

INSTALLATION AND OPERATION GUIDE

GUIDE D'OPERATION
GUÍA DE OPERACIÓN
GUIDA DI FUNZIONAMENTO
BEDIENUNGSANLEITUNG



EL-USB-TC-LCD

 **LASCAR**
electronics

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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

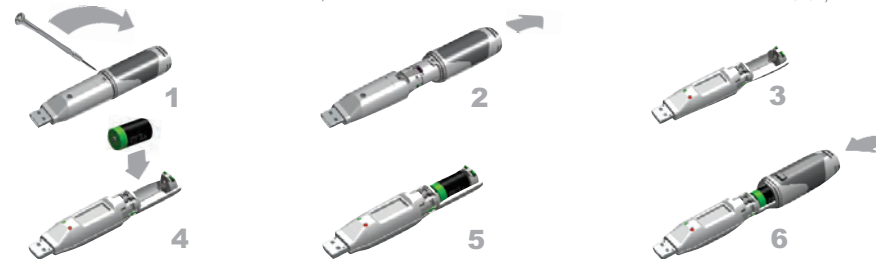
Prima di utilizzare il data logger, inserire la batteria 1/2 AA da 3,6 V fornita in dotazione seguendo le istruzioni.

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 3,6V 1/2AA 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.

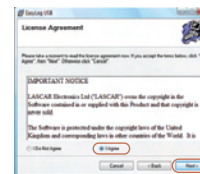
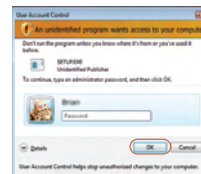
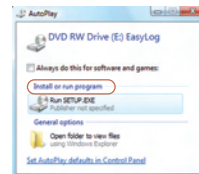
After completing the software installation you must install the driver to use your EL-USB data logger. **It is important that the CD is left in the drive during this final stage of installation.** Please refer to the relevant section for the Windows platform you are using.

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

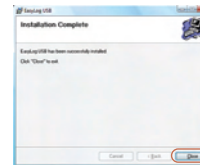
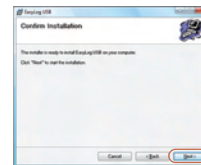
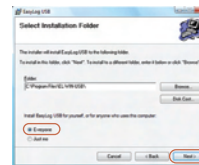
START HERE

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.
7. EasyLog USB is being installed
8. Click "Close". An icon will now be placed on your desktop

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

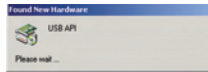


You have installed the EL-WIN-USB Configuration Software successfully. You now have to install the USB hardware driver. Please refer to the relevant section depending on the Windows platform you are using

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"**

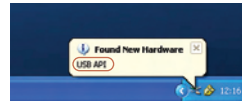
6. Windows™2000 now refers to the data logger as the **"F32x Express USB Device"** then click **"Finish"**

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™ 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"**

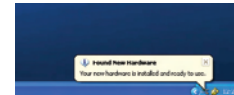
NOTE - A screen appears, showing files being copied to your computer

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"**

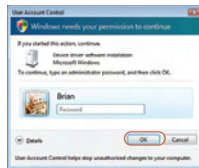
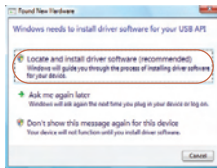
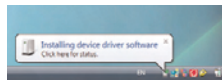


5. The Window will close and you will see the following message

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



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"**

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

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-TC-LCD STATUS INDICATION

EN

LED Indicators



Red LED Gree LED



Green double flash

Every 20 seconds: logger full, no alarm



Green single flash

Every 30 seconds: delayed start

Every 20 seconds: logging, no alarm, low battery

Every 10 seconds: logging, no alarm



Red/Green single flash

Every 20 seconds: logger full, last value equal to or exceeds the low or high alarm



Red double flash

Every 10 seconds: logging, high alarm

Every 20 seconds: logging, high alarm, low battery



Red single flash

Every 10 seconds: logging, low alarm

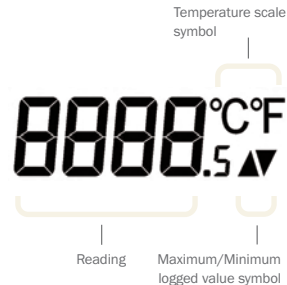
Every 20 seconds: logging, low alarm, low battery



