



# Quick Start Guide

PDF Logger for Cryogenic Containers  
& Dry Shippers



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## Use with Cryo (LN2, liquid nitrogen) Shippers

### PDF Logger Kit:

Logger with bracket is mounted on top of the Lid with Probe mounted through the Cork into the upper part of the vapor phase area.



## Principle of Mounting on a Cryo Shipper

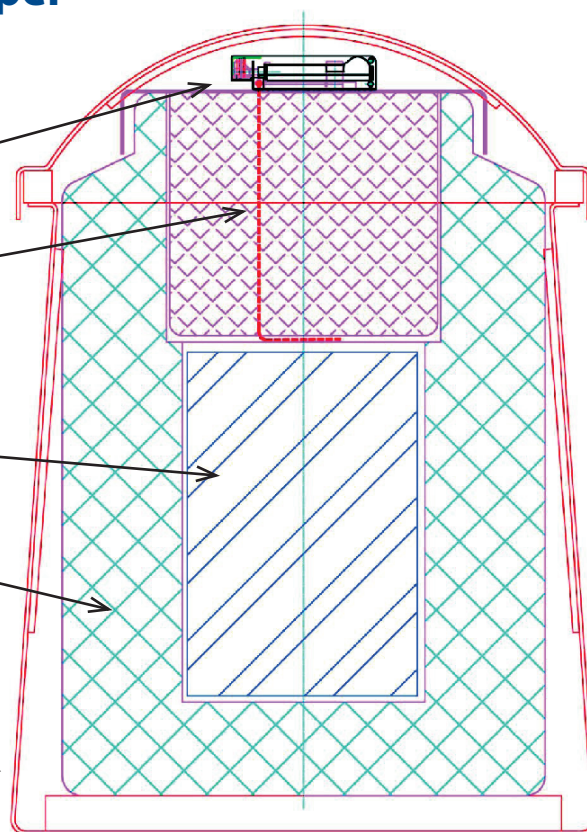
PDF Logger with Bracket mounted onto the Lid (Cork)

Probe pushed through the insulation and extends into storage space

Storage space

Cryo Shipper with LN2 absorbent

Protective shipping container



# Required Material

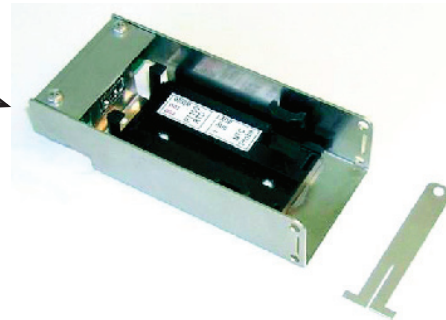
## PDF Logger

Logger can be plugged into any USB port of a PC, MAC or Linux to generate a Report, No software required



## Stainless steel bracket for PDF Logger and PT100 Probe

Most used for mobile Cryo-shippers, lockable by pad-lock. Datalogger is well protected. Sensor is connected in a terminal



