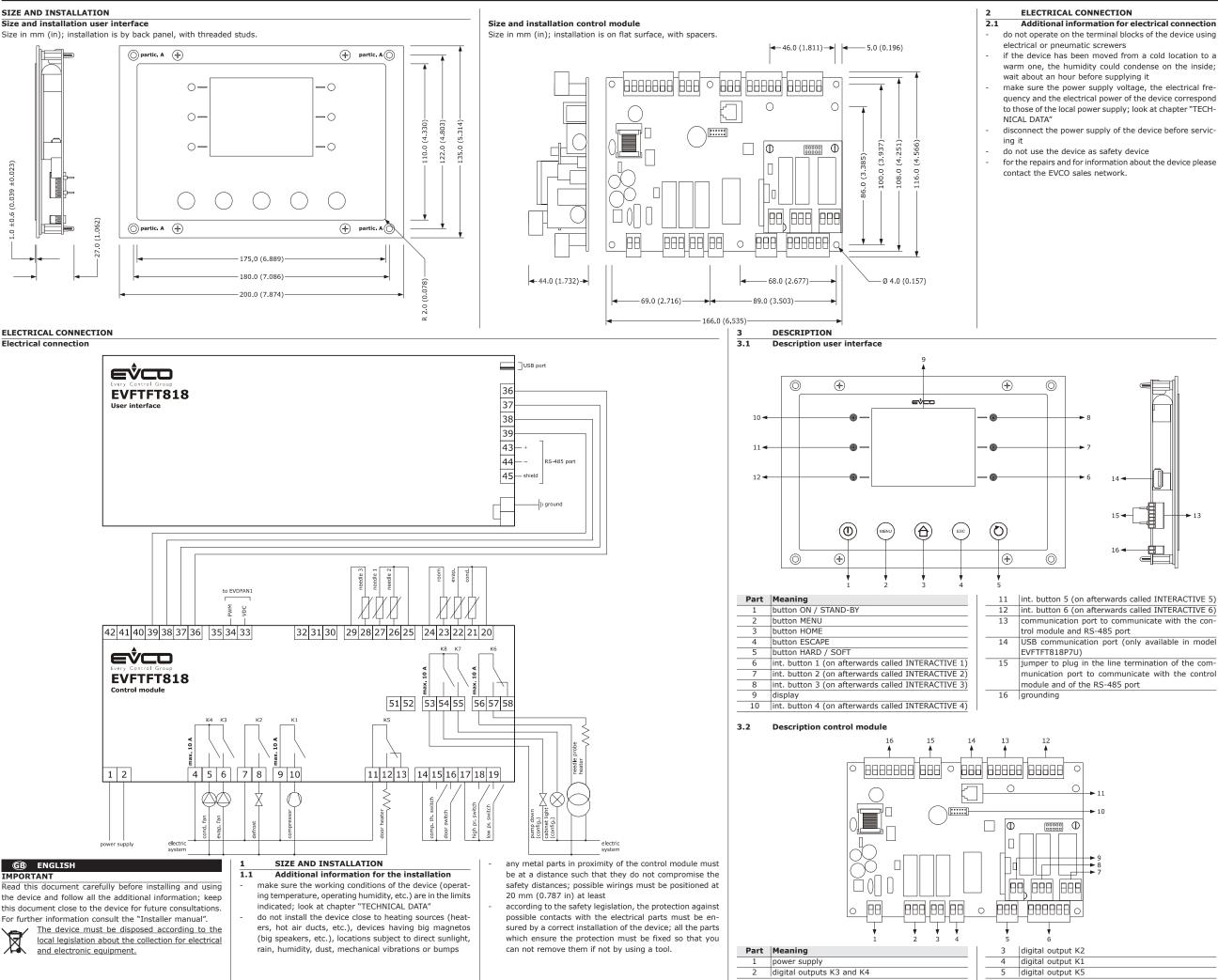
EVCO S.p.A. | Code 104FTFT818E103 | Page 1 of 2 | PT 47 / 12 EVF818 - Split controller (which can be integrated into the unit) for blast chillers (with colour TFT graphic display and capacitive push buttons)



digital inputs
digital output K6
digital outputs K7 and K8
reserved
reserved
reserved
analog inputs (room probe, evaporator probe and
condenser probe)
analog inputs (needle probe 1, needle probe 2
and needle probe 3)
reserved
PWM analog output
communication port to communicate with the con-
trol module

USER INTERFACE

4.1 Preliminary information

There are the following operating status:

- status "off" (the device is not powered)
- status "stand-by" (the device is powered but it is switched off)
- status "on" (the device is powered, it is switched on and it is waiting an operating cycle is started)
- status "run" (the device is powered, it is switched on and an operating cycle is running).

