# EV8338

## Controller for bread and pastry convection ovens


EPoCA compatible

PLEASE READ CAREFULLY and save this document

CONSIDER THE ENVIRONMENT

## I ENGLISH

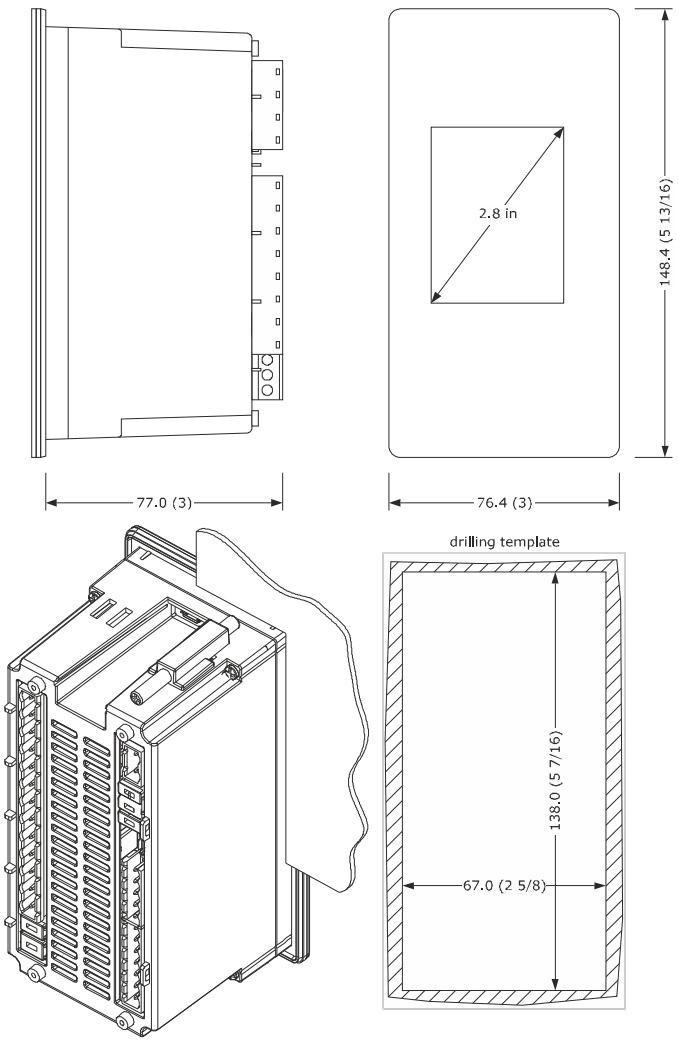
- power supply 115... 230 VAC or 24 VAC (according to the model)
- built-in clock
- chamber probe (J/K or Pt 100 2 wires)
- multi-purpose inputs
- PWM analogue output for EVCO speed regulator
- alarm buzzer
- TTL MODBUS slave port for programming key, for EVconnect app, EPoCA remote monitoring system or for BMS
- USB port (set up recipe book, add and personalise languages, update firmware)
- on-off/PI control.

**Models available**

| Purchasing code | Power supply | Type of analogue inputs | Number of digital outputs |
|---|---|---|---|
| EV8338J9 | 115... 230 VAC | for J/K thermocouples or Pt 100 2-wire probes | 8 |
| EV8338J4 | 24 VAC | for Pt 100 2-wire probes and J/K thermocouples | 8 |

## 1 MEASUREMENTS AND INSTALLATION

Measurements in mm (inches). To be fitted to a panel, screwed-in brackets provided.



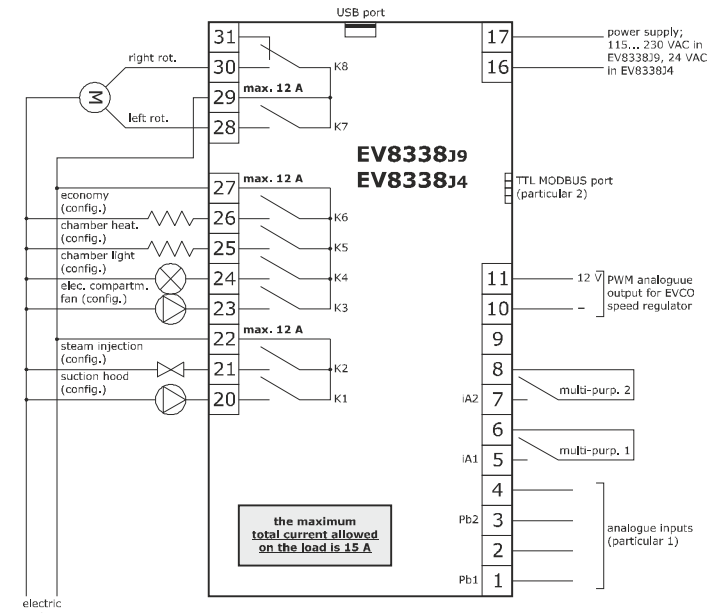

The tolerance of the measurements of the drilling template is +0.2 -0 mm.