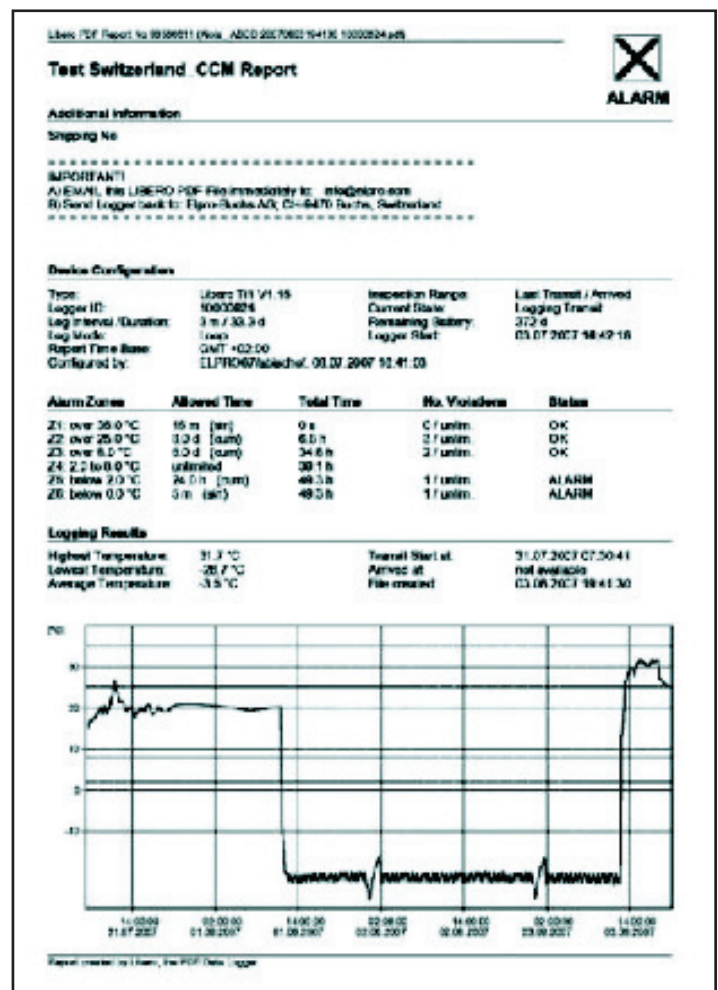
Cryo Probe 2: Teflon Probe  
PT100, Class A, Temperature Range: -200°C .. +200°C



## PDF Logger for External Sensor and Alarm

- Automatic PDF Generator built-in
- Single and Multiple use version (100 days, 1 to 3 years)
- Memory: 16'000 temperature data points
- Measuring range: PT100: -200..+200°C
- Accuracy: + / - 0.2° (depending on range)
- Large, multifunctional LCD display
- Alarm: 2 limit values or 5 alarm/time ranges
- Alarm indicator and external Alarm Output
- Function Keys: TRANSIT and ARRIVED
- Detailed evaluation of raw data possible with elpro-LOG ANALYZE Software

**Just plug PDF Logger into any USB port and the PDF Report is automatically created.**





## Mounting of Bracket, Probe and PDF Logger

All can easily be fitted on top of the lid and protected by the outer package of the shipper.

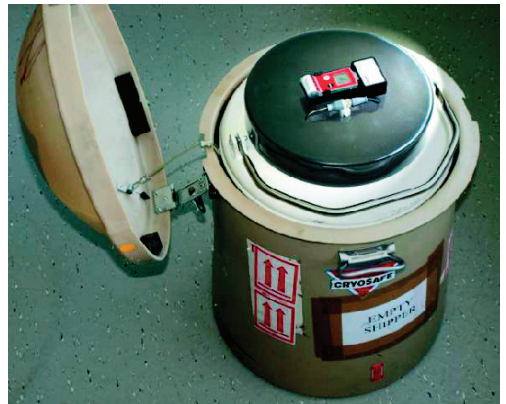
Right, top: Mounting: the bracket is screwed onto the Lid (Cork) of the Cryo Container. The probe is entered trough a small whole into the vapour phase area of the shipper.



Left: End of Probe protruding into the vessel



Right, bottom: Mounting (shown terminal bracket)



## Handling and System Components

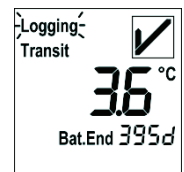
### At departure:

1. Check PDF Logger display:

If it is already in «TRANSIT», press the «ARRIVED» button for 2 seconds.

2. To start a new transport section, press «TRANSIT» button for 2 seconds:

Logging status changes to «TRANSIT» and temperature monitoring becomes active.

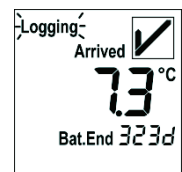


### At destination:

1. To mark the end of a transport section, press the black «ARRIVED» button for about 2 seconds: Logging status changes to «ARRIVED».

