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INSTALLATION AND OPERATION GUIDE

GUIDE D'OPERATION
GUÍA DE OPERACIÓN
GUIDA DI FUNZIONAMENTO
BEDIENUNGSANLEITUNG



LASCAR'S DATA LOGGER RANGE

Lascar Model	Description	Range
EL-USB-1	Temperature	-35 to +80 °C (-31 to +176 °F)
EL-USB-2	Temperature & RH	-35 to +80 °C (-31 to +176 °F) & 0 to 100% RH
EL-USB-3	Voltage	0 to 30VDC
EL-USB-4	4-20mA	4 to 20mA
EL-USB-TC	Thermocouple Temperature	-200 to +1300 °C (-328 to +2372 °F)
EL-USB-RT	Real-time Temperature & RH	-20 to +70 °C (-4 to +158 °F) & 0 to 100% RH
EL-USB-CO	Carbon Monoxide	0 to 1000ppm
EL-USB-LITE	Low Cost Temperature	-10 to +50 °C (+14 to +122 °F)
EL-USB-2-LCD	Temperature & RH with LCD	-35 to +80 °C (-31 to +176 °F) & 0 to 100% RH

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ENVIRONMENTAL DISPOSAL/WARNINGS

WEEE



This product may contain substances that can be hazardous to the environment if not disposed of properly. Electrical and electronic equipment should never be disposed of with general household waste but must be separately collected for their proper treatment and recovery. The crossed-out bin symbol, placed on the product, reminds you of the need to dispose of the product correctly at the end of its life. In this way you will assist in the recovery, recycling and re-use of many of the materials used in this product. At the end of the life of your product please contact your distributor for information on collection arrangements.

Battery disposal



Most batteries end up in landfill where their hazardous material can leach into the soil and cause harm. It is much more environmentally friendly to recycle batteries in a safe, correct manner. Follow applicable country, state, and local regulations for disposal/recycling of the 1/2AA battery supplied with your data logger.

RoHS



The Restriction of Hazardous Substances (RoHS) Directive 2002/95/EC of the European Parliament stipulates that certain hazardous substances must not be present above defined levels in products. This data logging product is manufactured to be RoHS compliant.

For further information visit: www.lascarelectronics.com/main/environmental-data-logging.php

BATTERY INSTALLATION

Battery Installation

Before using the data logger you will need to insert the 3.6V 1/2AA battery provided, following the instructions below.

Replacement batteries available from www.lascarelectronics.com, PN: BAT 3V6 1/2AA.

Installation de la batterie

Avant d'utiliser l'enregistreur de données, vous devez suivre les instructions ci-dessous pour installer la batterie 1/2AA de 3,6 V.

Vous pouvez vous procurer des batteries de rechange auprès de www.lascarelectronics.com, N° de réf. : BAT 3V6 1/2AA.

Cómo colocar la batería

Antes de utilizar el registrador de datos, necesitará colocar la batería 1/2AA de 3,6V suministrada, siguiendo estas instrucciones.

Pueden adquirirse baterías de repuesto en www.lascarelectronics.com, Pieza número: BAT 3V6 1/2AA.

Installazione della batteria

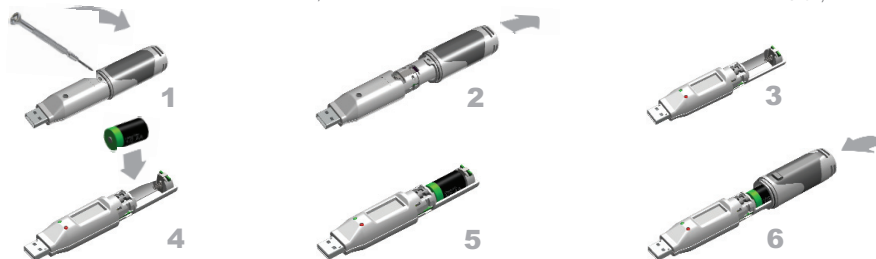
Prima di utilizzare il data logger, inserire la batteria 1/2 AA da 3,6 V fornita in dotazione seguendo le istruzioni.