INSTALLATION PRECAUTIONS

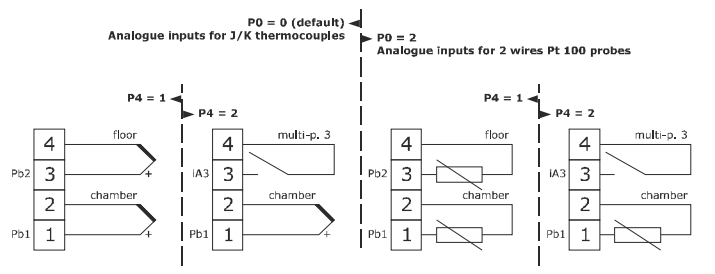
- the thickness of the panel must be between 0.8 and 5.0 mm (1/32 and 3/16 in)
- the maximum tightening torque applicable to the screwed-in brackets is 10 Nm
- ensure that the working conditions are within the limits stated in the *TECHNICAL SPECIFICATIONS* section
- do not install the device close to heat sources, equipment with a strong magnetic field, in places subject to direct sunlight, rain, damp, excessive dust, mechanical vibrations or shocks
- in compliance with safety regulations, the device must be installed properly to ensure adequate protection from contact with electrical parts. All protective parts must be fixed in such a way as to need the aid of a tool to remove them.

## 2 ELECTRICAL CONNECTION

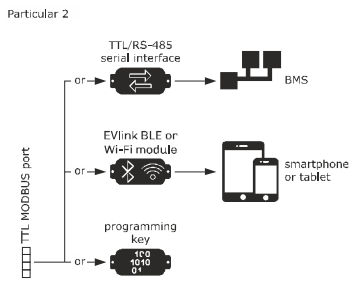
N.B.
- use cables of an adequate section for the current running through them
- ensure that the thermocouple is properly insulated from contact with metal parts or use already insulated thermocouples
- if necessary, extend the thermocouple cables using compensating cables
- where there are three multi-purpose inputs, multi-purpose input 1 has priority over multi-purpose input 2 and multi-purpose input 3
- the TTL MODBUS port can be used as an alternative to the USB port and vice versa
- to reduce any electromagnetic interference, locate the power cables as far away as possible from the signal cables.




Particular 1




Particular 2




Example of electrical connection with fan modulating with PWM driving signal, with frequency tracking and with inversion of the fan direction, for EVCO inverter speed regulator (F0 = 4).

COMPATIBLE EVCO CUT PHASE SPEED REGULATORS
- EVC95E00X7XXX00 (650 W)
- EVC99E00X7XXX01 (950 W)

COMPATIBLE EVCO INVERTER SPEED REGULATORS
- EI750M2C04O0VXX (750 W)
- EI1K5M2C04O0VXX (1,5 kW)
- EI2K2M2C04O0VXX (2,2 kW)
- EI2K3M2C04O0VXX (2,3 kW)

PRECAUTIONS FOR ELECTRICAL CONNECTION
- if using an electrical or pneumatic screwdriver, adjust the tightening torque
- if the device is moved from a cold to a warm place, humidity may cause condensation to form inside. Wait for about an hour before switching on the power
- make sure that the supply voltage, electrical frequency and power are within the set limits. See the section *TECHNICAL SPECIFICATIONS*
- disconnect the power supply before carrying out any type of maintenance
- do not use the device as a safety device
- for repairs and for further information, contact the EVCO sales network.

## 3 FIRST-TIME USE

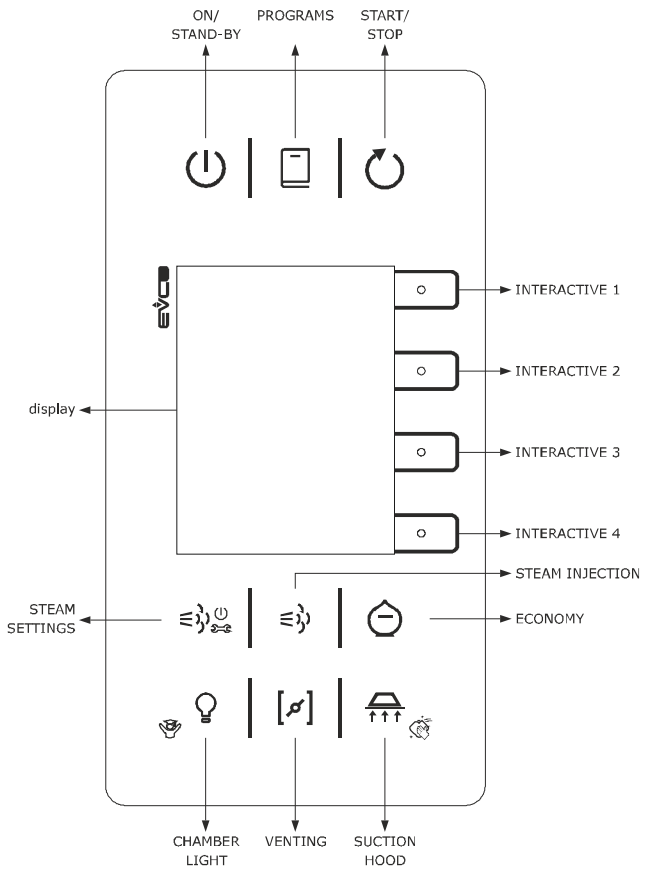
1. Carry out the installation following the instructions given in the section *MEASUREMENTS AND INSTALLATION*.
2. Power up the device as set out in the section *ELECTRICAL CONNECTION*: an internal test will start up.
   The test normally takes a few seconds; when it is finished the display will switch off.
3. Configure the device as shown in the section *Setting configuration parameters*.