Hereinafter, "switching on the device" means moving from status "stand-by" to status "on" and "switching off the device" means moving from status "on" to status "stand-by". 4.2 Switching on / off the device

Operate as follows:

1. Make sure the keyboard is not locked and no procedure is running.

- 2. Press and release button ON / STAND-BY.
- 4.3 The display

During status "off" and during status "stand-by" the display is switched off.

During status "on" the device shows the day and the real time and the room temperature

During status "run" the device will show:

if a temperature controlled blast chilling or a temperature controlled blast freezing is running, the temperature read by the needle probe, the room temperature, the program name (if foreseen) and the time elapsed since the start of the blast chilling or of the blast freezing

if a time controlled blast chilling or a temperature controlled blast freezing is running, the residual duration of the blast chilling or of the blast freezing, the room temperature, the program name (if foreseen) and the time elapsed since the start of the blast chilling or of the blast freezing.

Showing the inputs and outputs status 4.4

- Operate as follows:
- Make sure the device is in status "on".
- 2. Make sure the keyboard is not locked and no procedure is running
- Press and release button HOME, press and release button MENU, then press and release over and over again button INTERACTIVE 2 to select "INTERNAL VALUES".
- 4. Press and release button INTERACTIVE 4, then press and release button INTERACTIVE 3 or button INTER-ACTIVE 2 to select the input or the output.
- To quit the procedure operate as follows:
- 5. Press and release button ESCAPE or do not operate 60 s.

4.5 Activating the defrost by hand

Operate as follows:

- 1. Make sure the device is in status "on", a precooling or a storing is running
- 2. Make sure the keyboard is not locked and no procedure is runnina
- 3. Press and release button INTERACTIVE 5, pess and release button INTERACTIVE 5 again, then press and release button START / STOP.

If the evaporator probe is enabled and to the defrost activation the evaporator temperature is above the defrost cut off temperature, the defrost will not be activated.

4.6 Locking / unlocking the keyboard

- To lock the keyboard operate as follows:
- 1. Make sure no procedure is running.
- 2. Press and release button ON / STAND-BY, then press and release button INTERACTIVE 4.

According to the model, after 60 s the keyboard will automatically lock.

- To unlock the keyboard operate as follows:
- 3. Make sure no procedure is running.
- 4. Press and release button ON / STAND-BY, then press and release button INTERACTIVE 4.

4.7 Silencing the buzzer

- Operate as follows
- 1. Make sure no procedure is running 2. Press and release a button
- OPERATION

5.1 Temperature controlled blast chilling and storing

To start the cycle operate as follows:

- 1. Make sure the device is in status "on". 2. Make sure the keyboard is not locked and no procedure is running
- 3. Press and release button INTERACTIVE 4, press and release button INTERACTIVE 4 again, then press and release button INTERACTIVE 2: the device will show the blast chilling cutoff temperature and the blast chilling working setpoint
- Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them
- Press and release button START / STOP: it will be started the test for the verification of the proper insertion of the needle probe
- $5.1\$ If the test is successfully completed, the cycle will be started
- 5.2 If the test is not successfully completed, the cycle will be started time controlled
- To stop the cycle operate as follows
- 6. Press and release button START / STOP 5.2 Temperature controlled hard blast chilling and storing

To start the cycle operate as follows:

- 1. Make sure the device is in status "on"
- 2. Make sure the keyboard is not locked and no procedure is runnina
- 3. Press and release button INTERACTIVE 4. press and release button INTERACTIVE 4 again, then press and release button INTERACTIVE 6 and press and release button INTERACTIVE 1 at last: the device will show the blast chilling cutoff temperature and the blast chilling working setpoint
- Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them.
- Press and release button START / STOP: it will be started the test for the verification of the proper in-
- sertion of the needle probe 5.1 If the test is successfully completed, the cycle will be started
- 5.2 If the test is not successfully completed, the cycle will be started time controlle
- To stop the cycle operate as follows
- Press and release button START / STOP.
- Time controlled blast chilling and storing To start the cycle operate as follows:
- 1. Make sure the device is in status "on"
- 2. Make sure the keyboard is not locked and no procedure is running
- 3. Press and release button INTERACTIVE 4, then press and release button INTERACTIVE 4 again: the device will show the blast chilling duration and the blast chilling working setpoint
- Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them.
- Press and release button START / STOP: the cycle will be started. To stop the cycle operate as follows
- Press and release button START / STOP
- Time controlled hard blast chilling and stor-5.4 ina
- To start the cycle operate as follows:
- 1. Make sure the device is in status "on".
- 2. Make sure the keyboard is not locked and no procedure is running
- 3. Press and release button INTERACTIVE 4, press and release button INTERACTIVE 4 again, then press and release button INTERACTIVE 6: the device will show the blast chilling duration and the blast chilling working setpoint.
- Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them.
- Press and release button START / STOP: the cycle will be started.
- To stop the cycle operate as follows
- 6. Press and release button START / STOP.
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- 5.5 Continuous blast chilling
- To start the cycle operate as follows:
 - 1. Make sure the device is in status "on".
 - 2. Make sure the keyboard is not locked and no procedure is runnina
 - 3. Press and release button INTERACTIVE 4, press and release button INTERACTIVE 4 again, then press and release twice button INTERACTIVE 2: the device will show
 - the blast chilling working setpoint 4. Press and release button MENU, press and release the
 - INTERACTIVE buttons to modify this value, then press and release button ESCAPE to store it Press and release button START / STOP: the cycle will be
 - started.
 - To stop the cycle operate as follows:
 - Press and release button START / STOP. Temperature controlled blast freezing and stor-

 - To start the cycle operate as follows:
 - Make sure the device is in status "on" 2. Make sure the keyboard is not locked and no procedure is runnina
 - 3. Press and release button INTERACTIVE 4, press and release button INTERACTIVE 5, then press and release but-
 - ton INTERACTIVE 6 and press and release button INTER-ACTIVE 2 at last: the device will show the blast freezing cutoff temperature and the blast freezing working setpoint.
 - 4. Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them.
 - 5. Press and release button START / STOP: it will be started the test for the verification of the proper insertion of the needle probe.
 - 5.1 If the test is successfully completed, the cycle will be
 - started. 5.2 If the test is not successfully completed, the cycle will be
 - started time controlled
 - To stop the cycle operate as follows: 6. Press and release button START / STOP.
 - 5.7 Temperature controlled soft blast freezing and storina
 - To start the cycle operate as follows:
 - 1. Make sure the device is in status "on". 2. Make sure the keyboard is not locked and no procedure
 - is runnina 3. Press and release button INTERACTIVE 4, press and release button INTERACTIVE 5, then press and release button INTERACTIVE 2: the device will show the blast freezing cutoff temperature and the blast freezing working setpoint.
 - Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them
 - 5. Press and release button START / STOP: it will be started the test for the verification of the proper insertion of the needle probe.
 - 5.1 If the test is successfully completed, the cycle will be started.
 - 5.2 If the test is not successfully completed, the cycle will be started time controlled
 - To stop the cycle operate as follows
 - Press and release button START / STOP 5.8 Time controlled blast freezing and storing

To start the cycle operate as follows:

- Make sure the device is in status "on" 2. Make sure the keyboard is not locked and no procedure is runnina
- Press and release button INTERACTIVE 4, press and re lease button INTERACTIVE 5, then press and release button INTERACTIVE 6: the device will show the blast freezing duration and the blast freezing working setpoint.
- 4. Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them
- Press and release button START / STOP: the cycle will be started.
- To stop the cycle operate as follows
- 6. Press and release button START / STOP. 5.9 Time controlled soft blast freezing and storing
- To start the cycle operate as follows:
- Make sure the device is in status "on"
- Make sure the keyboard is not locked and no procedure is running
- Press and release button INTERACTIVE 4, then press and 3. release button INTERACTIVE 5: the device will show the blast freezing duration and the blast freezing working setpoint.

4. Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them.

