



Features

- Single channel, compatible with K, J, and T Thermocouples
- **Stand-alone operation**
 - Powered by replaceable batteries
 - Built-in date and time clock
 - Deep on-board memory of 252,928 readings
 - Built-in graphics display for temperature trending, high/low capture, and more
- IP67 construction resists dust ingress and water submersion up to 1 meter
- Programmable high/low alarm thresholds
- Both audible and visual alarm states
- One K-type thermocouple probe included (0 to 400°C range)

Total Record Times

| Sampling Interval | Record Time |
|---------------------------|-------------|
| 1 sample every 2 seconds | 5.8 days |
| 1 sample every 5 seconds | 14 days |
| 1 sample every 10 seconds | 29 days |
| 1 sample every 15 seconds | 43 days |
| 1 sample every 20 seconds | 58 days |
| 1 sample every 30 seconds | 87 days |
| 1 sample every 1 minutes | 174 days |
| 1 sample every 2 minutes | 249 days |
| 1 sample every 5 minutes | > 2 years |
| 1 sample every 10 minutes | > 2 years |
| 1 sample every 15 minutes | > 2 years |
| 1 sample every 20 minutes | > 2 years |
| 1 sample every 30 minutes | > 2 years |
| 1 sample every 1 hour | > 2 years |

Programmable Elements

- Logger name
- °F or °C
- Thermocouple type
- **Sampling interval**
 - 2, 5, 10, 15, 20, 30 seconds
 - 1, 2, 5, 10, 15, 20, 30 minutes
 - 1 hour
- **LCD control to maximize battery life**
 - LCD and backlight on for 15 sec after button press
 - LCD always on, backlight on for 15 sec after button press
- **Security setting**
 - Allow/disallow the viewing and the adjustment of settings when deployed
- High and low temperature alarm thresholds
- Alarm delay – the number of consecutive samples after a threshold breach before an alarm is triggered
- Enable/disable status LEDs (sampling, alarm)
- Enable/disable audible alarm
- **Record trigger**
 - Immediate
 - When the logger button is pressed
 - Less or greater than a programmable temperature value
 - At a specific date and time

EL-GFX-TC Description

The EL-GFX-TC data logger offers a cost-effective approach to thermocouple temperature data logging for one channel. Its integrated USB interface allows the instrument to be configured by any Windows-based PC. Typical programmable parameters include a unique data logger name, °F or °C temperature scale, sampling interval (2 seconds to 1 hour), high and low alarm limits, security settings, triggered recording parameters, and more. The GFX-TC is powered by two replaceable (non-rechargeable) ½ AA lithium batteries, for long-life recordings typically up to one year.

Model EL-GFX-TC provides a security option that can prohibit tampering of the logger in any manner that would affect recorded data after deployment.

The GFX also supports a programmable alarm delay feature, from immediate to after 250 readings. This is useful where temperature is known to fluctuate momentarily into an alarm threshold, but does not necessarily indicate an alarm condition. For example, the logger is placed inside a freezer or refrigerator. If the door opens the temperature will momentarily rise, but the logger can be configured to ignore that increase for a programmed number of samples before triggering an alarm.

During deployment, status LEDs provide continuous visual feedback of sampling events, battery status, and alarm states. In addition, three front panel function buttons allow you to view the memory consumed (0-100 %), the number of readings contained in the logger's memory, and the current battery capacity (0-100 %.) The last recorded temperature reading can also be viewed, along with historical data in the form of minimum and maximum values logged during the current recording cycle, as well as an historical trend plot. Using front panel buttons you can also start and stop the logger and view pre-programmed alarm thresholds.

The GFX-TC is programmed using software that is provided with the instrument. The software programs all operating parameters and options. When a logging session is complete, the GFX logger is plugged into any computer onto which the software is installed using the supplied cable. Options in the software allow the GFX logger to upload time, date and recorded data to the PC where they can be graphed in a cursor-based chart that displays temperature as a function of recorded time and date. A single mouse click can export the data to Microsoft Excel for detailed analysis and report generation.