   Recommended configuration parameters for first-time use:

| PAR. | DEF. | PARAMETER | MIN... MAX. |
|---|---|---|---|
| P0 | **0** | type of probe | 0 = J 1 = K<br>2 = Pt 100 2-wire |
| P1 | **0** | unit of measurement | 0 = °C 1 = °F |
| r3 | **130** | chamber setpoint | r1... r2 |

   Then check that the remaining settings are appropriate; see the section *CONFIGURATION PARAMETERS*.
4. Disconnect the device from the mains.
5. Make the electrical connection as shown in the section *ELECTRICAL CONNECTION*, without powering up the device.
6. For the connection in an RS-485 network connect the interface EVIF22TSX, to use the device with the EPoCA remote monitoring system, connect the EVIF25TWX module, to use the device with the APP EVconnect connect the interface EVIF25TBX; see the relevant instruction sheets. **If EVIF22TSX is used, set parameter bLE to 0**.
7. Power up the device again.

## 4 USER INTERFACE AND MAIN FUNCTIONS




### 4.1 Switching the device on/off

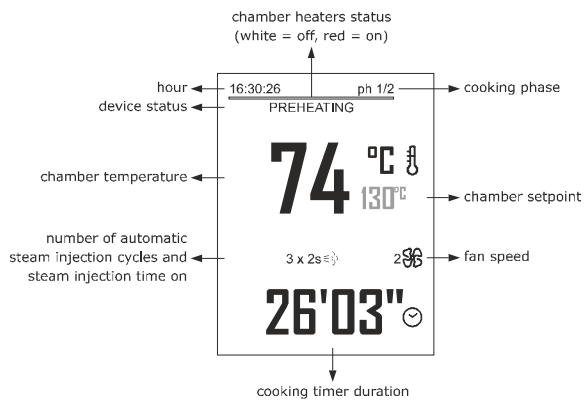
To switch the device on:

| | | |
|---|---|---|
| 1. | | Touch the ON/STAND-BY key. |

To switch the device off:

| | | |
|---|---|---|
| 1. | | Touch the ON/STAND-BY key for 3 s. |

If the device is switched on, the display will show:




If the chamber setpoint in pre-heating mode has been reached, the status of the device will show "**READY**", if not, it will show "**PRE-HEATING**". If the last programme started up was manual, the status of the device will show "**MANUAL**". If the last cooking cycle was a recipe, the status of the device will show the name of the recipe.

If the device is switched off, the display will show the time. If the weekly programmed switch-on function is activated, the display will also show the day and time of the next switch-on and the programme that will start.
If the status of the device shows an alarm code, see the section *ALARMS*.

### 4.2 Starting up/interrupting the cooking cycle

To start up a cooking cycle:
- make sure that the device is switched on
- make sure that the cooking timer is set

| | | |
|---|---|---|
| 1. | | Touch the START/STOP key: the cooking timer will start up and the status of the device will show "**COOKING**". When the timer stops, it will show "**END**". |

To interrupt the cooking cycle:

| | | |
|---|---|---|
| 1. | | Touch the START/STOP key for 1 s. |

### 4.3 Adding cooking minutes (4 maximum) to the final phase of a finished cycle

| | | |
|---|---|---|
| 1. | +1 | Touch the INTERACTIVE 4 key. |
| 2. | | Take no action for 5 s. |

### 4.4 Setting the cooking timer

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 4 key: the display will show the minutes in yellow. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show the seconds in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 5. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 6. | | Touch the INTERACTIVE 4 key to exit the procedure beforehand (any changes made will not be saved). |

### 4.5 Setting the chamber setpoint

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 2 key: the display will show the value in yellow. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value within the limits r1 and r2 (default "0... 300"). |
| 3. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 4. | | Touch the INTERACTIVE 4 key to exit the procedure beforehand (any changes made will not be saved). |

### 4.6 Steam injection (if u1c... u8c = 6)

If a cooking cycle is not active:

- make sure that the device is switched on

| | | |
|---|---|---|
| 1. | | Touch the STEAM INJECTION key without releasing it. |

The injector will be activated for as long as the key is held down.

If a cooking cycle is active:

| | | |
|---|---|---|
| 1. | | Touch the STEAM INJECTION key. |

The injector will automatically be activated after the delay t1, for the time t8 (remaining off for the time t9) and for the number of cycles t10.
The injector will be activated provided the temperature of the chamber is no lower than the threshold t2.

To automatically activate the injector at start-up of cooking cycle:

- make sure that the device is switched on

| | | |
|---|---|---|
| 1. | | Touch the STEAM INJECTION key. |
| 2. | | Start up the cooking cycle. |

To quickly set times t8, t9 and the number of cycles t10:

- make sure that the device is switched on

| | | |
|---|---|---|
| 1. | | Touch the STEAM SETTINGS key for 3 s: the display will show the "**Steam**" menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to select a label (the availability of the labels depends on parameter t7). |
| | LABEL | DESCRIPTION |
| | **T On** | t8 (steam injection time on) |
| | **T Off** | t9 (steam injection time off) |
| | **Cycles** | t10 (number of automatic steam injection cycles) |
| 3. | | Touch the INTERACTIVE 3 key: the display will show the value in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 5. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 6. | | Touch the INTERACTIVE 4 key to exit the procedure beforehand (any changes made will not be saved). |

### 4.7 Opening/closing the vent (if u1c... u8c = 7)

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the VENTING key. |

To set the amount of time for the vent to open in advance at the end of the cooking cycle:

- make sure that the device is switched on
- make sure that a cooking cycle is not active

| | | |
|---|---|---|
| 1. | | Touch the VENTING key for 3 s: the display will show the "**Venting**" menu. |
| 2. | | Touch the INTERACTIVE 3 key: the display will show the minutes in yellow. |
| 3. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value or a label. |
| | LABEL | DESCRIPTION |
| | **opn** | vent open during the cooking cycle and for time u1 from the end of the cycle |
| | **clo** | vent closed during the cooking cycle and at the end of the cycle |
| 4. | | Touch the INTERACTIVE 3 key: the display will show the seconds in yellow. |
| 5. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 6. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 7. | | Touch the INTERACTIVE 4 key to exit the procedure beforehand (any changes made will not be saved). |

### 4.8 Setting the fan speed (if u1c... u8c = 4 and if F0 = 2 or 3)

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 3 key. |
| 2. | | Take no action for 5 s. |

### 4.9 Switching the chamber light on/off (if u1c... u8c = 5)

| | | |
|---|---|---|
| 1. | | Touch the CHAMBER LIGHT key. |

### 4.10 Switching the suction hood on/off (if u1c... u8c = 8)

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the SUCTION HOOD key. |

The hood remains on at maximum for the time u2.
If u2 = 0, touch the SUCTION HOOD key again to switch the hood off.

### 4.11 Switching the economy output on/off (if u1c... u8c = 12)

- make sure that the device is switched on
- make sure that a cooking cycle is active

| | | |
|---|---|---|
| 1. | | Touch the ECONOMY key. |

To automatically switch on the economy output at start-up of cooking cycle:

- make sure that the device is switched on
- make sure that a cooking cycle is not active

| | | |
|---|---|---|
| 1. | | Touch the ECONOMY key for 3 s: the display will show the "**Economy**" menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set a label. |
| | LABEL | DESCRIPTION |
| | **ECO AUTO** | economy output on at start-up of cooking cycle |
| | **ECO KEEP** | economy output on at start-up of cooking cycle if the previous cycle ended with output on |
| 3. | | Touch the INTERACTIVE 3 key: the display will show "**on**" or "**off**" in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 5. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 6. | | Touch the INTERACTIVE 4 key to exit the procedure beforehand (any changes made will not be saved). |

### 4.12 Keypad lock (cleaning the device)

| | | |
|---|---|---|
| 1. | | Touch the SUCTION HOOD key for 3 s: the display will show "**Cleaning controller**" and the remaining count of the time c10. |

### 4.13 Silencing the buzzer

Touch a key.
If u1c... u8c = 11, the buzzer is silenced.

## 5 ADDITIONAL FUNCTIONS

### 5.1 Setting the language

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 4 key: the display will show the **"Configuration"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Language"**. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show the **"Language"** menu. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a language. |
| 5. | | Touch the INTERACTIVE 3 key. |
| 6. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 5.2 Display of device status

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the CHAMBER LIGHT key for 3 s: the display will show the "**Expert**" menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Internal values"** or **"Alarms"**. |
| 3. | | Touch the INTERACTIVE 3 key. |
| 4. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 5.3 Analogue and digital output testing

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 4 key: the display will show the **"Configuration"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Service"**. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show "**Password**" in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set "**19**". |
| 5. | | Touch the INTERACTIVE 3 key: the display will show the **"Quick service"** menu. |
| 6. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Output testing"**. |
| 7. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select the output. |
| 8. | | Touch the INTERACTIVE 3 key to change output status. |
| 9. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

## 6 PROGRAMMES

### 6.1 Initial information

It is possible to save up to 50 programmes. To start up the cooking cycle with the settings stored in the programme, touch the START/STOP key.
Each programme can consist of a maximum of 5 cooking phases.
To add a phase:

- make sure that the device is switched on

| | | |
|---|---|---|
| 1. | | Touch the CHAMBER LIGHT key for 3 s: the display will show the "**Expert**" menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Add phase"**. |
| 3. | | Touch the INTERACTIVE 3 key. |
| 4. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

To configure a phase:

- make sure that the device is switched on

| | | |
|---|---|---|
| 1. | | Touch the CHAMBER LIGHT key for 3 s: the display will show the "**Expert**" menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a phase. |
| 3. | | Touch the INTERACTIVE 3 key. |
| 4. | Configure the device as shown in the previous paragraphs. | |

To delete a phase:

- make sure that the device is switched on

| | | |
|---|---|---|
| 1. | | Touch the CHAMBER LIGHT key for 3 s: the display will show the "**Expert**" menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Delete phase"**. |
| 3. | | Touch the INTERACTIVE 3 key. |
| 4. | | Touch the INTERACTIVE 3 key again. |
| 5. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 6.2 Storing a programme

Configure the device as shown in the previous paragraphs.

| | | |
|---|---|---|
| 1. | | Touch the PROGRAMMES key for 3 s: the display will show the "**Programmes**" menu, "**Programmes**" appears in yellow. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a position, any previously stored programmes will be overwritten. |
| 3. | | Touch the INTERACTIVE 3 key: "**Programmes**" will become white. |
| 4. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 6.3 Starting a programme

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the PROGRAMMES key: the display will show the **"Programmes"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a programme. |
| 3. | | Touch the INTERACTIVE 3 key: the programme will start up, the status of the device will show the name of the programme. |
| 4. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 6.4 Deleting a programme

Make sure that the device is switched on.

| | | |
|---|---|---|
| 1. | | Touch the PROGRAMMES key: the display will show the **"Programmes"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a programme. |
| 3. | | Touch the INTERACTIVE 4 key for 3 s. |
| 4. | | Touch the INTERACTIVE 3 key. |
| 5. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

## 7 WEEKLY PROGRAMMED SWITCH-ON

### 7.1 Initial information

It is possible to save up to 9 weekly programmed switch-ons. The pre-heating programme will start up when the device is switched on. To start up the cooking cycle with the settings stored in the programme, touch the START/STOP key or open/close the door.

