

EV7603/EV7613

Multifunction digital controllers for electric ovens

ENGLISH

1 GETTING STARTED

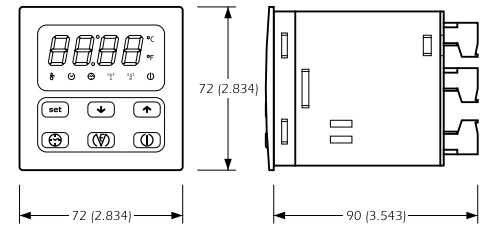
1.1 Important

Read these instructions carefully before installing and using the instrument; do not forget following all additional information for installation and electrical connection.

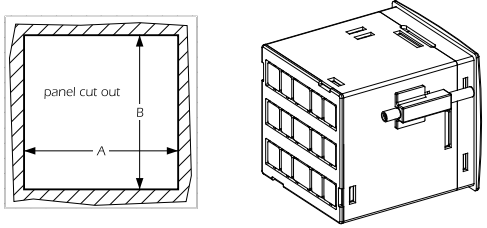
Keep these instructions close to the instrument for future consultations.

1.2 Installing the instrument

Panel mounting, with screw brackets.



Dimensions in mm (in).

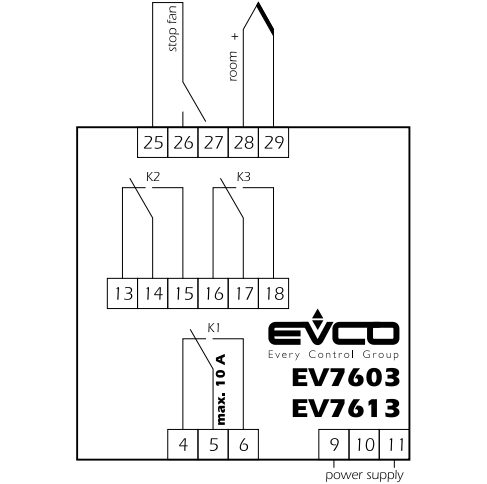


DIMENS.	MINIMUM	TYPICAL	MAXIMUM
A	68.0 (2.677)	68.0 (2.677)	68.7 (2.704)
B	68.0 (2.677)	68.0 (2.677)	68.7 (2.704)

Additional information for installation:

- the maximum panel thickness must be 4 mm (0.157 in)
- position the brackets as indicated; moderate the clamping torque, in order not to damage box and screw brackets
- working conditions (ambient temperature, humidity, etc.) must be between the limits indicated in the technical data
- install the instrument in locations with suitable ventilation, in order to avoid the overheating of the instrument
- do not install the instrument close to heating sources (resistances, hot air ducts, etc.), locations subject to direct sunlight, rain, humidity, dust, mechanical vibrations or bumps, devices provided with big magnetos (big speakers, etc.)
- according to safety norms, the protection against electrical parts must be ensured by a correct installation of the instrument; the parts that ensure the protection must be installed so that you can not remove them if not by using a tool.

1.3 Wiring diagram



Additional information for electrical connection:

- do not operate on the terminal blocks with electrical or pneumatic screwdriver
- if the instrument has been moved from a cold to a warm location, the humidity will condense on the inside; wait about an hour before applying power to the instrument
- test the working power supply voltage, working electrical frequency and working electrical power of the instrument; they must correspond with the local power supply
- disconnect the local power supply before servicing the instrument
- give the probe a protection able to protect them against contacts with metal parts or use insulated probes
- do not use the instrument as safety device
- do not try repairing the instrument yourself; for repairs, always use the sales network

- for any further information concerning the instrument, please consult Evco.

2 CONFIGURING THE INSTRUMENT

2.1 Preliminary information

You can choose the users for relays K1, K2 and K3 (among five combinations).

INST. CODE	RELAY K1	RELAY K2	RELAY K3
1	output for regulation	steam output	fan output
2	output for regulation	steam output	output for acoustic signalings
3	output for regulation	output for acoustic signalings	fan output
4	output for regulation	airhole output	fan output
5	output for regulation	airhole output	output for acoustic signalings

Further features for EV7603:

- cooking timer.

Further features for EV7613 (in addition to the ones for EV7603):

- real time clock and function Programmed starting.