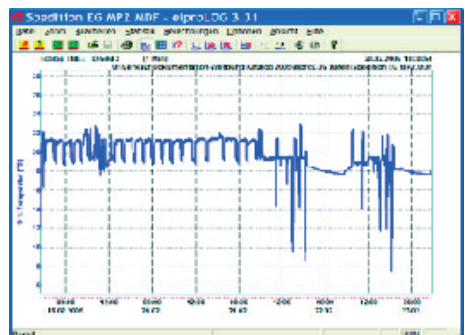
2. Disconnect PDF Logger from Terminal and plug PDF Logger into the USB port of your PC.

3. Within few seconds, the evaluation report (PDF/A file) will automatically be generated and presented in the explorer window.



### Optional:

elproLOG ANALYZE Software for additional detailed data evaluation of raw data in PDF File or data overlay



**Quick-Start Programming Guide, High/Low Alarm Limits**  
(For Full instructions and Multiple Alarm Zone Programming, refer to the  
User Guide for Configuration Utility available at [www.pdf-logger.com](http://www.pdf-logger.com))

**1)** Please download the Configuration Utility from [www.pdf-logger.com](http://www.pdf-logger.com)

You will be required to submit a brief form containing your contact information. The final link to download the Utility will be sent to your e-mail (please check your spam folder). This will include a serial number to enable activation of the Configuration Utility.

**2)** Install and Open the new Configuration Utility

**3)** Programming the Libero:

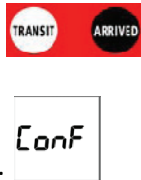
If the Logger Screen  
is **BLANK**:

Plug into computer  
USB port.

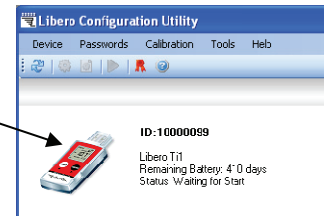
Wait for a picture of  
the device to display  
in the Utility Screen.

If the Logger Screen  
says **STRT**:

Simultaneously  
press Transit and  
Arrived until the  
screen says CONF  
(about 3 seconds).

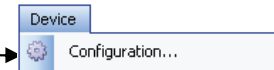


**4)** Click on the Picture of the  
Device in the Configuration  
Utility to Select it.



Plug into USB port,  
and wait for a  
picture of the  
device to display in  
the Utility Screen.

**5)** From the Menu, choose  
**DEVICE, Configuration...**



**CREATE A PROFILE**

Choose each menu item by following the steps below. There is NO need to choose apply between menus.

**Choose "Description"**

Type the Title you want to appear on your PDF report

Type any information you want to appear on the report (i.e. instructions, product, or equipment name)

Type a name for the PDF file (appears when the PDF is saved). "Alarm Prefix" can be selected after the alarm parameters are set. This will place "OK" or "ALARM" before the file name.

## Choose "Logging"

Set the Logging Interval (how often the Libero records and displays data). For a one minute logging interval, the Libero has enough memory to hold 11 days data.

**Start/Stop** : Libero STOPS when memory is full.

**Loop (Most Common Choice)**: Libero continues recording and overwrites the oldest data point when memory is full (for Single Use only Start/Stop is available)

"Start After Pressing TRANSIT Key" (Most Common). Means you must press TRANSIT to activate the Libero

"Start in Transit Mode" (most Common)

Configuration Libero T11 (ID 10000099)

Description  
Logging  
Alarm Conditions  
PDF Options  
Format Settings  
Handling Options  
Profile Information

Logging interval can be selected from 1 to 60 minutes. In "Loop Mode" the logger will overwrite the oldest value when memory is full. In "Start/Stop" the logger will stop when memory is full. Select "Start immediately" or when pressing a key. Note: Start Delay can be set under "Handling Options"

Logging Interval / Duration: 1 mn / 11d 2h 40m

Logging Mode: Start/Stop

Start Options

Start Mode: Start after pressing TRANSIT key  
(Note: Start Delay can be set under "Handling Options")

Transit / Arrived Initial State: Start in Transit mode

Load Profile Save Profile Apply Cancel Help

## Choose "Alarm Conditions"

Alarm Mode: Choose Alarm OFF, Single Alarm Thresholds (High/Low alarm), or Multiple Alarm Zone (for Multiple Alarm capability see full instruction manual)

Enter the upper and lower temperatures for alarm

Enter an alarm delay period (if desired). The delay is the amount of time before the alarm triggers.

