



Product specifications

EVF305

**Digital controllers for the management of the rotisserie
with capacitive type user interface**

	Drawn-up by
Name and surname	
Date	November 2012

1. REVISIONS OF THE DOCUMENT






Version	Drawn-up by	Date	Significant modifications
1.00		28/11/2012	First draft
1.01		7/12/2012	Parameter P5 description modified Parameter P6 introduced Parameter c19 becomes c12
1.02		21/12/2012	Various modifications
1.02		13/03/13	Meaning of M:F LED Parameter c20 Modifies cooking programs saving procedure Keys back-lighting Count pause/re-start function Learning function of programs running Modifies displays during washing









1. I/O DEFINITION




Below find the summary table of the I/O of the two controllers:

I/O CONTROLLERS	EVF305
Measure inputs	2 for J/K + 1 NTC thermocouples on board
	Chamber Probe (clamps 20-21)
	Needle Probe (clamps 20-22)
Digital inputs	1 per NO/NC potential-free contact
	Door (clamps 18-19)
Digital outputs	5 electro-mechanical relays
	K1 – Heating output (clamps 4-5)
	K2 – SPIT MOTOR output/FANS 2 output (clamps 4-6)
	K3 – Washing injection output (clamps 7-8)
	K4 – Light output (clamps 9-10)
	K5 – FANS output/FANS 1 output (clamps 11-12-13)
Serial ports	2
	RS485 Modbus for systems or data exchange with other board connected to the same plant
	RS485 Modbus for keypad

2. DESCRIPTION OF USER INTERFACE

	Red 3 digit display <ul style="list-style-type: none"> - In STAND-BY it is off - In ON, during normal operation, it displays the temperature of the chamber probe. - It can temporarily display the temperature of the needle probe
	On if the heating output is active, otherwise off
PROG	On if a program is in progress
	On if SPITS or FANS 1/FANS 2 on (see parameter u4)
°C	On if the red 3 digit display shows a temperature or a set point and P2=0
°F	On if the red 3 digit display shows a temperature or a set point and P2=1
MIF	Flashing if c20 ≠ 0 and the programs saving procedure is enabled
	Green 4 digit display indicating all of the information regarding the cooking timer or clock.
SET	Not used
1	Not used
2	Not used
TIMER	Flashing if a count is in progress
CLOCK	On if the data shown by the green 4 digit display is the real time
DELAY	On when the value displayed refers to the controller programmed switch on time
	Orange 1 digit display, used to show the day of the week, if the clock is enabled. If there is a program in progress, "P" is displayed

	<p>ON/STAND-BY key:</p> <ul style="list-style-type: none"> - If pressed for 1 second, it takes the oven from STAND-BY to ON and vice versa. <p>The key is active in any machine status/mode.</p> <p>The key back-lighting is always active.</p>
	<p>"START/STOP" key:</p> <ul style="list-style-type: none"> - If pressed during an ON phase, the timer is started - If held down for 1 second, the timer stops. - If pressed during pre-heat, a manual cycle is started. - If pressed when the timer count is in progress, it performs the count PAUSE/RESTART actions - If pressed during the selection of a program, the program itself is started <p>The key back-lighting is activated in ON mode</p> <p>The back-lighting is on in STAND-BY if there is an active deferred start-up, otherwise it is off.</p>
	<p>SET key:</p> <ul style="list-style-type: none"> - If pressed during the ON status, it allows access to the chamber work set point settings - During set point setting, it is used to confirm the temperature value just set <p>The key back-lighting is active in ON mode, off during the STAND-BY status.</p>
	<p>TIMER key:</p> <ul style="list-style-type: none"> - If pressed during the ON status, it allows to access the cooking timer settings and, more precisely, the setting of the minutes. - If pressed during the setting of the cooking timer, it allows to pass from setting the hours to setting the minutes and to then confirm the minutes value set. - If the clock is enabled and there is no count in progress, when pressed for 1 second it allows to access clock setting. Setting is allowed in STAND-BY and in ON <p>The key back-lighting is active in ON mode, off during the STAND-BY status.</p>
	<p>Washing key</p> <ul style="list-style-type: none"> - During the ON state, if pressed for 4 seconds, it allows to activate/deactivate the washing function. <p>The key back-lighting is off during the STAND-BY status; it is active in ON mode.</p>
	<p>DOWN key:</p> <ul style="list-style-type: none"> - If pressed during the setting procedure, it decreases the value displayed - If pressed together with the UP key for 4 seconds, it allows to enter the parameters setting procedure. <p>The key back-lighting is active in ON mode, off during the STAND-BY status.</p>
	<p>PROGRAMS key:</p> <ul style="list-style-type: none"> - If pressed, during the ON status, access is given to the memorised programs menu - During the ON status, if pressed again inside the memorised programs menu, exit the menu - During the ON status, if pressed for 1 second, it allows to access the displayed program saving procedure - During the ON status, if held down for 1 second during the saving procedure of the recipe displayed, it allows to save/overwrite the program at the desired position - During the execution of a program, if pressed, it shows the code of the program in progress on the red 3 digit display. Go back to normal display after 2 seconds or by pressing the key again <p>The key back-lighting is active in ON mode, off during the STAND-BY status.</p>
	<p>UP key:</p> <ul style="list-style-type: none"> - If pressed during the setting procedure, it increases the value displayed - If pressed together with the DOWN key for 4 seconds, it allows to enter the parameters setting procedure.