2.2 Selecting the instrument code

To gain access the procedure:

- switch off the power supply of the instrument
- restore the power supply
- press

3 times in 4 s since the power supply has been restored: the instrument will show "SEL" flashing in the display.

Otherwise:

- press 1 s to turn the instrument off
- press and 4 s: the instrument will show the instrument code in the display.

- press or to select "PA"
- press or in 15 s to set "743"
- press and 4 s: the instrument will show "SEL" flashing in the display.

To modify the instrument code:

- press or in 15 s
- press

To quit the procedure:

- press 1 s or switch off the power of the instrument.

If you modify the instrument code, the instrument will not lose the value of configuration parameters.

3 USER INTERFACE

3.1 Turning the instrument on/off

- press 1 s.
- To turn off means turning the instrument off via software (the instrument is connected with the power supply).

3.2 User interface

If the instrument is turned on, the display will show the room temperature or the working setpoint or the count of the cooking timer or the real time (only EV7613), according to parameter c9.

If the instrument is turned off, the display will be switched off or will show the real time (only EV7613), according to parameter c7.

3.3 Selecting the quantity to show in the display

- press

The instrument will show in succession:

- room temperature (LED and will be switched off)
- working setpoint (LED will be lit)
- count of the cooking timer (LED will be lit or will flash)
- real time (only EV7613, LED will be lit).

If you turn the instrument off, it will restore parameter c9.

3.4 Silencing the alarms

- press a button.

4 REAL TIME CLOCK (ONLY EV7613)

4.1 Setting the clock

To gain access the procedure:

- press 1 s: the instrument will show "rtc" in the display and after 1 s will show the real time (hours:minutes) (the left part of the display will flash).

To modify the hours:

- press or in 15 s.

To modify the minutes:

- press during the modification of the hours, then ...

- press or in 15 s.

To quit the procedure:

- press during the modification of the minutes or do not operate 15 s.

5 PROGRAMMED STARTING (ONLY EV7613)

5.1 Setting the starting time

To gain access the procedure:

- make sure the instrument is turned on and the count of the cooking timer is not running
- press the instrument will show in succession "tin" and the cooking timer value (hours:minutes); the left part of the display will flash

- press

in 15 s: the instrument will show in succession "dEL" and the programmed starting time (hours:minutes); the left part of the display will flash.

To modify the hour:

- press or in 15 s.

To modify the minutes:

- press during the modification of the hour
- press or in 15 s.

To quit the procedure:

- or do not operate 15 s.

To modify the number of days the instrument must put back the starting: during the modification of the minutes: the instrument will show in succession "int" and the number of days in 15 s. (you can set the number of days between 0 and 6) (1).

- press or

To quit the procedure:

- press during the modification of the number of days or do not operate 15 s.

- for example: if it is 08:00, set 0 as number of days to turn the instrument on automatically at 20:00 of the same day; if it is 20:00, set 1 as number of days to turn the instrument on automatically at 08:00 of the following day.

5.2 Activating function Programmed starting

- make sure the instrument is turned on
- press and 1 s: this will turn the instrument off.

At the time you have set with the procedure indicated in paragraph 5.1, the instrument will automatically start working; to turn the instrument on automatically also the following days, repeat the procedure.

The alarm "Real time clock error" interrupts the function.

5.3 Interrupting function Programmed starting

- make sure the instrument is turned off
- press and 1 s.

6 COOKING TIMER

6.1 Setting the cooking timer

To gain access the procedure:

- make sure the instrument is turned on
- press the instrument will show "tin" in the display and next the cooking timer value (hours:minutes) (the left part of the display will flash).

To modify the hours:

- press or in 15 s (2) (3).

To modify the minutes:

- press during the modification of the hours, then ...

- press or in 15 s (2) (3).

To quit the procedure:

- do not operate 15 s (3).

During the count of the cooking timer the instrument activates the output for cooking timer.

- you can set the cooking timer between 00:00 and 24:00 h:min

- you can modify the cooking timer value also if the count is running; if you set 00:00, the instrument will interrupt the function and the buzzer will utter an intermittent beep 3 s.

6.2 Activating the cooking timer

- press during the modification of the minutes.

Otherwise:

- make sure the instrument is turned on
- press and 1 s.

6.3 Interrupting the cooking timer

- make sure the instrument is turned on

- press and 1 s.

