

**QUICK INSTALLATION MANUAL
THERMOSTAT ZED-TCM
PRODUCT CODE: ZED-TCM-M / ZED-TCMR-M
END-DEVICE FOR ZB-CONNECTION RADIO NETWORK**

GENERAL DEVICE CHARACTERISTICS

ZED-TCM belongs to ZB-Connection devices family.

It is a battery powered radio thermostat, equipped with LCD display and four buttons.

The device has also an internal NTC thermal probe.

There are two versions of the device, the version without relay (ZED-TCM-M) and the version with relay (ZED-TCMR-M). If it is present it is a bistable relay, to ensure a low consumption also with relay active.

The task of ZED-TCM is mainly to acquire the temperature of its probe and implement a control process that results in the activation / deactivation of the relay, if present, and the activation / deactivation of some data transported via radio to a compatible Gateway.

Furthermore ZED-TCM can act as an interface between the user and the supervision system connected by the Gateway.

The device must be supplied with a three 1,5V AAA battery. Its role in the network is End-Device.

ELECTRICAL DEVICE CHARACTERISTICS

POWER SUPPLY: 3x1,5V AAA Battery 3.6V battery

WIRELESS CHARACTERISTICS: 2405 MHz ÷ 2480 MHz
DSSS Modulation
Nominal transmission Power +3dBm
IEEE 802.15.4 compliant
Stack EmberZNet3.5.x
Stack version 0
Proprietary profile ID
Proprietary encryption key

TEMPERATURE SENSOR PROBE: NTC SENSOR TYPE 103AT
(10K a 25°C; beta=3435K)
Measurement range -50°C ÷ +100°C
Reading resolution 0,1°C
Reading accuracy ±0,5°C

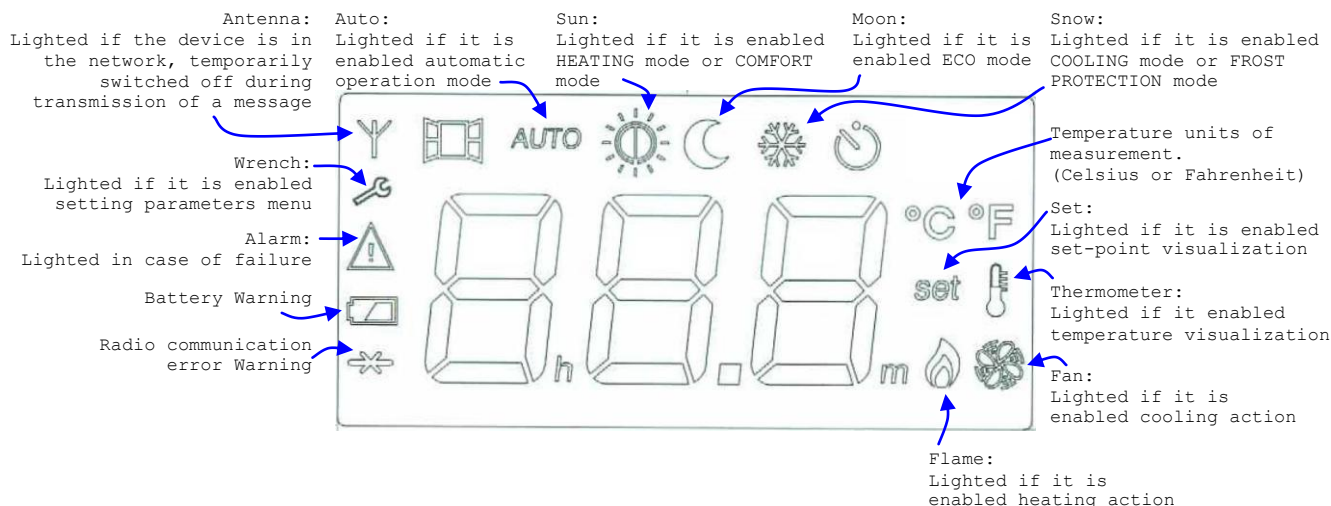
OPERATING CONDITIONS: -20÷+55 °C (+10÷30°C for nominal battery duration)

PROTECTION DEGREE: IP 55

DEVICE LAYOUT



- Button "-" (1° button from left): It decreases the value of set point or the value of the selected parameter
- Button "+" (2° button from left): It increases the value of set point or the value of the selected parameter
- Button "timer" (2° button from right): No function associated
- Button "Mode/Off" (1° button from right): It changes the operation mode.



PARAMETERS MENU

This menu is activated by pressing contemporary buttons "Mode/Off" and "Timer" for three seconds. Pressing button "Mode/Off" for a second to enter in the changing value menu for the chosen parameter. In this condition, pressing buttons "+"/"-" to change the value of the parameter chosen (if it is possible). Pressing button "Mode/Off" for a second to confirm the value chosen for the selected parameter.

PARAMETERS

P1 : Device Address
P2 : Joining State
P3 : Set-Point minimum value
P4 : Set-Point maximum value
P5 : Hysteresis Heating
P6 : Hysteresis Cooling
P7 : Modality (0-> HEATING/COOLING, 1-> COMFORT/ECO/FROSTPROT)
P8 : Lock change mode button (0-> enabled, 1-> button disable)
P9 : Lock change set-point buttons (0-> enable, 1-> buttons disable)
P10: LCD Display Mode (0-> shows internal probe temperature, 1-> shows Set-point)
P11: Temperature unit of measurement. (0-> °C, 1-> °F)

DEVICE ADDRESSING

ZED-TCM can be addressed by programming P1 parameter. Valid addresses range from 16 and 127 (default value is 16). Changing address is possible only if device is not joined to any network (off-line mode).

Attention: Be careful when assigning addresses. Two devices with the same address would put their data into the same container in the Gateway and this would generate ambiguity which would be difficult to identify in subsequent network operations.

ASSOCIATING THE DEVICE TO A COMPATIBLE NETWORK

Activation of the joining process is performed by setting value "on" on P2 parameter. Joining process is possible only if device is not joined to any network (off-line mode).

JOINING ZED-TCM TO A NETWORK: SEQUENCE PROCESS

- 1) Open the Network (acting on Gateway).
- 2) Set the desired value for the address (P1 parameter).
- 3) Enter in parameter menu (pressing "Mode/Off" and "Timer" button together).
- 4) Select P2 parameter, then press "Mode/Off" button.
- 5) Select "on" value, then press "Mode/Off" button.
- 6) It appears message "Joi".
Joining process consists in scanning of all 16 radio channels in search of an open and compatible network (i.e. type ZB-Connection). This process can take up to 30 seconds.
- 7) At the end of the process it is showed a "on" message if device has correctly joined to a network. Otherwise device restarts

DISASSOCIATING THE DEVICE FROM THE NETWORK - RESTORE DEFAULT VALUE

Disassociating the device involves the losing of the network parameters and consequently the leaving from the network of which it had been a part.

Besides device loads the default value for all its parameters.

Disassociation can be ordered in two ways:

- Receiving an appropriate command password via radio.
- Setting the value "off" in parameter P2 twice in succession, the first command causes the reset of the device (message "RST" appears), the second time the command causes the disassociation (message "LEA" appears).