Excelog One

Thermocouple Data Logger and Simulator

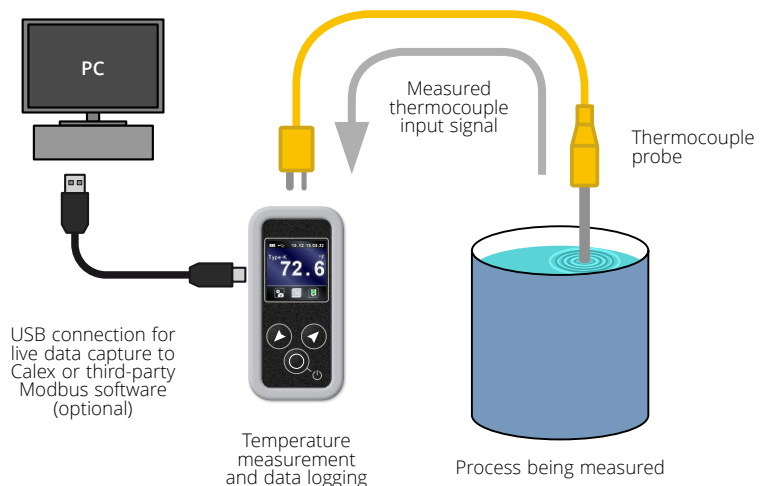Thermocouple probe not included

- Dual-function thermocouple data logger and thermocouple voltage output simulator
- Log data to built-in memory
- Simulate a thermocouple voltage for a chosen temperature
- Single channel, configurable for measurement input or thermocouple voltage output
- Free software for configuration and data acquisition
- Built-in USB-rechargeable battery
- Backlit colour display
- Select °C or °F
- Modbus interface for integration into third-party software
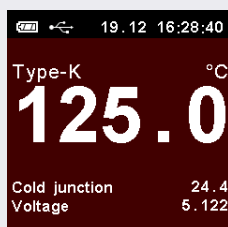- CE Marked and RoHS 2 Compliant

MEASURE MODE

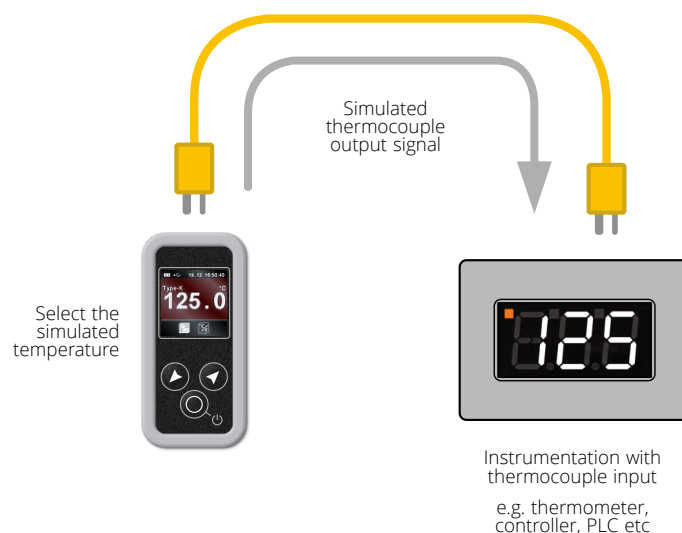|	
Type-K	°C
23.2	
Cold junction	24.6
Voltage	0.929
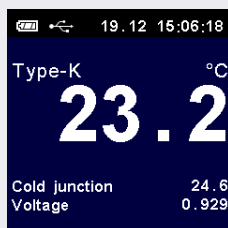
- Connect a thermocouple probe to the Excelog One
- Select the thermocouple type in the menu (Type J, K, T, R, S, N, E)
- Log data to internal memory
- Connect via USB to log data live to a PC
- Transfer data from the Excelog to the PC via the USB connection and software

PC

USB connection for live data capture to Calex or third-party Modbus software (optional)