7 WORKING SETPOINT (WORKING TEMPERATURE)

7.1 Setting the working setpoint

- make sure the instrument is turned on

- press
- press or in 15 s (look at parameters r1 and r2 as well).

To quit the procedure:

- do not operate 15 s.

8 STEAM INJECTION (IF PRESENT)

8.1 Preliminary information

If parameter t0 has value 0, pressing button the instrument will turn the injector on the time you will have set with parameter t2 or as long as you will keep pressed the button; parameter t1 will set the minimum time between two injections in succession.

If parameter t0 has value 1, the instrument will automatically turn the injector on the time you will have set with parameter t2 and will turn the injector off the time you will have set with parameter t1; injection must have been enabled pressing button .

9 CONFIGURATION PARAMETERS

9.1 Setting configuration parameters

To gain access the procedure:

- make sure the instrument is turned off
- press and 4 s: the instrument will show "1"
- press or to select "PA"
- press

- press or in 15 s to set "19"
- press
- press and 4 s: the instrument will show "P0".
- To select a parameter:
 - press or
- To modify a parameter:
 - press
 - press or in 15 s
 - press
- To quit the procedure:
 - press and 4 s or do not operate 60 s.

9.2 Restoring default configuration parameters

To gain access the procedure:

- switch off the power supply of the instrument
- restore the power supply
- press 3 times in 4 s since the power supply has been restored: the instrument will show "SEL" flashing.

Otherwise:

- press 1 s to turn the instrument off
- press and 4 s: the instrument will show "1" to select "PA"
- press or in 15 s to set "743" or do not operate 15 s
- press or 4 s: the instrument will show "SEL" flashing.
- To restore default configuration parameters:
 - press the instrument will show "dEF" flashing
 - press or in 15 s to set "149" or do not operate 15 s: the instrument will show "SEL" flashing.
 - press

To quit the procedure:

- press 1 s or switch off the power supply of the instrument.

10 SIGNALS

10.1 Signals

LED	MEANING
	LED working setpoint if it is switched off and LED clock and timer are too, the instrument will show the room temperature (parameter c9) if it is lit, the instrument will show the working setpoint (parameter c9) if it flashes, the modification of the working setpoint will be running
	LED clock if it is lit, the instrument will show the real time (only EV7613, parameter c7) or the modification of the real time will be running
	LED timer if it is lit, the instrument will show the count of the cooking timer (parameter c9) or the modification of the cooking timer value will be running if it flashes when the instrument is turned on, the count of the cooking timer will be running if it flashes when the instrument is turned off, the programmed starting will be running (only EV7613)
out 1	LED load if it is lit, the load will be turned on
out 2	LED load if it is lit: - the steam injection will be running (if present and if parameter t0 has value 0) - the steam injection will have been enabled (if present and if parameter t0 has value 1) - the airhole will be turned on by hand (if present)
	LED on/stand by if it is lit, the instrument will be turned off
°F	LED Fahrenheit degree if it is lit, the unit of measure of the temperature will be Fahrenheit degree (parameter P8)
°C	LED Celsius degree if it is lit, the unit of measure of the temperature will be Celsius degree (parameter P8)

11 ALARMS

11.1 Alarms

CODE	MEANING
AL	Temperature alarm (parameters A1 and A4) Remedies: - check the room temperature Effects: - no effect

Alarm code flashes alternated with a quantity.

12 INTERNAL DIAGNOSTICS

12.1 Internal diagnostics

CODE	MEANING
SEL	Configuration alarm Remedies: - restore default configuration parameters Effects: - the load will be turned off
PF1	Room probe alarm Remedies: - check the kind of probe (parameter P0) - check the integrity of the probe - check the connection instrument-probe - check the room temperature Effects: - the load will be turned off
Err	Internal alarm Remedies: - switch off the power supply of the instrument; unless the alarm disappears, you will have to change the instrument Effects: - the load will be turned off
tEr1	Interruption of power supply during the count of the cooking timer Remedies: - check the reasons that have given the interruption of power supply Effects: - the instrument will work according to parameter r8
tEr2	Clock alarm Remedies: - set the real time again Effects: - if the programmed starting is running, the instrument will interrupt the function - the programmed starting will not be available

