

Data logger for temperature

as of version V7.0

Operating Manual

EASYLOG 40K

EASYLOG 40KH

EASYLOG 40KH-E300

EASYLOG 40KH-E600

EASYLOG 40KH-GOF



EASYLOG 40KH



EASYLOG 40K



WEEE-Reg.-Nr. DE93889386



GREISINGER electronic GmbH

D - 93128 Regenstauf, Hans-Sachs-Straße 26

+49 (0) 9402 / 9383-0 +49 (0) 9402 / 9383-33 info@greisinger.de

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1 General note

Read this document carefully and get used to the handling of the device before you use it. Keep this paper ready to hand in order to look it up if a question turns up.

2 Intended use

The loggers **EASYLOG 40K...** are especially designed for long-time monitoring of temperatures. Both, the low power consumption and the high battery capacity ensure a long recording time. The last 48,000 measuring values can be stored in the memory. In addition, the LCD-display indicates both the temperature measured at the moment and the operating mode of the logger.

3 Required accessory:

The EASYBus interface is used to program, start and read out the **EASYLOG 40K...**

Following accessory is required:

- Interface converter:
RS232 <> EASYBus (e.g. EBW1, EBW64, EBW240)
or
USB <> EASYBus (e.g. EBW3)
- Connecting cable: interface converter to **EASYLog** (EBSK ..)
- **GSOFT 40K** (> Version 5.0)
to start the logger and read out the logger data.

4 Safety instructions:

This device has been designed and tested in accordance with the safety regulations for electronic devices. However, its trouble-free operation and reliability cannot be guaranteed unless the standard safety measures and special safety advises given in this manual will be 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 +70°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 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 re-starting.

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.

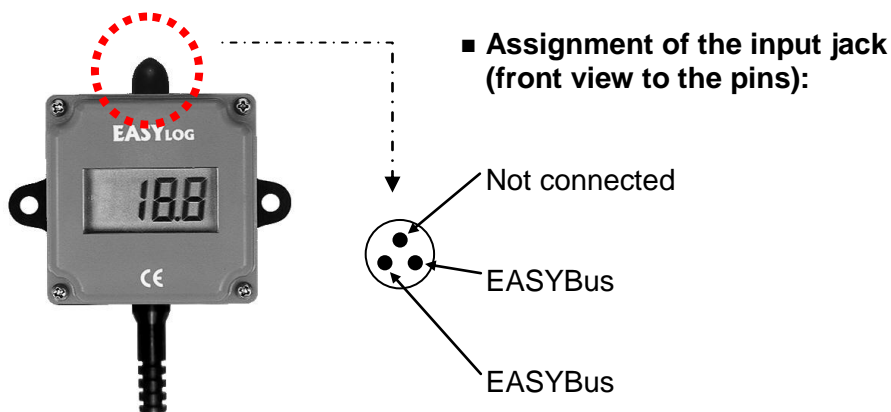
In case of doubt, please return device to manufacturer for repair or maintenance.

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 or serious injury and material damage!

5 Connection



6 Advice regarding state of logger upon delivery:

The delivered logger is in a “sleep mode”, that means nothing is displayed and the power consumption is at its minimum. When there is a communication with the software for the first time, the **EASYLOG** leaves the sleep mode and ›Stop‹ is displayed. Then the device is ready for operation.

Note: The sleep mode (nothing is displayed) cannot be restored again.

“Stop“ or “Halt“ are similar to the sleep mode. Both of this operating modes ensure minimum power consumption.

7 Battery service life and recording time

Measuring cycle:	2 sec.	30 sec.	1 min.	15 min.
Recording time:	26.5 hours	16.5 days	33 days	500 days
Battery service life:	Approx. 200 days	Approx. 3-4 years	Approx. 4-5 years	Approx. 6-8 years

Please note! Short measuring cycles as well as frequently measuring data transfer result in a reduction of the battery service life!



8 Disposal instructions:



Dispense exhausted batteries at destined gathering places.

This device must not be disposed as ‘residual waste’.

According to the ElektroG (*law for bringing into market, the return and the environmentally friendly disposal of electronic equipment*) we accept the return of this device, please send it directly to us (adequately stamped). We will dispose it appropriately and environmentally friendly.

9 Operating mode display:

The **EASYLog** is equipped with a 10 mm LCD display.

The main purpose of the LCD display is to indicate the temperature. Depending on the operating mode of the logger, other messages will be displayed as well.

