6 = 3, the display will show the floor set-point (in this case the "**set**" LED and the "**2**" LED will be on).

See also paragraphs 3.4 and 3.6.

If the instrument is in the stand-by state:

- the upper part of the display will be off
- the lower part of the display will be off
- the LED ⏻ will be on.

3.4 Learning the quantity shown by the upper part of the display during the on state

- make sure no procedure is in progress
- press ▲ and ⏻ : if functioning with 1 measurement input, the upper part of the display will show one of the labels given in the following table for 2 seconds:

LABEL	MEANING
Pb	chamber temperature
SP	work set-point

If functioning with 2 measurement inputs, the upper part of the display will show one of the labels given in the following table for 2 seconds:

LABEL	MEANING
Pb1	temperature of the top
SP1	top set-point
Pb2	temperature of the floor
SP2	floor set-point

3.5 Temporary setting of the quantity shown by the upper part of the display during the on state

- make sure no procedure is in progress
- press ▲ and ⏻ for 1 s several times: the upper part of the display will show one of the labels given in the tables in paragraph 3.4 for 2 secs, after which it will show the corresponding value.

Any power supply cut-off causes the display of the quantity established with parameter P5 to be restored.

3.6 Learning the quantity shown by the lower part of the display during the on state

- make sure no procedure is in progress
- press ▼ and ⏻ : if functioning with 1 measurement input, the lower part of the display will show one of the labels given in the following table for 2 seconds:

LABEL	MEANING
Pb	chamber temperature
SP	work set-point

if functioning with 2 measurement inputs, the lower part of the display will show one of the labels given in the following table for 2 seconds value of the cooking timer or its count if the timer is active:

LABEL	MEANING
Pb1	temperature of the top
SP1	top set-point
Pb2	temperature of the floor
SP2	floor set-point

3.7 Temporary setting of the quantity shown by the lower part of the display during the on state

- make sure no procedure is in progress
- press ▼ and ⏻ for 1s several times: the lower part of the display will show one of the labels given in the tables in paragraph 3.6 for 2 secs, after which it will show the corresponding value.

Any power supply cut-off causes the display of the quantity established with parameter P6 to be restored.

3.8 Chamber light switch on/off

- make sure no procedure is in progress
- press MIF

Using the multifunction input, it is also possible to cause the same effect by pressing the MIF key in remote mode.

3.9 Buzzer silencing

- make sure no procedure is in progress
- press a key (the first time the key is pressed, the associated effect is not caused).

Pressing the key also causes the deactivation of the acoustic output and the buzzer output.

Using the multifunction input, it is also possible to deactivate the buzzer, the acoustic output and the buzzer output in remote mode.

4 SETTINGS

4.1 Setting the type of functioning (with 1 measurement input rather than 2)

To access the procedure:

- make sure that the instrument is in stand-by state and that no procedure is in progress
- press ▲ and ▼ for 4s: the upper part of the display will show "**PA**"
- press SET : the lower part of the display will show the corresponding value
- press ▲ or ▼ within 15s to set "**743**"
- press SET
- press ▲ and ▼ for 4s: the upper part of the display will show "**Pb**".

To modify the type of functioning:

- press SET : the lower part of the display will show the corresponding value.

The meaning of the values is the following:

VALUE	MEANING
1	functioning with 1 measurement input (default, chamber probe)
2	functioning with 2 measurement inputs (top probe and floor probe)

- press ▲ or ▼ within 15s
- press SET

To exit the procedure:

- press ▲ and ▼ for 4s.

The modification of the type of functioning does not cause the configuration parameters default value to be restored.

4.2.1 Setting the work set-point (only if functioning with 1 measurement input)

- make sure that the instrument is in on state and that no procedure is in progress
- press SET : the lower part of the display will show "**SP**", the upper part the corresponding value and the LED will flash
- press ▲ or ▼ within 15s; see also parameters r1 and r2
- press SET 3 times or do not operate for 15s: the LED will switch-off, after which the instrument will exit the procedure.

To exit the procedure in advance:

- do not operate for 15s (any modifications will be saved).

It is also possible to set the work set-point via the SP parameter.