	<p>The key back-lighting is active in ON mode, off during the STAND-BY status.</p> <p>LIGHT, key:</p> <ul style="list-style-type: none"> - If pressed during the ON or STAND -BY status, the CHAMBER LIGHT output is activated/deactivated <p>The key back-lighting is active in ON and in STAND-BY status.</p> <p>The light is SWITCHED OFF AUTOMATICALLY when the oven is taken to stand-by. It is always however possible to switch it on again manually whenever you want it on.</p>
	<p>NEEDLE PROBE key:</p> <ul style="list-style-type: none"> - During the ON status, if pressed it shows the temperature of the needle probe on the 3 digit display. If the needle probe is disabled (P4 = 0) the display shows "- - -" After a time equal to P5, the display goes back to showing the chamber probe temperature - During the needle probe display, if pressed it allows to go back to the chamber temperature display. <p>The key back-lighting is off during the STAND-BY status, active in ON if the red 3 digit display shows the temperature of the chamber probe, flashing in ON if the red 3 digit display shows the needle probe temperature.</p>
	<p>ROTATION key:</p> <ul style="list-style-type: none"> - Se u4=0, during the ON or STAND -BY status, if pressed the SPIT MOTOR output is activated/deactivated - Se u4=1, during the ON or STAND -BY status, if pressed the FANS 1/FANS 2 OUTPUTS are activated/deactivated <p>The key back-lighting is active in ON and in STAND-BY status.</p>

2. SETTINGS

Regulation of the clock (RTC)

The board is fitted with RTC on board, which allows to display the time if c8=1.

To set/regulate the clock during any machine phase

- Make sure no procedures are in progress and c8=1.
- Press the TIMER key for 1 second
- The number of the day of the week will flash on the relevant display
- Use the UP or DOWN keys to set the day of the week (1 = Monday, 2 = Tuesday, ... , 7 = Sunday)
- Press the TIMER key to confirm
- The hour value will flash on the relevant display
- Use the UP or DOWN keys to set the actual hour (24h format)
- Press the TIMER key to confirm
- The minutes value will flash on the relevant display
- Use the UP or DOWN keys to set the value of the actual minutes
- Press the TIMER key to confirm and exit the procedure or wait 15 seconds without operating on the keypad.

Setting the chamber set point

Ensure that the oven is ON and that no other procedure is in progress.

- Press the SET key, the red 3 digit display flashes.
- Use the UP and DOWN keys to modify the value.
- Wait 15 seconds without acting on the keypad or press the SET key or to exit the procedure saving the new settings.

Setting the cooking timer

The timer can be set between 00:00 and 24:00 hh:mm.

- Ensure that the oven is ON and that no other procedure is in progress.
- Press the TIMER key, the top part of the green 4 digit display flashes.
- Use the UP and DOWN keys to modify the value of the hours.