No LEDs flash

LEDs disabled during configuration to save battery power and increase logging life / logger stopped / battery empty

LCD Indicators



The EL-USB-TC-LCD features a high contrast LCD and two 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

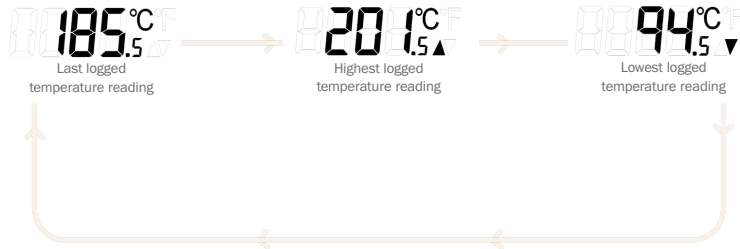
*If the logger is set to 'LCD off' or 'LCD on for 30 seconds' mode, then this will only be shown after the button is pressed. Otherwise the display will remain blank.

EL-USB-TC-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-TC-LCD

INDICATION D'ÉTAT

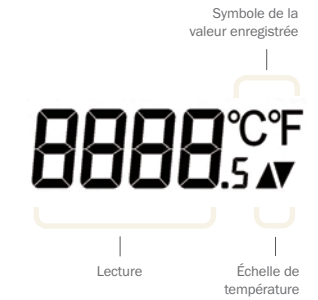


Indicateurs LCD

Diode Rouge Diode Verte

	Double clignotement vert Toutes les 20 secondes:enregistreur plein, pa d'alarme
	Simple clignotement vert Toutes les 30 secondes: retard au démarrage. Toutes les 20 secondes: enregistrementen cours, pas d'alarme, batterie faible Toutes les 10 secondes: enregistrement en cours, pas d'alarme
	Simple clignotement rouge/vert Toutes les 20 secondes: enregistreur plein, dernière valeur égale ou supérieure à basse ou haute alarme
	Double clignotement rouge Toutes les 10 secondes: enregistrement en cours, haute alarme Toutes les 20 secondes: enregistrement en cours, haute alarme, batterie faible
	Simple clignotement rouge Toutes les 10 secondes: enregistrement en cours, basse alarme Toutes les 20 secondes: enregistrement en cours, basse alarme, batterie faible
	Pas de clignotements Diodes désactivées pendant le configuration pour économiser la batterie et augmenter la vie de l'enregistreur / enregistreur arrêté/ batterie déchargée

Indicateurs LCD



Le EL-USB-TC-LCD est doté d'un LCD à fort contraste et de deux voyants DEL. 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-TC-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-TC-LCD

INDICACIÓN DE ESTADO

ES

Indicadores de la pantalla LCD



LED Rojo LED Verde



Parpadeo doble verde

Cada 20 segundos registrador lleno, alarma



Parpadeo simple verde

Cada 30 segundos: inicio demorado
Cada 20 segundos: registrando, sin alarma, batería baja
Cada 10 segundos: registrando, sin alarma



Parpadeo simple rojo/verde

Cada 20 segundos: registrador lleno, último valor igual o superior a la alarma baja o alta



Parpadeo doble rojo

Cada 10 segundos registrando, alarma alta
Cada 20 segundos registrando: alarma alta, batería baja



Parpadeo simple rojo

Cada 10 segundos: registrando, alarma baja
Cada 20 segundos registrando, alarma baja, batería baja



Ningún LED parpadeando

LEDs deshabilitados durante la configuración para ahorrar batería y aumentar la vida de registro / registrador parado / batería vacía

Indicadores de la pantalla LCD



El EL-USB-TC-LCD tiene una pantalla LCD de elevado contraste y dos LED. 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-TC-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-TC-LCD

INDICAZIONE DI STATO



Indicatori LCD



LED Rosso LED Verde



Lampeggio verde doppio

Ogni 20 secondi: logger pieno, nessun allarme



Lampeggio verde singolo

Ogni 30 secondi: avvi ritardato

Ogni 20 secondi: registrazione in corso, nessun allarme, batteria scarica

Ogni 10 secondi: registrazione in corso, nessun allarme



Lampeggio rosso/verde singolo

Ogni 20 secondi: Logger pieno, ultimo valore uguale o maggiore dell'allarme limite min o max