4.2.2 Setting the top set-point and the floor set-point (only if functioning with 2 measurement inputs)

To modify the top set-point:

- make sure that the instrument is in on state and that no procedure is in progress
- press SET : the lower part of the display will show "**SP1**", the upper part the corresponding value and the LED will flash
- press ▲ or ▼ within 15s; see also parameters r1 and r2
- press SET 2 times or do not operate for 15s: the LED will switch-off, after which the instrument will exit the procedure.

To modify the floor set-point:

- press SET during the modification of the top set-point: the lower part of the display will show "**SP2**", the upper part the corresponding value and the LED will flash
- press ▲ or ▼ within 15s; see also parameters r7 and r8
- press SET : the LED will switch-off, after which the instrument will exit the procedure.

To go back to previous levels:

- press ESC several times during the procedure.

To exit the procedure in advance:

- do not operate for 15s (any modifications will be saved).

It is also possible to set the top set-point via parameter SP1 and the floor set-point via parameter SP2.

4.3 Setting the power distributed to the top and the power distributed to the floor (only if functioning with 1 measurement input)

To modify the power distributed to the top:

- press SET during the modification of the work set-point: the lower part of the display will show "**Po1**", the upper part the corresponding value and a proportional number of bars of the ◤ will flash
- press ▲ or ▼ within 15s; see also parameters c0 and c1
- do not operate for 15s: the LED ◤ will switch-off, after which the instrument will exit the procedure.

To modify the power distributed to the floor:

- press SET during the modification of the power distributed to the top: the lower part of the display will show "**Po2**", the upper part the corresponding value and a proportioned number of bars of the LED ◢ will flash
- press ▲ or ▼ within 15s; see also parameters c0 and c1
- press SET : the LED ◢ will switch-off, after which the instrument will exit the procedure.

To go back to previous levels:

- press ESC several times during the procedure.

To exit the procedure in advance:

- do not operate for 15s (any modifications will be saved).

It is also possible to set the power distributed to the top through parameter Po1 and the power distributed to the floor through parameter Po2.

4.4 Setting the configuration parameters

To access the procedure:

- make sure that the instrument is in stand-by state and that no procedure is in progress
- press ▲ and ▼ for 4s: the upper part of the display will show "**PA**"
- press SET : the lower part of the display will show the corresponding value
- press ▲ or ▼ within 15s to set "**-19**"
- press SET or do not operate for 15s
- press ▲ and ▼ for 4s: if functioning with 1 measurement input, the upper part of the display will show "**SP**"; if functioning with 2 measurement inputs, the upper part of the display will show "**SP1**".

To select a parameter:

- press ▲ or ▼

To modify a parameter:

- press SET : the lower part of the display will show the corresponding value
- press ▲ or ▼ within 15s
- press SET or do not operate for 15s.

To exit the procedure:

- press ▲ and ▼ for 4s or do not operate for 60s (any modifications will be saved).

Cut the instrument power supply off after modification of the parameters.

4.5 Restore the default value of the configuration parameters

- make sure that the instrument is in stand-by state and that no procedure is in progress
- press ▲ and ▼ for 4s: the upper part of the display will show "**PA**"
- press SET : the lower part of the display will show the corresponding value
- press ▲ or ▼ within 15s to set "**743**"
- press SET or do not operate for 15s
- press ▲ and ▼ for 4s: the upper part of the display will show "**Pb**"
- press ▲ or ▼ to select "**dEF**"
- press SET : the lower part of the display will show the corresponding value
- press ▲ or ▼ within 15s to set "**149**"
- press SET or do not operate for 15s: the upper part of the display will show "**dEF**" flashing for 4s, after which "**dEF**" will switch on
- cut the instrument power supply off.

To exit the procedure in advance:

- press ▲ and ▼ for 4s during the procedure (i.e. before setting "**149**": restore will not be carried out).

Make sure that the default value of the parameters is appropriate.

5 RAPID HEATING (only if functioning with 1 measurement input)

5.1 Preliminary considerations

The rapid heating allows to reach the work set-point as quickly as possible, supplying 100% of the power both to the top and the floor (i.e. excluding switch-on of the top and floor outputs in a cyclical way with benefit to switch-on in continuous mode).

When the temperature of the chamber reaches the "work set-point - temperature established with parameter c3" value, the function is interrupted.