- Wait 15 seconds without operating on the keypad to exit the procedure, saving the new settings or press the TIMER key to pass to setting the minutes; the lower part of the green 4 digit display flashes.
- Use the UP and DOWN keys to modify the value of the minutes.
- Wait 15 seconds without acting on the keypad or press the TIMER key to exit the procedure saving the new settings.
- The START key can be pressed at any time to save the settings and start the count

Modify the count in progress

The count can be set between 00:00 and 24:00 hh:mm.

- Make sure that the oven is ON, that no other procedure is in progress and that there is a count in progress.
- Press the TIMER key, the top part of the green 4 digit display flashes.
- Use the UP and DOWN keys to modify the value of the hours.
- Wait 15 seconds without operating on the keypad to exit the procedure, saving the new settings or press the TIMER key to pass to setting the minutes; the lower part of the green 4 digit display flashes.
- Use the UP and DOWN keys to modify the value of the minutes.
- Wait 15 seconds without acting on the keypad or press the TIMER key to exit the procedure saving the new count value.
- Setting the count at 00:00 means stopping the timer

count pause/re-start in progress

Press the START key, the green 4 digit display flashes.

Saving a cooking program.

The Programs function allows to memorise 20 different cooking programs with:

- Customised chamber set-point
- Duration of the customised cooking timer

In constructor mode it is possible to memorise another two programs; pre-heating (PrE) and maintenance (Mai)

Saving a user mode program:

To save the values set manually on the controller:

- Check that the timer setting is not null.
- Se c20=0, press the PROGRAMS key for 1 second during the ON phase.
- If c20≠0,
 - o During an ON phase, press the UP and DOWN keys simultaneously for 4 seconds. The PA label appears on the red 3 digit display.
 - o Press the SET key, the red 3 digit display shows the value
 - o Use the UP and DOWN keys to modify the value, setting it at 245.
 - o Wait for 15 seconds without acting on the keypad or press the SET key, the M.F. LED flashes. From this moment, if the keypad remains inactive for c20 seconds, the procedure is disabled. To advance the expiry of this timeout, press the ON/STANDBY key; the M.F. LED switches off
 - o Press the PROGRAMS key for at least 1 second
- The red 3 digit display will show the number of the first program free: e.g. P03 (if all occupied, the display will show "P—")
- the green 4 digit display shows "----" if the program is free, it will be off if the program is occupied.
- Using the UP and DOWN keys, select the number of the program to save/overwrite.
- Press the PROGRAMS key for 1 second to save the program, press the PROGRAMS key to exit without memorising.

Saving a constructor mode program:

At constructor level there are the Preheat (PrE) and Maintenance (MAI) programs, as well the 20 programs available also at user level.

To save the values set manually on the controller:

- Press the PROGRAMS key for 1 second during the ON phase.
- The red 3 digit display will show the number of the first program free: e.g. P03 (if all occupied, the display will show "P—")
- the green 4 digit display shows "----" if the program is free, it will be off if the program is occupied.
- Press the LIGHT key for 1 sec; the red 3 digit display will show the label of the first constructor program PrE.
- Using the UP and DOWN keys, select the number of the program to save/overwrite.

- Press the PROGRAMS key for 1 second to save the program, press the PROGRAMS key to exit without memorising.

Weekly programming and deferred start-up on the basis of weekly programming

Whenever enabled from parameter r12, this functionality will allow the final user to plan their own weekly working activity in a way that the oven goes to temperature at the time set every day, with all settings necessary to perform the pre-defined program.

At this point, the job of the user will be to simply fill the oven and press START for the envisioned cooking procedure.

Weekly programming is therefore envisioned, which will establish if and at what time the oven is to be switched on for every day of the week.

The machine will start the program selected at the time established.