Measured thermocouple input signal

Thermocouple probe

Temperature measurement and data logging

Process being measured

SIMULATE MODE

Type-K	°C
125.0	
Cold junction	24.4
Voltage	5.122

- Simulate the output of a thermocouple. Use this to check the functionality and calibration of your instrumentation
- Select the thermocouple type in the menu (Type J, K, T, R, S, N, E)
- Connect the Excelog to your instrumentation via a cable and connectors of the matching thermocouple type
- Set the output temperature via the up & down keys

Select the simulated temperature

Simulated thermocouple output signal

Instrumentation with thermocouple input

e.g. thermometer, controller, PLC etc

INTUITIVE INTERFACE

Actual size

Push buttons:

Change output temperature (in Simulate mode)

Change menu items

Display the menu

Long press: Power off

Settings

Start / stop logging

SETTINGS AND FEATURES

- Easy configuration via intuitive menu
- English, Spanish, French, German, Italian, Chinese and Japanese languages
- Measure / simulate mode
- Thermocouple type
- Internal/external cold junction
- Data logging interval, number of samples to log, schedule
- Screen saver timeout
- Firmware updates via USB
- Fully configurable via built-in controls; no additional hardware required

GENERAL SPECIFICATIONS
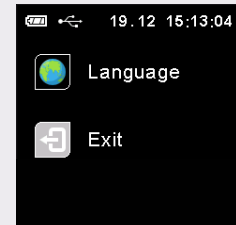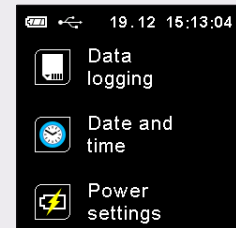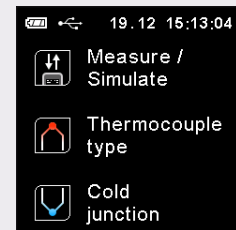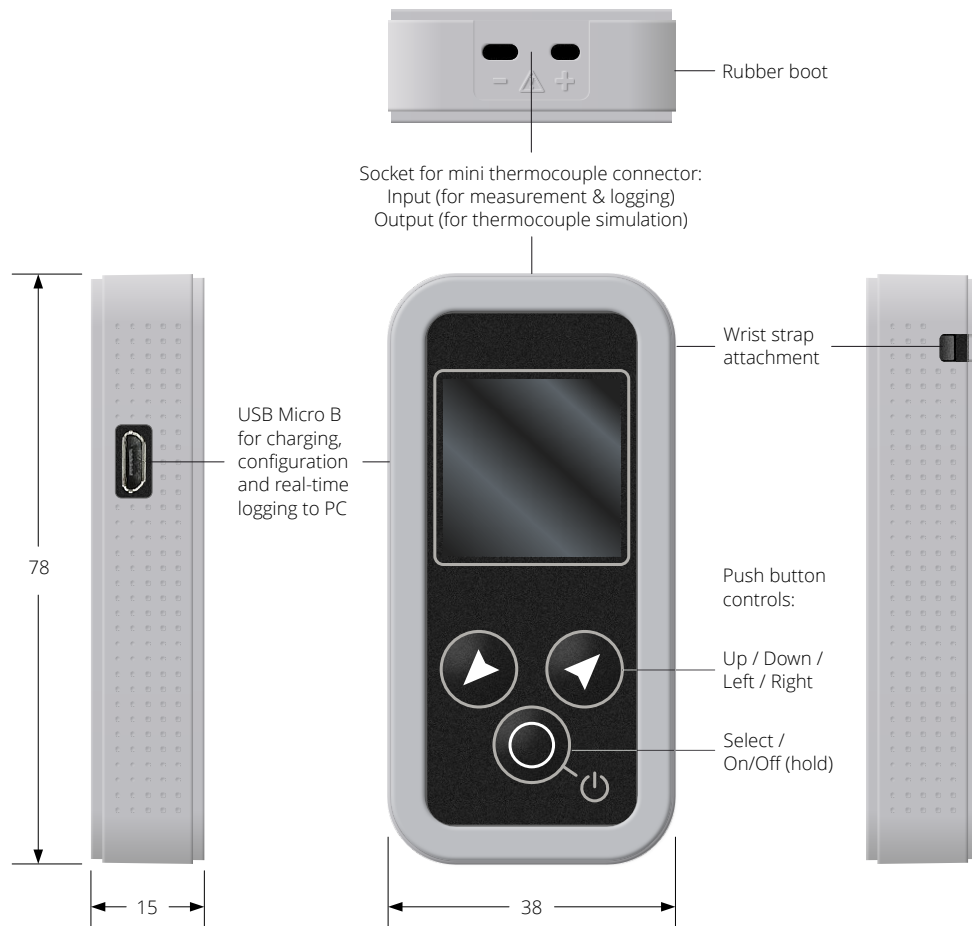
Input	1 x thermocouple input (any of the below types), for use with miniature thermocouple connectors
Output	1 x simulated thermocouple voltage output (any of the below types)
Temperature Range	Depending on mode and thermocouple type:

Thermocouple Type	Temperature Range	
	Input (Measured)	Output (Simulated)
Type J	-200°C to 1200°C	-50°C to 1200°C
Type K	-200°C to 1372°C	-50°C to 1372°C
Type T	-200°C to 400°C	-50°C to 400°C
Type R	0°C to 1768°C	300°C to 1768°C
Type S	0°C to 1768°C	300°C to 1768°C
Type N	0°C to 1300°C	200°C to 1300°C
Type E	-200°C to 1000°C	-50°C to 1000°C

Input Accuracy (Measured)	± 0.1% or 0.8°C, whichever is greater
Output Accuracy (Simulated)	At 23°C ± 5°C: ± 0.1% or 0.8°C, whichever is greater At 0°C to 50°C: ± 0.25% or 0.8°C, whichever is greater
Temperature Resolution	0.1° for temperatures below 1000° (C or F) 1° for temperatures above 1000° (C or F)
Display	27 x 27 mm colour LCD, backlit
Configurable Parameters	Temperature units, mode (measure/simulate), thermocouple type, cold junction settings, signal processing, date and time, data logging, power options, languages
Display Language	English, Spanish, French, German, Italian, Chinese (simplified), Japanese
Temperature Units	°F or °C
Display response time	Temperatures update every 1 s
Operating Temperature	0 to 50°C
Power Supply	Built-in rechargeable Li-ion battery, or USB (cable included)
Battery Life	Logging mode: 35 hours (power save enabled) 10 hours with full brightness (typical) Simulation mode: 32 hours (power save enabled)
Charge Time	3.5 hours
Weight	60 g
Dimensions	78(h) x 38(w) x 15(d) mm

DATA LOGGING SPECIFICATIONS

Logging Interval	1 to 86,400 seconds (1 day)
Data Capacity	1.5 MB (2 days, logging every second)
Variables Logged	Measured temperature, cold junction temperature, voltage
File Format	.csv (can be imported to Excel)
Configurable Parameters	Sample period, number of samples, scheduled start date/time (or manual start/stop)

DIMENSIONS & CONNECTIONS

Actual size

Rubber boot

Socket for mini thermocouple connector:
Input (for measurement & logging)
Output (for thermocouple simulation)

USB Micro B
for charging,
configuration
and real-time
logging to PC

Wrist strap
attachment

78

Push button
controls:

Up / Down /
Left / Right

Select /
On/Off (hold)

15

38

MODEL NUMBERS

EXCELOG-ONE   Data logger and thermocouple simulator with USB cable

ACCESSORIES

EL1-MAU   Spare international mains adapter

EL1-CALCERTA   Calibration certificate, UKAS traceable

SOFTWARE

EXCELOG
- Temperature display
- Logging of live temperature data direct to PC
- File format: Comma-separated text file (compatible with Excel)
- Scrolling temperature chart
- Configuration of Excelog One settings
- Free download at www.calex.co.uk/software

OTHER   Also compatible with third-party Modbus software

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