5.2 Rapid heating activation

- causes the event established with parameter c2:
  - if c2 = 1, press SET for 1s (make sure that the instrument is in on state and that no procedure is in progress)
  - if c2 = 2, pass from the stand-by state to the on state
  - if c2 = 3, press SET for 1s (make sure that the instrument is in on state and that no procedure is in progress) or pass from the stand-by state to the on state.

If parameter c2 is set at 0, the function cannot be activated.

When the function is in progress the upper part of the display shows "**F-F**" alternately to the quantity established with parameter P5.

5.3 Interruption of rapid heating in manual mode

- make sure no procedure is in progress
- press SET for 1s.

6 SIGNALS

6.1 Signals

LED	MEANING
≋	top and floor LED if it is on, the top output and/or the floor output will be on if it flashes, the modification of the work set-point, the top set-point and the floor set-point is in progress (with the procedures indicated in paragraphs 4.2.1 or 4.2.2)
◤	power distributed to the top LED supplies and indication regarding the power distributed to the top if it flashes, the modification of the power distributed to the top is in progress (with the procedure indicated in paragraph 4.3)
◢	power distributed to the floor LED supplies and indication regarding the power distributed to the floor if it flashes, the modification of the power distributed to the floor is in progress (with the procedure indicated in paragraph 4.3)
°C	degrees Celsius LED if it is on, the unit of measurement of the temperatures will be degrees Celsius (parameter P2)
°F	degrees Fahrenheit LED if it is on, the unit of measurement of the temperatures will be degrees Fahrenheit (parameter P2)
⏻	on/stand-by LED if it is on, the instrument is in the stand-by state
set	set-point LED if it is on, the quantity shown by the lower part of the display will be the work set-point value, the top set-point and the floor set-point
1	▪ the quantity displayed by the lower part of the display will be the top set-point value ▪ the quantity displayed by the lower part of the display will be the floor set-point value

7 INDICATIONS

7.1 Indications

INDICAT.	MEANING
F-F	alternately to the quantity established with parameter P5: the rapid heating function will be in progress (only if functioning with 1 measurement input)

8 ALARMS

8.1 Alarms

CODE	MEANING
AL	chamber temperature alarm (only if functioning with 1 measurement input) Remedies: ▪ check the chamber temperature ▪ see parameters A1 and A3 Consequences: ▪ the alarm output will be activated ▪ the acoustics output and the buzzer output will be activated
AL1	top temperature alarm (only if functioning with 2 measurement inputs) Remedies: ▪ check the top temperature ▪ see parameters A1 and A3 Consequences: ▪ the alarm output will be activated ▪ the acoustics output and the buzzer output will be activated
AL2	floor temperature alarm (only if functioning with 2 measurement inputs) Remedies: ▪ check the floor temperature ▪ see parameters A5 and A7 Consequences: ▪ the alarm output will be activated ▪ the acoustics output and the buzzer output will be activated

When the causes of the alarm have disappeared, the instrument will go back to normal functioning.

9 INTERNAL DIAGNOSTICS

9.1 Internal diagnostics

CODE	MEANING
Pr1	If functioning with 1 measurement input: chamber probe error Remedies: ▪ see parameter P0 ▪ check probe integrity ▪ check the instrument-probe connection ▪ check the chamber temperature Main consequences: ▪ the top output and the floor output will be deactivated ▪ the acoustics output and the buzzer output will be activated

	If functioning with 2 measurement inputs: top probe error Remedies: ▪ the same as the previous case but relative to the top probe Main consequences: ▪ the top output will be deactivated ▪ the acoustics output and the buzzer output will be activated
Pr2	floor probe error (only if functioning with 2 measurement inputs) Remedies: ▪ the same as the previous case but relative to the floor probe Main consequences: ▪ the floor output will be deactivated ▪ the acoustics output and the buzzer output will be activated

When the causes of the alarm have disappeared, the instrument will go back to normal functioning.