STOP:

The **EASYLOG** is 'stopped'. No data are recorded. The logger memory is empty. The logger is reset and can be restarted.

HALT:

The **EASYLOG** has been 'halted'. The stored data can be read. The logger memory is not empty.

DISPLAY OF TEMPERATURE:

The small arrow is flashing. The logger is active. Temperature measurements are carried out at certain intervals. The temperatures measured 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 in accordance with the starting conditions programmed before.

START ALARM:

The logger is active, but no data are recorded. Recording will start as soon as the temperature is within the min. and max. alarm limits.

BATTERY:

The battery of the **EASYLOG** is getting discharged soon. Replace the battery briefly. Please return logger to the manufacturer.

ALARM LOW:

The temperature measured is below the min. alarm limit.

ALARM HIGH:

The temperature measured has exceeded the max. alarm limit.

ERROR 1:

The temperature has exceeded the measuring range of the logger.

ERROR 2:

The temperature has been fallen below the measuring range of the logger.

ERROR 7:

The **EASYLOG** has detected a system fault. Potential causes: at recording logger the bus voltage was frequently interrupted, device failure

• Remedy:

- connect logger with the GSOFT 40K and reset the system fault.
- check wiring (defective contact).
- If the error message displayed furthermore, please send the logger to the manufacturer to repair.

10 Specification

Measuring range:	
EASYLog 40K	-30.0 ... 60.0 °C
EASYLog 40KH	-50.0 ... 150.0 °C
EASYLog 40KH-E300	-50.0 ... 300.0 °C
EASYLog 40KH-E600	0 ... 600 °C
EASYLog 40KH-GOF	-50.0 ... 150.0 °C
Resolution:	0.1°C (display and memory) (1°C with EASYLog 40KH-E600)
Accuracy: (at nominal temperature)	
EASYLog 40K, ..KH	< ± 0.5 °C
EASYLog 40KH-E300	< ± 0.5 °C ±0.2% of meas. value
EASYLog 40KH-E600	< ± 1 °C ±0.2% of meas. value
EASYLog 40KH-GOF	< ± 0.5 °C
Sensor:	Pt1000, 2-wire
EASYLog 40K	sensor tube made of plastic, Ø7 mm, approx. 30 mm long, attached on the device.
EASYLog 40KH	sensor tube made of stainless steel, Ø 5 mm, approx. 50 mm long, approx. 1 m silicone cable with anti-buckling glanding to housing.
EASYLog 40KH-E300	sensor tube made of stainless steel, Ø3 mm, approx. 100 mm long, sleeve Ø5 x 50 mm, approx. 1 m glass silk cable. Cable with anti-buckling glanding to housing.
EASYLog 40KH-E600	sensor tube made of stainless steel, Ø3 mm, approx. 100 mm long, sleeve Ø5 x 50 mm, flexible, coating-element, approx. 1 m silicone cable (cable max. 200°C). Cable with anti-buckling glanding to housing.
EASYLog 40KH-GOF	self-adhesive surface temperature probe with moulded silicone design, approx. 2 m PFA-insulated cable. Cable with anti-buckling glanding to housing.
Display:	LCD display, 10 mm high, 4-digit
Recording interval:	2s to 5h
Measuring value memory:	48,000 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. 26 hours up to 8 years, depending on measuring cycle.
Alarm function:	the measured values are monitored at alarm limits. Alarm limit and alarm delay (0 ... 1092 min.) adjustable via interface.
Nominal temperature:	+25 °C
Working temperature:	-30 ... +60 °C
Storage temperature:	-40 ... +70 °C
Battery service life:	approx. 6-7 years (if interval is 15 min.), depending on measuring cycle and operating temperature.
Interface:	EASYBus, 3-pin miniature plug.
Busload:	2 EASYBus-devices.
Data communication:	via interface converter.
Dimensions / housing:	48.5 x 48.5 x 35.5 mm (H x W x D), plug an fixation flap not included. Housing made of shock resistant plastic, transparent front made of polycarbonate, splash water-proof: IP 65.
EMC:	The EASYLog have been manufactured in accordance with the regulations concerning EMC (2004/108/EG). The device meets EN61326-1 (table 2, class B).
Conformance:	The devices corresponds to the requirements at EN 12830 Suitability S (storage), Location A and C, Accuracy classification 1 (..40KH-E600: class 2). Recommended inspection interval: 12 months <i>Please note: for the usage in food storage and distribution systems in accordance with EN 12830 a regular inspection of the device per EN 13486 is required. We can execute this inspection for you – please contact us.</i>