### 7.2 Storing a switch-on

- make sure that parameter C5 is set to 1 (default)
- make sure that at least one programme has been stored
- make sure that the device is switched off

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 3 key. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Add switch-on"**. |
| 3. | | Touch the INTERACTIVE 3 key. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Day"**. |
| 5. | | Touch the INTERACTIVE 3 key: the display will show the day in yellow. |
| 6. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 7. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 8. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Time"**. |
| 9. | | Touch the INTERACTIVE 3 key: the display will show the time in yellow. |
| 10. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 11. | | Touch the INTERACTIVE 3 key: the display will show the minutes in yellow. |
| 12. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 13. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 14. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Programme"**. |
| 15. | | Touch the INTERACTIVE 3 key: the display will show the programme in yellow. |
| 16. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 17. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 18. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Save"**. |
| 19. | | Touch the INTERACTIVE 3 key. |
| 20. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 7.3 Activating the switch-ons

| | | |
|---|---|---|
| 1. | Switch off the device. | |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a switch-on. |
| 3. | | Touch the START/STOP key: the display will show the day and time of the next switch-on and the programme that will start. |
| | | Touch the ON/STAND-BY key to switch the device off without activating the switch-ons. |

### 7.4 Changing a switch-on

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 3 key. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Switch-ons"**. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show the switch-ons in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a switch-on. |
| 5. | | Touch the INTERACTIVE 3 key. |
| 6. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 7.5 Deleting a switch-on

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 3 key. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Switch-ons"**. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show the switch-ons in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a switch-on. |
| 5. | | Touch the INTERACTIVE 3 key. |
| 6. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Delete switch-on"**. |
| 7. | | Touch the INTERACTIVE 3 key. |
| 8. | | Touch the INTERACTIVE 3 key again. |
| 9. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

## 8 SETTINGS

### 8.1 Setting configuration parameters

N.B.
Changing parameter P1 causes the value of the parameters whose unit of measurement is °C or °F to be changed automatically.

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 4 key: the display will show the **"Configuration"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Service"**. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show "**Password**" in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set "**-19**". |
| 5. | | Touch the INTERACTIVE 3 key: the display will show the **"Service"** menu. |
| 6. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select a parameter. |
| 7. | | Touch the INTERACTIVE 3 key: the display will show the parameter in yellow. |
| 8. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 9. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 10. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 8.2 Setting the time and day of the week

N.B.
- Do not disconnect the device from the mains within two minutes since the setting of the time and day of the week.
- if the device communicates with the EVconnect app, the time and day of the week will be automatically set by the smartphone or tablet.

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 4 key: the display will show the **"Configuration"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Clock"**. |
| 3. | | Touch the INTERACTIVE 3 key. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Time"**. |
| 5. | | Touch the INTERACTIVE 3 key: the display will show the time in yellow. |
| 6. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 7. | | Touch the INTERACTIVE 3 key: the display will show the minutes in yellow. |

| | | |
|---|---|---|
| 8. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 9. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 10. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Day"**. |
| 11. | | Touch the INTERACTIVE 3 key: the display will show the day in yellow. |
| 12. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set the value. |
| 13. | | Touch the INTERACTIVE 3 key (or take no action for 15 s). |
| 14. | | Touch the INTERACTIVE 4 key to exit the procedure (or take no action for 60 s). |

### 8.3 Restoring factory settings (default)

N.B.
Check that the factory settings are appropriate; see the section *CONFIGURATION PARAMETERS*.

Make sure that the device is switched off.

| | | |
|---|---|---|
| 1. | | Touch the INTERACTIVE 4 key: the display will show the **"Configuration"** menu. |
| 2. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select **"Service"**. |
| 3. | | Touch the INTERACTIVE 3 key: the display will show "**Password**" in yellow. |
| 4. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key within 15 s to set "**149**". |
| 5. | | Touch the INTERACTIVE 3 key: the display will show the **"Service"** menu. |
| 6. | | Touch the INTERACTIVE 1 key or the INTERACTIVE 2 key to select "**Restore default**". |
| 7. | | Touch the INTERACTIVE 3 key for 3 s: the display will show a tick. |
| 8. | | Touch the INTERACTIVE 4 key to exit the procedure beforehand (the reset will not be carried out). |