10 TECHNICAL DATA

10.1 Technical data

Container: grey self-extinguishing.
Front panel protection rating: IP 54.
Connections: removable terminal boards (power supply, inputs and outputs), 6-pole connector (serial port).
Temperature of use: from 0 to 55 °C (from 32 to 131 °F, 10 ... 90% relative humidity without condensate).
Power supply: 115 ... 230 VAC, 50/60 Hz, 5 VA (approx) or 24 VAC.
Alarm buzzer: incorporated.
Measurement inputs: can be configured:
- 1 (chamber probe) for J/K thermocouple if functioning with 1 measurement input
- 2 (top probe and floor probe) for J/K thermocouple if functioning with 2 measurement inputs

Digital inputs: 2 inputs:
- on/stand-by input in high voltage (230 VAC) with configurable polarity
- multifunction input, for NO/NC contact (potential-free contact, 5 V 1 mA).

Range of measurement: from -99 to 800 °C (from -99 to 999 °F) for J thermocouple, from -99 to 999 °C (from -99 to 999 °F) for K thermocouple.
Resolution: 1 °C/1 °F.
Digital outputs: 6 relays:
- **top (relay K1):** 8 A res. @ 250 VAC (contact in exchange)
- **floor (relay K2):** 8 A res. @ 250 VAC (contact in exchange)
- **alarm (relay K3):** 8 A res. @ 250 VAC (NO contact)
- **chamber light (relay K4):** 8 A res. @ 250 VAC (NO contact)
- **acoustics (relay K5):** 8 A res. @ 250 VAC (NO contact)
- **on/stand-by (relay K6):** 8 A res. @ 250 VAC (NO contact)

The maximum current accepted on clamp 23 is 10 A.
Other outputs: buzzer output (12 V, max. 20 mA); the output is activated during alarms and errors, with continuous contribution.
Serial port: port for the communication with the supervising system (through a serial interface, via TTL, with MODBUS communication protocol) or with the programming key.

11 WORK SET-POINT, POWER DISTRIBUTED AND CONFIGURATION PARAMETERS

11.1 Work set-point

	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	WORK SET-POINT
	r1	r2	°C/°F (1)	150	not visible	work set-point
	r1	r2	°C/°F (1)	not visible	150	top set-point
	r7	r8	°C/°F (1)	not visible	150	floor set-point

11.2 Power distributed

PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	POWER DISTRIBUTED
	0	100	%	50	not visible	power distributed to the top (percentage of c1); see also c0 and c1
	0	100	%	50	not visible	power distributed to the floor (percentage of c1); see also c0 and c1