Lampeggio rosso doppio

Ogni 10 secondi: registrazione in corso, allarme limite max

Ogni 20 secondi: registrazione in corso, allarme limite max, batteria scarica



Lampeggio rosso singolo

Ogni 10 secondi: registrazione in corso, allarme limite min

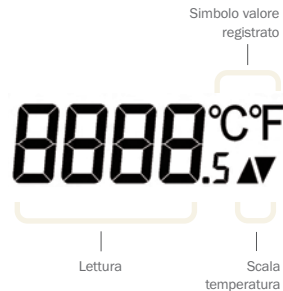
Ogni 20 secondi: registrazione in corso, allarme limite min, batteria scarica



Nessun LED lampeggiante

LED sono disattivati durante la configurazione al fine di risparmiare la carica della batteria ed estendere la durata di registrazione / logger arrestato / batteria scarica

Indicatori LCD



L'EL-USB-TC-LCD è dotato di un LCD ad elevato contrasto e di due LED. 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.

EL-USB-TC-LCD

FUNZIONAMENTO DEL PULSANTE



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)

185.5°C°F

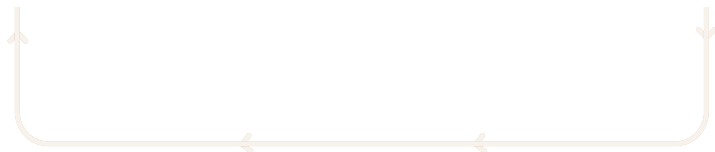
Lettura dell'ultima temperatura registrata

201.5°C°F

Lettura della temperatura massima registrata

94.5°C°F

Lettura della temperatura minima registrata



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-TC-LCD STATUSANZEIGE



LCD-Anzeige



Rote LED Grüne LED



Leuchtet zweimal grün auf

Alle 20 Sekunden: logger voll, kein alarm



Leuchtet einmal grün auf

Alle 30 Sekunden: verzögerter start
Alle 20 Sekunden: aufzeichnung, kein alarm, batterie schwach
Alle 10 Sekunden: aufzeichnung, kein alarm



Leuchtet einmal rot/grün auf

Alle 20 Sekunden: logger voll, letzter wert entspricht genau dem wert oder überschreitet den wert für einen alarm wegen unterschreitung oder überschreitung



Leuchtet zweimal rot auf

Alle 10 Sekunden: aufzeichnung, alarm wegen überschreitung
Alle 20 Sekunden: aufzeichnung, alarm wegen überschreitung, batterie schwach



Leuchtet einmal rot auf

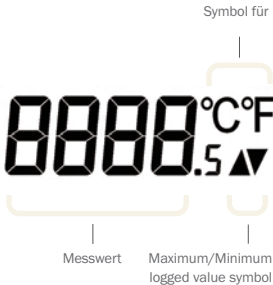
Alle 10 Sekunden: aufzeichnung, alarm wegen unterschreitung
Alle 20 Sekunden: aufzeichnung, alarm wegen unterschreitung, batterie schwach



Kein Aufleuchten der LEDs

LED während der konfiguration abgeschaltet, um batteriestrom zu sparen und die aufzeichnungsdauer zu verlängern / logger gestoppt / batterie leer

LCD-Anzeige



Das EL-USB-TC-LCD verfügt über ein kontrastreiches Display sowie zwei 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 einem bestimmten Termin gestartet werden soll*
P5	Push to Start (Zum Starten drücken)	Wird angezeigt, wenn das Datenerfassungsgerät durch Knopfdruck gestartet werden muss
log	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

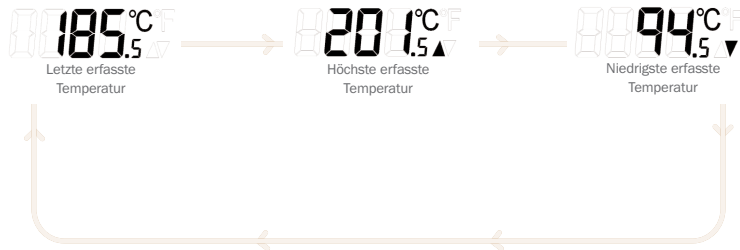
*Wenn für das Datenerfassungsgerät der Modus „LCD off“ (LCD aus) oder „LCD on for 30 seconds“ (LCD 30 Sekunden lang an) eingestellt ist, wird der Status erst nach dem Drücken des Knopfes angezeigt. Ansonsten bleibt das Display aus.

EL-USB-TC-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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