USER MANUAL

HUMiREG

This manual is designed to provide you with all the information you need to operate and maintain HUMiREG device. Whether you're a first-time user or an experienced pro, this manual will help you get the most out of your device.

Before you begin using your device, we strongly recommend that you read through this manual carefully. It contains important safety information, as well as step-by-step instructions for setting up and using your device. By following the instructions in this manual, you can ensure that your device is set up correctly and is safe to use.

Wersja 1.0

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1.Safety rules

In this manual you will find information on how the device works, safe use and proper operation. Before assembly and commissioning, please read and understand this manual carefully and follow the rules below. Please contact the company if you have any questions. In order to avoid electric shock or damage to the module, mechanical and electrical installation should be carried out by qualified personnel. Make sure all wires are connected correctly before turning on the power. Do not make any modifications to the connected cables when the device is powered. Ensure proper working conditions, do not expose the device to direct and strong influence of thermal radiation.

2.Application of the device

HUMi1REG is a device that reads the humidity and temperature values from the **HUMi2N** sensor and stores the averaged values in its internal memory. The device's memory is enough for dtereing approximately 1.5 years of data. Once the memory is full, the oldest saved records are replaced with new ones. The saved data can be presented in the form of a graph or a table. The device is equipped with a relay output that can be used to signal alarm situations. The recorder triggers an alarm when the humidity or temperature values exceed the preset alarm thresholds. Alarms are also activated if the recorder loses connection with the sensor.

The hermetic The hermetic IP65 enclosure allows for the device to be used in an industrial environment.allows for the device to be used in an industrial environment.

We have a 5-inch resistive touch screen for operating and communicating with the device. The recorder is perfect for recording and monitoring facilities where maintaining specific humidity or temperature parameters is crucial. The built-in memory and data presentation in the form of a graph allow for quick diagnosis in case of exceeding the parameters and identify the moment when the problem occurred.

3.Cennection

3.1.Componnets

The recorder requires a power supply of 12-24V DC, >10W, for proper operation. The entire humidity measurement system consists of:

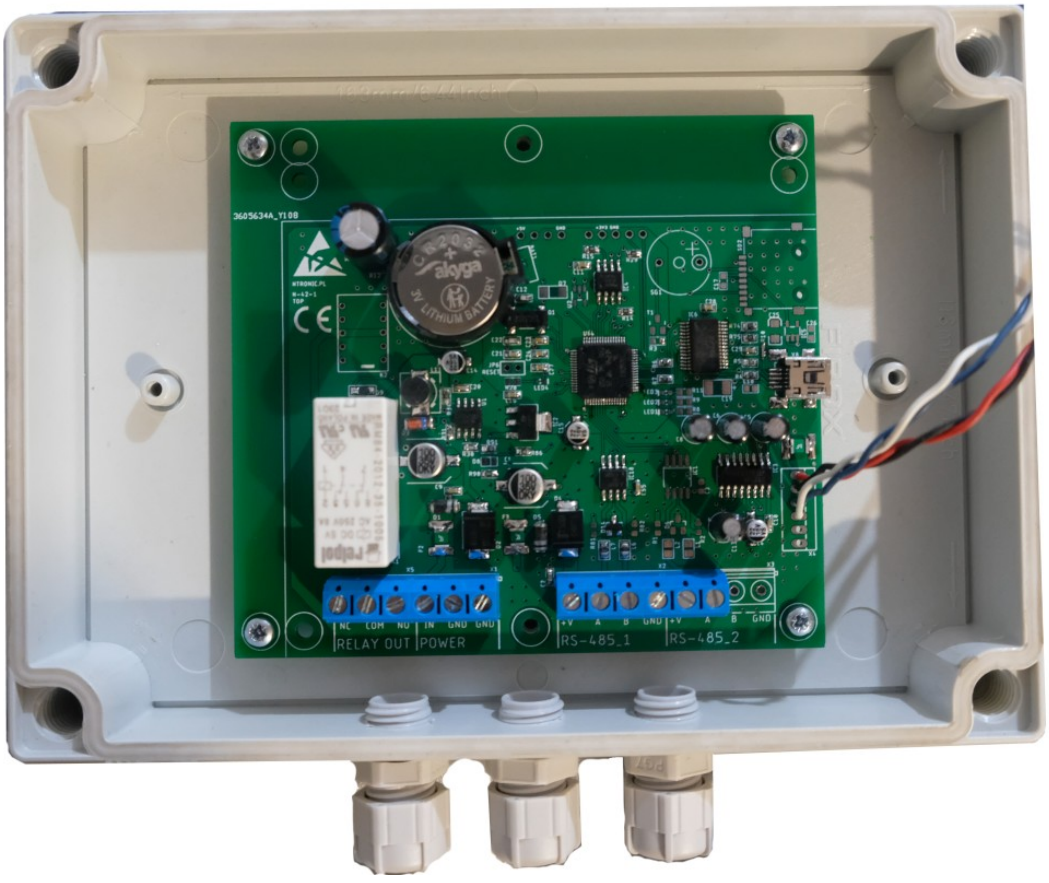
- Touch panel
- HUMi2N converter
- HUMi0N humidity and temperature sensor.