Le batterie di ricambio sono disponibili sul sito web www.lascarelectronics.com, N. art.: BAT 3 V6 1/2 AA.

Einsetzen der Batterie

Vor der Benutzung des datenloggers muss eine 1/2 AA da 3,6V Batterie entsprechend der untenstehenden anweisungen eingesetzt werden.

Ersatzbatterien können über www.lascarelectronics.com bezogen werden; PN: BAT 3V6 1/2AA.



IMPORTANT NOTES BEFORE INSTALLING EL-WIN-USB SOFTWARE

Please read these notes carefully before proceeding with installation.

The screen shots on the 'START HERE' page are taken from Windows™ Vista. If you are installing using Windows™ XP or 2000 the screens may look slightly different; however, the content will be the same.

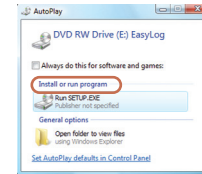
To install the software and USB driver you must have administrative privileges on the host computer. Contact your IT department if you need further information.

After completing the software installation you must install the driver to use your EL-USB data logger. **It is important that the CD is left in the drive during this final stage of installation.** Please refer to the relevant section for the Windows platform you are using.

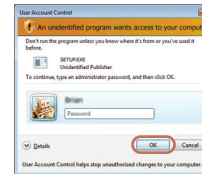
This logger is not designed to be permanently connected to a USB port.

START HERE Windows™ 2000/XP/VISTA(32-bit)

Important: Leave the CD in the drive while installing your drivers



1. Insert the EL-WIN-USB Configuration Software CD into the CD drive of your computer. If the CD does not automatically load, navigate to the CD and double click "Setup"



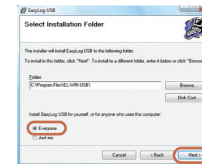
2. Installing software requires administrative privileges. Accept the "User Account Control" request, enter password if necessary



3. Click "Next"



4. Read the "IMPORTANT NOTICE", select "I Agree" and "Next"

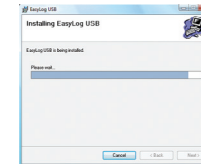


5. Select "Everyone", click "Next"

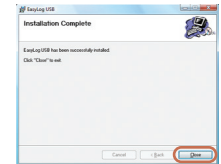


6. Click "Next" to start the Installation.

NOTE - A progress bar will be displayed until the installation is complete



7. EasyLog USB is being installed



8. Click "Close". An icon will now be placed on your desktop

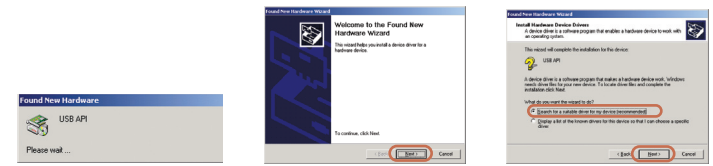


You have installed the EL-WIN-USB Configuration Software successfully. You now have to install the USB hardware driver. Please refer to the relevant section depending on the Windows platform you are using

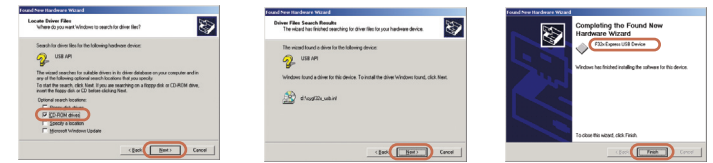
WINDOWS™ 2000

USB Driver Installation

Important: Leave the CD in the drive while installing your drivers



1. Insert the USB data logger into a USB port on the computer. The following screens should automatically appear. Windows™2000 refers to the data logger as **"USB API"** until the end of this installation
2. Click **"Next"**
3. Select **"Search for a suitable driver for my device (recommended)"** then click **"Next"**

