

COLD CHAIN

and ULTRA LOW TEMPERATURE DATALOGGERS



SECTION

5A

- ❖ Re-Usable & Disposable Cold Chain Datalogs.
- ❖ Convenient Factory Pre-Set Temperatures.
- ❖ Cold Chain Datalogs with PDF Reports.
- ❖ Wide Range of Cold Chain Datalogs.
- ❖ Ultra-Low (Cryogenic) Temperature Monitoring Datalogs.
- ❖ General Information on Cold Chain Industry.

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Index Cold Chain Datalogs

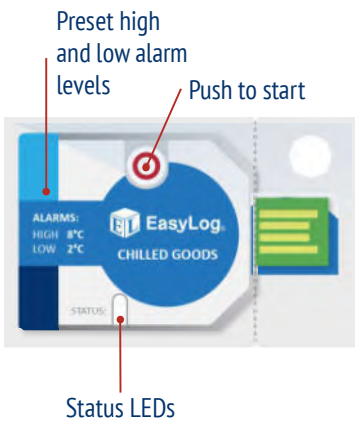
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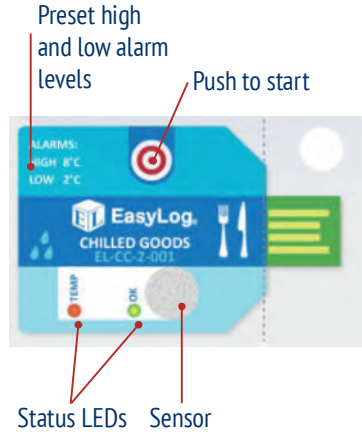
Quick Start Guide

1. Your new logger comes ready to go. Simply press and hold the start button until the green LED lights up to start logging.

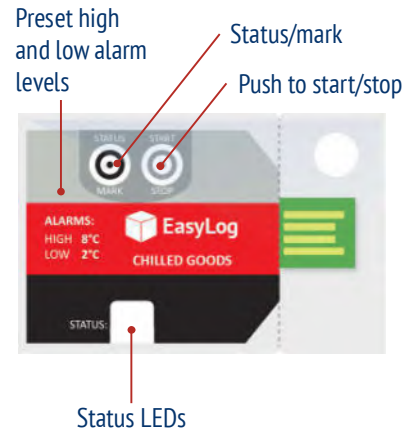
EL-CC-1




EL-CC-2









EL-PDF-1



2. Now place your logger in the location you want to monitor.

Once logging, pressing the  button will light up an LED only on PDF, CC flashes, to give a quick indication of the status. It will also add a marker to the data to show that you have checked it. No alarms will be triggered in the first 30 minutes to allow the logger to settle at the monitored conditions periodically.

	Red + Green single flash Logger is ready to start new logging session	Push Start / Stop button
	Green single flash The data logger is currently logging No alarm has been triggered	No action required
	Red single flash The data logger is currently logging An alarm has been triggered!	View data log after use
	Green double flash The data logger's memory is full or the logger has been stopped. No alarm was triggered during the session.	View data log after use
	Red double flash The data logger's memory is full or the logger has been stopped. An alarm was triggered during the session!	View data log after use
	No LEDs flash The data logger has a flat battery	Contact your distributor for a new logger

EL-CC-1 & EL-CC-2

USING THE SOFTWARE

3. When you are ready to view the recorded data on your logger, download the EasyLog CC software (compatible with 32-bit and 64-bit versions of Windows 7, 8 and 10). Visit www.easylogcc.com and click 'DOWNLOAD'.

4. To save your data, remove the logger from the plastic sleeve and connect it to a USB port. Open the EasyLog CC software and click on Save Data. This will automatically open up your readings in the EasyLogGraph software, where you can view your data or export it in various formats.

EL-PDF-1 (no software)

3. When you are ready to view the recorded data on your logger, press and hold the button to stop the current logging session. Remove the logger from the plastic sleeve and connect it to a USB port.

4. Copy the file off the device as if it were a memory stick. For large logging sessions this could take up to 30 seconds.



EL-CC-1 & EL-PDF-1 only

5. Press the button to start a new data logging session. To maintain IP67 status, the logger must be placed in Lascar's accessory bag, EL-CC-BAG*. The EL-CC-2 loggers are single use.



*EL-CC-BAG available for sale on our website

IMPORTANT SAFETY INFORMATION



Repairing or Modifying

Never attempt to repair or modify Lascar products. Dismantling them, other than for the purpose of changing replaceable batteries, may cause damage that is not covered under the warranty. Servicing should only be provided by an authorized supplier.



Disposal and Recycling Information

You must dispose of Lascar products in accordance with relevant laws and regulations. They contain electronic components and lithium batteries and therefore must be disposed of separately from household waste.

Section 1.

Disposable Data Logger with PDF Report

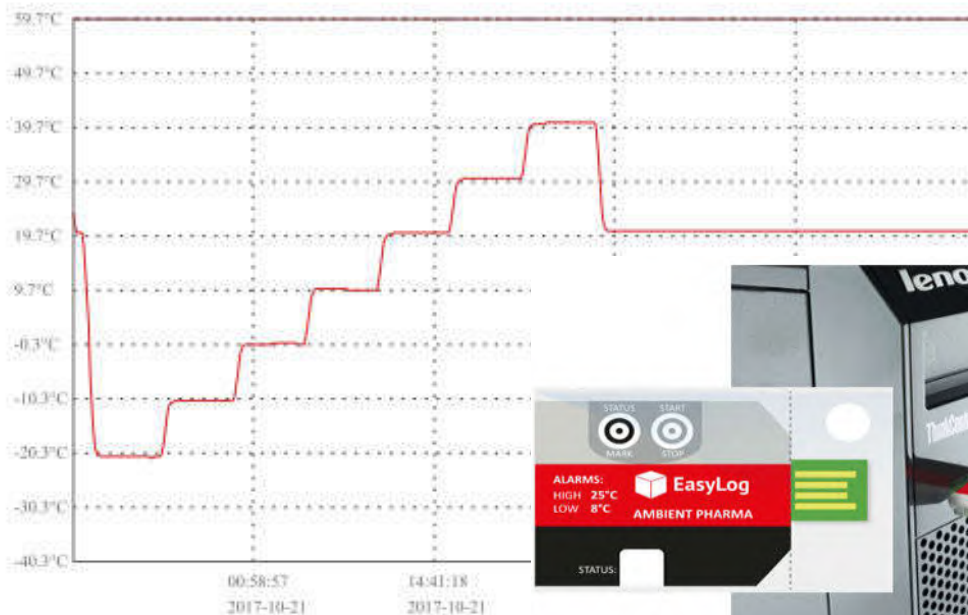
Range: EL-PDF-01
Chilled, Frozen, Ripening Good
& Ambient Pharma