The EL-GFX-TC is provided with everything you need to begin taking thermocouple temperature measurements: USB cable for connecting it to a PC, a K-type thermocouple probe (0 to 400°C range), batteries, and software (downloadable, no CD provided.) Also provided is a convenient wall clip that can be either permanently attached to a surface, or temporarily attached to a ferrous surface via the integrated magnet.

EL-GFX-TC Close-up


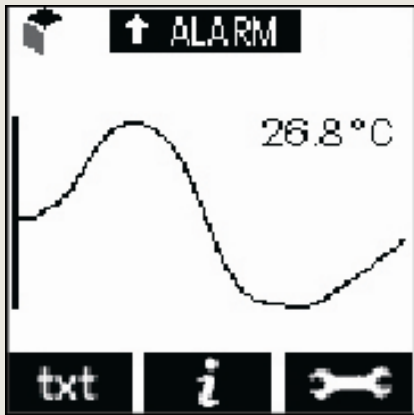
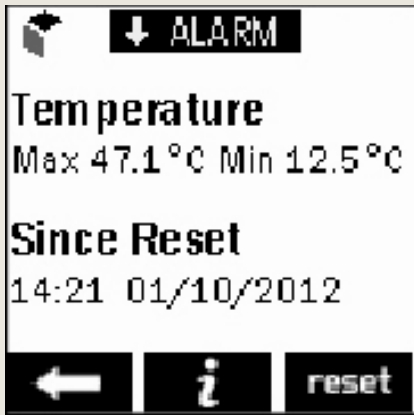


EL-GFX-TC Operating Modes (actual GFX screen images)



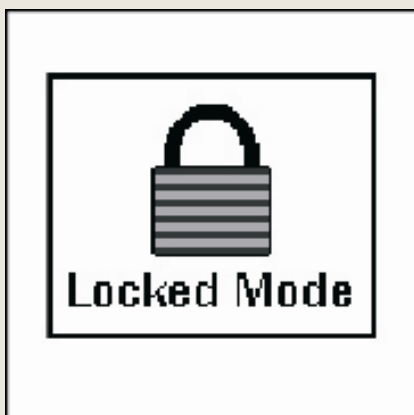
Start options (Immediate start not shown):

| | | |
|---|--|---|
|  |  |  |
| Delayed manual start | Delayed time/day start | Delayed temperature start |

Data display options:

| | | |
|--|---|--|
|  |  |  |
| Current temperature (low alarm triggered) | Trend plot with current temp (high alarm triggered) | Summary |

General status and local control:

| | | |
|---|--|---|
|  |  |  |
| Logger status screen | General control | Locked mode prohibits local adjustments |

EL-GFX-TC Specifications

| Specification | Minimum | Typical | Maximum | Unit |
|--------------------------------|-----------------|---------------|---------------|---------|
| Measurement Range (K-type TC) | -200 (-328) | | +1350 (+2462) | °C (°F) |
| Measurement Range (J-type TC) | -200 (-328) | | +1190 (+2174) | °C (°F) |
| Measurement Range (T-type TC) | -200 (-328) | | +390 (+734) | °C (°F) |
| Internal Resolution | | 0.1 (0.1)* | | °C (°F) |
| Accuracy (overall error) | | ±1.5 (±2.7)** | | °C (°F) |
| Logging Rate (configurable) | every 2 seconds | | every 1 hour | |
| Operating Temperature Range*** | -10 (-14) | | +40 (+104) | °C (°F) |
| Battery Life† | | 1 | | Year |

* Above 999.9°C/F display becomes 1°C. Internal resolution remains at 0.1°C/F.

** At 25°C. See internal accuracy curve on page 4. Important - quoted accuracy is for the data logger only when measuring within the specified operating temperature. Thermocouple error is not included and should also be taken into consideration.

*** Operating temperature applies to the data logger module only. Please consult the probe manufacturer for operating temperature of thermocouple.

† At 25°C and 10 minute logging rate with no alarm LEDs or sounder and minimal LCD use.

WARNING: Do not exceed operating temperatures.