You can now return to the Description menu to "Add Alarm Prefix"

Configuration Libero T11 (ID 10000099)

Description  
Logging  
Alarm Conditions  
PDF Options  
Format Settings  
Handling Options  
Profile Information

"Single Alarm Thresholds" is also known as upper / lower alarm (e.g. 21°C - 0°C). The alarm is activated when temperature is out of limits for longer than the delay time. The alarm delay will be adjusted according to the logging interval. With "Multi Alarm Zones", up to 5 different temperature / time ranges can be selected.

Alarm Mode: Single Alarm Thresholds

Single Alarm Thresholds

Upper Threshold: 80 °C

Lower Threshold: 2.0 °C

Alarm Delay Time: 5 Minutes

Load Profile Save Profile Apply Cancel Help

## Choose "PDF Options"

Choose how data and alarms are displayed on the PDF  
1) "All Values in Memory" – PDF report shows all data and alarms in the logger memory. Pressing Transit does not clear alarms.

2) "Last Transit – Arrived" - Shows only data and alarms from the last time TRANSIT was pressed until ARRIVED is pressed. Pressing Transit again clears alarms and data  
3) "Graphics All Values in Memory & Alarm Last Transit-Arrived" – Shows all data in the logger memory, only considers alarms for the latest TRANSIT to ARRIVED interval. Pressing Transit clears Alarm, but does not clear data from the graph.

Y-Axis scaling "Automatically Zoom" (Most common)

Choose "Show Complete Report" unless you want to omit information

Configuration Libero T11 (ID 10000099)

Description  
Logging  
Alarm Conditions  
PDF Options  
Format Settings  
Handling Options  
Profile Information

The "Inspection Range" is the time range that will be shown in the PDF report. "All measured Values" will not consider any pressed key but show all stored values. "Only last Transit-Arrived period" will show the range between starting (after pressing Transit and start delay) until the key Arrived has been pressed.

Inspection Range: Graphics & Alarm handling all values in Memory

Y-Axis Scaling of Chart

Automatically Zoom (selected)  
Use Zoom Preset

Upper Limit: 0 °C Lower Limit: 0 °C

Style Options

PDF Customizing: Show complete Report (Alarm Condition / Alarm Status / Logging Results)

Language: English

Save Profile Apply Cancel Help

Choose "Format Settings"

Choose the appropriate time zone (daylight savings time does not switch automatically)

Choose a date format.

Choose a time format.

Choose a temperature unit (C or F) and a decimal separator (point) or (comma)

The screenshot shows the 'Format Settings' tab of the 'Configuration Libero Ti1 (ID 1000099)' dialog. The left sidebar lists: Description, Logging, Alarm Conditions, PDF Options, **Format Settings**, Handling Options, and Profile Information. The main area contains: 'Time Zone used in PDF' with a dropdown set to '(GMT +01:00) Central Europe, Eastern Europe, West Central Africa' and an unchecked checkbox 'add 1 hour to PDF report: (Daylight Saving)'; 'Date/Time Format' with 'Date Format' set to 'DD.MM.YYYY (31.10.2006)' and 'Time Format' set to '24h (14:53:15)'; and 'Measurement Value Format' with 'Temperature Unit' set to '°C' and 'Decimal Separator' set to '.(Point)'. At the bottom are buttons: Load Profile, Save Profile, Apply, Cancel, and Help.

Choose "Handling Options"

Choose "Full Functionality" unless you want to restrict button use or omit information from the Libero display.

Choose "Always show current value" unless you want to omit the temperature value from the Libero display.

A "Start Delay" and "Transit Delay" are used to allow the Libero time to equilibrate to the temperature before data collection begins (generally, both a start delay and transit delay are used). Libero generally equilibrates from ambient to refrigerated temperature in 15-20 min. When the delay time is over, the Libero automatically begins logging.