## 9 CONFIGURATION PARAMETERS

| NO. | PAR. | DEF. | ANALOGUE INPUTS | MIN... MAX. |
|---|---|---|---|---|
| 1 | P0 | **0** | type of probe | 0 = J 1 = K<br>2 = Pt 100 2-wire |
| 2 | P1 | **0** | unit of measurement | 0 = °C 1 = °F |
| 3 | P3 | **1** | type of steam injection | 0 = disabled<br>1 = manual and automatic (with t8, t9 and t10) |
| 4 | P4 | **0** | configurable input function | 0 = disabled<br>1 = floor probe<br>2 = multi-purpose input 3 |
| 5 | CA1 | **0** | chamber probe offset | -25... 25 °C/°F |
| 6 | CA2 | **0** | floor probe offset | -25... 25 °C/°F |
| NO. | PAR. | DEF. | REGULATION | MIN... MAX. |
| 7 | r0 | **5** | chamber setpoint differential | 1... 99 °C/°F<br>effective if r10 = 0 |
| 8 | r1 | **0** | minimum chamber setpoint | 0 °C/°F... r2 |
| 9 | r2 | **300** | maximum chamber setpoint | r1... 999 °C/°F |
| 10 | r3 | **130** | chamber setpoint default in phase configuration | r1... r2 |
| 11 | r4 | **10** | chamber setpoint in pre-heating mode (relative to working setpoint phase 1 cooking cycle) | -199... 199 °C/°F<br>working setpoint phase 1 cooking cycle + r4 |
| 12 | r8 | **80** | cycle time for chamber and floor heaters on | 1... 999 s<br>if r10 > 0, cycle time PI |
| 13 | r10 | **0** | proportional band | 0... 99 °C/°F<br>0 = on-off control |
| 14 | r11 | **0** | integral action time | 0... 999 s<br>0 = P control |
| 15 | r14 | **180** | delay between two chamber heater switch-ons | 1... 240 s |
| 16 | r15 | **10** | minimum time chamber heaters on/off | 1... 240 s |
| NO. | PAR. | DEF. | GENERAL SETTINGS | MIN... MAX. |
| 17 | c0 | **15** | time buzzer on from end of cooking cycle | -1... 120 s<br>-1 = until silencing |
| 18 | c1 | **0** | activate buzzer for 1 s at end of cooking phase | 0 = no 1 = yes |
| 19 | c2 | **60** | keyboard inactivity time to switch off the device from weekly programmed switch-on activation | 0... 240 min<br>0 = disabled |
| 20 | c3 | **10** | high chamber temperature threshold for locked display (relative to chamber setpoint) | 0... 99 °C/°F<br>chamber setpoint + c3<br>0 = disabled |
| 21 | c4 | **10** | low chamber temperature threshold for locked display (relative to chamber setpoint) | 0... 99 °C/°F<br>chamber setpoint - c4<br>0 = disabled |
| 22 | c5 | **1** | enable weekly programmed switch-on | 0 = no 1 = yes |
| 23 | c10 | **10** | duration of controller cleaning | 1... 120 s |
| 24 | c11 | **0** | status chamber and fan heaters at end of cooking cycle | 0 = off<br>1 = with last settings |
| 25 | c12 | **0** | cooking timer start-up with door opening/closing | 0 = if device status is "PREHEATING" or "READY"<br>1 = if device status is "READY" |
| 26 | c13 | **0** | door opening function at end of cooking cycle | 0 = disabled<br>1 = start up cooking cycle<br>2 = start up cooking timer |
| NO. | PAR. | DEF. | STEAM INJECTION | MIN... MAX. |
| 27 | t1 | **30** | delay steam injection from start-up of cooking cycle phase | 0... 600 s |
| 28 | t2 | **100** | chamber temperature for inhibiting automatic steam injection cycles | 0... 999 °C/°F |
| 29 | t3 | **0** | fan off time from end of steam injection (fan off in steam injection) | -1... 120 s<br>-1 = injection inhibited if fan off, pending until fan on and fan off at end of injection<br>0 = disabled |
| 30 | t4 | **1** | activate automatic steam injection cycles at start-up of cooking cycle | 0 = no 1 = yes |
| 31 | t5 | **0** | steam injection inhibited and pending until chamber heaters switched on and chamber heaters switched off at end of injection | 0 = no 1 = yes |
| 32 | t6 | **0** | inhibition steam injection if vent is open | 0 = no 1 = yes |
| 33 | t7 | **2** | time available with quick setting of automatic steam injection cycles | 0 = injection time on<br>1 = injection time on and injection time off<br>2 = injection time on, injection time off and number of automatic cycles<br>3 = injection time on and number of automatic cycles |
| 34 | t8 | | steam injection default time on with quick setting | 1... 99 s |
| 35 | t9 | **10** | steam injection default time off with quick setting | 1... 999 s<br>if t7 = 1 or 2, injection time off |
| 36 | t10 | **3** | number of automatic steam injection cycles default | -1... 20<br>-1 = until generator is switched off<br>if t7 = 0 or 1, number of automatic cycles |
| NO. | PAR. | DEF. | FAN | MIN... MAX. |
| 37 | F0 | **1** | type of fan | 0 = on/off, single speed mode<br>1 = on/off, single speed mode and with inversion of the fan direction<br>2 = on/off, two-speed mode and with inversion of the fan direction<br>3 = modulating with PWM driving signal and with inversion of the fan direction, for EVCO phase cut speed regulator<br>4 = modulating with PWM driving signal, with frequency tracking and with inversion of the fan direction, for EVCO inverter speed regulator (with F4, F5 and F6, duty = 50%) |
| 38 | F1 | **15** | fan off time for inversion of direction | 1... 600 s |
| 39 | F2 | **120** | fan on time for every fan direction | 1... 600 s |
| 40 | F3 | **1** | chamber heaters off if fan off for inversion of direction | 0 = no 1 = yes |
| 41 | F4 | **50** | if F0 = 3, minimum value fan speed; if F0 = 4, minimum frequency fan speed | if F0 = 3, 0... 100 %<br>if F0 = 4, 0... 100 Hz |
| 42 | F5 | **100** | if F0 = 3, maximum value fan speed; if F0 = 4, maximum frequency fan speed | if F0 = 3, 0... 100 %<br>if F0 = 4, 0... 100 Hz |
| 43 | F6 | **5** | fan start-up duration | 0... 10 s |
