XT11CX

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2. GENERAL WARNINGS

PLEASE READ BEFORE USING THIS MANUAL

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- The instrument shall not be used for purposes different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.
- Dixell Srl reserves the right to change the composition of its products, even without notice, ensuring the same and unchanged functionality.

SAFETY PRECAUTIONS

- Check the supply voltage is correct before connecting the instrument.
- Do not expose to water or moisture: use the controller only within the operating limits avoiding sudden temperature changes with high atmospheric humidity to prevent formation of condensation
- Warning: disconnect all electrical connections before any kind of maintenance.
- Fit the probe where it is not accessible by the End User. The instrument must not be opened.
- In case of failure or faulty operation send the instrument back to the distributor or to "Dixell S.r.l." (see address) with a detailed description of the fault.
- Consider the maximum current which can be applied to each relay (see Technical Data).
- Ensure that the wires for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.
- In case of applications in industrial environments, the use of mains filters (our mod. FT1) in parallel with inductive loads could be useful.

3. GENERAL DESCRIPTION

The **XT11CX** is a new electronic digital thermometer which displays the current temperature and also logs the maximum and minimum temperatures experienced. These max. / min. temperatures can be displayed at the touch of a button and reset if required.

4. FRONT PANEL COMMANDS

SET	In programming mode it selects a parameter or confirm an operation
AUX	Not used
∧	In programming mode it browses the parameter codes or increases the displayed value
∨	In programming mode it browses the parameter codes or decreases the displayed value
∨ + ∧	To lock or unlock the keyboard
SET + ∨	To enter in programming mode
SET + ∧	To return to room temperature display

LED	Mode	Meaning
°C	On	Measurement unit
	Flashing	Programmino mode
°F	On	Measurement unit
	Flashing	Programming mode

HOW TO CHANGE A PARAMETER VALUE

To change the parameter's value operate as follows:
1. Enter the Programming mode by pressing the **SET**+ ∨ keys for 3s (**"°C" or "°F"** LED starts blinking).
2. Select the required parameter. Press the "**SET**" key to display its value
3. Use ∧ or ∨ to change its value.
4. Press "**SET**" to store the new value and move to the following parameter.

To exit: Press **SET**+ ∧ or wait 15s without pressing a key.
NOTE: the set value is stored even when the procedure is exited by waiting the time-out to expire.

TO LOCK THE KEYBOARD

1. Keep pressed for more than 3s the ∧ and ∨ keys.
2. The "**OF**" message will be displayed and the keyboard will be locked. If a key is pressed more than 3s the "OF" message will be displayed.

TO UNLOCK THE KEYBOARD

Keep pressed together for more than 3s the ∧ and ∨ keys till the **"on"** message will be displayed.

5. PARAMETERS

DISPLAY

ot **Probe calibration:** (-12.0÷12.0°C / -21÷21°F) allows to adjust possible offset of the first probe.
CF **Measurement unit:** (°C÷°F) **°C** =Celsius; **°F** =Fahrenheit. **WARNING**: When the measurement unit is changed the SET point and the values of the parameters Hy, LS, US, oE, o1, AU, AL have to be checked and modified if necessary).
rE **Resolution (only for °C):**(dE ÷ in) **dE=** decimal between -9.9 and 9.9°C; **in=** integer
dy **Display delay:** (0÷15 min.) when the temperature increases, the display is updated of 1 °C/1°F after this time.

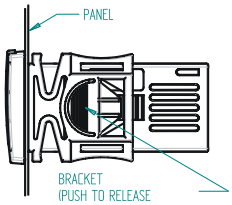
ALARM

AU **MAXIMUM temperature alarm**: (SET÷110°C; SET÷230°F) when this temperature is reached the alarm is enabled.
AL **Minimum temperature alarm**: (-50.0 ÷ SET°C; -58÷230°F when this temperature is reached the alarm is enabled.
Ad **Temperature alarm delay:** (0÷99 min) time interval between the detection of an alarm condition and alarm signalling.
dA **Exclusion of temperature alarm at startup:** (0÷99 min) time interval between the detection of the temperature alarm condition after instrument power on and alarm signalling.

OTHER

PC **Kind of probe: PTC or NTC**
rL **Software release**
Pt **Parameter code table**.

6. INSTALLATION AND MOUNTING



Instrument **XT11CX** shall be mounted on vertical panel, in a 29x71 mm hole, and fixed using the special bracket supplied.
The temperature range allowed for correct operation is 0÷60 °C. Avoid places subject to strong vibrations, corrosive gases, excessive dirt or humidity. The same recommendations apply to probes. Let air circulate by the cooling holes.

7. ELECTRICAL CONNECTIONS

The instrument is provided with screw connectors. Before connecting cables make sure the power supply complies with the instrument's requirements. Separate the probe cables from the power supply cables, from the outputs and the power connections. Do not exceed the maximum current allowed on each relay, in case of heavier loads use a suitable external relay.

