Excelog 6

6-channel temperature data logger
with touch screen

Operator's Guide

CALEX
ELECTRONICS LIMITED

Inputs

4 x thermocouple inputs (any of the following types), for use with miniature thermocouple connectors, plus 2 x RTD inputs, spring clamp, for 2-wire or 3-wire RTDs, 28 to 16 AWG

Input Type	Temperature Range	Accuracy of Excelog only (whichever is greater)
Type J	-200°C to 1200°C	± 0.1% or 0.8°C
Type K	-200°C to 1372°C	± 0.1% or 0.8°C
Type T	-200°C to 400°C	± 0.1% or 0.8°C
Type R	0°C to 1768°C	± 0.1% or 0.8°C
Type S	0°C to 1768°C	± 0.1% or 0.8°C
Type N	0°C to 1300°C	± 0.1% or 0.8°C
Type E	-200°C to 1000°C	± 0.1% or 0.8°C
Pt100, Pt200, Pt500, Pt1000	-200°C to 850°C	± 1.0% or 1.0°C

General Specifications

Temperature Resolution	0.1° for temperatures below 1000° (C or F)
	1° for temperatures above 1000° (C or F)
Display	2.83" (72 mm) resistive touch TFT, 320 x 240 pixels, backlit
Configurable Parameters	Temperature units, alarms, signal processing, date and time, data logging, power options, graph channels
Temperature Units	°F or °C
Alarm Configuration	12 x visual alarms (2 per channel) with adjustable level, individually configurable HI or LO.
Signal Processing	Average, minimum, maximum, standard deviation, 2-channel difference
Display Response Time	1 s
Operating Temperature	0 to 50°C (0 to 40°C for battery charging)
Power Supply	Built-in rechargeable Li-ion battery, or USB, or 5 V DC mains adapter (included)
Battery Life (Typical)	32 hours while logging with full display brightness
	Up to 96 hours while logging in power saving mode
Charge Time	6 hours (using mains adapter)
Weight	200 g without thermocouples
Dimensions	136(w) x 71(h) x 32(d) mm, without thermocouples

Data Logging Specifications

Data Logging Interval	1 to 86,400 seconds (1 day)
Max. SD Card Capacity	32 GB SD or SDHC (4 GB SD Card included - approx 2 years of data)
Variables Logged	Measured temperature, cold junction temperature, alarm events
File Format	.csv (can be imported to Excel)
Configurable Parameters	Sample rate, number of samples, scheduled start date/time, (or manual start/stop)

PC interface

Windows Software	Free download from www.calex.co.uk/software
Communication protocol	Modbus (address table available separately)

Top

1 2 3 4

4 x thermocouple inputs, channels 1 to 4

Left

SD Card

Front

71

45

Touch screen

Power switch

59

136

Right

2- or 3-wire RTD inputs, spring clamp terminals

Ch. 5
Ch. 6

USB socket for power, charging and PC communication

32
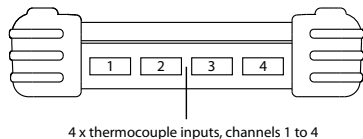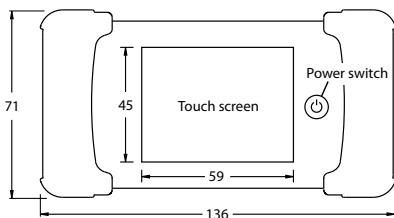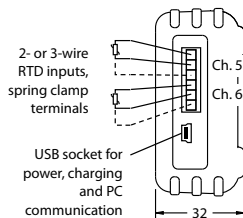
⚠ Warning

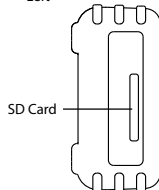This device has an internal, non-removable, rechargeable Lithium-Ion Polymer battery. Do not attempt to remove or replace the battery as this could cause damage and will invalidate the warranty. Do not attempt to charge the battery in ambient temperatures outside of the range 0°C to 40°C (32°F to 104°F). Do not dispose of batteries in a fire as they may explode. Dispose of batteries according to local regulations. Do not dispose as household waste. Improper use or use of unapproved chargers may present a risk of fire, explosion, or other hazard, and will invalidate the warranty. Never use a damaged charger. Only use the charger indoors.

Refer to this instruction sheet when the warning symbol (⚠) is encountered.

To avoid the possibility of electric shock or personal injury:
- Before using the thermometer, inspect the case. Do not use the thermometer if it appears damaged. Look for cracks or missing plastic;
- Do not apply a voltage between any terminal and earth ground while the USB is connected;
- To prevent damage, do not apply more than 1V between any two input terminals;
- Do not use the instrument around explosive gas, vapour or dust.

EXCELOG-6   6-channel handheld temperature data logger with 4 GB SD Card, 5 V DC mains adapter, and USB cable

Accessories

ELMAU   Spare USB mains adapter
ELSD   Spare 4 GB SD Card

Guarantee

Calex guarantees each instrument to be free from defect in material and workmanship under normal use and service for the period of one year from the date of purchase. This guarantee extends only to the original buyer.