Weekly Programming:

To set the machine weekly programming:

- With the machine in STAND-BY, hold the PROGRAMS key for 1 second (if enabled from parameter r12)
- Day 1 (Monday) will flash on the DAY OF THE WEEK display and the remaining displays will show the deferred start-up settings already associated to Monday (program selected on the Programs display, start time on the start display). Whenever no switch-on is programmed for Monday, the Programs display will show "--" and the Time display will be off.
- Press the UP or DOWN keys to select the day of the week to set and press PROGRAMS to confirm
- The PROGRAMS display will flash
- Press the UP or DOWN keys to select the program number to perform for the day selected previously (the programs can be set by -- (no programmed switch-on) at 9) and press PROGRAMS to confirm
- If the value of the program selected is "--" (none), the Time display will switch off and the next day of the week will start to flash (therefore go back to the first point for the successive settings), otherwise the TIME display hours value will flash.
- Press the UP or DOWN keys to select the switch-on time and press PROGRAMS to confirm
- The minutes value on the TIME display will flash to set the value of the minutes and the switch-on time.
- Press the UP or DOWN keys to select the minutes and press PROGRAMS to confirm
- The DAY OF THE WEEK display will start to flash again and the procedure will go back to the first point for the successive settings.

To exit the weekly programming setting mode, hold the PROGRAMS key for 1 second.

Deferred start-up

On machine switch-off (machine from ON status to STAND-BY), whenever enabled from parameter r12 and with at least one weekly programmed switch-on enabled, the board will propose the next day available for machine switch-on, along with the number of program to be carried out and its time of execution.

Press the START key to confirm the value and press the UP or DOWN keys to select the following switch-ons.

Press the START key to confirm the value.

Instead, press the ON/STAND-BY key to switch the oven off without automatic switch-ons.

After 15 seconds without any selection, the board will switch off without automatic switch-ons.

With board in STAND-BY and no programmed switch on enabled, all displays will be off

With board in STAND-BY with programmed switch-on enabled, the displays will show the switch-on day, the switch-on time and the program number to perform. The START key will be enabled as it is possible to cancel the programmed switch-on by pressing START for 1 second.

Using the PROGRAMS key it will be possible to temporarily modify the day, time and program number to be performed.

Setting the parameters

- Make sure no procedures are in progress
- Press the UP and DOWN keys simultaneously for 4 seconds

Password

the PA label appears on the red 3 digit display

- Press the SET key, the red 3 digit display shows the value.
- Use the UP and DOWN keys to modify the value, setting it at -19.

- Wait for 15 seconds without acting on the keypad or press the SET key.
- Press the UP and DOWN keys simultaneously for 4 seconds

Parameter List

the label of the first parameter available appears on the red 3 digit display

- Press the UP or DOWN keys to scroll the list of parameters.
- To exit the procedure when scrolling the parameters list, wait 60 seconds without operating on the keypad or press the STAND-BY key.

Value of parameters

- Press the SET key, the red 3 digit display shows the value of the parameter.
- Use the UP and DOWN keys to modify the value of the parameter.
- Wait 15 seconds without operating on the keypad or press the SET key to save the new settings and pass to another parameter.
- Otherwise, press the STAND-BY key to exit the procedure without saving the modifications of the last parameter

3. OPERATING LOGIC

During STAND-BY:

- access is allowed to configuration parameters
- pressing the ON/OFF key for 1 second puts the board in ON status.

Temperature regulation

The temperature adjuster is linked to the temperature detected by the chamber probe; the heating output remains on until the set point is reached to then re-activate once the temperature has dropped below the differential value of the chamber set point.

Oven switch-on without pre-heat

If c18=0, when the oven passes from STAND-BY to ON, it operates in manual mode (set point SP). It is possible to modify the settings of the timer and of the set point and start a count, or select a cooking program.

Oven switch-on with pre-heat

If c18=1, when the oven passes from STAND-BY to ON, a pre-heat phase starts whose settings are those of the Pre-program.

The green 4 digit display will show the PrE message.

When pre-heating has ended, the oven will emit a continuous beep for 4 seconds to indicate that the oven has reached temperature and is ready for cooking. The green 4 digit displays shows flashing PrE, the oven continues to regulate in order to maintain the temperature.

At this point, it is possible to press any key to go to manual mode or select and start a program.

If, on completion of the pre-heat, a time equal to c19 passes without any key being pressed or door being opened (i0=1) the oven goes back to STD-BY.