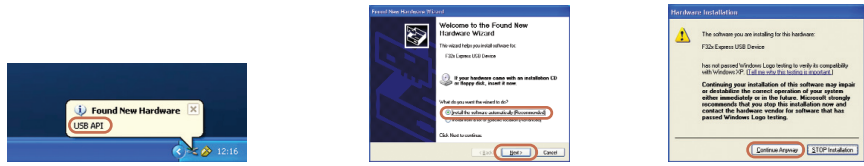


4. Select **"CD-ROM drivers"** only, then click **"Next"**
5. Click **"Next"**
6. Windows™2000 now refers to the data logger as the **"F32x Express USB Device"** then click **"Finish"**

WINDOWS™ XP

USB Driver Installation

Important: Leave the CD in the drive while installing your drivers



1. Insert the USB data logger into a USB port on the computer. The following screens should automatically appear. Windows™XP refers to the data logger as **"USB API"** and **"F32x Express USB Device"** throughout this installation
2. Ensure the CD is in the CD drive. Select **"Install the software automatically (Recommended)"** then click **"Next"**

NOTE - A screen appears, showing files being copied to your computer

3. When this window appears, click **"Continue Anyway"**
- NOTE** - This is a feature of Windows™XP. Selecting "Continue Anyway" will not cause any adverse changes/effects on your computer



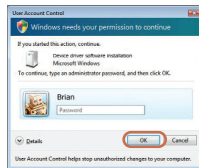
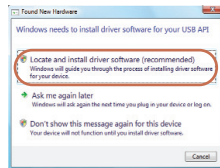
4. Installation is now complete, click **"Finish"**
5. The Window will close and you will see the following message

You have successfully installed the necessary software and driver for your EL-USB data logger. Please refer to page 8 within this manual for a guide on how to use the data logger

WINDOWS™ VISTA(32-bit)

USB Driver Installation

Important: Leave the CD in the drive while installing your drivers

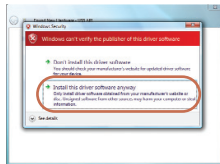


1. Insert the USB data logger into a USB port on the computer. The following screens should automatically appear

2. Select **"Locate and install driver software (recommended)"** then click **"Next"**

3. Installing the driver requires administrative privileges. Accept the **"User Account Control"** request, enter password if necessary

4. The following screen should automatically appear



You have successfully installed the necessary software and driver for your EL-USB data logger. Please refer to page 8 within this manual for a guide on how to use the data logger

5. The above window will appear after a few seconds. Click **"Next"**

6. When this window appears, click **"Install this driver software anyway"**
NOTE - This is a feature of Windows™ Vista. Selecting **"Install this software anyway"** will not cause any adverse changes/effects on your computer

7. Installation is now complete, Click **"Finish"**

NOTE

At various times Vista may ask security questions; allow access when prompted

USING YOUR DATA LOGGER (QUICK START)

The EL-USB data logger you have purchased is a stand-alone device. All communication with the data logger is via a USB port of a PC which has Lascar's configuration software and driver installed. To begin take the following steps:

1. Ensure the battery is correctly installed
2. Insert the data logger into an available USB port on your PC
3. Double click on the EasyLog USB icon on your Windows™ desktop



This will load the configuration software. Here you can setup the data logger for a new log, stop and download a data logger that has been recording, view previously saved data in graph format, and check the current status of the attached data logger (including the serial number). Follow screen instructions or consult the help file for further information on running the software.

When setup is complete the data logger should be removed from the USB port to begin recording. If you would like advice on how best to use the data logger for a particular application please contact your nearest Lascar representative.