| NO. | PAR. | DEF. | ALARMS | MIN... MAX. |
| 44 | A0 | **10** | temperature alarm switch-off differential | 1... 99 °C/°F |
| 45 | A1 | **0** | high temperature alarm threshold | 0... 500 °C/°F |
| 46 | A2 | **0** | high temperature alarm delay and delay after modifying setpoint | 0... 240 min |
| 47 | A3 | **0** | type of high temperature alarm | 0 = disabled<br>1 = absolute<br>2 = relative to setpoint |
| 48 | A4 | **70** | high operating temperature alarm threshold | 0... 88 °C/175 °F<br>0 = disabled |
| 49 | A5 | **240** | power failure duration due to interruption of cooking cycle | 0... 240 min<br>0 = disabled |
| NO. | PAR. | DEF. | DIGITAL INPUTS | MIN... MAX. |
| 50 | i0 | **0** | multi-purpose input 1 activation | 0 = with contact closed<br>1 = with contact open |
| 51 | i1 | **1** | multi-purpose input 1 function | 0 = disabled<br>1 = suction hood on, fan off (door open alarm)<br>2 = steam injection off, chamber heaters off, fan off, suction hood on (door open alarm)<br>3 = steam injection off, chamber heaters off, fan off (door open alarm)<br>4 = chamber heaters off (thermal switch alarm)<br>5 = fan off (thermal switch alarm)<br>6 = electronics compartment fan on, remaining outputs off (general thermal switch alarm)<br>7 = switches device on/off<br>8 = manual steam injection<br>9 = type A burner lock alarm (heaters off)<br>10= type B burner lock alarm (heaters on) |
| 52 | i2 | **0** | door open alarm delay and thermal switch alarm delay from multi-purpose input 1 | 0... 120 s |
| 53 | i3 | **0** | multi-purpose input 2 activation | 0 = with contact closed<br>1 = with contact open |
| 54 | i4 | **6** | multi-purpose input 2 function | as i1 |
| 55 | i5 | **0** | door open alarm delay and thermal switch alarm delay from multi-purpose input 2 | 0... 120 s |
| 56 | i6 | **0** | multi-purpose input 3 activation | 0 = with contact closed<br>1 = with contact open |
| 57 | i7 | **6** | multi-purpose input 3 function | as i1 |
| 58 | i8 | **0** | door open alarm delay and thermal switch alarm delay from multi-purpose input 3 | 0... 120 s |
| NO. | PAR. | DEF. | DIGITAL OUTPUTS | MIN... MAX. |
| 59 | u0 | **0** | opening vent | 0 = with contact closed<br>1 = with contact open |
| 60 | u1 | **10** | time vent open from end of cooking cycle | 0... 600 s<br>-1 = open until closed by pressing key |
| 61 | u2 | **10** | time suction hood on | 0... 999 s<br>0 = switch on/off by pressing key |
| 62 | u3 | **0** | chamber light on when device is switched on | 0 = yes 1 = no |
| 63 | u4 | **0** | chamber light off when device is switched off | 0 = yes 1 = no |
| 64 | u5 | **0** | enable suction hood in stand-by | 0 = no 1 = yes manual |
| 65 | u6 | **60** | operating temperature threshold when electronics compartment fans on and device off | 20... 65 °C/65... 150 °F<br>fans always on with device on and device sensor in alarm mode |
| 66 | u7 | **10** | u6 differential | 1... 99 °C/°F |
| 67 | u8 | **0** | activate chamber light flashing for 10 s at end of cooking cycle | 0 = no 1 = yes |
| 68 | u9 | **0** | venting configuration | 0 = solenoid valve on/off<br>1 = motorised solenoid valve |
| 69 | u10 | **120** | duration of venting stoppage from end of short pulse for opening and from end of long pulse for closing motorised venting solenoid valve | 0... 600 ds |
| 70 | u11 | **10** | duration short pulse for closing motorised venting solenoid valve | 0... 600 ds |
| 71 | u12 | **30** | duration long pulse for opening motorised venting solenoid valve | 0... 600 ds |
| 72 | u13 | **0** | floor setpoint | -999... 999 °C/°F<br>-999... 0 °C/°F = u13 + chamber setpoint<br>1... 999 °C/°F = u13 |
| 73 | u14 | **0** | open vent with door opening | 0 = no 1 = yes |
| 74 | u15 | **0** | venting status with device switched off | 0 = closed<br>1 = open |
| 75 | u1c | **8** | K1 output configuration | 0 = disabled<br>1 = chamber heaters<br>2 = fan rotation right<br>3 = fan rotation left<br>4 = fan high/low speed<br>5 = chamber light<br>6 = steam injection<br>7 = venting<br>8 = suction hood<br>9 = electronics compartment fan<br>10= on/stand-by<br>11= sound<br>12= economy<br>13= floor heaters<br>14= burner lock reset |
| 76 | u2c | **6** | K2 output configuration | like u1c |
| 77 | u3c | **9** | K3 output configuration | like u1c |
| 78 | u4c | **5** | K4 output configuration | like u1c |
| 79 | u5c | **1** | K5 output configuration | like u1c |
| 80 | u6c | **12** | K6 output configuration | like u1c |
| 81 | u7c | **3** | K7 output configuration | like u1c<br>if F0 = 3 or 4, K7 output configuration = fan enabling |
| 82 | u8c | **2** | K8 output configuration | like u1c<br>if F0 = 3 or 4, K8 output configuration = NO contact is reverse, NC contact is run |
| NO. | PAR. | DEF. | MODBUS | MIN... MAX. |
| 83 | LA | **247** | MODBUS address | 1... 247 |
| 84 | Lb | **3** | MODBUS baud rate | 0 = 2,400 baud<br>1 = 4,800 baud<br>2 = 9,600 baud<br>3 = 19,200 baud |
| N. | PAR. | DEF. | SICUREZZE | MIN... MAX. |
| 85 | PA1 | **426** | level 1 password | -99... 999 |
| 86 | PA2 | **824** | level 2 password | -99... 999 |
| N. | PAR. | DEF. | DATA-LOGGING EVLINK | MIN... MAX. |
| 87 | bLE | **1** | serial port configuration for connectivity | 0 = free<br>1 = forced for EVconnect or EPoCA<br>2-99 = EPoCA local network address |
| 88 | rE0 | **15** | data-logger sampling interval | 0... 240 min |
| 89 | rE1 | **1** | recorded temperature | 0 = none 1 = all |