During the pre-heat, it is possible to select and start a program or press the START key and start timer count and the manual mode using the manual set point SP.

Regulation of the cooking timer

The cooking timer is a function that can be activated with machine in ON status.

It can act as a simple cooking timer without any effect on machine operation or it can subject the heating output to its activation, according to the value given by parameter r14.

At the end of the cooking timer the buzzer will ring intermittently for a time that can be set from the parameter and the "time" display will show flashing "End" and a maintenance phase is started automatically (see the MAI program settings).

Maintenance phases

It is started at the end of the timer count in manual mode or at the end of the execution of a program. The settings are those of the MAI constructor program.

At the end of the maintenance phase, the oven will emit a continuous 4 second deep, the green 4 digit display will show flashing MAI, the heating output is switched-off.

If, on completion of the maintenance phase, a time equal to c19 passes without any key being pressed or door being opened (i0=1) the oven goes to STD-BY.

The maintenance phase can be stopped by pressing the START key for one second.

Execution of a cooking program

The Programs function allows to memorise and recall up to 20 different cooking programs (P01..P20) with:

- Customised chamber set-point
- Duration of the customised cooking timer

Execution of a program:

To select and perform a memorised program:

- Press the PROGRAMS key during the ON phase.
- The number of the first program available flashes on the red 3 digit display e.g. P12;
- Press UP or DOWN to select the program desired
- If you wish to see the program settings, press SET. The red and green displays will show the set point and timer values; press SET to go back to the program selection
- Press START to begin the execution of the program and the timer count.
- The programs LED switches on

The set point and the value of the count can be modified during the progress of a program. Modification of the set point is temporary and is not re-proposed at a successive start-up of the same program.

At the end of the cooking timer the buzzer will ring intermittently for a time that can be set from the parameter and the "time" display will show flashing "End" and a maintenance phase is started automatically (see the MAI program settings).

Stopping a program

To stop a program that is running:

- Press the START key for at least 1 sec, any count in progress will be terminated
- The oven goes back to manual regulation (parameter SP)

Management of the light

The chamber light is managed via the key. It is always active both in ON and in STAND-BY.

The output is activated/deactivated by pressing the LIGHT key.

The light is switched off automatically when the oven is taken to stand-by. It is always however possible to switch it on again manually whenever you want it on.

If u0 = 0 the output is linked to the status of the light key. If the oven is in ON status, the light is switched on temporarily when the door is opened. When the door is closed, the light goes back to the status before opening.

Se u0= 1 the output is switched on when the oven passes from STAND-BY to ON, can be switched off/on from key.

Management of the SPITS MOTOR (u4=0)

The SPITS MOTOR is managed via the key. It is always active both in ON and in STAND-BY.

The output is activated/deactivated by pressing the ROTATION key.

The output is switched off automatically when the oven is taken to stand-by. It is always however possible to switch it on again manually whenever you want it on.

If u1 = 0 the output is linked to the status of the ROTATION key. If u2 = 1 the output is temporarily deactivated when the door is opened. When the door is closed, the output goes back to the status before opening.

If u1= 1 the output is switched on when the timer is started by pressing the START key and can be switched on/off from the key. If u2 = 1 the output is temporarily deactivated when the door is opened.

Managing the digital inputs

Management of the door digital input (D.I. 1):

The door digital input can be configured by NO or NC contact using the relevant parameter i1.

Opening the door deactivates the fans output, the LIGHT output is activated temporarily if u0=0 and if it is in ON phase, the SPITS MOTOR output is deactivated if u2=1. Opening the door causes a signal on the display (dr) flashing alternately with the chamber or needle temperature for the entire duration that the door is open.

Washing function

The function can be activated/deactivated using the relative key.

A count or program cannot be started during washing.

During washing, the heating output has a set point equal to r15 and hysteresis equal to r16.

The washing function has duration equal to c14 starting from the time in which, after having activated the function, the temperature of the chamber probe has reached the set point r15.

The washing output is active if, after having reached set point r15, the chamber probe remains inside the interval [r15-r17,115+r17].

When this condition is satisfied, the washing output is activated cyclically for the entire duration of c14, c15 and c16 respectively represent the switch-on and switch-off time of the output.