EL-GFX-TC Ordering Information

| Description | Order Number |
|---|------------------|
| EL-GFX-TC Data Logger Includes data logger, two (2) batteries (preinstalled), USB cable (31-inches), one (1) 1m K-type Thermocouple probes (0 to 400°C range), mounting clip, downloadable configuration, review and Excel export software. | EL-GFX-TC |
| Optional Accessories | |
| Spare Battery Please note: 2 batteries are required to run the EL-GFX-TC data logger. | BAT-3V6 |

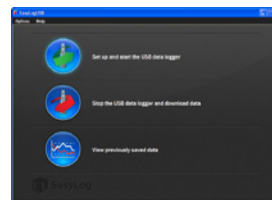
Included



EL-GFX-TC
Data Logger



Mounting
Clip



Software
(Via Download)



2 Batteries
(preinstalled)



USB Cable
(31 inches)

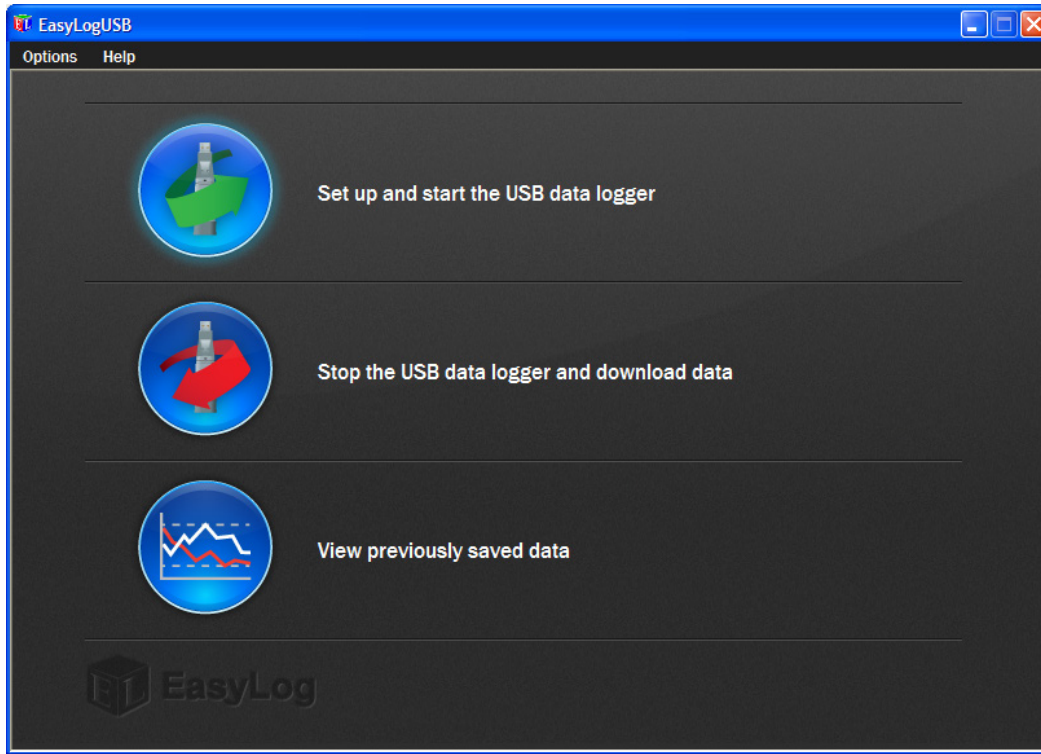


K-Type TC Probe 0 to 400°C Range
(1m)

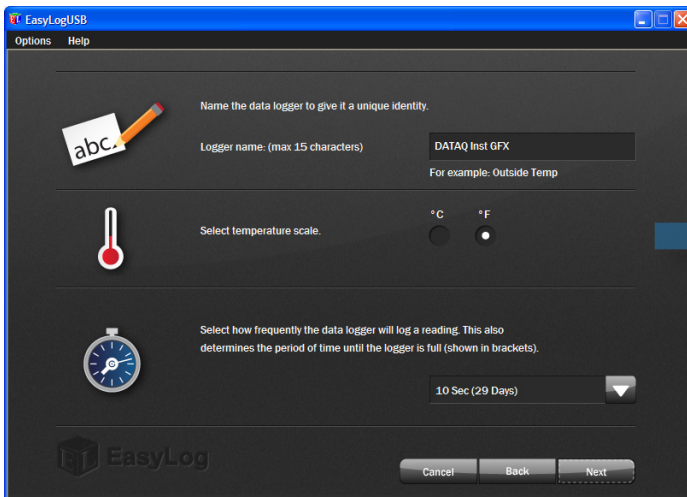
EL-GFX-TC Included Software Overview

Software included with EL-GFX Series instruments allows complete instrument configuration, data retrieval, review, and single-click export facility to Microsoft Excel.