## 10 ALARMS

| LABEL | RESET | TO CORRECT |
|---|---|---|
| Chamber probe | automatic | - check P0 |
| Floor probe | automatic | - check integrity of the probe<br>- check electrical connection |
| Board probe | automatic | check operating temperature |
| time flashing | manual | set time and day of the week |
| Chamber high temp. | automatic | check A1 and A3 |
| Controller high temp. | automatic | check A4 |
| Door | automatic | check i0, i1, i3 and i4 |
| Power failure | manual | - touch a key<br>- check A5<br>- check electrical connection |
| Thermal switch | manual | check i0, i1, i3 and i4 |

## 11 TECHNICAL SPECIFICATIONS

| | | |
|---|---|---|
| Purpose of the control device: | | function controller. |
| Construction of the control device: | | built-in electronic device. |
| Housing: | | black, self-extinguishing. |
| Category of heat and fire resistance: | | D. |
| Measurements: | | 76.4 x 148.4 x 77.0 mm (3 x 5 13/16 x 3 in). |
| Mounting methods for the control device: | | to be fitted to a panel, screwed-in brackets provided. |
| Degree of protection provided by the casing: | | IP65 (front). |
| Connection method: | | |
| plug-in screw terminal blocks for wires up to 2.5 mm² | Pico-Blade connector | female Micro USB connector. |
| Maximum permitted length for connection cables: | | |
| power supply: 10 m (32.8 ft) | | analogue inputs: 10 m (32.8 ft) |
| digital inputs: 10 m (32.8 ft) | | digital outputs: 10 m (32.8 ft) |
| Operating temperature: | | from 0 to 60 °C (from 32 to 140 °F). |
| Storage temperature: | | from -25 to 70 °C (from -13 to 158 °F). |
| Operating humidity: | | relative humidity without condensate from 10 to 90%. |
| Pollution status of the control device: | | 3. |
| Compliance: | | |
| RoHS 2011/65/EC | WEEE 2012/19/EU | REACH (EC) Regulation no. 1907/2006 |
| EMC 2014/30/EU | | LVD 2014/35/EU. |
| Power supply: | | 115... 230 VAC (+10 % -15 %), 50/60 Hz (±3 Hz), max. in EV8338J9 |
| | | 24 VAC (+10 % -15 %), 50/60 Hz (±3 Hz), max. in EV8338J4 |
| Earthing methods for the control device: | | none. |
| Rated impulse-withstand voltage: | | 2.5 KV. |
| Over-voltage category: | | II. |
| Software class and structure: | | A. |
| Clock: | | built-in secondary lithium battery. |
| Clock drift: | | ≤ 60 s/month at 25 °C (77 °F). |
| Clock battery autonomy in the absence of a power supply: | | > 24 h at 25 °C (77 °F). |
| Clock battery charging time: | | 24 h (the battery is charged by the power supply of the device). |
| Analogue inputs: | | 1 for J/K thermocouples or Pt 100 2-wire probes (chamber probe). |
| J thermocouples: | Measurement field: | from 0 to 700 °C (from 32 to 999 °F). |
| | Resolution: | 1 °C (1 °F). |
| K thermocouples: | Measurement field: | from 0 to 999 °C (from 32 to 999 °F). |
| | Resolution: | 1 °C (1 °F). |
| Pt 100 probes: | Measurement field: | from 0 to 650 °C (from 32 to 999 °F). |
| | Resolution: | 1 °C (1 °F). |
| Digital inputs: | | 2 dry contact (multi-purpose 1 and multi-purpose 2). |
| Dry contact: | Type of contact: | 3.3 V, 1 mA |
| | Protection: | none. |
| Other inputs: | can be configured for analogue input (floor probe) or digital input (multi-purpose input 3). | |
| Analogue outputs: | | 1 for PWM signal (for EVCO speed regulator). |

| | |
|---|---|
| Digital outputs: | 8 with electro-mechanical relay (K1...K8 relays).<br>**The maximum overall current permitted for loads is 15 A.** |
| K1 relay: | SPST, 16 A res. @ 250 VAC |
| K2...K7 relay: | SPST, 8 A res. @ 250 VAC. |
| K8 relay: | SPDT, 8 A res. @ 250 VAC. |
| Type 1 or Type 2 actions: | type 1. |
| Additional features of Type 1 or Type 2 actions: | C. |
| Displays: | 2.8 inch TFT colour graphic display. |
| Alarm buzzer: | built-in. |
| Built-in sensors: | 1 (operating temperature). |
| Communications ports: | |
| 1 TTL MODBUS slave port for programming key or BMS | 1 USB port (set up recipe book, add and personalise languages, update firmware). |

N.B.
The device must be disposed of according to local regulations governing the collection of electrical and electronic equipment.



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