If the washing function has been requested but the probe has not reached the temperature set with parameter r15, the red 3 digit display shows flashing "LAU". The green 4 digit display shows the duration of the function (parameter c14)

On reaching the temperature r15, if washing conditions are not satisfied (parameters r15 and r17) the red 4 digit display shows flashing "LAU"; the green 4 digit display shows the time missing to the end of the function.

On reaching the temperature r15, if washing conditions are satisfied (parameters r15 and r17) the red 4 digit display shows "LAU"; the green 4 digit display shows the time missing to the end of the function.

FANS output (u4=0)

The FANS OUTPUT is always on in ON status, during normal operation.

If washing is in progress, the fans status depends on u3.

Management of the FANS 1/FANS 2 outputs (u4=1)

The FANS 1/FANS 2 outputs are managed via the key. It is always active both in ON and in STAND-BY.

The output is activated/deactivated by pressing the ROTATION key.

The outputs are switched on alternately, the FANS 1 output for time u5, the FANS 2 output for time u6.

The outputs are switched off automatically when the oven is taken to stand-by. It is always however possible to switch them on again manually whenever you want it on.

If u1 = 0 the outputs are linked to the status of the ROTATION key. If u2 = 1 the outputs are temporarily deactivated when the door is opened. When the door is closed, the outputs go back to the status before opening.

If u1= 1 the outputs are switched on when the timer is started by pressing the START key and can be switched on/off from the key. If u2 = 1 the outputs are temporarily deactivated when the door is opened.

Summary of configurations for K2 and K5 outputs

u4	K2	K5	u1	u2	u3	
0	SPITS	FANS	0	0	0	SPITS switch-on with ROTATION key Opening the door does not deactivate the SPIT Washing does not deactivate FANS
			0	0	1	SPITS switch-on with ROTATION key Opening the door does not deactivate the SPIT Washing deactivates FANS
			0	1	0	SPITS switch-on with ROTATION key Opening the door deactivates the SPIT Washing does not deactivate FANS
			0	1	1	SPITS switch-on with ROTATION key Opening the door deactivates the SPIT Washing deactivates FANS
			1	0	0	SPITS switch-on with ROTATION key and passing from STAND-BY to ON Opening the door does not deactivate the SPIT Washing does not deactivate FANS
			1	0	1	SPITS switch-on with ROTATION key and passing from STAND-BY to ON Opening the door does not deactivate the SPIT Washing deactivates FANS
			1	1	0	SPITS switch-on with ROTATION key and passing from STAND-BY to ON Opening the door deactivates the SPIT Washing does not deactivate FANS
			1	1	1	SPITS switch-on with ROTATION key and switch-on passing from STAND-BY to ON. Opening the door deactivates the SPITS Washing deactivates FANS
1	FANS 2	FANS 1	0	0	0	FANS 1/FANS 2 switch-on with ROTATION key Opening the door does not deactivate FANS 1/FANS 2 Washing does not deactivate FANS 1/FANS 2
			0	0	1	FANS 1/FANS 2 switch-on with ROTATION key Opening the door does not deactivate FANS 1/FANS 2 Washing deactivates FANS 1/FANS 2
			0	1	0	FANS 1/FANS 2 switch-on with ROTATION key Opening the deactivates FANS 1/FANS 2 Washing does not deactivate FANS 1/FANS 2
			0	1	1	FANS 1/FANS 2 switch-on with ROTATION key Opening the deactivates FANS 1/FANS 2 Washing deactivates FANS 1/FANS 2
			1	0	0	FANS 1/FANS 2 switch-on with ROTATION key and passing from STD-BY to ON Opening the door does not deactivate FANS 1/FANS 2 Washing does not deactivate FANS 1/FANS 2
			1	0	1	FANS 1/FANS 2 switch-on with ROTATION key and passing from STD-BY to ON Opening the door does not deactivate FANS 1/FANS 2 Washing deactivates FANS 1/FANS 2
			1	1	0	FANS 1/FANS 2 switch-on with ROTATION key and passing from STD-BY to ON Opening the deactivates FANS 1/FANS 2 Washing does not deactivate FANS 1/FANS 2
			1	1	1	FANS 1/FANS 2 switch-on with ROTATION key and switch-on passing from STD-BY to ON Opening the deactivates FANS 1/FANS 2 Washing deactivates FANS 1/FANS 2

21. LIST OF ALARMS AND SIGNALS

"PF" power failure alarm

The power failure alarm occurs if there is a power cut and it is active in ON phase.

