Z-CONNECT TEMPERATURE & HUMIDITY SENSOR
USER MANUAL

Z-Wave is the world's leading wireless smart home automation technology, providing affordable and convenient home automation solutions. Z-Wave has been incorporated into a range of devices capable of interacting with your household utilities and appliances.

With Z-Wave devices you can automate everyday tasks, like opening and closing windows, switching off lights, locking doors, adjusting room temperature and much more.
This zConnect HUMIDITY AND TEMPERATURE SENSOR is a wireless Z-Wave enabled device and is fully compatible with any Z-Wave network operating on the same radio frequency (921.42 MHz in AU/NZ).
The zConnect HUMIDITY AND TEMPERATURE SENSOR is designed for residential and light commercial usage, primarily for integration with Z-Wave home automation systems such as Fibaro HC3/Lite3, Yubii, Aula or similar.
The zConnect Z-Wave HUMIDITY AND TEMPERATURE SENSOR can be installed everywhere indoor or under cover outdoor.

PACKAGE CONTENTS

1 x Z-Wave HUMIDITY AND TEMPERATURE SENSOR
1 x Battery
1 x Pin

PRODUCT DESCRIPTION

The zConnect HUMIDITY AND TEMPERATURE SENSOR is a Z-Wave controlled battery operated sensor which can be used in different Z-Wave projects around your house.
Protect yourself from the mold in the bathroom. When the zConnect HUMIDITY AND TEMPERATURE SENSOR installed in bathroom and detects rising humidity, it instantly can start the exhaust fan connected to Z-Wave network.

Automate your AC. When the zConnect HUMIDITY AND TEMPERATURE SENSOR installed in your living area and detects rising humidity and temperature, it can start your air conditioner via Remotec Z-Wave/IR Bridge.

Ventilate your laundry. When the zConnect HUMIDITY AND TEMPERATURE SENSOR installed in your laundry and detects rising humidity, it can send command to Z-Wave windows winders to ventilate the area.

The zConnect HUMIDITY AND TEMPERATURE SENSOR has a Z-Wave 700 Series Chip that supports the latest Z-Wave 700 features.

Z-WAVE 700 SERIES

Depending on the capability of the Controller or gateway software, the following operations can be performed with a zConnect HUMIDITY AND TEMPERATURE SENSOR:

- Turn devices ON and OFF within same Z-Wave network. They can be lights, fans, motors, actuators, appliances, heating and cooling.
- Control roller shutters or window chain winders, curtains.
- Scene control via a Z-Wave Gateway (Scene Activation Set, if Z-Wave Gateway supports such function).
- Scene control on a Z-Wave Gateway (Central scene, if Z-Wave Gateway supports such function).
- Inclusion or Exclusion of the zConnect sensor from a Z-Wave network.
- The zConnect sensor has 2 ASSOCIATION GROUPS (see ASSOCIATIONS chapter below):

SPECIFICATIONS

Power	CR2032 BATTERY
Battery life	Up to 4 years
Z-Wave chip	700 series
RF Power output	2 MW
Z-Wave RF	921.4 MHz AU,NZ, Brazil, Thailand , Chile, Malaysia
Power consumption when on	<0.72W
Power consumption in stand-by mode	<0.2W
Range indoors	Up to 45m
Range outdoors	Up to 75m
Dimensions	36 * 36 * 10 mm
IP rating	IP30
Humidity Range	0% TO 100%
Protection	IP-30
Operating temperature	0 °C to 85 °C

INSTALLATION

ATTENTION! Do not install it under open sky.
Use double tape attached to the device. Clean surface with rubbing alcohol of acetone.

Depending on the environment in which the device is to be used, the following placement guidelines are used.

To measure the air temperature in a room, the sensor is installed approximately 1.5 m above the floor level and at least 0.5 m from the corner of the room and at least 1 m from heat sources.

When installing a temperature sensor, the following factors should be taken into account: the distribution of the heating system; heat capacity of the room; the number of rooms with heating devices of different power. It is recommended to install the temperature sensor in the coldest rooms undergoing the least temperature change during the day from heat sources not connected with the heating system (sun, people, and office equipment). It is not recommended to install the temperature sensor on external walls, near heating devices, window or door openings. An incorrectly installed reference room temperature sensor leads to ineffective operation of the entire control system.