3.1.a. Touch panel

The main board inside the touch panel, which can be accessed by unscrewing the 4 screws on the front, contains the terminals for connectiong signals and powers supply. Terminals labeled sequentially:

1. **REALAY OUT** - relay terminals
    1. NC: normally closed contact
    2. COM: common contact
    3. NO: normally open contact
2. **POWER** – powering the device
    1. IN: 24V power supply positive
    2. GND: 24V power supply negative
    3. GND: additional 24V power supply negative
3. **RS-485_1 –** comunnication port (for comunication with HUMi2N converter)
    1. +V: HUMi2N sensor power supply
    2. A: RS485 interface A line
    3. B: RS485 interface B line
    4. GND: HUMi2N sensor power supply

Terminals in the RS-485_2 group are unused. The main board also includes a USB port for software updates.

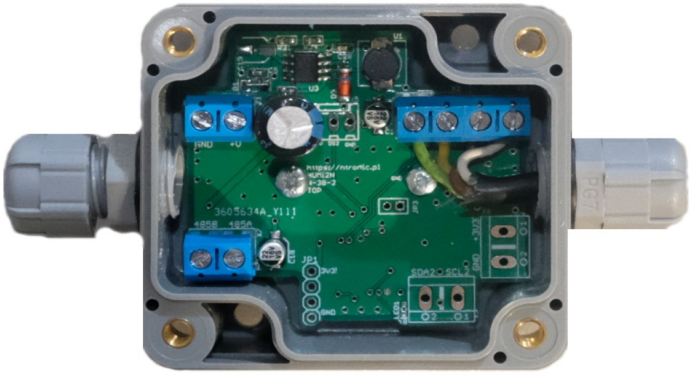


3.1.b. HUMi2N converter

It is responsible for reading temperature and humidity measurements from the HUMi0N sensor and provides them to the touch panel via MODBUS-RTU protocol.

It can be located up to 100m away from the touch panel. Connection of the HUMi2N converter to the touch panel should be provided via twisted pair cable. •