Summary Report

Serial Number 0004754621
Alarm Disabled

First Reading	11:16:36 2017-10-20	Minimum	-21.1°C 17:16:36 2017-10-20
Last Reading	07:48:21 2017-10-23	Maximum	40.5°C 23:15:21 2017-10-21
Elapsed Time	2 days, 20 hours	Average	14.4°C
Total Readings	16448	Standard Deviation	16.2°C
Logging Rate	15 seconds	MKT	12.30°C (dH83.14472)

High Alarm: Not Set	Low Alarm: Not Set
First Triggered N/A	First Triggered N/A
Occurrences N/A	Occurrences N/A
Time in Alarm N/A	Time in Alarm N/A
Longest Alarm N/A	Longest Alarm N/A
Zone 1: Not Set	Zone 2: Not Set
Time Triggered N/A	Time Triggered N/A
Total Time in Zone N/A	Total Time in Zone N/A



EL-PDF-1 Cold Chain Range



Your data, anytime, anywhere

With PDF Report direct download via USB Port . Software Free, Temperature Data Logging Solutions.

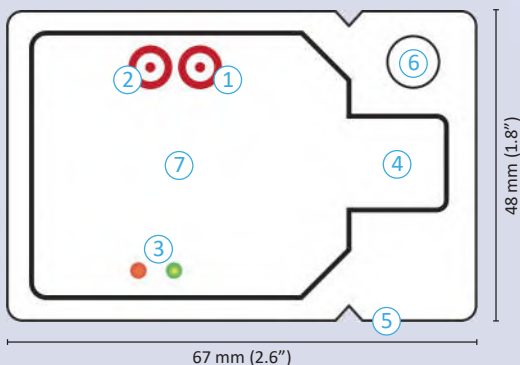
- 4 data loggers for monitoring Chilled Goods, Frozen Goods Ripening Goods and Ambient Pharmaceutical.
- Custom cumulative alarm versions of each logger available if required.
- No set-up required. One button press-to-start logging.
- Pre-configured with appropriate sample rates, alarm thresholds and cumulative alarms for each application.
- No software required. Results appear in an automatically generated PDF file.



Each of the four PDF loggers comes pre-configured for use in your particular application – simply press the Start button to begin logging. Pressing the Status button will light up the status LEDs to give a quick indication of whether the temperature has exceeded an alarm condition at any point. Once your session has been completed, press and hold the Start/Stop button to stop the log, tear open the IP67-rated plastic wallet to reveal the USB connector and plug into your PC. Copy the file off the device as if it were a memory stick.

YOUR EL-PDF-1

- 1 Start/Stop button
- 2 Status/Mark button
- 3 Status LEDs
- 4 USB connector
- 5 Tear to open
- 6 Mounting point
- 7 Model type



CUSTOM CONFIGURATIONS

This unit can be quickly customised for use in multiple markets. If you have a specific monitoring application, call us today.

SPECIFICATIONS

Measurement range	-30 to +60°C (-22 to +140°F)
Accuracy (overall error)	±0.5°C maximum (±1°F)
Resolution	0.1°C (0.1°F)
Battery Life	12 months (minimum)
IP Rating	IP67*
Readings	32,600

* The data logger is protected against moisture to IP67 standard when housed in an EL-CC-BAG or equivalent.

PDF Cold Chain Range	Chilled Goods	Frozen Goods	Ripening Goods	Ambient Pharma
High Alarm Level	8°C	-16°C	14°C	25°C
Low Alarm Level	2°C	-20°C	12°C	8°C
Cumulative Alarms Level	Available Upon Request	Available Upon Request	Available Upon Request	Available Upon Request
Logging Interval	10 minutes (220 days)	10 minutes (220 days)	10 minutes (220 days)	10 minutes (220 days)
Part Number	EL-PDF-1-001 PK10	EL-PDF-1-002 PK10	EL-PDF-1-003 PK10	EL-PDF-1-004-PK10

Section 2.

Disposable Data Logger with Alarms

Chilled, Frozen, & Ripening Goods



EL-CC-1-Range

Cold Chain Data Logging Solutions.

(Does not offer direct USB PDF Reports).

- 3 data loggers for monitoring Chilled Goods, Frozen Goods and Ripening Goods.
- No set-up required. One button press-to-start logging.
- Pre-configured with appropriate sample rates and alarm thresholds for each application.
- Reusable with 12+ months battery life.
- Various export options including PDF, Microsoft Excel and JPEG.

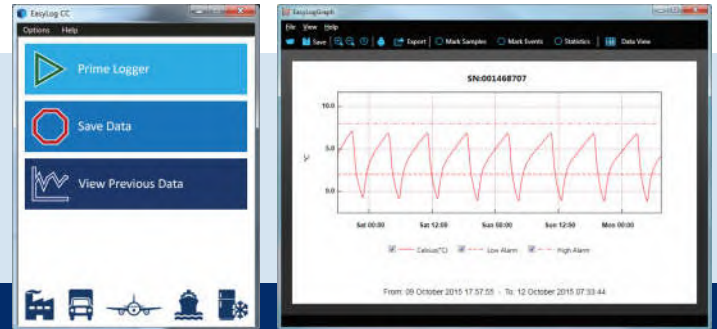
Your data, anytime, anywhere



Each of the three Cold Chain loggers comes pre-configured for use in your particular application – simply press the button to start logging. During a logging session, pressing the button will light up the status LEDs to give a quick indication as to whether the temperature has exceeded an alarm condition at any point. Once your session has been completed, tear open the IP67-rated plastic wallet to reveal the USB connector and plug it in to your PC. Use the free EasyLog CC software for Windows to download and graph the data, and then prime your logger for its next use.

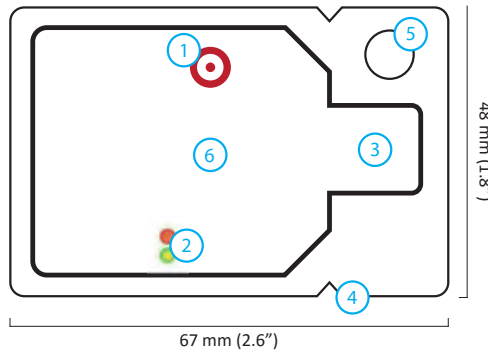
EasyLog CC Software

The simple-to-use software allows you to view the data graphically, in a table or export it in various formats for use in further reporting.