Excelog 6 Touch Screen Interface

SD Card inserted
Scheduled logging enabled
Alarm logging enabled
USB/power connected
Battery status:

- Charging
- Discharging
- Battery fault
- Battery temperature out of range

29 Jul 2018 - 18:53:15
CH1 (Type-K) °C **30.0**   CH2 (Type-K) °C **23.1**
CH3 (Type-K) °C **27.3**   CH4 (Type-K) °C **22.9**
CH5 (PT-100) °C **23.8**   CH6 (PT-100) °C **23.7**

Select °C or °F

Start/Stop Logging
Reset All Alarms

Channel View
29 Jul 2018 - 18:54:37
CH1 (Type-K)
23.1°C

Select °C or °F

Reset Channel Alarms
Exit

Detailed View
11 Sep 2018 - 16:08:13
CH1
Temperature: 30.3 °C
ΔT/t: -2.1 °C
Average: 28.7 °C
Maximum: 34.5 °C
Minimum: 24.3 °C
Standard Dev.: 4.6053 °C
Cold junction: 25.4 °C
Voltage: 1.2197 mV

Select °C or °F

Reset Values
Exit

Graph
29 Jul 2018 - 18:55:01
30.0°C
25.0°C
20.0°C
18:54:20 18:54:30 18:54:40 18:54:50
CH1
CH2
X-axis: Time (hh:mm:ss)
Y-axis: Temperature (°C)

Drag left and right to scroll graph

Return to present time
Exit

Graph Settings
Graph Options   29 Jul 2018 - 18:55:09
Graph Interval   Graph Data 1   Graph Data 2
Reset Graph

Settings
Settings   29 Jul 2018 - 18:55:46
Channel Settings   Data Logging   Power Options
Date & Time   Language   Firmware Update

Graph Interval
Graph Interval   29 Jul 2018 - 18:55:17
1 second   10 minutes
10 seconds   30 minutes
30 seconds   1 hour
1 minute

Graph Data 1 & 2
Graph Data 1   29 Jul 2018 - 18:55:25
Channel 1   Channel 4
Channel 2   Channel 5
Channel 3   Channel 6

Power Options
Power Options   29 Jul 2018 - 18:59:17
Enable Power Saving:
Idle time (mins):   1

Save changes
Exit without saving

Channel Settings
Channel Settings   29 Jul 2018 - 18:55:53
Channel 1   Channel 2   Channel 3
Channel 4   Channel 5   Channel 6

Channel 1-6 Settings
Channel 1 Settings   29 Jul 2018 - 18:56:01
Input Type   Cold junction   Differential
Correction   Alarms   Display Options

Language
Language   29 Jul 2018 - 18:59:34
English   Français   Español   Italiano
Deutsch   日本語   中文

Date & Time
Date & Time   29 Jul 2018 - 18:59:xx
Date: 29 - 07 - 2018
        Day Month Year
Time: 18 : 59

Data Logging
Data Logging   29 Jul 2018 - 19:03:35
Data Logging   Alarm Logging

Data Logging
Data Logging   29 Jul 2018 - 18:58:59
Sample period: 1 s
Number of samples: 60
(enter 0 for continuous logging)
Enable Scheduled Start:
01 - 01 - 2018
Day Month Year
Time: 12 : 00

Alarm Logging
Alarm Logging   29 Jul 2018 - 18:59:07
Log trigger time
Log while triggered
Log reset time

Cold Junction (Thermocouple only)
Cold junction   29 Jul 2018 - 18:56:22
Internal cold junction
External cold junction (0.0°C)

Differential
Channel 1 Differential   11 Sep 2018 - 16:08:55
Difference between channels
Difference between samples
CH1-CH1   CH1-CH4
CH1-CH2   CH1-CH5
CH1-CH3   CH1-CH6

Difference between samples
Sample period: 10 s

Alarms
Channel 1 Alarms   29 Jul 2018 - 18:56:50
Alarm 1   Alarm 2

Reset Channel Alarms

Thermocouple Input Type
Channel 1 Input Type   29 Jul 2018 - 18:56:08
Type-K   Type-E
Type-J   Type-R
Type-T   Type-S
Type-N

RTD Input Type
Channel 5 Input Type   29 Jul 2018 - 18:57:48
2 wire
3 wire
PT-100   PT-500
PT-200   PT-1000

Correction
Correction   29 Jul 2018 - 18:56:42
Correction Span: 1.000
Correction Offset: 0.0 °C

Display Options
Channel 1 Display Options   29 Jul 2018 - 18:57:28
Unfiltered Temperature
Average Temperature
Differential Temperature

Alarm 1 & 2
Channel 1 Alarm 1   29 Jul 2018 - 18:56:58
Setpoint: 0.0 °C
Hysteresis: 0.0 °C
Off   Low   High
Reset: Auto   Manual