EL-USB-2-LCD STATUS INDICATION

EN

LED Indicators



Green LED/Red



Green triple flash

Logger full, no alarm on the channel



Red triple flash

Logger full, alarm on the channel



Green double flash

Delayed start



Green single flash

Logging, no alarm



Red single flash

Logging, low alarm on the channel



Red double flash

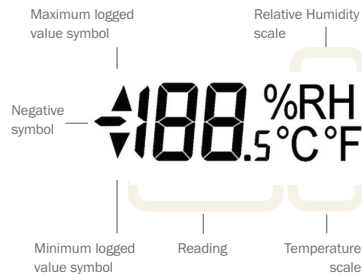
Logging, high alarm on the channel



No LEDs flash

Logger stopped or battery empty

LCD Indicators



The EL-USB-2-LCD features a high contrast LCD and two bi-colour LEDs. The LCD shows the latest logged reading, maximum, minimum and supplementary details on the logger status (see table opposite).

Display	Logger status	Explanation
d5	Delayed Start	This is shown when the logger is set to start at a specific date and time *
P5	Push to Start	This is shown 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 three seconds
---	Stopped	If the logger has not been set to log and the button is pressed, three dashes are displayed for three seconds

*If the logger is set to 'LCD off' or 'LCD on for 30 seconds' mode, then this will only be shown after the button is pressed. Otherwise the display will remain blank.

EL-USB-2-LCD BUTTON OPERATION



The button performs 2 functions:

- To start the logger when in 'push to start' mode
- To enable the display and cycle through the available display modes (see table below)



LCD Mode	LCD behaviour on button press
LCD always on	Each button press changes the LCD, as per the diagram
LCD on for 30 seconds	The first press enables the LCD and displays the last logged temperature. Each subsequent press changes the LCD, as per the diagram. If the button is not pressed for 30 seconds, the LCD disables and the logger returns to the beginning of the display cycle
LCD off	'Log' is displayed, to show that the logger is working. No data is displayed in this mode

EL-USB-2-LCD

INDICATION D'ÉTAT



Indicateurs LCD



Verte/Diode Rouge



Triple clignotement vert
Enregistreur plein, pas d'alarme sur la voie



Triple clignotement rouge
Enregistreur plein, alarme sur la voie



Double clignotement vert
Retard au démarrage



Simple clignotement vert
Enregistrement en cours, pas d'alarme



Simple clignotement rouge
Enregistrement en cours, basse alarme sur la voie

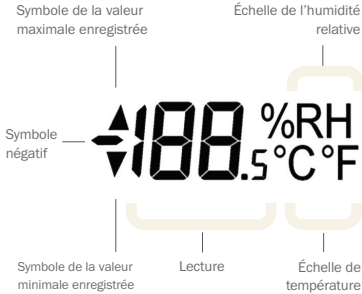


Double clignotement rouge
Enregistrement en cours, haute alarme sur la voie



Pas de clignotement
Enregistreur arrêté ou batterie déchargée

Indicateurs LCD



Le EL-USB-2-LCD est doté d'un LCD à fort contraste et de deux voyants DEL bicolores. Le LCD affiche la dernière lecture enregistrée, le maximum, le minimum et des détails supplémentaires sur l'état de l'enregistreur (voir tableau ci-contre).

Affichage	État de l'enregistreur	Explication
d5	Démarrage retardé	Ceci est indiqué quand l'enregistreur de données est réglé pour démarrer à une date et une heure spécifiques*
P5	Appuyer pour démarrer	Ceci est indiqué quand l'enregistreur de données est réglé sur 'Appuyer pour démarrer' l'enregistrement
109	Enregistrement	Ceci est indiqué quand l'enregistreur de données fonctionne en mode 'LCD désactivé' et que le bouton est enfoncé. L'écran s'efface de nouveau après trois secondes
---	Arrêté	Si l'enregistreur de données n'est pas réglé pour enregistrer et que le bouton est enfoncé, trois tirets s'affichent pendant trois secondes

*Si l'enregistreur de données est réglé sur le mode 'LCD désactivé' ou 'LCD activé pendant 30 secondes', ce message ne s'affiche qu'après la pression sur le bouton. L'écran reste vide autrement.