YOUR EL-CC-1

- 1 Start / Status button
- 2 Status LEDs
- 3 USB connector
- 4 Tear to open
- 5 Mounting point
- 6 Model type



SPECIFICATIONS

Measurement range	-30 to +60°C (-22 to +140°F)
Accuracy (overall error)	±0.5°C maximum (±1°F)
Resolution	0.1°C (0.1°F)
Battery Life	12 months (minimum)
IP Rating	IP67*
Readings	32,600

* The data logger is protected against moisture to IP67 standard when housed in an EL-CC-BAG or equivalent.

Cold Chain Product Range	Chilled Goods	Frozen Goods	Ripening Goods
High Alarm Level	8°C	-16°C	14°C
Low Alarm Level	2°C	-20°C	12°C
Logging Interval	10 minutes (220 days)	10 minutes (220 days)	10 minutes (220 days)
Part Number	EL-CC-1-001	EL-CC-1-002	EL-CC-1-003

This unit can be quickly customised for use in multiple markets. If you have a specific monitoring application, that requires different sample rates or alarm thresholds, call us today.

ACCESSORIES

EL-CC-BAG: Pack of 5 waterproof bags for data logger during use.

Section 3.

Disposable Data Logger with Alarms

Ambient & Pharma





EasyLog | EL-CC-1-004 AMBIENT PHARMA GOODS DATA LOGGER

Pack of 10 Ambient Pharma Goods Data Logger with Alarms
Cold Chain Logistics

Available in packs of 10, the EL-CC-1-004 PK10 Ambient Pharma Goods data logger comes pre-configured with sample High 25°C, Low 8°C Alarms - simply press the button to start logging.

Sold in packs of 10 data loggers, the **ultra low cost** EL-CC-1-004 Ambient Pharmaceutical data logger comes pre-configured with sample High 25°C, Low 8°C Alarms - simply press the button to start logging. During a logging session, pressing the button will light up the status LEDs to give a quick indication as to whether the temperature has exceeded an alarm condition at any point. Once your session has been completed, tear open the IP67-rated plastic wallet to reveal the USB connector and plug it in to your PC. Use the free EasyLog CC software for Windows to download and graph the data, and then prime your logger for its next use.



Specification

Low / High Alarm Level	8°C / 25°C (Cumulative alarms available upon request)
Measurement Range	-30 to +60°C (-22 to +140°F)
Accuracy (overall error)	±0.5°C maximum (±1°F)
Battery Life	12 months (minimum)
IP Rating	IP67 (when in its plastic wallet or EL-CC-BAG)
Readings	32,600

Applications

The EL-CC-1-004 PK10 temperature data logger is suitable for monitoring ambient temperatures for pharmaceuticals. Applications include:



Section 4.

RH (Relative Humidity) Data Logger

Chilled Goods, Ambient
Pharma, Blood & Platelets





EL-CC-2-RH Pharma & Medical.



Your data, anytime, anywhere

Temperature & Relative Humidity Datalog Monitor for the Pharmaceutical & Medical Market. Single Use.

- Four loggers for monitoring Chilled Goods, Ambient Pharmaceuticals, Blood and Platelets in transportation.
- Also measures 0 to 100% Relative Humidity range.
- No set-up required. One button press-to-start logging.
- Single use with up to 12+ months battery life.
- Various export options including PDF, Microsoft Excel and JPEG.



Each of the four Cold Chain loggers comes pre-configured for use in your particular application – simply press the button to start logging. During a logging session, pressing the button will light up the status LEDs to give a quick indication as to whether the temperature has exceeded an alarm condition at any point.

Once your session has been completed, tear open the IP67-rated plastic wallet to reveal the USB connector and plug it in to your PC. Use the free EasyLog CC software for Windows to download and graph the data.

GENERAL SPECIFICATIONS

Temperature	Measurement range	-30 to +70°C (-22 to +158°F)
	Internal resolution	0.1°C (0.1°F)
	Accuracy (overall error)	±0.3°C (±0.7°F) typical (see page 2)
Relative Humidity	Measurement range	0 to 100%RH (see page 2)
	Internal resolution	0.1%RH
	Accuracy (overall error)	±2%RH typical (see page 2)
IP Rating		IP67
Battery life		12 months (minimum)
Readings		32,637 temperature/ 32,637 relative humidity

INCLUDED IN THE BOX

EL-CC-2	Data Logger with integral battery
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Pharma Cold Chain Range	Chilled Goods	Ambient Pharma	Blood	Platelets
High Alarm Level	8°C	25°C	10°C	24°C
Low Alarm Level	2°C	8°C	1°C	20°C
Logging Interval	10 minutes (220 days until full)			
Part Number	EL-CC-2-001 PK10	EL-CC-2-004 PK10	EL-CC-2-005 PK10	EL-CC-2-006 PK10

EasyLog CC Software

The simple to use software allows you to view the data graphically, in a table or export it in various formats for use in further reporting.

Once your data is in the graphing module you are able to report on time in alarm conditions as well as obtain values such as the Mean Kinetic Temperature, Minimum, Maximum and Average for both temperature and humidity.





EL-CC-2-RH Pharma & Medical.

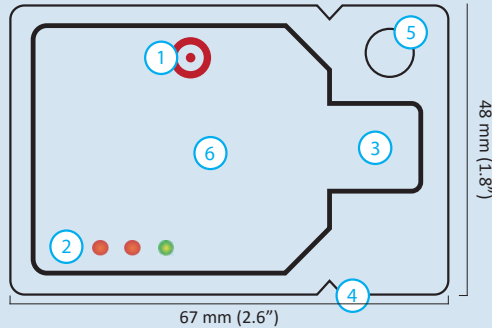


Your data, anytime, anywhere

Temperature & Relative Humidity
Datalog Monitor for the Pharmaceutical
& Medical Market. Single Use.

