Two-Wire Minilogger for Thermistorstrings Datasheet and Manual

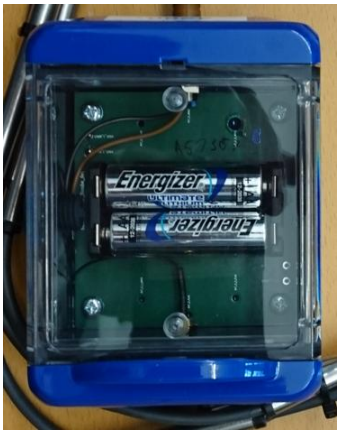
(v2, 220811)

Wireless low power long life datalogger with Two-Wire-Bus interface for Geoprecision Thermistor-Strings and other 2W capable sensors.

- 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.

Stainless steel[1]

POM



String-Box
Higher battery capacity and extended wireless-range (external antenna).

Optional:

- ESD protection shield for datalogger and connected thermistor-string (Faraday cage).
- Fully sealed with directly connected thermistor-string for wet /under water conditions.

[1] Not available for US/ Canada region.

1. Technical data

- Two-Wire bus interface, 3-pole M8 connector (male).
- Operating temperature -40 to 80 °C.
- IP67 rating.
- Dimensions:
  - Steel /POM: 146 mm length, 20 mm diameter (without connector).
  - String-Box: 110 x 80 x 60 mm (without antenna).
- Power supply:
  - Steel /POM: 1 x 1.5 to 3.6 Volt Lithium AA-Cell.[2]
  - String-Box: 2 x 1.5 Volt Lithium AA-Cell.
- Power consumption:
  - Idle: 40 µA (direct wireless connectivity).
  - Measurement: 20 to 50 mA, depending on the connected sensors.
- 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.
- Battery-lifetime up to 5 years, depending on the number of sensors.[3]
- Logging-Interval: 20 sec to 24 hrs

[2] Recommendation: 1.5 V Energizer Ultimate Lithium AA.
[3] Extreme low and changing temperatures will decrease the lifetime of the battery.

2. Usage and software

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!

To configure the device for an existing thermistor-string refer to page 38 of “Doku_FlexGate_Software_Engl”.
In case of a delivery combined with a thermistor-string, the device comes fully configured to record and store the data with an interval of 1 hour!

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 connector:

Prevent the connector from physical load and water. Be sure that the connector is clean and dry before connecting any sensor.

Additional information:

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