Wireless Temperature Minilogger
Datasheet and Manual

(v2, 220811)

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

- Precise temperature sensing.
- Easy to handle and for rough outdoor conditions.
- Long battery life.
- Very 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 temperature-band is left.
  - Offset and multiplier correction to suit the field application.

Different types of housings, sensor cables and dimensions:

M-Log5W-Simple
- POM housing
- Direct sensor tip, 4 mm dia. steel cap

M-Log5W-Cable
- POM housing
- Selectable cable length
- 6 mm dia. steel cap

M-Log5W-Rock
- Stainless steel housing[1]
- Selectable cable length
- 6 or 5 mm dia. steel cap

Cable length up to 90 cm, default: 25 cm.

Optional:
Battery-holder for easy battery exchange in field without additional tools. (Not recommended for extremely rough conditions!)

[1] Not available for US/Canada region.

1. Technical data

- Resolution 0.01 °C
- Accuracy:
  - +- 0.1 °C @ 0 °C.
  - +- 0.3 °C from -20 to +30 °C.
  - +- 0.5 °C full range.
- Long term stability less than 0.1 °C for 5 years.
- Pt1000 sensor element.
- Operating temperature -40 to 80 °C.
- POM or stainless steel housing, IP67 rating.
- PUR cable for 6 mm sensor tip.
- Silicone Cable for 5 mm sensor tip.
- Dimensions 146 mm length, 20 mm diameter (without cable).
- Power supply 1 x 3.6 Volt Lithium AA-Cell.
- Power consumption:
  - Idle: 7 µA (direct wireless connectivity).
  - Measurement: 10 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 350,000 values.
- Battery-lifetime up to 5 years @ 1 hour period or 300,000 cycles (whatever comes first).[2]
- Logging-Interval: 20 sec to 24 hrs.

[2] 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 tip:

Prevent the sensor-cap and cable from mechanical load.

Additional information:

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