14 SETPOINT AND CONFIGURATION PARAMETERS

14.1 Setpoint

	MIN.	MAX.	U.M.	DEF.	SETPOINT
r1	r2	25/50	°C/°F	150	working setpoint

14.2 Configuration parameters

PARAM.	MIN.	MAX.	U.M.	DEF.	MEASURE INPUTS
P0	0	1	---	0	kind of probe (0 = Tc "J", 1 = Tc "K")
P1	-25/-50	25/50	°C/°F	0	room probe calibration
P8	0	1	---	0	temperature unit of measure (0 = Celsius degree, 1 = Fahrenheit degree)

PARAM.	MIN.	MAX.	U.M.	DEF.	MAIN REGULATOR
r0	1	99	°C/°F	5	hysteresis (differential, relative to the working setpoint)
r1	0	r2	°C/°F	50	minimum working setpoint programmable
r2	r1	999	°C/°F	350	maximum working setpoint programmable
r7	0	1	---	0	connection between the status of the output for regulation and the cooking timer (0 = no connection, 1 = unless the count of the cooking timer is running, the instrument will turn off the output for regulation)

r8	0	240	min	240	maximum length of a lack of power supply (that has arisen during the count of the cooking timer) in order that the count is not interrupted even if the instrument is not supplied (visible only in EV7613)
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PARAM.	MIN.	MAX.	U.M.	DEF.	TEMPERATURE ALARM
A1	0	999	°C/°F	300	temperature above which the instrument activates the alarm (it is important if A4 = 1)
A4	0	1	---	1	enabling the alarm (1 = YES)

PARAM.	MIN.	MAX.	U.M.	DEF.	POWER/COOKING TIMER
c4	-1	120	s	15	time the buzzer and the output for acoustic signalings (if present) are activated at the end of the cooking timer (-1 = the buzzer must be silenced by hand and the output will keep being activated)

c5	0	60	min	20	time between the instrument turns the airhole on automatically and the end of the cooking timer (visible only if the instrument code is 1); look at c6 as well (only if the instrument code has value 4 or 5)
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c6	0	60	min	20	time the instrument turns the airhole on automatically (visible only if the instrument code is 1); look at c5 as well (only if the instrument code has value 5)
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c7	0	1	---	0	visualization of the real time in the display at the bottom when the instrument is turned off (1 = YES) (visible only in EV7613)
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c8	0	240	min	10	showing the count of the cooking timer automatically before its end (duration)
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c9	0	3	---	0	quantity to show when the instrument is turned on (0 = room temperature, 1 = working setpoint, 2 = count of the cooking timer, 3 = real time (only on EV7613))
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cA	0	3	---	1	display colour (0 = both temperatures and times in red, 1 = temperatures in red and times in green, 2 = temperatures in green and times in red, 3 = both temperatures and times in green)
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PARAM.	MIN.	MAX.	U.M.	DEF.	DIGITAL INPUTS
i0	0	1	---	0	kind of contact of the multifunction input (it is important if i1 ≠ 0; 0 = NO, 1 = NC) (only if the instrument code has value 1, 3 or 4)

i1	0	1	---	0	action given by the activation of the multifunction input (0 = no action, 1 = the fan will be turned off)
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i2	0	1	---	1	showing IA during a stop fan input alarm (1 = yes) (only if the instrument code has value 1, 3 or 4)
----	---	---	-----	---	--

PARAM.	MIN.	MAX.	U.M.	DEF.	STEAM INJECTION (VISIBLE ONLY IF THE INSTRUMENT CODE IS 3)
t0	0	1	---	0	steam injection operation (0 = if you press button the instrument will turn the injector on the time you will have set with parameter t2 or as long as you will keep pressed the button; parameter t1 will set the minimum time between two injections in succession, 1 = the instrument will automatically turn the injector on the time you will have set with parameter t2 and will turn the injector off the time you will have set with parameter t1; injection must have been enabled pressing button) (only if the instrument code has value 1 or 2)

t1	0	250	s	1	if t0 = 0, minimum time between two injections in succession; if t0 = 1, time the instrument turns the injector off; look at t2 as well (only if the instrument code has value 1 or 2)
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t2	1	250	ds	10	if t0 = 0, minimum time the instrument turns the injector on; if t0 = 1, time the instrument turns the injector on; look at t1 as well (only if the instrument code has value 1 or 2)
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IA	Fan stop input alarm Remedies: check the reasons that have provoked the activation of the
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