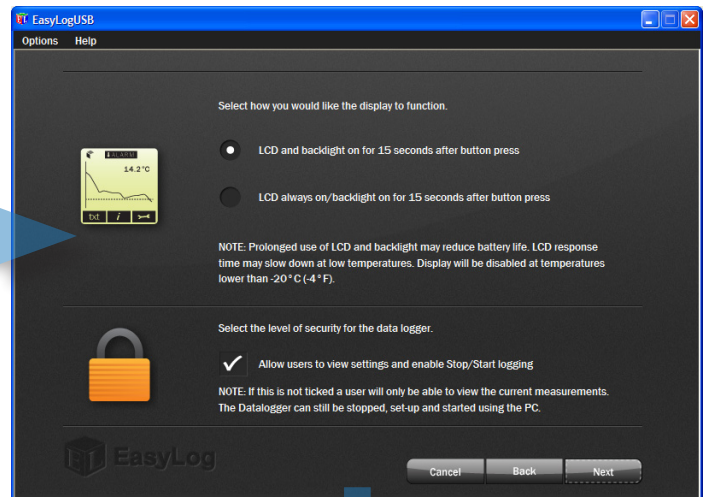
Top EL-GFX Software Menu



Typical EL-GFX Configuration Procedure:

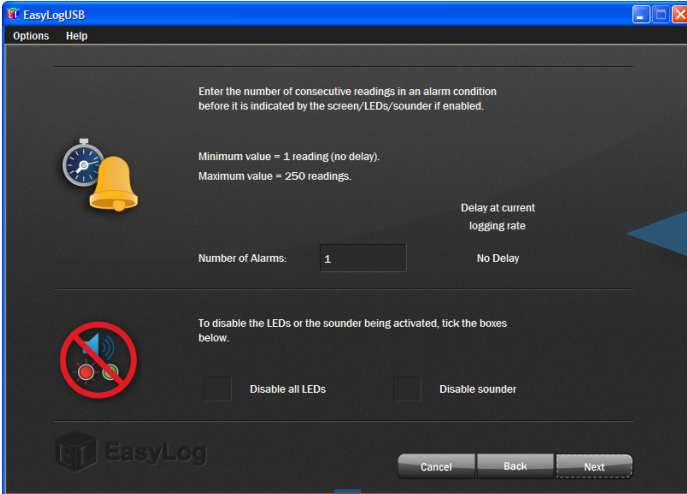


Name the GFX logger and set its temperature scale and logging interval.

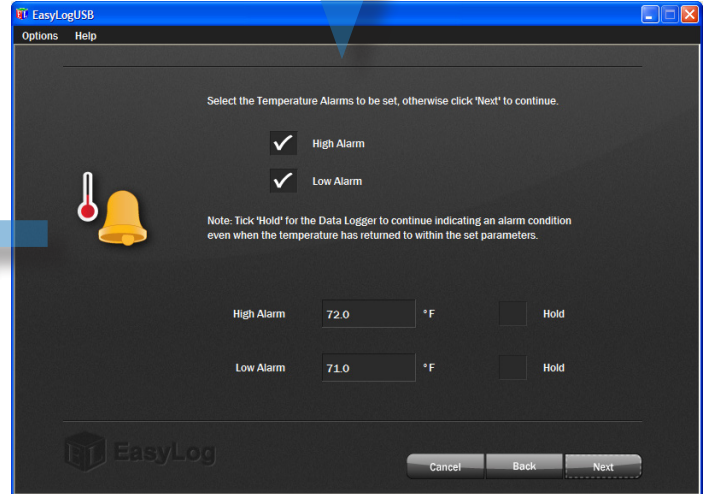


Configure the logger's LCD behavior and security level.