7.1 PROBE

The probe shall be mounted with the bulb upwards to prevent damages due to casual liquid infiltration. It is recommended to place the thermostat probe away from air streams to correctly measure the average room temperature.

7.2 HOW TO PROGRAM THE HOT KEY FROM THE INSTRUMENT (UPLOAD)

1. Program one controller with the front keypad.
2. When the controller is ON, insert the "Hot key" and push ∧ key; the **"uP"** message appears followed a by flashing "**En**"
3. Push "**SET**" key and the "**En**" will stop flashing.
4. Turn OFF the instrument remove the "Hot Key", then turn it ON again.

NOTE: the "**Er**" message is displayed for failed programming. In this case push again o key if you want to restart the upload again or remove the "Hot key" to abort the operation.

7.3 HOW TO PROGRAM AN INSTRUMENT USING HOT KEY (DOWNLOAD)

1. Turn OFF the instrument.
2. Insert a **programmed "Hot Key" into the 5 PIN receptacle** and then turn the Controller ON.
3. Automatically the parameter list of the "Hot Key" is downloaded into the Controller memory, the "**do**" message is blinking followed a by flashing "**En**".
4. After 10 seconds the instrument will restart working with the new parameters.
5. Remove the "Hot Key"..

NOTE: the "**Er**" message is displayed for failed programming. In this case push again o key if you want to restart the upload again or remove the "Hot key" to abort the operation.

8. ALARM SIGNALLING

Mess.	Cause	Outputs
"P1"	Room probe failure	Compressor output according to "Cy" e "Cn"
"HA"	Maximum temperature alarm	Outputs unchanged
"LA"	Minimum temperature alarm	Outputs unchanged

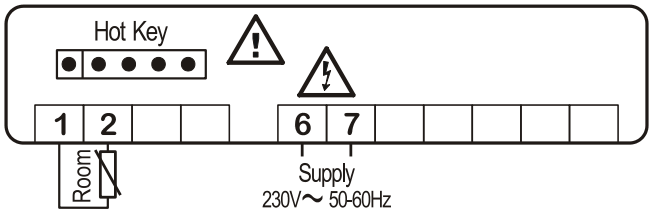
8.1 ALARM RECOVERY

Probe alarm "**P1**" start some seconds after the fault in the probe; it automatically stop some seconds after the probe restarts normal operation. Check connections before replacing the probe. Temperature alarms "**HA**" and "**LA**" automatically stop as soon as the temperature returns to normal values.

9. TECHNICAL DATA

Housing: self extinguishing ABS. **Case:** frontal 32x74 mm; depending on the model depth 50mm; **Mounting:** panel mounting in a 29x71mm panel cut-out; **Protection:** IP20; **Frontal protection:** IP65
Connections: screw terminals;
Power Supply: depending on the model 110Vac ±10%, 50/60Hz or 230Vac ±10%, 50/60Hz;
Power absorption: 3.5VA max;
Display: 3 digits, red LED, 14,2 mm high with icons; **Probe input**: 1 NTC or 1 PTC.
Data storing: on the non-volatile memory (EEPROM).
Kind of action: 1B; **Pollution grade:** 2; **Software class:** A.; **Rated impulsive voltage**: 2500V; **Over voltage Category**: II
Operating temperature: 0÷60 °C; **Storage temperature:** -30÷85 °C. **Relative humidity:** 20÷85% (no condensing)
Measuring and regulation range: depending on the model **PTC** -50÷150°C (-58÷302°F); **NTC** -40÷110°C (-40÷230°F) **Resolution:** 0,1 °C or 1°C or 1 °F (selectable); **Accuracy (ambient temp. 25°C)**: ±0,7 °C ±1 digit

10. CONNECTIONS – 110VAC OR 230VAC



In case of model at 230Vac, connect power supply to terminals 6-7.

11. DEFAULT SETTING VALUES

LABEL	DESCRIPTION	RANGE	DEFAULT
DISPLAY			
ot	Probe calibration	-12.0÷12.0°C/-21÷21°F	**0**
CF	Measurement units	°C - °F	°C
rE	Resolution (only for °C)	dE – in	dE
dy	Display delay	0 ÷ 15 min	0
ALARM			
AU	High temperature alarm	0÷50°C AL÷150°C / 0÷90°C AL÷302°C	150
AL	Low temperature alarm	0÷50°C -55°C÷AU / 0÷90°C -67°F÷AU	-50
Ad	Temperature alarm delay	0 ÷ 255 min	15
dA	Exclusion of temperature alarm at startup	0 ÷ 24:00	1.0
OTHER			
PC	Kind of probe	PTC/NTC	
rL	Firmware release	Read Only	- - -
Pt	Parameter code table	Read Only	- - -

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