When the power supply is restored, the controller will go back to the status in which it was at the time of the power cut and will continue to operate. The signal will appear on the upper display, alternating with the temperature and accompanied by the ringing of the buzzer.

Press any key to eliminate the PF signal and the ringing of the buzzer.

If a cooking timer count should be in progress, this will start again automatically from the point in which it was interrupted, showing the label PF1 on the green 4 digit display alternately with the count value.

If the duration of the power cut is over the value of parameter r13 any timer count will be interrupted. The green 4 digit display shows PF2 alternating with the real time if c8=1, or alternating with the timer setting of c8=0.

Chamber maximum temperature alarm "AH"

The chamber maximum temperature alarm can occur only when the oven is in the ON phase.

This engages when the temperature of the chamber probe exceeded the chamber maximum temperature alarm set point and automatically disengages when the temperature drops below the triggering temperature of 10°C/18°F.

The signal will always appear on the upper display, alternating with the temperature and accompanied by the ringing of the alarm buzzer.

It has no effect on the adjustments.

Door open signal "dr"

When the door micro switch digital input is active, the "dr" label will appear on the upper display while alternating with the chamber temperature (or set point), without the buzzer ringing.

22. ERRORS LIST

Chamber probe error "Pr1"

Pr1 will flash on the red 3 digit display and the alarm buzzer will ring.

Effect: Regulation is interrupted

Needle probe error "Pr2" (only if P4=1)

Pr2 will flash on the red 3 digit display and the alarm buzzer will ring.

Effect: regulation is normal

Cold joint error "EOC"

EOC will flash on the red 3 digit display and the alarm buzzer will ring.

Effect: Regulation is interrupted

"ErL" user-module interface communication error

ErL will flash on the upper display

Effect: all outputs will be deactivated. No user operation can be performed.

23. PARAMETERS MAP

PAR.	MIN.	MAX	U.M.	DEF	WORKING SET POINT
SP	r1	r2	°C/°F (1)	250	chamber set point
PAR.	MIN.	MAX	U.M.	DEF	MEASUREMENT INPUTS
CA1	-25/50	25/50	°C/°F (1)	0	chamber probe offset
CA2	-25/50	25/50	°C/°F (1)	0	needle probe offset
P0	0	1	----		probe type 0 = J 1 = K
P2	0	1	----	0	temperature unit of measurement (2) 0 = °C 1 = °F
P4	0	1	----	0	enabling of needle probe 0 = no 1 = yes
P5	0	1	----	0	value shown in the upper temperature display during the ON status during normal operation 0 = temperature of the chamber; 1 = work set point
P6	0	240	Sec	5	needle probe display duration
PAR.	MIN.	MAX	U.M.	DEF	MAIN REGULATOR
r0	1	99	°C/°F (1)	5	hysteresis
r1	0	r2	°C/°F (1)	50	minimum set point of the chamber
r2	r1	999	°C/°F (1)	350	maximum set point of the chamber
r12	0	1	----		enabling of the use of the "weekly programming" and "deferred start-up" functions 1 = YES
r13	0	240	min	240	duration of a power supply cut-off that occurs during a cooking timer count, exceeding which the count is interrupted (3)
r14	0	1	----	0	restriction between the status of the heating output and the cooking timer 1 = YES, the heating output remains off if the cooking timer count is not in progress
r15	0	999	°C/°F (1)	80	washing function set point
r16	1	99	°C/°F (1)	5	hysteresis of the washing function
r17	1	99	°C/°F (1)	2	value of the neutral area for the washing function
PAR.	MIN.	MAX	U.M.	DEF	MISCELLANEOUS
c4	-1	120	sec	15	duration of buzzer activation and the acoustic output on conclusion of the cooking timer count, see also c9 (4) (5) -1 = the buzzer and the acoustic output must be deactivated in manual mode by pressing a key
c8	0	1	----	1	real time display
c12	0	240	min	60	time that must pass (from programmed switch-on of the instrument) without having operated with the keys so that the instrument again passes to the programmed switch-on status
c14	0	120	min	15	duration of the washing function
c15	1	240	sec	5	washing function injection time on
c16	1	240	sec	5	washing function injection time off
c18	0	1	----	1	enabling of pre-heat when the oven passes from STAND-BY to ON by pressing the key
c19	0	240	min	30	stand-by time, after pre-heating and the end of the maintenance phase, of an action by the user, after which the oven goes back to STAND-BY
c20	0	240	sec	30	If c20=0 the programs setting procedure is always enabled. If c20≠0 it is the time of inactivity of the keypad, the passing of which the programs saving procedure must be enabled
PAR.	MIN.	MAX	U.M.	DEF	TEMPERATURE ALARMS
A1	0	999	°C/°F (1)	0	temperature of the chamber, above which the temperature alarm is activated (6)
A2	0	240	min	0	chamber temperature alarm delay
A3	0	2	----	0	chamber temperature alarm type 0 = no alarm 1 = absolute (i.e. A1) 2 = relative to the chamber set point (i.e. "set point of the work chamber + A1")
PAR.	MIN.	MAX	U.M.	DEF	DIGITAL INPUTS
i0	0	1	----	0	effect caused by the activation of the door micro switch input 0 = no effect 1 = the FANS output is deactivated, the light output is activated (if not already), the

