GREISINGER electronic GmbH T-Logg 120 Data Logger Measured Variables Voltage Current Instruction Manual

Contents

GREISINGER electronic GmbH

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Product Information

Specifications

- Model: T-Logg 120
- Version: 1.0
- Data logger for standard signals
- Recording time: Individual programming
- Memory capacity: 16,000 measuring values
- LCD-display: Displays temperature and operating status
- Manufacturer: GEISINGER Electronic GmbH

Product Usage Instructions

General

The T-Logg 120 is a cost-efficient solution for monitoring standard signals. It allows for individual programming of the recording time and can store up to 16,000 measuring values in its memory. The LCD shows the current temperature and operating status of the logger.

Required Accessory

To program, start, and read out the T-Logg, you will need the following accessories:

- Interface converter USB 100 or USB 100 SL (approx. 1m cable length) for direct connection to the USB port of your PC
- MINI SOFT software (version 7.18 or later, free of charge) for starting and reading out the logger data
- Alternatively, you can use the comprehensive software GSOFT 40K (version 7.18 or later)

Safety Instructions

Please adhere to the following safety instructions when using the T-Logg 120:

1. This device has been designed and tested by safety regulations for electronic devices. However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advice given in this manual are followed.
2. Observe general instructions and safety regulations for electric, light, and heavy current plants, including domestic safety regulations (e.g., VDE).
3. If connecting the device to other devices (e.g., via PC), ensure careful circuitry design. Internal connections in third-party devices (e.g., connecting GND and earth) may result in non-permissible voltages that can impair or destroy the device or another connected device.
4. If there is any risk involved in running the device, it must be switched off immediately and marked accordingly to avoid accidental restarting. Operator safety may be at risk if:
    - There is visible damage to the device.
    - The device is not functioning as specified.
    - The device has been stored under unsuitable conditions for a prolonged period.

    In case of doubt, please return the device to the manufacturer for repair or maintenance.
5. **Warning:** Do not use this product as safety or emergency stop devices, or in any other application where failure of the product could result in personal injury or material damage. Failure to comply with these instructions could result in death, serious injury, and material damage.

Connection

Interface Connection

The input jack of the T-Logg 120 has the following assignment (front view to the pins):

- Not connected
- Interface [+] (positive)

T-Logg 120 W – … : Assignment of the angle-type plug

Table of connections for the angle-type socket and jack:

Pin no.	Wire colour	Connection
0	blue	Feeded through, signal +
1	red	Feeded through, signal –
2	black	Fed through
3	–	–

FAQ

- **Q:** What is the recording time of the T-Logg 120?
- **A:** The recording time of the T-Logg 120 can be individually programmed.
- **Q:** How many measuring values can be stored in the memory of the T-Logg 120?
- **A:** The T-Logg 120 can store up to 16,000 measuring values in its memory.
- **Q:** What accessories are required to use the T-Logg 120 with a PC?
- **A:** To use the T-Logg 120 with a PC, you will need an interface converter (USB 100 or USB 100 SL) for direct connection to the USB port of the PC, a cable with approximately 1m length, and the MINISOFT software (version 7.18 or later) to start and read out the logger data. Alternatively, you can use the GSOFT 40K software (version 7.18 or later).

General

The logger T-Logg 120 … is designed as a cost-efficient solution for monitoring standard signals. It enables individual programming of the recording time. The last 16,000 measuring values can be stored in the memory. In addition, the LCD indicates both the temperature measured at the moment and the operating status of the logger.

Required accessory
The USB interface of your PC is used to program, start and read out the T-Logg.
For this following accessory is required:

- Interface converter USB 100 or USB 100 SL for direct connection to the USB port of the PC, cable length approx. 1m.
- MINISOFT software (version 7.18 or later / free of charge) to start the logger and read out the logger data.
- **Notice:** It’s also possible to use the T-Logg with the comprehensive software GSOFT 40K (version 7.18 or later).

