Wireless Air-Humidity and Temperature Minilogger
Datasheet and Manual

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Small, wireless ultra-low power and long life datalogging system for precise temperature and air-humidity measurement and recording.

- Precise sensing by using Rotronic's world unique "**Air-Chip**" sensor-technology.
- Easy to handle.
- Long battery life.
- Easy battery exchange without tools.
- Compact dimensions.
- Wireless data-transfer and configuration under field-approved distances:
  - Communicates through a thickness of snow, water, rock, earth, ...
  - No disturbance to observation site as instrument does not need to be removed or exposed during readout.
- Non-volatile flash memory for safe data-storage.
- Wide range of user configurable settings:
  - Measurement-Periods.
  - Automatic change to a configurable period when a specified air-humidity or temperature-band is left.
  - Offset and multiplier correction to suit the field application.

Optional:

- Sensor extension cable.
- Young hut protective sleeve.

1. Technical data

- Resolution
  - 0.02 % rH.
  - 0.01 °C.
- Accuracy:
  - +- 0.8 %rH from 10 to 30 °C.
  - +- 0.1 °C from 10 to 30 °C.
- Long term stability less than 1 %rH/year.
- Rotronic HC2A-S3 sensor.
- Operating temperature -40 to 80 °C.
- POM housing, IP67 rating (datalogger).
- Dimensions 146 mm length, 20 mm diameter (without sensor).
- Power supply 1 x 3.6 Volt Lithium AA-Cell.
- Power consumption:
  - Idle: 7 µA (direct wireless connectivity).
  - Measurement: 20 mA.
- Flexgate 2 OS.
- 433 MHz or 915 MHz (US region) radio communication for configuration and data-download.
- 2 MByte non-volatile flash memory for up to 400,000 values (200k measurements).
- Battery-lifetime up to 5 years @ 1 hour period or 250,000 cycles (whatever comes first).[1]
- Logging-Interval: 20 sec to 24 hrs

[1] Extreme low and changing temperatures will decrease the lifetime of the battery.

2. Usage and software

The measurement-system comes fully configured to read the sensor and record the data with an interval of 1 hour.

To download the data from the device or to change the configuration the “Wireless USB-Dongle” (433 MHz /EU or 915 MHz US) and FG2-Shell software are required.

Download the latest version of the FG2-Shell software here:
https://www.thermistor-string.com/additional-string-information/downloads/category/2-software

How to install and use the FG2-Sehll software, please refer to the documentation “Doku_FlexGate_Software_Engl”:
https://www.thermistor-string.com/additional-string-information/documentation-thermistor-string/category/3-documentation

→**Note**:

- All configuration/parameters of the device are stored in a separate non-volatile memory. Even after power-loss or erasing the data-storage (

), the configuration is valid.
- Carefully check the parameters for the activated Record-Checkbox (

), otherwise no data is recorded!

3. Handling information

Battery:

- Lithium batteries can be dangerous! Prevent it from shock, physical damage or temperatures above the given specification.
- Old batteries must be recycled in special battery waste disposal.
- Always use correct polarity of the battery. Otherwise the whole device and battery are destroyed.

High sensitive sensor:

Prevent the sensor from water and mechanical load!

Full HC2 sensor documentation and handling information:

https://www.rotronic.com/de-de/humidity-measurement-feuchtemessung-temperaturmessungs/humidity-measurement-feuchte-messung/probes-hygroclip2-fuehler/hc2a-s3-meteof-hler

Additional information:

- “Doku_FlexGate_Software_Engl”
- https://www.thermistor-string.com/questions
- https://www.geo-precision.com
- https://www.rotronic.com/de-de/