11.3 Configuration parameters

PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	WORK SET-POINT
SP	r1	r2	°C/°F (1)	150	not visible	work set-point
SP1	r1	r2	°C/°F (1)	not visible	150	top set-point
SP2	r7	r8	°C/°F (1)	not visible	150	floor set-point
PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	POWER DISTRIBUTED
Po1	0	100	%	50	not visible	power distributed to the top (percentage of c1); see also c0 and c1
Po2	0	100	%	50	not visible	power distributed to the floor (percentage of c1); see also c0 and c1
PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	MEASUREMENT INPUTS
CA1	-25/-50	25/50	°C/°F (1)	0	0	with 1 measurement input, chamber probe inset; with 2 measurement inputs, top probe offset
CA2	-25/-50	25/50	°C/°F (1)	not visible	0	floor probe offset
P0	0	1	----	0	0	type of probe 0 = J 1 = K
P2	0	1	----	0	0	temperature unit of measurement (2) 0 = °C 1 = °F
P5	0	(3)	----	0	0	quantity shown by the upper part of the display during the on state or during normal functioning 0 = with 1 measurement input, chamber temperature; with 2 measurement inputs, top temperature 1 = with 1 measurement input, work set-point; with 2 measurement inputs, top set-point 2 = temperature of the floor 3 = floor set-point
P6	0	(3)	----	1	1	quantity shown by the lower part of the display during the on state or during normal functioning 0 = with 1 measurement input, chamber temperature; with 2 measurement inputs, top temperature 1 = with 1 measurement input, work set-point; with 2 measurement inputs, top set-point 2 = temperature of the floor 3 = floor set-point
PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	MAIN REGULATOR
r0	1	99	°C/°F (1)	5	5	with 1 measurement input, work set-point differential; with 2 measurement inputs, top set-point differential
r1	0	r2	°C/°F (1)	50	50	with 1 measurement input, minimum work set-point; with 2 measurement inputs, top minimum set-point
r2	r1	999	°C/°F (1)	350	350	with 1 measurement input, maximum work set-point; with 2 measurement inputs, top maximum set-point
r6	1	99	°C/°F (1)	not visible	5	floor set-point differential
r7	0	r8	°C/°F (1)	not visible	50	minimum floor set-point
r8	r7	999	°C/°F (1)	not visible	350	maximum floor set-point
c0	0	2	----	0	not visible	restraint between the power distributed to the top and power distributed to the floor 0 = no restraint 1 = the modification of the power supplied to an output automatically causes the supply of the maximum power to the other 2 = the modification of the power supplied to an output causes an automatic adaptation of the power supplied to the other such to guarantee that the sum of the two percentages is always 100
c1	1	999	s	80	not visible	cycle time for the top output and floor output switch-on, see also Po1 and Po2
c2	0	3	----	1	not visible	event that causes the activation of the rapid heating function 0 = function cannot be activated 1 = press SET for 1s (make sure that the instrument is in on state and that no procedure is in progress) 2 = pass from stand-by state to on state 3 = press SET for 1s (make sure that the instrument is in on state and that no procedure is in progress) or pass from stand-by state to on state
c3	0	99	°C/°F (1)	10	not visible	temperature of the chamber over which the rapid heating function is interrupted (relative to the work set-point i.e. "work set-point - c3")
PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	TEMPERATURE ALARMS
A1	0	999	°C/°F (1)	0	0	with 1 measurement input, temperature of the chamber above which the chamber temperature alarm is activated; with 2 measurement inputs, temperature of the top above which the top temperature alarm is activated; see also A3 (4)
A2	0	240	min	0	0	with 1 measurement input, chamber temperature alarm delay; with 2 measurement inputs, top temperature alarm delay
A3	0	2	----	0	0	with 1 measurement input, type of chamber temperature alarm delay; with 2 measurement inputs, type of top temperature alarm delay 0 = no alarm 1 = absolute (i.e. A1) 2 = with 1 measurement input, relative to the work set-point (i.e. "work set-point + A1"); with 2 measurement inputs, relative to the top set-point (i.e. "top set-point + A1")
A4	0	999	°C/°F (1)	not visible	0	floor temperature above which the floor temperature alarm is activated, se also A6 (4)
A5	0	240	min	not visible	0	floor temperature alarm delay
A6	0	2	----	not visible	0	type of floor temperature alarm 0 = no alarm 1 = absolute (i.e. A4) 2 = relative to the floor set-point (i.e. "floor set-point + A4")
PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	DIGITAL INPUTS
i1	0	1	----	0	0	on/stand-by input polarity 0 = live input active 1 = non-live input active
i5	0	2	----	0	0	effect caused by the activation of the multifunction input 0 = no effect 1 = CHAMBER LIGHT SWITCH-ON/OFF - the activation of the input will cause the chamber light to switch-on and the successive activation will cause its switch-off 2 = BUZZER, ACOUSTIC OUTPUT AND BUZZER OUTPUT DEACTIVATION - the activation of the input will cause deactivation of the buzzer, the acoustic output and the buzzer output (activate the input again to deactivate these utilities again)
i6	0	1	----	0	0	type of contact of the multifunction input 0 = NO (input active with closed contact) 1 = NC (input active with open contact)
PARAM.	MIN.	MAX.	U.M.	1 INPUT	2 INPUTS	SERIAL NETWORK (MODBUS)
LA	1	247	----	247	247	instrument address
Lb	0	3	----	2	2	baud rate 0 = 2.400 baud 1 = 4.800 baud 2 = 9.600 baud 3 = 19.200 baud
LP	0	2	----	2	2	parity 0 = none (no parity) 1 = odd 2 = even

(1) the unit of measurement depends on parameter P2
(2) **set the parameters relative to the regulators appropriately after modification of parameter P2**
(3) the value depends on the type of functioning (1 with 1 measurement input and 3 with 2 measurement inputs)
(4) the parameter differential is 10 °C/18 °F.

EVCO S.p.A.
Via Mezzaterra 6, 32036 Sedico Belluno ITALY
Phone +39-0437-852468 ▪ Fax +39-0437-83648
info@evco.it ▪ www.evco.it