Safety instructions

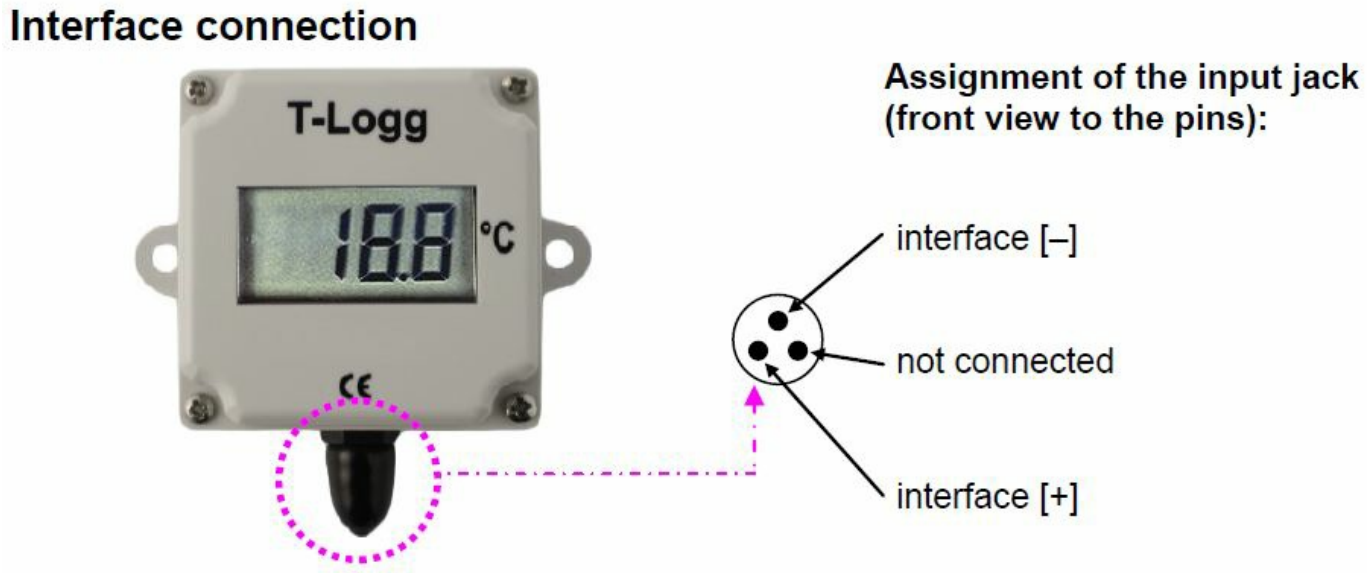
This device has been designed and tested under the safety regulations for electronic devices.
However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advice given in this manual are adhered to when using the device.

1. Trouble-free operation and reliability of the device can only be guaranteed if the device is not subjected to any other climatic conditions than those stated under ‗Specification'
   To protect the battery the max. permissible storage and transport temperature of the device is +85°C.
2. General instructions and safety regulations for electric, light and heavy current plants, including domestic safety regulations (e.g. VDE), have to be observed.
3. If the device is to be connected to other devices (e.g. via PC) the circuitry has to be designed most carefully. Internal connection in third-party devices (e.g. connection GND and earth) may result in not-permissible voltages impairing or destroying the device or another device connected.
4. If there is a risk whatsoever involved in running it, the device has to be switched off immediately and to be marked accordingly to avoid restarting.
   Operator safety may be a risk if:
   - there is visible damage to the device.
   - the device is not working as specified.
   - the device has been stored under unsuitable conditions for a longer time.
     In case of doubt, please return the device to the manufacturer for repair or maintenance.
5. **Warning:**
   Do not use this product as a safety or emergency stop device, or in any other application where failure of the product could result in personal injury or material damage.

Failure to comply with these instructions could result in death or serious injury and material damage!

Connection

Interface connection



T-Logg 120 W – … : Assignment of the angle-type plug
Table of connections angle-type socket and jack

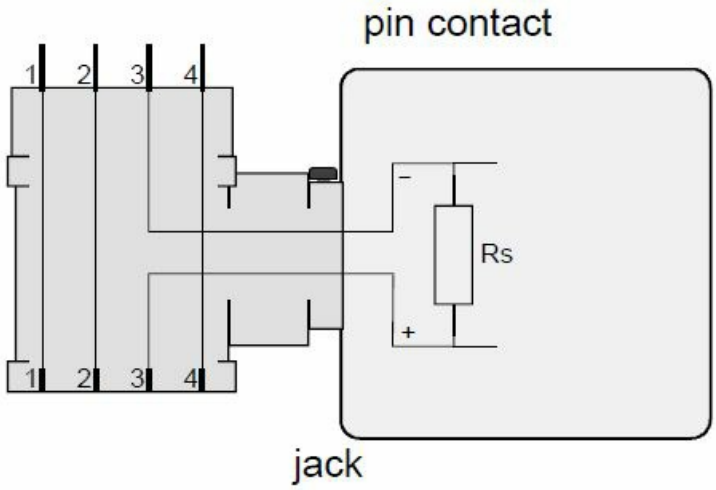
Pin no.	wire colour	Inputs		
		0 … X Volt	**0 … 20 mA**	**4 … 20 mA**
1	blue	fed through, signal +	fed through	fed through
2	red	feed through, signal –	fed through	T-Logg
3	black	fed through	T-Logg	fed through
4	yellow	fed through	fed through	fed through