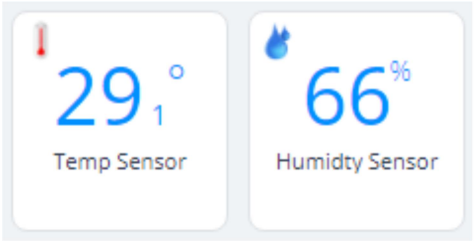
CONNECTING AND CONFIGURATION OF DEVICE

zConnect HUMIDITY AND TEMPERATURE SENSOR comes with a Battery already installed in the device.

To **include** the device into your Z-Wave Network, first place your Z-Wave Controller into Inclusion mode, then press the Service button located at the top of your device using the Pin provided three times within 2 seconds.

To **exclude** the device from your Z-Wave Network, first place your Z-Wave Controller into Exclusion mode, press the Service button located at the top of your device using the Pin provided three times within 2 seconds.

After successful inclusion you'll see two icons in the controller interface.



(Devices appearance in a FIBARO Home Centre 3)

TEMPERATURE READINGS

zConnect HUMIDITY AND TEMPERATURE SENSOR has a digital temperature sensor that can be used to measure the ambient temperature of indoor air. It works as the following:

- t current temperature.

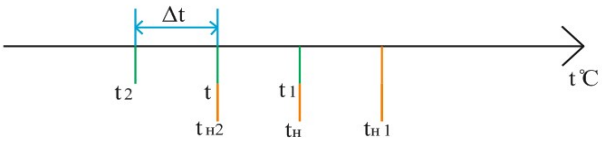
- t1 upper temperature threshold.
- t2 lower temperature threshold.
- Δt is the difference between the threshold value and the current temperature.

At the first start-up, the sensor measures the temperature (℃) and humidity of the environment Fig. 1 Depending on the set Δt, the sensor records the threshold values t1 and t2 for the event of sending a report on the new temperature and humidity to the network. The minimum value of Δt is 1℃ which is also the default (parameter 2)

The sensor measures temperature and humidity with a frequency of once every two minutes 1 / 120Hz, the rest of the time the sensor is in sleep mode (low power consumption) while consuming 2 μA. The device is normally in sleep mode and therefore does not participate in the network as a repeater.

In fact, if t does not go beyond t1 and t2, the sensor will not send any reports to the network.

If at the moment of measurement t is greater than t1 or less than t2, the sensor will send a report to the network to the group of associated devices and, depending on parameter 1, to the lifeline group, the current values of temperature and humidity. Then it will remember the new thresholds in Figure 1.1 for the event of sending a report to the network.



- TP IS THE CURRENT TEMPERATURE.
- T1 UPPER TEMPERATURE THRESHOLD.
- T2 LOWER TEMPERATURE THRESHOLD.
- ΔT IS THE DIFFERENCE BETWEEN THE THRESHOLD VALUE AND THE CURRENT TEMPERATURE.

Every 50 reports, the device will measure and record the current battery level in its memory. If the battery charge has decreased, the sensor will send new data on the battery status to the controller.
The device can send a "NotificationReport" message about the maximum and minimum allowable temperature parameter 3 and parameter 4, respectively; they are by default set to values from 2° C to 60° C.

ASSOCIATIONS AND PARAMETERS

After changing Associations or Parameters; press the Service button to wake the device to receive the new configuration settings.
Please refer to the user manual of your Z-Wave controller for Associations setup.

Association Groups:

- Group 1- Device group to which temperature, humidity, battery and Alarm values will be sent. Max - 1 device.
- Group 2 - A group of devices to which the temperature will be sent. Max - 3 devices.
- Group 2 - A group of devices to which humidity will be sent. Max - 3 devices.

Parameters:

- Parameter 1 - Send temperature and humidity values to Lifeline (group 1). Default = 0

  0 - send to lifeline,

  1 - do not send to lifeline.
- Parameter 2 - Delta temperature. Default is 1, the maximum value is 10.
- Parameter 3 Upper temperature threshold for sending Alarm. Default is 60, the maximum value of the parameter is 65, and the minimum is 50.
- Parameter 4 Lower temperature threshold for sending Alarm. Default is 2, the maximum value of the parameter is 5.

EXCLUSION FROM A Z-WAVE NETWORK

To **exclude** the device from your Z-Wave Network, first place your Z-Wave Controller into Exclusion mode, press the Service button located at the top of your device using the Pin provided three times within 2 seconds.

MAINTENANCE

If the device does not pass the auto-test, remove the device and send it to the service centre. If the device reports a low battery charge, replace it immediately.

LEGAL

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