

Temperature and Relative Humidity **WIRELESS SENSORS** FOR EZEIO

This wireless expansion module operates on built-in standard AA batteries for up to 2 years. It has built in sensors for RH, temperature and battery voltage, plus three external connections for thermistors - a total of 6 data points in a small, easy to mount device.

This wireless module is ideal for monitoring free-standing refrigeration units, or other applications where it isn't practical to hard wire the sensors to the ezeio controller. The integrated Temp/RH sensor can be used to calculate dew point for anti-sweat heat control or air enthalpy for HVAC economizers.

Features

- Wireless connection to the ezeio controller
- Up to 100m range
- Built-in temperature and relative humidity sensor
- Connection for up to 3 thermistor probes
- Runs on standard AA batteries for up to 2 years
- Battery voltage monitor
- Easy to mount, connect and configure
- Up to 9 expanders per ezeio Controller
- External radio link status LED



- ▶ **3 Thermistor inputs**
- ▶ **Temperature and Relative Humidity sensor**
- ▶ **Runs on standard AA batteries**
- ▶ **Up to 100m range. Secure communications.**

Technical specifications

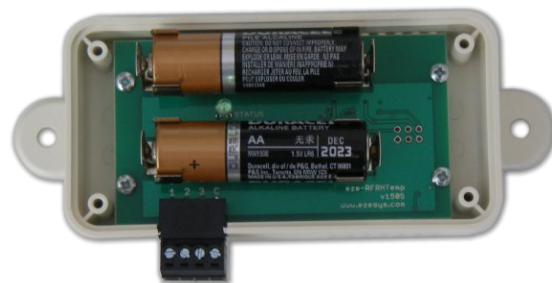
Dimensions:	5." x 2.5" x 1.2" (130 x 63 x 29mm)
Weight:	125g with batteries
Supply:	2 x Standard AA last up to 2 years
Environment:	0 to 50°C, non condensing
Inputs:	3 screw terminals for 10k thermistors
Thermistor range:	-20°C to +60°C, internally linearized.
Internal sensors:	RH, Temperature and battery voltage
Update interval:	45s average
Radio:	900MHz, Frequency hopping, encrypted 868MHz version for EU available
Range:	Up to 100m from base unit

Normal setup

Open the cover and insert two standard 1.5V AA batteries

To add the RF expander to the system:

- 1) Click **Configure** -> **Devices** -> **Add Device**
 - 2) Select Wireless device, and enter the serial number of the new RF device.
 - 3) Click **Add device**, and **Save Changes**
- The device is now added to the system.



Pairing

If the RF expander is not paired, the Signal LED will blink slow.
Pairing is automatic, but may take up to 4 minutes.

To add inputs/outputs:

- 1) Click Configure -> Inputs -> Add Input
- 2) In the Input Location drop-down, select the input
Use the table to the right for reference.
- 3) Enter the conversion, logging, name etc.
- 4) Save changes.

Hardware input mapping

IN#1	Terminal 1, 10k Thermistor, Kelvin x10
IN#2	Terminal 2, 10k Thermistor, Kelvin x10
IN#3	Terminal 3, 10k Thermistor, Kelvin x10
IN#4	Battery voltage, mV
IN#5	Internal temperature, Kelvin x10
IN#6	Internal RH, %RH x10

Signal LED cadences

The Signal LED will turn on for 4 seconds after power is applied.
After 4 seconds, the Signal LED will indicate status as follows:

Slow blink	Waiting to pair / searching for controller
Short flashes about 1/s	Normal operation. Communicating with controller.
Fast continuous flashing	Radio error or system reset. Please power cycle.
No flashing	No power, or master controller out of range.

The Signal LED will turn off 4 minutes after reset to extend the battery life. A short flash every 40-50 seconds indicates normal operation. More frequent flashing indicates low battery.

Break pairing / pair with other controller

To break the pairing, simply power cycle the RF expander five (5) times, removing the power during the time when the LED is lit after startup. The LED will blink fast on the 5th power-up to indicate the pairing has been reset.