Input signal: 0 … X Volt

- In the angle-type plug the 4 male contacts are directly connected 1:1 with the socket.
- The logger connection is on contact 1 (signal+) and contact 2 (signal-).
- If your transmitter assignments for the ‘signal+’ and ‘signal-‘ are different, please do not forget to adjust the male contacts of your angle-type plug accordingly:
- To do so open the angle-type plug and remove the red and the blue wires entering the housing from the coupling of the angletype plug.
- Connect wires with the respective contacts, representing signal + (blue wire) and signal – (red wire) at your transmitter.

Input signal: 0 … 20 mA

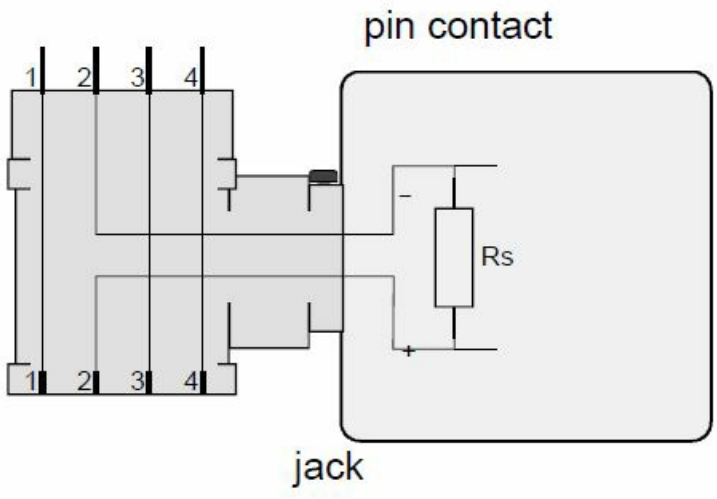
In the angle-type plug the male contacts 1, 2 and 4 are directly connected 1:1 with the socket. The T-Logg (Rs = ~70 Ohm) is located between the male contact 3 (-) and the jack 3 (+).



- If the ‘signal’-line in your transmitter is not assigned to contact 3, please do not forget to adjust the logger-angle-type plug and the external angle-type plug accordingly:
- To do so open the logger-angletype plug and exchange the black wire of contact 3 against the wire of the contact representing the ‘signal’ in your transmitter. Then exchange and/or rewire the two contacts in the angle-type plug of your connecting cable.

Input signal: 4 … 20 mA

In the angle-type plug the male contacts 1, 3 and 4 are directly connected 1:1 with the socket. The T-Logg (Rs = ~70 Ohm) is located between the male contact 2 (-) and the jack 2 (+).



- If the ‘signal/GND’-line in your transmitter is not assigned to contact 2, please do not forget to adjust the logger-angle-type plug and the external angle-type plug accordingly:
- To do so open the logger-angletype plug and exchange the red wire of contact 2 against the wire of the contact representing the ‘signal/GND’ in your transmitter. Then exchange and/or rewire the two contacts in the angle-type plug of your connecting cable.

How to change the assignment of the angle-type plug

- Dismantle the plug by pulling the adapter insert out of the case, using a screwdriver at the lateral groove.
- Change the assignment according to the notes at the respective input signal.
- Latch coupling inserts in the cover. You have a choice between 4 different orientations – each of them spaced 90°.
- Please make sure to adjust the connecting cable, if the assignment of the angle-type plug has been changed for the types 4-20mA and 0-20mA.
- Put on an angle-type plug and connect plugs using the long screw delivered. (Do not forget seals).

T-Logg 120 K – … : Assignment of the connection cable
The connection cable has the following assignment:

Wire colour	**Meaning**
red	signal +
white	signal –

- Advice regarding the state of the logger upon delivery
- Upon its delivery, the logger is in a kind of ‘sleeping state’:
- The display does not show anything, the power consumption is at its minimum.
- The T-Logg wakes up as a communication link with software has been established. After that the message
- Stop appears on display. The logger is ready for operation now.