YOUR EL-CC-2

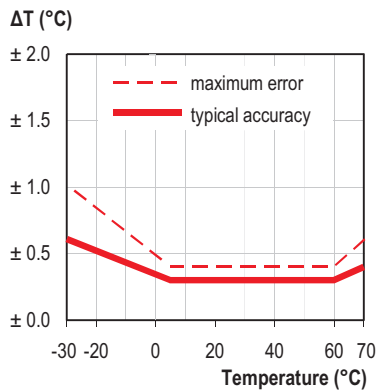
- ① Start / Status button
- ② Status LEDs
- ③ USB connector
- ④ Tear to open
- ⑤ Mounting point
- ⑥ Model type



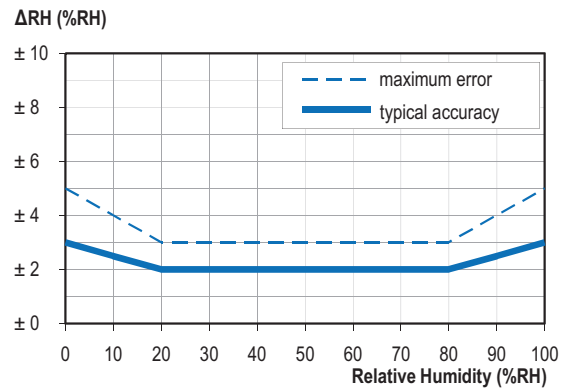
This unit can be quickly customised for use in multiple markets. If you have a specific monitoring application, call us today.

SENSOR ACCURACY & INFORMATION

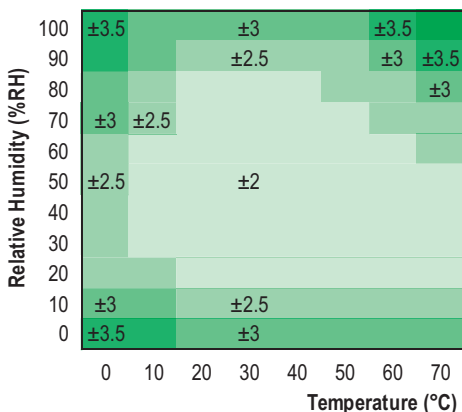
Typical and maximal tolerance for temperature sensor in °C.



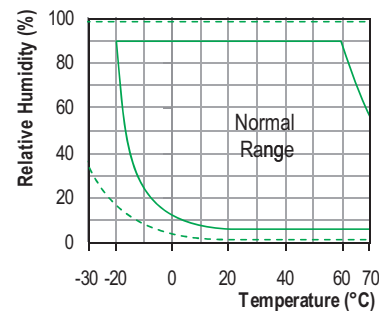
Typical and maximal tolerance at 25°C for relative humidity.



Typical accuracy of relative humidity measurements given in %RH for temperatures 0 to 80°C.



Operating conditions



Long term exposure to humidity levels outside of the 'normal' range may temporarily offset RH measurements (±3%RH after 60 hours). Once returned to less extreme conditions the device will slowly return towards calibration state.

When tracking changes in ambient conditions, the response time of the humidity sensor in your data logger is approximately 20 minutes to reach 90% of the reading. However, if you are measuring step changes in humidity it is advised that you leave the unit for up to four hours to ensure that it has enough time to settle at the new level.

It is worth remembering that the value of relative humidity is of course sensitive to temperature variation. As an example, at a relative humidity of ~90%RH at ambient temperature, a variation in temperature of 1°C will result in a change of up to -5%RH. Therefore when comparing multiple devices or calibrating them, any temperature variations must be considered.

Section 5.

Portable Data Loggers

Tagtemp & Tagtemp-USB



TagTemp-USB PORTABLE DATALOGGER

The TagTemp Line offers a way to keep track of temperature variations during storage and transportation of food, medicines and supplies that require special handling in accurately controlled environments. TagTemp has compact and highly efficient options, which are fully sealed, preventing water ingress.

TagTemp-USB logger has an internal sensor to measure the temperature of the environment where it is installed, recording these acquisitions in its electronic memory. You can access the temperature acquisitions on a computer, making it easier to visualize and analyze them in tables or graphs. The USB communication interface is made through the Novus NXperience free software.

Portable USB Temperature Data Logger TagTemp-USB

MODEL TYPE

TagTemp-USB (temperature-20 to 70 °C, 32 K, IP67)

DETAILS

- Measure Range
Temperature: -20.0 °C to 70.0 °C
- Accuracy:
±0,5°C @25°C
± 1 °C max. along the entire measured range
- Measurement Resolutions: Temperature: 0.1 °C
- Memory capacity: 32.000 (32 k) logs
- Measurement Interval:
5 seconds min
18 hours max
- Supply: 3.0 V lithium battery (CR2032), built-in
- Estimated autonomy:
More than 400 days – Sampling rate of 1 minute
More than 500 days – Sampling rate of 30 minutes
- Operating temperature: From -20 °C to 70 °C
- Case: PC-ABS
- Protection: up to IP67 degree of protection
- Dimensions: 55 x 37,5 x 15 mm
- Equipment -PC data transfer time
Proportional to the number of records. 20 seconds to 32,000 records: PC Interface: Micro-USB cable
- Menus in Portuguese, English or Spanish
Sets up, reads and displays data on the screen



TagTemp Stick PORTABLE DATALOGGER

Portable USB Temperature DataLogger TagTemp-Stick

Portable USB Temperature DataLogger

TagTemp-Stick is an electronic temperature data logger, compact and robust, that dispenses use of cables for configuration and data collecting. Plugs directly into a USB interface of a computer with Windows® to communicate with the application LogChart II, which is the configuration and data analysis software for data loggers from TagTemp series. The TagTemp-Stick has a high accuracy internal temperature sensor and is waterproof and can operate submerged up to 1m deep. It is ideal for temperature recording in the transport and storage of refrigerated and frozen products, such as vaccines, blood products and food. Its wide application includes the fields of biology, chemistry, pharmacy, logistics and industry.

MODEL TYPE

TagTemp-Stick (temperature USB logger -20 to 70 °C, 32 K)

DETAILS

- Measure range: Temperature: -20.0 °C to 70.0 °C
- Accuracy:
± 0.5 °C @ 25 °C
± 1 °C max. along the entire measured range
- Measurement resolutions: Temperature: 0.1 °C
- Memory capacity: 32.000 (32 k) logs
- Measurement interval:
5 seconds min
18 hours max
- Power Supply: 3.0 V lithium battery (CR2032), built-in, non-replaceable and non-rechargeable
- Estimated battery autonomy:
More than 400 days – Sampling rate of 1 minute
More than 500 days – Sampling rate of 30 minutes
- Operating temperature: From -20 °C to 70 °C
- Housing: Polyamide
- Protection: Up to IP67
- Dimensions: 78 x 23 x 10 mm
- Equipment -PC data transfer time:
Proportional to the number of records
20 seconds to 32.000 records
- PC Interface: Connector USB
- Menus in Portuguese, English or Spanish
Sets up, reads and displays data on the screen.