i1	0	1	----	0	FANS 1 and SPIT MOTOR/FANS 2 outputs can be deactivated (see u2) door micro switch input polarity 0 = NO (input active with closed contact) 1 = NC (input active with open contact)
PAR.	MIN.	MAX	U.M.	DEF	SERIAL NETWORK (MODBUS)
u0	0	1	----	0	Light output operation 0 = manual linked to the status of the LIGHT key, on during door opening if i0=1 1 = automatic on when the oven passes from STAND-BY to ON, can be switched off/on from key
u1	0	1	----	0	SPITS MOTOR/FANS 2 and FANS 1 outputs operation (see u4) 0 = manual linked to the status of the ROTATION key (see also u2) 1 = automatic on when the oven passes from STAND-BY to ON, can be switched off/on from key
u2	0	1	----	0	Door input/SPITS MOTOR/FANS 2 output restriction (see also u1) FANS 1 (see u4) 0 = no restriction 1 = the SPITS MOTOR/FANS 2 output is deactivated when the door is open
u3	0	1	----	0	FANS/FANS 1 and FANS 2 washing function output restriction (see also u1) 0 = no restriction 1 = the FANS/FANS 1 and FANS 2 outputs are deactivated if washing is in progress
u4	0	1	----	0	K5 and K2 output configuration 0 = FANS and SPIT 1 = FANS 1 and FANS 2 see parameters u5 and u6
u5	0	240	sec	10	If u4= 1, activation time of the K5 output
u6	0	240	sec	10	If u4= 1, activation time of the K2 output
PAR.	MIN.	MAX	U.M.	DEF	SERIAL NETWORK (MODBUS)
LA	1	247	----	247	device address
Lb	0	3	----	2	baud rate 0 = 2.400 baud 1 = 4.800 baud 2 = 9.600 baud 3 = 19.200 baud
LP	0	2	----	2	parity 0 = none (no parity) 1 = odd 2 = even

- (1) the unit of measurement depends on P2
- (2) Properly set the parameters corresponding to the regulators after modifying parameter P2
- (3) if the power supply cut-off is shorter than the time established with parameter r13, the count will also continue when the instrument is not powered.
- (4) the buzzer and the acoustic output are activated before the conclusion of the cooking timer count (time established by parameter c9), for the time established with parameter c4
- (5) if the cooking timer is interrupted (with the procedure given in paragraph 5.4 or through the activation of the multi-function input), the duration of buzzer activation and the acoustic output and the flashing duration of the 00:00 indication will be 3 s
- (6) The parameter differential is 10°C/18°F.

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