

FK 405A

ON-OFF single output digital thermoregulator

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EVERY CONTROL S.r.l.

This Company belongs to **EVCO group**

Via Mezzaterra 6, 32036 Sedico Belluno ITALY

Phone 0039-0437-852468 • Fax 0039-0437-83648

info@everycontrol.it • www.everycontrol.it

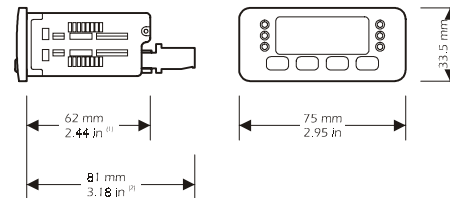
ENGLISH

smart guide

1 PREPARATIONS

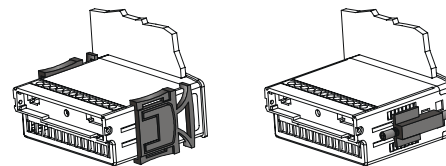
1.1 How to install the instrument

Panel mounting, panel cut out 71 x 29 mm (2.79 x 1.14 in), with click brackets (they are supplied by the builder) or screw brackets (by request).



(1) maximum depth with screw terminal blocks (standard model)

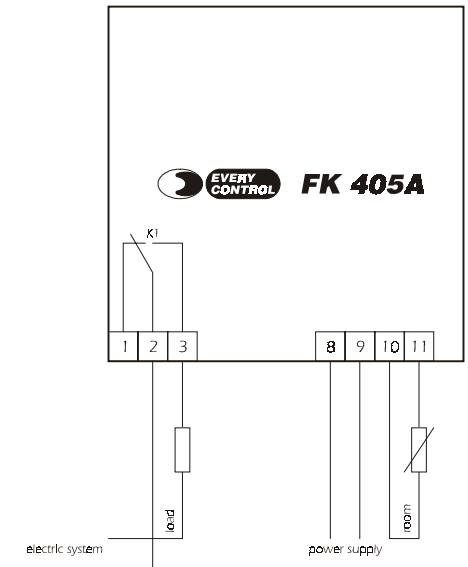
(2) maximum depth with extractable terminal blocks (by request).



installation with click brackets (on the left-hand side, they are supplied by the builder)

and screw brackets (on the right-hand side, by request); if you are using screw brackets, you have to moderate the clamping torque, in order not to damage the box and screw brackets.

1.2 Electrical connection



2 OPERATION

2.1 Preliminary information

During the normal operation the instrument shows the room temperature.

2.2 Load operation

Once you have turned the instrument ON, the load will be forced ON for the time you have set with the parameter d3; on afterwards, it will work in accordance with the working setpoint and parameter r0 (heating action).

3 WORKING SETPOINT

3.1 How to set the working setpoint

If you have to modify the working setpoint value:

▪ press **set** and **↑** or **↓** ⁽³⁾

⁽³⁾ you can set the working setpoint between -40 and 99 °C (-40 and 99 °F).

4 CONFIGURATION PARAMETERS

4.1 How to set the configuration parameters

If you have to gain access the procedure:

▪ press **↑** and **↓** for 4 s; the instrument will show **r** **i**

If you have to select a parameter:

- press  or 

If you have to modify the value of the parameter:

- press  and  or 

If you have to quit the procedure:

- press  and  for 4 s  or do not operate for about 60 s.



5 SIGNALS

5.1 Signals

LED	MEANING
out	Load LED if it is lighted, the load will be ON
LED	Load forced ON LED
below	if it is lighted, the load will be forced ON (look at the parameter d3)
out	

6 ALARMS

6.1 Alarms

CODE	REASONS	REMEDIES	EFFECTS
 corrupted memory data	there is the corruption of the configuration data of the memory of the instrument	switch off the power supply of the instrument: unless the alarm disappears, you will have to change the instrument	<ul style="list-style-type: none"> you can not gain access the setting procedures the load will be forced OFF
 room probe alarm	<ul style="list-style-type: none"> the kind of room probe you have connected is not right the room probe plays up the connection instrument-room probe is wrong the room temperature is outside the limits allowed by the working range of the instrument 	<ul style="list-style-type: none"> test the integrity of the probe test the instrument-probe connection test the temperature close to the probe (it has to be between the limits allowed by the working range) 	the load will be forced OFF

The instrument shows the indications above flashing.

7 TECHNICAL DATA

7.1 Technical data

Box: self-extinguishing grey.

Size: 75 x 33.5 x 62 mm (2.95 x 1.31 x 2.44 in) the model with screw terminal blocks (standard model), 75 x 33.5 x 81 mm (2.95 x 1.31 x 3.18 in) the model with extractable terminal blocks (by request).

Installation: panel mounting, panel cut out 71 x 29 mm (2.79 x 1.14 in), with click brackets (they are supplied by the builder) or screw brackets (by request).

Frontal protection: IP 65.

Connections: screw terminal blocks with pitch 5 mm (0.19 in, standard model) for cables up to 2.5 mm² (0.38 sq in, power supply, input and output) or extractable terminal blocks with pitch 5 mm (0.19 in, by request) for cables up to 2.5 mm² (0.38 sq in, power supply, input and output).

Ambient temperature: from 0 to 55 °C (32 to 131 °F, 10 ... 90% of relative humidity without condensate).

Power supply: 12-24 Vac/dc, 50/60 Hz, 1.5 VA (standard model) or 12 Vac/dc, 50/60 Hz, 1.5 VA (by request).

Measure inputs: 1 (room probe) for NTC probes.

Working range: from -40 to 99 °C (-40 to 210 °F).

Setpoint range: from -40 to 99 °C (-40 to 99 °F).

Resolution: 1 °C.

Display: one red LED 3-digit display 13.2 mm (0.51 in) high, output status indicators.

Outputs: one 10 A @ 250 Vac relay (change-over contact).

8 WORKING SETPOINT AND CONFIGURATION PARAMETERS

8.1 Working setpoint

LABEL	MIN.	MAX.	U.M.	DEF.	WORKING SETPOINT
/1	-40	99	°C	50	working setpoint

8.2 Configuration parameters

LABEL	MIN.	MAX.	U.M.	DEF.	MEASURE INPUTS
/1	-55	99	°C	0	room probe calibration (you have to set eight points for adjusting one degree)

LABEL	MIN.	MAX.	U.M.	DEF.	REGULATOR
r0	1	15	°C	2	hysteresis (differential, it is relative to the working setpoint)

LABEL	MIN.	MAX.	U.M.	DEF.	LOAD FORCED ON
d3	0	99	min	40	time the load is forced ON since you turn the instrument ON