Section 6

Ultra-Low (Cryogenic) Datalog Temperature Monitors & Recorders

The **EL USB ULT-LCD** Datalog and **EL USB ULT-LCD+** (High Accuracy) Datalog measures temperatures from -100°C to $+100^{\circ}\text{C}$.

Can be used in the Cold Chain process during storage and transportation.

Applications:

- ❖ Medical, Healthcare & Scientific Equipment & Products
- ❖ Food & Fresh Produce Storage & Transportation
- ❖ Vaccines & Covid-19 Vaccines Storage & Transportation
- ❖ Pharmaceutical, Laboratory, Chemical Storage & Transportation
- ❖ Veterinary & Animal Welfare Storage & Transportation
- ❖ 21CFR Compliant Data Loggers



EL-USB-ULT-LCD for Ultra-Low Temperatures

Ultra Low Temperature Cryogenic Data Logger with LCD screen



Your data, anytime, anywhere



- Measurement range -100 to +100°C (-148 to +212°F)
- T-Type probe on 1m cable
- Stores over 32,000 readings
- High contrast LCD, with four digit temperature display function
- Logging rates between 1 second and 12 hours
- Immediate, delayed and push-to-start logging
- User-programmable alarm thresholds
- Status indication via red and green LEDs
- EasyLog software available as a free download

The EL-USB-ULT-LCD is designed to monitor vaccines in cryogenic dry ice storage.

This standalone data logger measures and stores more than 32,000 temperature readings from its high accuracy thermocouple temperature probe.

The user can easily set up the logger and view downloaded data by plugging the data logger into a PC's USB port and using the free EasyLog software. Data can then be graphed, printed and exported to other applications for detailed analysis.

The high contrast LCD can show a variety of temperature information. At the touch of a button, the user can cycle between the current, maximum and minimum stored values for temperature.

The data logger is supplied with a lithium metal battery which typically gives 2 years' logging life.

SPECIFICATIONS

ACCESSORIES

Temperature measurement range	-100 to +100°C (-148 to +212°F)
Internal resolution	0.5°C (1°F)
Accuracy (overall error)	±2.5°C (±4.5°F) typical
Logging rate	User selectable between 1 second & 12 hours
Operating temperature range	-10 to +40°C (+14 to +104°F) (data logger only)
Battery Life	2 years (at 25°C and 1 minute logging rate)
Readings	32,510
Dimensions	135 x 24 x 21mm (5.31 x 0.94 x 0.82")
Probe dimensions	300 x Φ 1.5mm, 1m cable (11.8 x Φ 0.05, 39.3" cable)

BAT 3V6 1/2AA	Replacement battery
EL-P-TC-T-ULT	Replacement T-type thermocouple probe
EL-DataPad	Handheld datalogger programmer & collector

INCLUDED IN THE BOX

BAT 3V6 1/2AA	Battery
EL-P-TC-T-ULT	Thermocouple probe
EL-LCD WALL BRACKET	Mounting Bracket



EL-USB-ULT-LCD Software

For Ultra-Low Cryogenic
Temperature Data Logger with
LCD screen



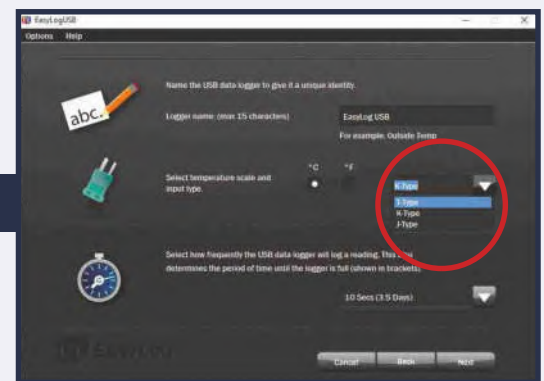
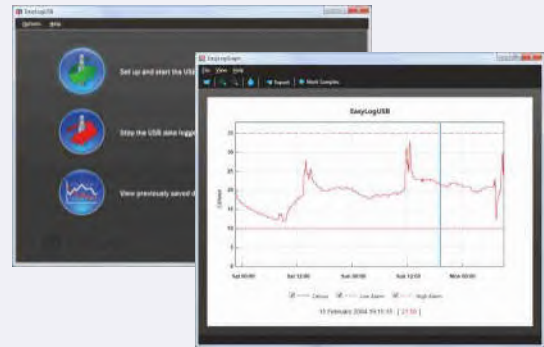
Your data, anytime, anywhere

EasyLog Software

Lascar's EasyLog control software is available as a free download from www.easylogusb.com. Easy to install and use, the control software is compatible with 32-bit and 64-bit versions of Windows 7, 8 & 10. The software is used to set up the logger, download, graph and annotate data or export in Excel, PDF and jpeg formats.

The software allows the following parameters to be configured:

- Logger name
- Measurement parameter (°C or °F)
- Logging rate (user selectable between 1 second and 12 hours)
- High and low alarms
- Immediate and delayed logging start



When setting up your logger, make sure you select the T-Type probe.

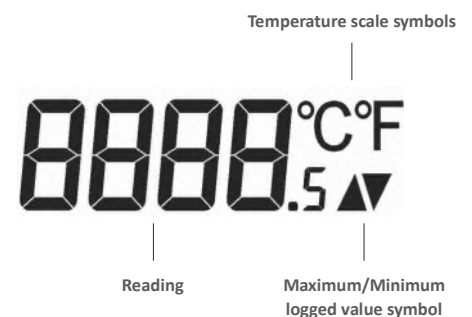
Download the latest version of the software free of charge from www.easylogusb.com

DISPLAY STATUS INDICATION

The EL-USB-ULT-LCD features a high contrast LCD which shows logged temperature values using seven segment numbers, along with annunciators. The LCD can also show information regarding the logging status.

The LCD shows three different recorded readings, which can be cycled through using the built-in push button. The most recent logged temperature, maximum logged temperature and minimum logged temperature can be displayed.

To increase battery life it is possible, via the software, to turn off the display or have it active only after pressing the button.



Display	Logger Status	Explanation
d5	Delayed Start	This is shown when the button is pressed and the logger is set to start at a specific date and time
P5	Push to Start	This will flash when the logger is setup for 'Push to Start' logging
109	Logging	This is shown when the logger is running in 'LCD off' mode, and the button is pressed. The display clears again after a short period
---	Stopped	If the logger has not been set to log and the button is pressed, three dashes are displayed for a short period

EL-USB-ULT-LCD Software

Ultra Low Temperature Cryogenic Data Logger with LCD screen



Your data, anytime, anywhere

LED STATUS INDICATION

EL-USB-ULT-LCD features two LEDs:

- The first LED flashes **red** to indicate that the EL-USB-ULT-LCD is in an alarm condition. It will flash when the logged temperature has exceeded a Low or High alarm level.
- The second LED flashes **green** to indicate that the EL-USB-ULT-LCD is not in an alarm condition.