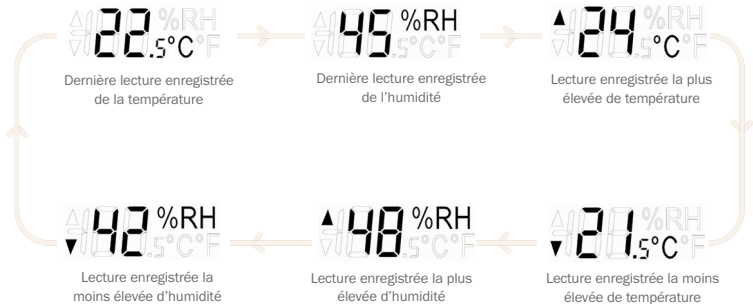
EL-USB-2-LCD

FONCTIONNEMENT DU BOUTON



Le bouton remplit 2 fonctions

- Démarrer l'enregistreur lorsqu'il est en mode 'Appuyer pour démarrer'
- Activer l'écran et le cycle par les modes d'affichage disponibles (voir ci-dessous)



Mode LCD	Comportement du LCD à la pression du bouton
LCD toujours activé	Chaque pression sur le bouton modifie le LCD, selon le schéma
LCD activé pendant 30 secondes	La première pression active le LCD et affiche la dernière température enregistrée. Chaque pression qui suit modifie le LCD, selon le schéma. Si le bouton n'est pas enfoncé pendant 30 secondes, le LCD se désactive et l'enregistreur retourne au début du cycle d'affichage
LCD désactivé	Le 'journal' s'affiche pour indiquer que l'enregistreur fonctionne. Aucune donnée n'est affichée dans ce mode

EL-USB-2-LCD

INDICACIÓN DE ESTADO

ES

Indicadores de la pantalla LCD

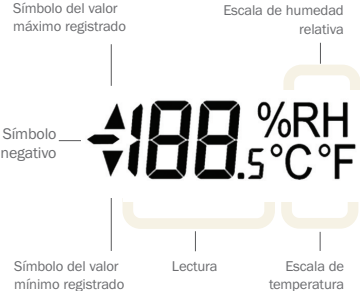


Verde/LED Rojo



- Parpadeo verde triple**
Registrador lleno, sin alarma en el canal
- Parpadeo rojo triple**
Registrador lleno, alarma en el canal
- Parpadeo verde doble**
Inicio demorado
- Parpadeo verde simple**
Registrando, no alarma
- Parpadeo rojo simple**
Registrando, alarma baja en el canal
- Parpadeo rojo double**
Registrando, alarma alta en el canal
- Ningún LED parpadeando**
Registrador parado batería vacía

Indicadores de la pantalla LCD



El EL-USB-2-LCD tiene una pantalla LCD de elevado contraste y dos LED bicolores. La pantalla LCD muestra la última lectura registrada, la máxima, la mínima y mensajes sobre el estado del registrador (ver la tabla siguiente).

Pantalla	Estado del registrador	Explicación
d5	Inicio retardado	Estas letras aparecen cuando el registrador de datos está configurado para iniciarse en una fecha y a una hora determinadas*
P5	Pulsar para iniciar	Estas letras aparecen cuando el registrador de datos está configurado para empezar a registrar cuando se pulse el botón
109	Registrando	Estas letras aparecen cuando el registrador de datos funciona en modo "LCD apagada" y se aprieta el botón. La pantalla se vuelve a quedar en blanco al cabo de tres segundos
---	Detenido	Si el registrador de datos no se ha configurado para registrar y se aprieta el botón, aparecen tres guiones durante tres segundos

*Si el registrador de datos está configurado en los modos "LCD apagada" o "LCD encendida durante 30 segundos", estas letras sólo aparecerán tras pulsar el botón. De lo contrario, la pantalla estará en blanco.