4. Press and release the INTERACTIVE buttons to select the

5. Press and release the INTERACTIVE buttons to select

6. Press and release button ESCAPE or do not operate

2. Make sure the keyboard is not locked and no procedure

Press and release button INTERACTIVE 3 or button IN-

TERACTIVE 2 to select the program, then press and re-

lease button START / STOP: the cycle will be started with

2. Make sure the keyboard is not locked and no procedure

4. Press and release button INTERACTIVE 3 or button IN-

LED temperature controlled blast chilling / tempera-

ED time controlled blast chilling / time controlled

Alarm temperature controlled blast chilling or tem

vithin the maximum duration (HACCP alarm)

AH High temperature alarm (HACCP alarm)

PF Lack of power supply alarm (HACCP alarm)

ErC Error compatibility user interface-control module

Purpose of the devices: controller for blast chillers.

ErL Error communication user interface-control module

user interface: open frame board behind a sheet of meth-

CtH Compressor thermal switch alarm

COH Overheated condenser alarm

CSd Locked compressor alarm

perature controlled blast freezing not concluded

SIGNALINGS AND INDICATIONS

HARD LED hard blast chilling / blast freezing

ture controlled blast freezing

LED bars blast chilling intensity

TERACTIVE 2 to select the program, then press and re-

lease button START / STOP: the cycle will be started with

character and to confirm it

6.2 Starting a program

To quit the procedure operate as follows:

1. Make sure the device is in status "on".

the settings stored in the program.

FUNCTION "FAVORITE"

Starting a favorite program

Make sure the device is in status "on".

3. Press and release button INTERACTIVE 6.

the settings stored in the program.

Signalings

HED blast chilling

🔆 🔆 LED blast freezing

blast freezing

LED storing

Av LED precooling

°C LED Celsius degree

•F LED Fahrenheit degree

AL Low temperature alarm

id Open door alarm

HP High pressure alarm

LP Low pressure alarm

Errors

Pr1 Room probe error

Pr2 Evaporator probe error

Pr3 Condenser probe error

Pr4 Needle probe 1 error

Pr5 Needle probe 2 error

Pr6 Needle probe 3 error

rtc Real time clock error

Technical data

TECHNICAL DATA

control module: open frame board.

10.1 Errors

Code Meaning

ALLX | ED auxiliary

min LED minutes

ALARMS

Alarms

Code Meaning

HACCP LED HACCP

Press and release button INTERACTIVE 3.

"[END1".

Operate as follows

is running

Operate as follows:

is running.

LED Meaning

7.1

8.1

9.1

10

11

11.1

Execution:

acrylate

tiM

60 s.

Size:

Installation:

Connections:

131 °F).

158 °F)

not condensing

Power supply:

NTC probes.

Kind of sensor:

Working range:

Kind of sensor:

Working range

5 VDC, 2 mA).

Digital inputs

Power supply:

Digital outputs:

management

management (K5)

Communication ports:

probe heater management

Protection

display

ment.

2 ports

tocol

Resolution

Protection:

Resolution

Protection

10 VA max.

Pollution situation: normal

24 h with battery fully charged.

power supply of the device).

Index of protection:

user interface: IP65

control module: IP00.

x 1.732 in: W x H x D).

- Press and release button START / STOP: the cycle will be started.
- To stop the cycle operate as follows:
- 6. Press and release button START / STOP.
- 5.10 Continuous blast freezing
- To start the cycle operate as follows: Make sure the device is in status "on"
- 2. Make sure the keyboard is not locked and no procedure is running
- Press and release button INTERACTIVE 4, press and release button INTERACTIVE 5, then press and release twice button INTERACTIVE 2: the device will show the blast freezing working setpoint
- Press and release button MENU, press and release the INTERACTIVE buttons to modify these values, then press and release button ESCAPE to store them
- Press and release button START / STOP: the cycle will be started

Make sure the keyboard is not locked and no procedure

Press and release button INTERACTIVE 4, press and re-

lease button INTERACTIVE 3, then press and release but-

ton INTERACTIVE 3 again or button INTERACTIVE 2: the

LED bars **7** will provide information about the fan speed.

Make sure the keyboard is not locked and no procedure

INTERACTIVE buttons to select the fan speed, then press

Press and release button MENU, press and release the

9. Press and release button ESCAPE or do not operate

Make sure the keyboard is not locked and no procedure

Press and release button INTERACTIVE 2, then press and

5.13 Switching on the UV light for the cycle of steri-

Make sure the device is in status "on" and the door is

3. Make sure the keyboard is not locked and no procedure

4. Press and release button INTERACTIVE 5, press and re-

1. Make sure the device is in status "on" or a storing is

running and the door is open, or the door switch input is

Make sure the keyboard is not locked and no procedure

Press and release button INTERACTIVE 5, press and re-

lease button INTERACTIVE 3, then press and release but-

1. Make sure the keyboard is not locked and no procedure

show the number of the first available program.