Using the EasyLog software it is possible to set the alarm to remain active even if the reading has returned to normal, in which case the alarm LED will continue to flash red. This 'Hold' feature in the software ensures the user is notified that at some point an alarm level has been exceeded, without needing to download the data.

Using the control software it is possible to set a delayed alarm. In this mode the logger has to see multiple consecutive alarms before being activated.

Hold is enabled by default, and can be turned off via the control software. The red LED will then only flash whilst the logger is in an alarm condition. When the temperature returns to normal, the green LED will flash.

	Green single flash (every 10 seconds) The data logger is currently logging. No alarm
	Green single flash (every 20 seconds) The data logger is currently logging, however the battery is running low. No alarm
	Green single flash (every 30 seconds) The data logger is not currently logging, but is primed to start at a later date and time (delayed start)
	Green double flash (every 20 seconds) The data logger is full and has stopped logging. No alarm
	Red single flash (every 10 seconds) The data logger is currently logging. Low alarm
	Red single flash (every 20 seconds) The data logger is currently logging, however the battery is running low. Low alarm
	Red double flash (every 10 seconds) The data logger is currently logging High alarm
	Red double flash (every 20 seconds) The data logger is currently logging, however the battery is running low. High alarm
	Red & Green single flash alternately (every 20 seconds) The data logger is full and has stopped logging. High or low alarm
	No LEDs flash The data logger is stopped, the battery is empty or there is no battery

EL-USB-ULT-LCD Battery

Ultra Low Temperature Cryogenic Data Logger with LCD screen



Your data, anytime, anywhere


BATTERY INFORMATION

Replacement

We recommend that you replace the battery annually, or prior to logging critical data. Only use 3.6V ½AA lithium metal batteries. The data logger does not lose its stored readings when the battery is discharged or replaced; however, the data logging process will stop and will not resume until the battery is replaced and the logger restarted by the EasyLog software or an EL-DataPad.

Before replacing the battery, remove the data logger from the PC. Please note that leaving the data logger plugged into the USB port for extended periods will cause some of the battery capacity to be lost.

Passivation

If left unused for extended periods of time lithium metal batteries, including those used in the EasyLog range of data loggers, naturally form a non-conductive internal layer preventing them from self-discharge and effectively increasing their shelf life. When first installed in the data logger, this may cause a momentary drop in the battery voltage (the Transient Minimum Voltage) as the internal layer is broken down, resulting in the data logger rese ng. Inserting the batteries in the data logger and leaving it connected to a PC for about 30 seconds will remove this layer. After this, remove and re-install the batteries to reset the data logger. Overall battery life will not be affected.

WARNING

Handle lithium metal batteries carefully, observe warnings on battery casing. Dispose of in accordance with local regulations.



EL-USB-ULT-LCD+

High Accuracy, Ultra Low Temperature Cryogenic Data Logger with LCD Screen



Your data, anytime, anywhere

- Measurement range -100 to +100°C (-148 to +212°F)
- High accuracy T-Type probe on 2m cable
- Stores over 32,000 readings
- High contrast LCD, with four digit temperature display function
- Logging rates between 1 second and 12 hours
- Immediate, delayed and push-to-start logging
- User-programmable alarm thresholds
- Status indication via red and green LEDs
- EasyLog software available as a free download



The EL-USB-ULT-LCD+ is designed to monitor vaccines in cryogenic dry ice storage.

This standalone data logger measures and stores more than 32,000 temperature readings from its high accuracy thermocouple temperature probe.

The user can easily set up the logger and view downloaded data by plugging the data logger into a PC's USB port and using the free EasyLog software. Data can then be graphed, printed and exported to other applications for detailed analysis.

The high contrast LCD can show a variety of temperature information. At the touch of a button, the user can cycle between the current, maximum and minimum stored values for temperature.

The data logger is supplied with a lithium metal battery which typically gives 2 years' logging life.

SPECIFICATIONS

Temperature measurement range	-100 to +100°C (-148 to +212°F)
Internal resolution	0.5°C (1°F)
Accuracy (overall error)	±1.8°C (±3.2°F) typical
Logging rate	User selectable between 1 second & 12 hours
Operating temperature range	-10 to +40°C (+14 to +104°F) (data logger only)
Battery Life	2 years (at 25°C and 1 minute logging rate)
Readings	32,510
Dimensions	135 x 24 x 21mm (5.31 x 0.94 x 0.82")
Probe dimensions	300 x Ø 1.5mm, 2m cable (11.8 x Ø 0.05, 39.3" cable)

ACCESSORIES

BAT 3V6 1/2AA	Replacement battery
EL-P-TC-T-ULT+	Replacement T-type thermocouple probe
EL-DataPad	Handheld datalogger programmer & collector

INCLUDED IN THE BOX

BAT 3V6 1/2AA	Battery
EL-P-TC-T-ULT+	Thermocouple probe
EL-LCD WALL BRACKET	Mounting Bracket



EL-USB-ULT-LCD+ Battery

High Accuracy, Ultra Low Temperature Cryogenic Data Logger with LCD screen



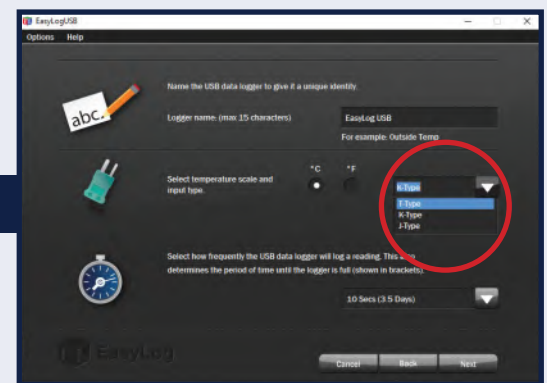
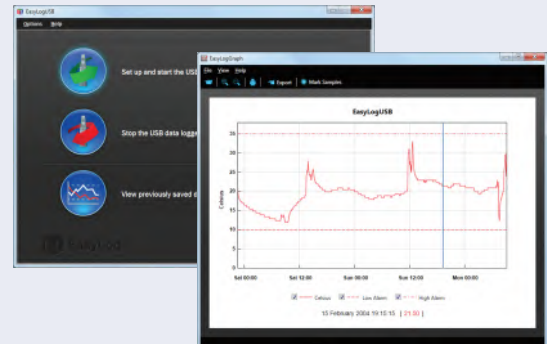
Your data, anytime, anywhere

EasyLog Software

Lascar's EasyLog control software is available as a free download from www.easylogusb.com. Easy to install and use, the control software is compatible with 32-bit and 64-bit versions of Windows 7, 8 & 10. The software is used to set up the logger, download, graph and annotate data or export in Excel, PDF and jpeg formats.