EL-USB-2-LCD

FUNCIONAMIENTO DEL BOTÓN



El botón tiene dos funciones

- Iniciar el registrador cuando está en modo "pulsar para iniciar"
- Activar la pantalla y recorrer los distintos modos de pantalla (ver a continuación)



Modo de la LCD	Comportamiento de la LCD al pulsar el botón
LCD siempre encendida	Cada vez que se pulsa el botón la pantalla LCD cambia, como se indica en el diagrama
LCD encendida durante 30 segundos	Al pulsar el botón por primera vez la pantalla LCD se activa y muestra la última temperatura registrada. Cada vez que se vuelve a pulsar el botón la pantalla LCD cambia, como se indica en el diagrama. Si el botón no se pulsa durante 30 segundos, la pantalla LCD se desactiva y el registrador vuelve al principio del ciclo de la pantalla
LCD apagada	Aparece el mensaje "Log", que indica que el registrador está en funcionamiento. En este modo no aparecen datos en la pantalla

EL-USB-2-LCD

INDICAZIONE DI STATO

IT

Indicatori LCD



Verde/LED Rosso



Lampeggio verde triplo

Logger pieno, nessun allarme sul canale



Lampeggio rosso triplo

Logger pieno, allarme sul canale



Lampeggio verde doppio

Avvio ritardato



Lampeggio verde singolo

Registrazione in corso, nessun allarme



Lampeggio rosso singolo

Registrazione in corso, allarme limite min sul canale



Lampeggio rosso doppio

Registrazione in corso, allarme limite max sul canale



Nessun LED lampeggiante

Logger arrestato o batteria scarica

Indicatori LCD

Simbolo valore massimo registrato

Scala umidità relativa

Simbolo negativo

100.5 °C °F

Simbolo valore minimo registrato

Lettura

Scala temperatura

L'EL-USB-2-LCD è dotato di un LCD ad elevato contrasto e di due LED a due colori. L'LCD visualizza la lettura registrata più recentemente, i valori massimo e minimo e i dettagli supplementari relativi allo stato del logger (vedere la tabella a fianco).

Schermo

Stato logger

Spiegazione

d5

Avvio ritardato

Viene visualizzato quando il data logger è impostato per l'avvio ad una data/ora specifica*

P5

Avvio tramite pressione del pulsante

Viene visualizzato quando il data logger è impostato per l'avvio della registrazione tramite pressione del pulsante

109

Registrazione

Viene visualizzato quando il data logger è attivo in modalità LCD disattivo e viene premuto il pulsante. Lo schermo si azzerà nuovamente dopo tre secondi

Arrestato

Se il data logger non è stato impostato per la registrazione e viene premuto il pulsante, vengono visualizzate tre linee per tre secondi

*Se il data logger è impostato sulla modalità LCD disattivo o LCD attivo per 30 secondi, questo messaggio viene visualizzato solo dopo la pressione del pulsante. In caso contrario, non verrà visualizzato nulla.



Il pulsante consente di eseguire 2 funzioni

- Avviare il logger in modalità di avvio tramite pressione del pulsante
- Abilitare la visualizzazione e scorrere le modalità di visualizzazione disponibili (vedere di seguito)



Modalità LCD	Comportamento LCD alla pressione del pulsante
LCD sempre attivo	Pressione del pulsante modifica l'LCD, come riportato nel diagramma
LCD attivo per 30 secondi	La prima pressione abilita l'LCD e visualizza l'ultima temperatura registrata. Ciascuna pressione successiva modifica l'LCD, come riportato nel diagramma. Se il pulsante non viene premuto per 30 secondi, l'LCD viene disabilitato e il logger ritorna all'inizio del ciclo di visualizzazione
LCD disattivo	Viene attivata la modalità "Registrazione" a indicare che il logger è in funzione. In questa modalità, non vengono visualizzati dati