Configuration of the display range
The display range, position of the decimal point and the display unit can be set by the software MINI SOFT (or GSOFT 40K) in the register —Settings‖.
Furthermore, it can be used to read out sensor information and to program the alarm points of the logger.

Operating mode display
The T-Logg is equipped with a 10 mm LCD.
The main purpose of the LCD is to indicate the measured value. Depending on the operating mode of the logger, other messages will be displayed as well.

STOP
The T-Logg is stopped‘. No data are recorded. The logger memory is empty.
The logger is reset and can be restarted.

HALT:
The T-Logg has been ‗halted‘. The stored data can be read.
The logger memory is not empty.

DISPLAY OF MEASURED VALUE:
The small arrow is flashing The logger is active.
Measurements are carried out at certain intervals. The measured value will be stored.

START DELAY:
The logger is active, but no data are recorded.
As soon as the start delay time has expired, the logger will start recording under the starting conditions programmed before.

START ALARM:
The logger is active, but no data are recorded. Recording will start as soon as the measured value is within the min. and max. alarm limits.

BATTERY:

- Changing display BAT / Value:
- The battery of the T-Logg is getting discharged soon.
- Replace the battery briefly. Even so, data logging is still active.

Constant display BAT:

- The Logger battery is empty now and data logging has been stopped.
- Replace the battery immediately.

ALARM LOW:
The measured value is below the min. alarm limit.

ALARM HIGH:
The measured value has exceeded the max. alarm limit.

ERROR 1:
The input signal has exceeded the measuring range of the logger.

ERROR 2:
The input signal has fallen below the measuring range of the logger.

ERROR 3:
The max. display range (9999) of the logger is exceeded.

ERROR 4:
The min. display range (-1999) of the logger is under-run.

ERROR 7:

- The T-Logg has detected a system fault.
- Remedy:
- Remove the battery and wait about 30 minutes. Then insert the battery again.
- If the error message is displayed furthermore, please send the logger to the manufacturer to repair.

Battery service life and recording time

- Measuring cycle: 2 sec. 10 sec. 15 min. 5 hours
- Recording time: 8.9 hours 44 hours 166 days Approx. 9 years
- Battery service life: — Approx. 1 year Approx. 3 years —

Please note!

Short measuring cycles as well as frequently measuring data transfer result in a reduction of the battery service life!
Even if the T-Logg is connected, power consumption is increased. So it‘s important to connect the logger with the USB interface of the PC only as long as necessary!

Battery replacement

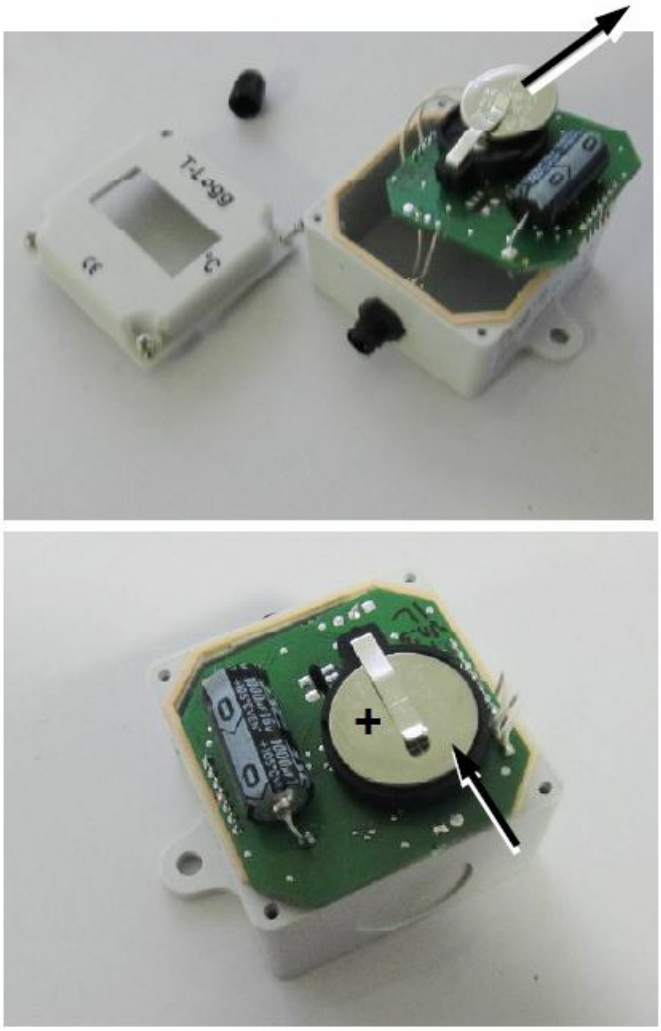
Notice:
As soon as BAT appears at display, the battery needs to be replaced. If battery voltage power decreases continuously, data logging will be stopped (compare with operating status’ _HALT‘).
Available stored data remains in the memory and does not get lost. It‘s possible to read the measuring data after replacement of the battery!