The software allows the following parameters to be configured:

- Logger name
- Measurement parameter (°C or °F)
- Logging rate (user selectable between 1 second and 12 hours)
- High and low alarms
- Immediate and delayed logging start



When setting up your logger, make sure you select the T-Type probe.

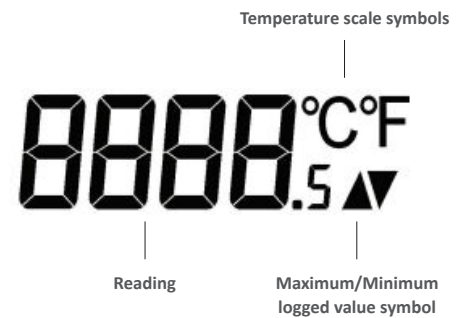
Download the latest version of the software free of charge from www.easylogusb.com

DISPLAY STATUS INDICATION

The EL-USB-ULT-LCD+ features a high contrast LCD which shows logged temperature values using seven segment numbers, along with annunciators. The LCD can also show information regarding the logging status.

The LCD shows three different recorded readings, which can be cycled through using the built-in push button. The most recent logged temperature, maximum logged temperature and minimum logged temperature can be displayed.

To increase battery life it is possible, via the software, to turn off the display or have it active only after pressing the button.



Display	Logger Status	Explanation
	Delayed Start	This is shown when the button is pressed and the logger is set to start at a specific date and time
	Push to Start	This will flash when the logger is setup for 'Push to Start' logging
	Logging	This is shown when the logger is running in 'LCD off' mode, and the button is pressed. The display clears again after a short period
	Stopped	If the logger has not been set to log and the button is pressed, three dashes are displayed for a short period

EL-USB-ULT-LCD+

High Accuracy, Ultra Low Temperature Cryogenic Data Logger with LCD Screen



Your data, anytime, anywhere

LED STATUS INDICATION

EL-USB-ULT-LCD+ features two LEDs:

- The first LED flashes **red** to indicate that the EL-USB-ULT-LCD+ is in an alarm condition. It will flash when the logged temperature has exceeded a Low or High alarm level.
- The second LED flashes **green** to indicate that the EL-USB-ULT-LCD+ is not in an alarm condition.

Using the EasyLog software it is possible to set the alarm to remain active even if the reading has returned to normal, in which case the alarm LED will continue to flash red. This 'Hold' feature in the software ensures the user is notified that at some point an alarm level has been exceeded, without needing to download the data.

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	Red double flash (every 10 seconds) The data logger is currently logging High alarm
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EL-USB-ULT-LCD+ Battery

High Accuracy, Ultra Low Temperature Cryogenic Data Logger with LCD screen



Your data, anytime, anywhere

BATTERY INFORMATION

Replacement

We recommend that you replace the battery annually, or prior to logging critical data. Only use 3.6V ½AA lithium metal batteries. The data logger does not lose its stored readings when the battery is discharged or replaced; however, the data logging process will stop and will not resume until the battery is replaced and the logger restarted by the EasyLog software or an EL-DataPad.

Before replacing the battery, remove the data logger from the PC. Please note that leaving the data logger plugged into the USB port for extended periods will cause some of the battery capacity to be lost.

Passivation

If left unused for extended periods of time lithium metal batteries, including those used in the EasyLog range of data loggers, naturally form a non-conductive internal layer preventing them from self-discharge and effectively increasing their shelf life. When first installed in the data logger, this may cause a momentary drop in the battery voltage (the Transient Minimum Voltage) as the internal layer is broken down, resulting in the data logger resetting. Inserting the batteries in the data logger and leaving it connected to a PC for about 30 seconds will remove this layer. After this, remove and re-install the batteries to reset the data logger. Overall battery life will not be affected.

WARNING

Handle lithium metal batteries carefully, observe warnings on battery casing. Dispose of in accordance with local regulations.



Vaccination Monitoring Solutions



The Lascar EasyLog family of vaccination data loggers is an inexpensive series of **standalone USB and WiFi-enabled sensors** allowing discrete and continuous temperature monitoring of vaccines. In line with the Center for Disease Control guidelines on data loggers used in **vaccination storage**, these sensors are available with **high accuracy glycol bottle probes and calibration certificates**.



www.mimic.co.za

- High/low alarms to alert out of range temperatures
- Display of current, min and max temperature readings
- Reset button for min and max readings
- Low battery indicator
- Accuracy $\pm 0.1^{\circ}\text{C}$ / $\pm 0.2^{\circ}\text{F}$
- At least 250,000 readings stored
- Data loops when memory is full
- Detachable temperature buffered probe
- User programmable logging rates
- Integral magnet to affix logger to outside of storage unit

WiFi Remote Monitoring

The EL-WiFi-VAC and EL-WiFi-VAC2 (dual channel) vaccine monitoring kits allow remote temperature data collection over WiFi. Using EasyLog Cloud, you can remotely view multiple EL-WiFi data loggers at any of your locations from any internet-enabled device, or use the EasyLog Cloud App for Apple and Android.

Set up is simple. Connect the sensor to your WiFi network using the free configuration software, place the glycol bottle into the area of vaccine storage and secure the logger on the outside of the fridge or freezer. Data can be viewed remotely on the EasyLog Cloud or via a single, host PC.



Store your data logging records securely on the Cloud



Remotely manage all of your data logging devices



Connect multiple users with variable account privileges



Never miss a critical event with flexible, advanced notification settings



Connect data loggers from multiple sites in a single account



Review and analyse your data with powerful graphing functionality



Easily access your most important data, anywhere



Keep track of data events and system activity with a detailed event log



USB Stand Alone Monitoring

EL-USB-VAC

The EL-USB-VAC is a handheld, battery powered data logger that measures and stores temperature readings on-board until data is downloaded from it via USB. Simple to set-up, just plug this device into your computer's USB port and, using Lascar's FREE configuration software, name the device, choose a sampling rate, select high and low alarms and a logging start time. Place the glycol bottle into the area of vaccine storage and secure the logger on the outside of the fridge or freezer using the magnet included in the pack.