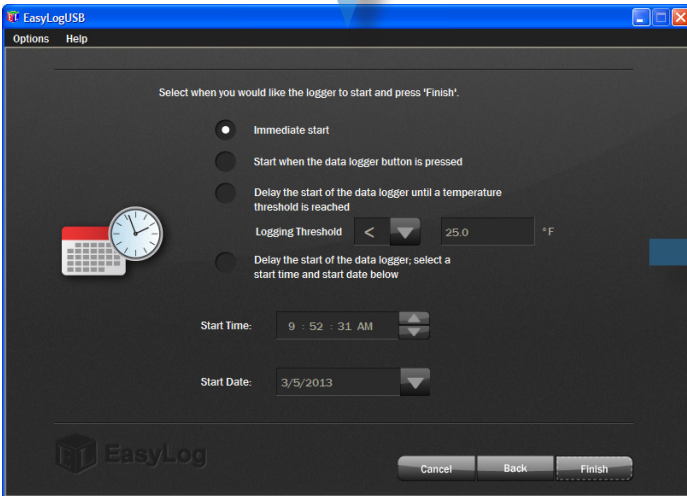
EL-GFX-TC Included Software Overview (continued)



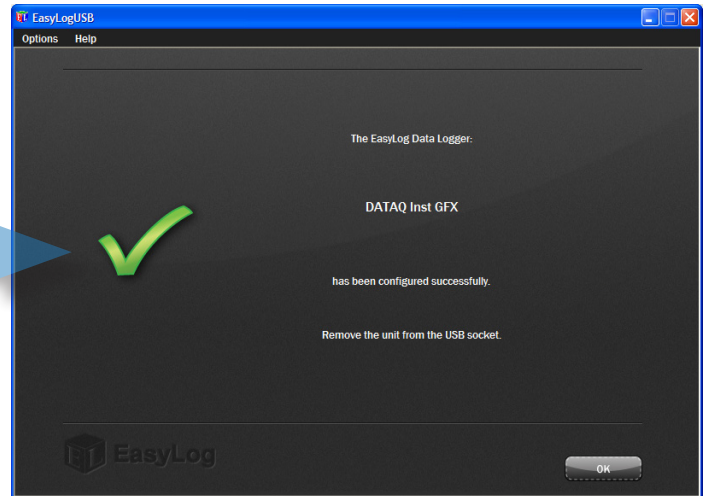
Configure alarm delay time and methods



Configure alarm thresholds and behavior

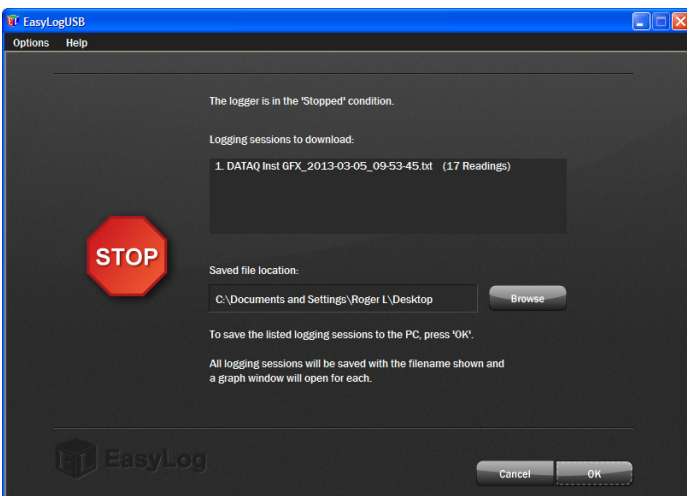


Configure logging start conditions



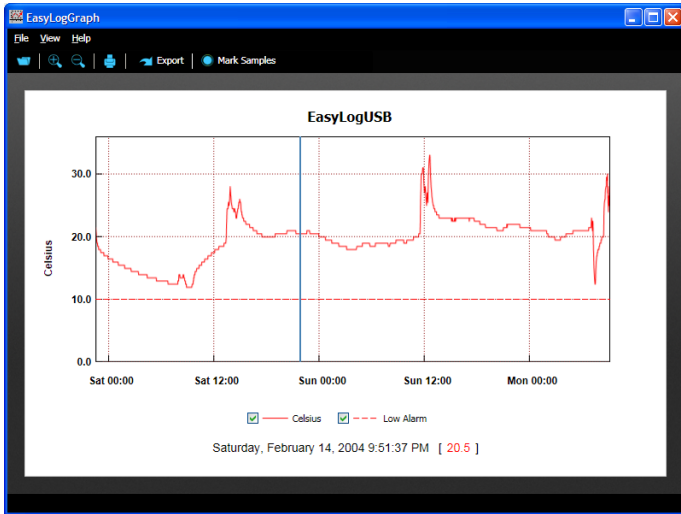
Configuration Complete!

Upload Logger Data



Review the stored logging sessions and define where they'll be saved.

Review Uploaded Logger Data



Cursor-based review of recorded data with time and date stamps

Sheet1 - Microsoft Excel

| EasyLogUSB Time | Celsius | Low Alarm | Serial Number |
|------------------------|---------|-----------|---------------|
| 1 13/02/2004 22:30:00 | 20.5 | 10 | 987654321 |
| 2 13/02/2004 22:31:00 | 21 | 10 | |
| 3 13/02/2004 22:32:00 | 21.5 | 10 | |
| 4 13/02/2004 22:33:00 | 21.5 | 10 | |
| 5 13/02/2004 22:34:00 | 21 | 10 | |
| 6 13/02/2004 22:35:00 | 20.5 | 10 | |
| 7 13/02/2004 22:36:00 | 20 | 10 | |
| 8 13/02/2004 22:37:00 | 20 | 10 | |
| 9 13/02/2004 22:38:00 | 19.5 | 10 | |
| 10 13/02/2004 22:39:00 | 19.5 | 10 | |
| 11 13/02/2004 22:40:00 | 19.5 | 10 | |
| 12 13/02/2004 22:41:00 | 19 | 10 | |
| 13 13/02/2004 22:42:00 | 19 | 10 | |
| 14 13/02/2004 22:43:00 | 19 | 10 | |
| 15 13/02/2004 22:44:00 | 19 | 10 | |
| 16 13/02/2004 22:45:00 | 18.5 | 10 | |

Single-click export to Microsoft Excel.

EL-GFX Series Graphing Data Loggers

EL-GFX Data Logger series products are a line of low cost, compact, battery-operated data loggers with a graphical display. Each product in the line offers a specific measurement function and range.