Replacement:

1. Remove the 4 screws at the front of the logger with a small screwdriver and remove the cover from the housing.
2. Take out the PCB and deposit it carefully beside the housing with the LCD face down. Take care not to damage

the gasket.

3. Push out the button cell carefully from the socket (see the picture at the top on the right).
4. Insert the new button cell (type CR 2032) with the correct polarity in the socket (the positive pole is on the retaining bracket – see picture at the bottom on the right).
5. Reinsert the PCB correctly (LCD face up) into the housing (see picture in the middle on the right).
6. Reassemble the housing. Use the 4 screws to fix the cover again.



Environmental Reference

Empty and defective batteries must not be disposed of in the regular domestic waste.
Return the used batteries to an authorised battery collecting point or send the batteries directly to us (sufficiently stamped).

Specification

- Input signal: refer to device type, or according to the type plate
- T-Logg 120 .. – 001: 0 – 1 Volt input resistance = ~ 100 kOhm
- T-Logg 120 .. – 002: 0 – 2 Volt input resistance = ~ 200 kOhm

- T-Logg 120 .. – 010: 0 – 10 Volt input resistance = ~ 500 kOhm
- T-Logg 120 .. – 020: 0 – 20 mA shunt resistance = ~ 70 Ohm
- T-Logg 120 .. – 420: 4 – 20 mA shunt resistance = ~ 70 Ohm
- Display range: -1999 … 9999 digit
- Scaling: freely programmable via software
- Decimal point: settable to any position
- Accuracy: ± 0.5% FS (at nominal temperature)
- Display: LCD, 10 mm high, 4-digit
- Recording interval: 2s to 5h
- Measuring value memory: 16,000 values
- Memory type: FILLING MEMORY: >> Once the memory is filled with data, the recording will automatically be halted. RING MEMORY: >> The old data will be overwritten in case of memory overflow.
- Recording time: approx. 9 hours up to 9 years, depending on the measuring cycle.
- Alarm function: the measured values are monitored at alarm limits. Alarm limit and alarm delay (0 … 500 min.) adjustable via interface.
- Nominal temperature: +25 °C
- Working temperature: -25 … +60 °C
- Storage temperature: -30 … +85 °C
- Battery: CR 2032, exchangeable.
- Battery service life: approx. 3 years (if the interval is 15 min.), depending on the measuring cycle and operating temperature.
- Interface: serial interface, 3-pin miniature plug
- Please note: the input is not isolated from the interface!
- Data communication: via interface converter
- Electric connection:
- T-Logg 120 K – …: approx. 0.5 m silicone connection cable
- T-Logg 120 W – ..: angle-type plug in accordance to DIN43650
- Dimensions/housing: 48.5 x 48.5 x 35.5 mm (H x W x D), plug and fixation flap not included. Housing made of shock-resistant plastic, transparent front made of polycarbonate, splash water-proof IP65.
- EMC: The T-Logg 120 … has been manufactured per the regulations concerning EMC (2004/108/EG). The device meets EN 61326-1:2008 Additional error: <1%

Disposal instructions
The device must not be disposed of in the regular domestic waste. Send the device directly to us (sufficiently stamped), if it should be disposed of. We will dispose of the device appropriate and environmentally sound.

CONTACT

- GREISINGER electronic GmbH
- D – 93128 Regenstauf, Hans-Sachs-Straße 26
- +49 (0) 9402 / 9383-0 +49 (0) 9402 / 9383-33 **info@greisinger.de**.

Documents / Resources

	GREISINGER electronic GmbH T-Logg 120 Data Logger Measured Variables Voltage Current [pdf] Instruction Manual T-Logg 120 Data Logger Measured Variables Voltage Current, T-Logg 120, Data Logger Measured Variables Voltage Current, Measured Variables Voltage Current, Variables Voltage Current, Voltage Current

References

- Manual-Hub.com - Free PDF manuals!
- Manual-Hub.com - Free PDF manuals!
- User Manual