EL-USB-2-LCD STATUSANZEIGE



LCD-Anzeige



Grüne LED/Rote



Leuchtet dreimal grün auf
Logger voll, kein alarm am kanal



Leuchtet dreimal rot auf
Logger voll, alarm am kanal



Leuchtet zweimal grün auf
Verzögerter start



Leuchtet einmal grün auf
Aufzeichnung, kein alarm



Leuchtet zweimal rot auf
Aufzeichnung, alarm wegen überschreitung am kanal

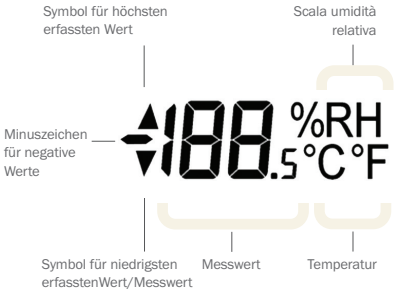


Leuchtet einmal rot auf
Aufzeichnung, alarm wegen unterschreitung am kanal



Kein Aufleuchten der LEDs
Logger gestoppt oder batterie leer

LCD-Anzeige



Das EL-USB-2-LCD verfügt über ein kontrastreiches Display sowie zwei zweifarbige LEDs. Im Display werden die letzte gespeicherte Messung, Höchstwerte, Tiefstwerte sowie zusätzliche Daten zum Loggerstatus angezeigt (siehe Tabelle auf der gegenüberliegenden Seite).

Display	Gerätestatus	Beschreibung
d5	Delayed Start (Verzögerter Start)	Wird angezeigt, wenn das Datenerfassungsgerät zu einen bestimmten Termin gestartet werden soll*
P5	Push to Start (Zum Starten drücken)	Wird angezeigt, wenn das Datenerfassungsgerät durch Knopfdruck gestartet werden muss
109	Logging (Speichervorgang)	Wird angezeigt, wenn der Knopf gedrückt wird und das Datenerfassungsgerät mit a ausgeschaltetem Display arbeitet. Das Display schaltet sich nach drei Sekunden wieder aus
---	Stopped (Angehalten)	Wenn der Knopf gedrückt wird und keine Messung geplant ist, werden drei Sekunden lang drei Balken angezeigt

*Wenn für das Datenerfassungsgerät der Modus „LCD off“ (LCD aus) oder „LCD on for 30 seconds“ (LCD 30 Sekunden lang an) eingestellt ist, wird der Status erst nach dem Drücken des Knopfes angezeigt. Ansonsten bleibt das Display aus.

EL-USB-2-LCD

STEUERUNG PER KNOPF



Über den Knopf können zwei Vorgänge gesteuert werden

- Starten der Protokollierung, wenn für das Gerät der Modus "Push to Start" (Zum Starten drücken) eingestellt wurde
- Einschalten des Displays und Anzeigen der verschiedenen Modi (siehe unten)



Display-Modus

Verhalten des Displays bei Knopfdruck

LCD always on (LCD ist immer eingeschaltet)

Die Anzeige wechselt bei Knopfdruck (siehe Diagramm)

LCD on for 30 seconds (LCD 30 Sekunden lang an)

Durch einmaliges Drücken wird das Display eingeschaltet, und die zuletzt erfasste Temperatur wird angezeigt. Durch erneutes Drücken des Knopfes werden im Display weitere Informationen angezeigt (siehe Diagramm). Wird der Knopf innerhalb von 30 Sekunden nicht noch einmal gedrückt, schaltet sich das Display ab, und das Datenerfassungsgerät kehrt zum Anfang des Anzeigezyklus zurück

LCD off (LCD aus)

Log" zeigt an, dass das Datenerfassungsgerät funktioniert. In diesem Modus werden keine Daten angezeigt

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