- 1 pair: A and B
- 2 pair: +V and GND

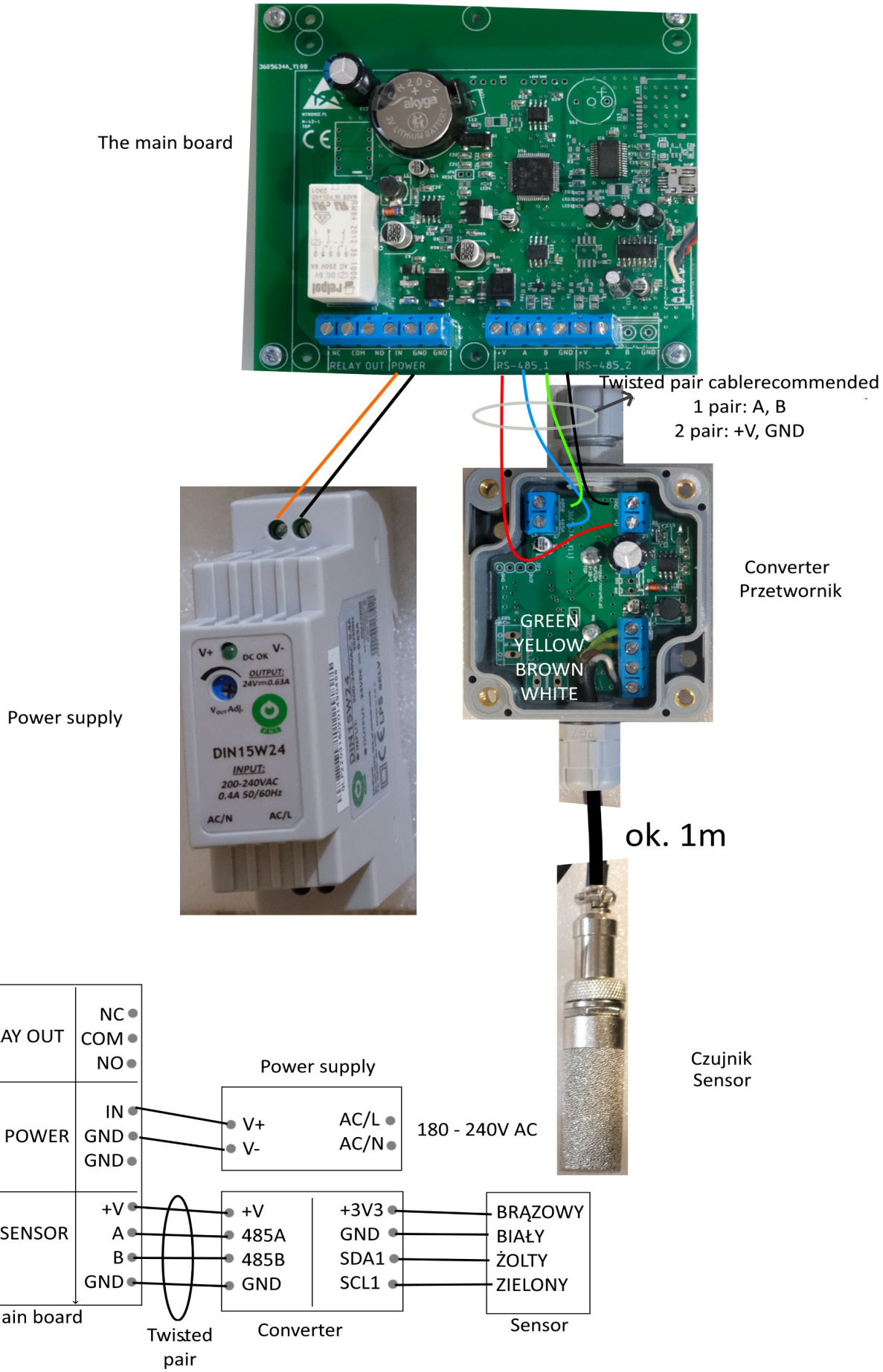


3.1.c. HUMi0N – Humidity and temperature sensor

Measurement element enclosed in a steel casing allowing air to pass through. The measuring part can be easily replaced by unscrewing and screwing in a new one.

The sensor should be connected to the HUMi2N converter with a cable no longer than 1m.

3.2.Connection diagram



4.Screens

4.1.Menu layout

The upper strap contains screen switching buttons:

1. **EYE** - preview of the current readings from the sensor
2. **TABLE** - preview of the saved recordings in the device's memory
3. **GRAPH** - preview of the saved recordings in the form of a chart. Each chart presents daily data. A second click switches to the temperature chart presentation.

Current readings preview screen

Memory preview screen in the form of a table

Memory screen in the form of a daily chart - humidity

The side buttons allow you to view memory data in the memory view screens.

Memory screen in the form of a daily chart - temperature

4.2.Alarms

By clicking the button next to the watch, we can set the date and time, as well as alarms for exceeding certain temperature or humidity ranges.
Each change should be saved by pressing the arrow in the lower right corner.

The bell icon indicates whether a particular alarm is on or off. Clicking on it changes its status.

Date and time setting screen

Overtemperature alarm setting screen

Humidity alarm setting screen

On the alarm screen, pressing the ACK button will turn off the sound signal. Pressing the OK button will cancel the alarm, however, if its cause does not disappear within 1 minute, the alarm will be triggered again

An example of an alarm screen

5.Safety rules

- Please read this user manual before using the device.
- Installation of the device and all connections should always be performed with the power supply disconnected.
- The device has no user serviceable parts. In the event of damage, repairs may only be made by an authorized service indicated by the manufacturer. Any attempt to repair or modify the device yourself will void the warranty.
- The device has been designed in such a way that it can be used indoors, without direct exposure to weather conditions.
- Devices should be protected from liquids or high humidity.
- The device is designed to work with stabilized DC voltage power supplies with overvoltage and short-circuit protection. We recommend using power supplies that allow you to connect the ground (additional surge protection).
- During a thunderstorm or a long period of non-use, we recommend disconnecting the power supply.
- When operating with loads close to maximum, the device may become very hot. Ensure adequate ventilation of the device and it is not recommended to install it near other heat sources.
- The devices should be connected in accordance with the specified polarity, and the maximum load of the outputs should not be exceeded.
- All electrical connections should be made with cables of appropriate cross-sections so as not to exceed a voltage drop of 3% at maximum load.
- It is absolutely necessary to use additional short-circuit protection appropriate for the installation using the LED lighting control system (power supplies with short-circuit protection, additional fuses on individual circuits, etc.).
- At least every 2 years, perform a technical inspection of the device and check whether the safety of use has not deteriorated. If any irregularities are found, the devices must be returned for repair.
- Make sure the device is properly installed before powering up.
- The device should be protected against contact with children.
- The device may generate acoustic noises when working with high currents as a result
- A phenomenon called magnetostriction. This is normal behavior resulting from the laws of physics and does not constitute grounds for complaint. This phenomenon intensifies as the value of the switched current increases. Too small cross-sections of wires and errors in the installation of LED lighting can also cause this type of phenomena.