EL-GFX-1 Temperature Data Logger
Measures -30 to +80 °C (-22 to 176 °F)



EL-GFX-DTP Temperature Data Logger with Probe
Measures -40 to +125°C (-40 to +257°F)



EL-GFX-2 Temperature and Humidity Data Logger
Measures -30 to +80 °C (-22 to 176 °F) and 0-100%RH



EL-GFX-2+High Accuracy Temp and RH Data Logger
Measures -30 to +80 °C (-22 to 176 °F) and 0-100%RH



EL-GFX-DTC Thermocouple Temperature Data Logger
Supports K, J, and T type Thermocouples



EL-GFX-TC Thermocouple Temperature Data Logger
Supports K, J, and T type Thermocouples

Lascar Data Logger Product Lines

EL-USB Data Loggers



Lascar EasyLog model EL-USB series products are a line of low cost, compact, battery-operated data loggers with built-in memory and a USB interface for easy setup and data download. Each product in the line offers a specific measurement function (including temperature, voltage, process current, and more).

EL-GFX Data Loggers



The EL-GFX line of data loggers is the latest release from Lascar Electronics with similar functionality of the EL-USB series with an added graphic display for data.

EL-WiFi Data Loggers



Lascar's EL-Wifi Data Logger series products are low cost, compact, battery-operated data loggers with wireless connectivity to any PC over a WiFi router. Each product in the line features a large, easy-to-read display of current measurements, and is purchased for specific measurement functions.



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Data Acquisition Product Links

(click on text to jump to page)

[Data Acquisition](#) | [Data Logger](#)