An alarm breach is indicated by a flashing Red LED. In the event of a breach, plug the unit into the computer's USB port and download data in txt. format using Lascar's free software. Data can be viewed in graphical or tabular form.



EL-GFX-VAC2






The EL-GFX-VAC2 is programmed using the same simple configuration software as the USB logger. The dual channel logger, that stores over 250,000 readings, has an on-screen display showing max, min and last log as well as an on-board graph of the data collected. Buttons allow you to start, stop and restart the logger in the field and alarm breaches can be registered with both LED and audible alarms. The logger can be battery powered or used with a USB wall adapter. Two channels allows measurement of two areas of a refrigerator or a refrigerator and freezer at the same time.



EL-SMS-2G-VAC

The EL-SMS-2G-VAC is perfect for applications where instant notifications of alarm breaches are vital. High and low level alarms are set using the free Android or Apple App, sending text messages to pre-selected phones when an alarm is triggered.

EL-Vaccination range

 <p>EL-WiFi-VAC Kit combining a WiFi data logger with glycol thermistor probe -40 to +60°C (-40 to +140°F) range</p>	 <p>EL-WiFi-VAC2 Kit combining a WiFi dual channel data logger & two glycol thermistor probes -40 to +60°C (-40 to +140°F) range</p>	 <p>EL-SMS-2G-VAC SMS Temperature alert device for vaccine monitoring, with App and glycol thermistor probe -40 to +60°C (-40 to +140°F)</p>
 <p>EL-USB-VAC Kit combining a USB data logger with a glycol thermistor probe -40 to +60°C (-40 to +140°F) range</p>	 <p>EL-GFX-VAC2 Kit combining a USB dual channel data logger & two glycol probes -40 to +60°C (-40 to +140°F) range</p>	<p>The device uses a 2G network and therefore is not available in the US, Canada and South America. Sim card not included</p>

21CFR Compliant range

Store data from both USB and WiFi data loggers in compliance with the regulations of 21CFR Part 11. Readings are encrypted and cannot be edited; software provides a full audit trail with user comments, authorised approval and electronic signatures showing who has started, stopped and approved the session data.

 <p>EL-USB-21-VAC Kit combining a USB data logger and glycol thermistor probe -40 to +60°C (-40 to +140°F)</p>	 <p>EL-WiFi-21CFR-VAC Kit combining a WiFi data logger and glycol thermistor probe -40 to +60°C (-40 to +140°F) range</p>	 <p>EL-WiFi-21CFR-VAC2 Kit combining a WiFi dual channel data logger and two glycol thermistor probes -40 to +60°C (-40 to +140°F) range</p>
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Section 7.

Accessories

Waterproof Bags

Description

Item: A wallet sized, re-sealable, transparent plastic, waterproof bag to house the Cold Chain Datalog. Used when monitoring frozen or other cold-ice packed goods during transportation.

The data logger is protected against moisture when housed in an EL-CC-BAG or its equivalent.

Product Part Number:

EL-CC-BAG

Product Description

Supplied individually or in Packs of 5.

Waterproof Bags for Data Logger Re-Use of all EL-CC-1 and EL-PDF-1 data loggers.

Protection Rating: IP 67

Size: Wallet Sized Waterproof Plastic Bag.

Integral Batteries:

Each Cold Chain Data Logger comes with an integral Lithium Battery.



Section 7.

Accessories/continued

Temperature Probe Toolkit for Fridges & Freezers

A Fridge / Freezer Temperature Probe Installation Kit designed to maximise efficiency by reducing heat transfer between the rubber door seals.

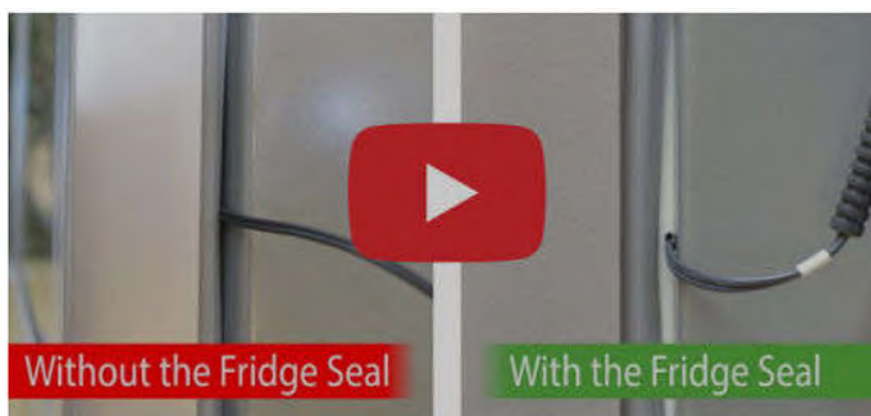
The Probe Toolkit is the perfect accessory for refrigerated temperature monitoring products, requiring a consistent temperature. This includes the monitoring of stored Vaccine products as well as ultra-low (Cryogenic) temperature stored products like certain types of Covid Vaccines and Pharmaceutical, laboratory, Medical and Chemical products.

Discreetly fitted, the seal eliminates any damage to the probe and to the fridge / freezer door itself. Clips and ties are also included in the kit, keeping cables tidy whilst ensuring that your temperature probe remains in the correct position within the fridge / freezer.

The new Probe Toolkit is compatible with any of EASYLOG's *temperature probe products* making user installation into fridges and freezers much easier where port holes are not included.

(Disposable Cold Chain Data Loggers are excluded as they do not come with temperature probes).

The kit includes a self-adhesive seal, designed to cushion a fridge / freezer door gasket around a temperature probe.



The Cold Chain Range of Disposable Dataloggers are ideal for either short or long-distance transportation.

Once activated and left on continuously, the Datalog records and logs temperatures at set regular intervals. The Lithium Battery supplied lasts for approximately one year or up to 32,600 readings, whichever comes first. The logger can also be used multiple times for short trips, recording and logging up to 32,600 readings overall.

The low-cost factor is an attractive option as a back-up or secondary temperature monitor (with a no software required optional simple down-loadable PDF report). One-way exporters typically pack the Cold Chain Disposable Datalogger amongst the goods. The recipient retrieves the datalogger and obtains a temperature report by inserting it directly into a USB port to download it.

Transportation includes shipping, rail, road, and air (international air compliance certifications are available on request).

The dataloggers can also be used in cargo holdings, warehousing and storage facilities including retail shelving of fresh and perishable goods.

The word 'Goods' typically refers to fresh produce and other products that are temperature sensitive, including Medical and Chemical goods.



JHB Branch

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