Press and release button INTERACTIVE 1 before starting

an operating cycle or during a storing: the device will

Press and release button INTERACTIVE 3 or button IN-

TERACTIVE 2 to select the program number, then press

and release button INTERACTIVE 4 to join it a name.

lease button INTERACTIVE 4, then press and release but-

closed, or the door switch input is not active.

- To stop the cycle operate as follows
- . Press and release button START / STOP.
- 5.11 Blast chilling intensity

is running.

As alternative:

is running.

60 s.

is running

Operate as follows

is runnina.

Operate as follows:

is runnina.

Operate as follows:

is running

ton START / STOP

FUNCTION "PROGRAMS"

Storing a program

active.

6.1

lization

ton START / STOP.

5.14 Needle probe heating

- To select the evaporator fan speed operate as follows: Make sure the function is enabled.
- Make sure the device is in status "on"

Make sure the function is enabled.

Make sure the device is in status "on"

and release button ESCAPE to store it.

To quit the procedure operate as follows

To start the precooling operate as follows

release button START / STOP.

To stop the precooling operate as follows

Make sure the function is enabled.

Press and release button START / STOP.

Make sure the device is in status "on"

5.12 Starting the precooling

```
user interface: 200.0 x 135.0 x 28.0 ±0.6 mm (7.874 x
    5.314 \times 1.102 \pm 0.023 in: W x H x D)
    control module: 166.0 x 116.0 x 44.0 mm (6.535 x 4.566
    user interface: by back panel, with threaded studs
    control module: on flat surface, with spacers
    user interface: extractable screw terminal blocks (con-
    trol module and RS-485 serial port)
    control module: extractable screw terminal blocks (use
    interface, power supply, inputs and outputs).
The maximum lengths of the connecting cables user inter-
face-control module is 20 m (65.614 ft)
Operating temperature: from 0 to 55 °C (from 32 to
Storage temperature: from -10 to 70 °C (from 14 to
Operating humidity: from 10 to 90% of relative humidity
  user interface: supplied by the control module
    control module: 230 VAC (±15%), 50 / 60 Hz, (±3 Hz),
Overvoltage category: integrated control
Real time clock: incorporated (with capacitor).
Battery autonomy in the event of lack of power supply:
Battery charging time: 2 min (the battery is charged by the
Signaling and alarm buzzer: incorporated.
Analog inputs: 6 inputs (room probe, evaporator probe, con-
denser probe and "multipoint" needle probe up to three sen-
sors), which can be set via configuration parameter for PTC /
PTC analog inputs (990 Ω @ 25 °C, 77 °F)
                          KTY 81-121.
                          from -50 to 150 °C (from -58 to
                          302 °F).
                          1 °C (1 °F).
                          none
<u>NTC analog inputs (10K Ω @ 25 °C, 77 °F)</u>
                          ß3435.
                          from -40 to 105 °C (from -40 to
                          220 °F).
                          1 °C (1 °F).
Digital inputs: 4 inputs (door switch, high pressure switch,
low pressure switch and compressor thermal switch), which
can be set via configuration parameter for normally open /
normally closed contact (free of voltage contact,
                          none.
                          none
Displays: 320 x 240 pixel (3.5 inches) colour TFT graphic
Analog outputs: 1 PWM output for evaporator fan manage
8 outputs (electromechanical relays)
   1 SPST 16 res. A @ 250 VAC output (K1) for compressor
    six 8 res. A @ 250 VAC outputs of which 5 SPST outputs
    for defrost management (K2), evaporator fan manage
    ment (K3), condenser fan management (K4), room light
    or UV light management (K7), pump down or alarm out-
    put management (K8) and 1 SPDT output for door heater
    1 SPDT 16 res. A @ 250 VAC output (K6) for needle
The maximum current allowed on the loads is 20 A.
Type of actions and additional features: 1C.
 1 RS-485 serial port with MODBUS communication pro-
  1 USB serial port (only available in model EVFTFT818P7U).
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