The screenshot shows the 'Handling Options' tab of the 'Configuration Libero Ti1 (ID 1000099)' dialog. The left sidebar lists: Description, Logging, Alarm Conditions, PDF Options, Format Settings, **Handling Options**, and Profile Information. The main area contains: a text box explaining 'Transit' and 'Arrived' keys; 'Button Mode' set to 'Full Functionality: Transit - Arrived / Display Statistics'; 'Display Mode' set to 'Always show current value'; and 'Delay' options with 'Use Start Delay' and 'Use Transit Delay' both unchecked, and a '0' value in the 'Minutes' field. At the bottom are buttons: Load Profile, Save Profile, Apply, Cancel, and Help.

Choose "Profile Information"

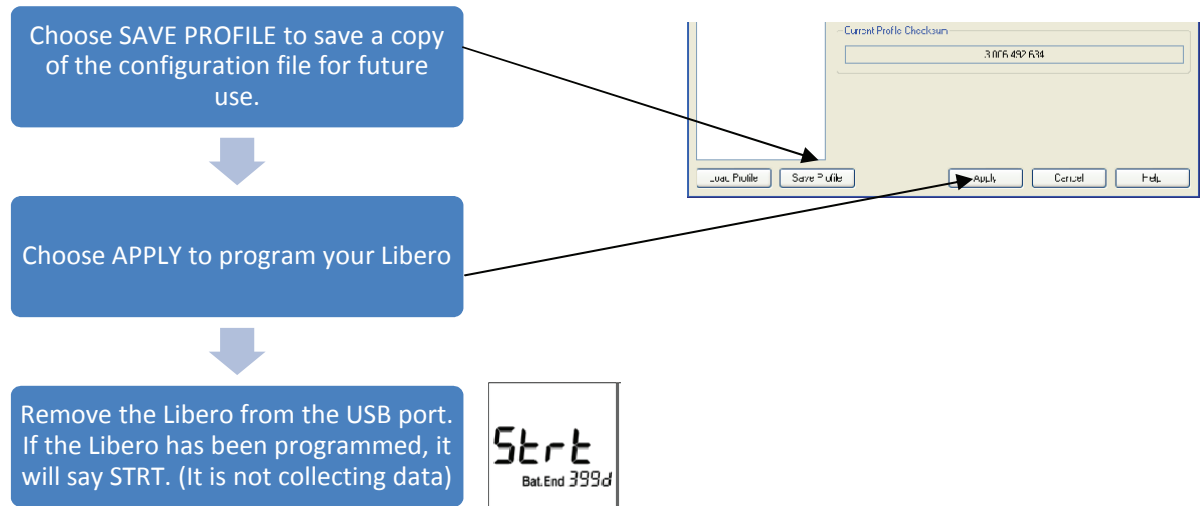
Unless you are familiar with or have been provided an MKT Activation Energy, do not make any changes to this number.

Use this tool if you want to create a unique ID for the profile you just created.

The Checksum is a number unique to each profile that is automatically generated by the configuration utility to ensure programming multiple Liberors with the same profile is exactly identical. Any changes you make to the profile will change the Checksum number.

The screenshot shows the 'Profile Information' tab of the 'Configuration Libero Ti1 (ID 1000099)' dialog. The left sidebar lists: Description, Logging, Alarm Conditions, PDF Options, Format Settings, Handling Options, and **Profile Information**. The main area contains: a text box explaining MKT activation energy; 'MKT Activation Energy' set to '83 kJ/mol'; 'Profile-ID' with fields for 'P', '3', '5', and 'C', and a checked box 'Show Profile-ID on LCD'; and 'Current Profile Checksum' showing '3.006.402.534'. At the bottom are buttons: Load Profile, Save Profile, Apply, Cancel, and Help.

**Your profile is complete.** You can return to any of the menu items before saving the profile and programming the logger. Follow the steps below to save your profile and program the Logger. Do NOT Exit the Configuration Utility until you remove the Libero from the USB port.



### **Activating the Libero and Downloading Data**

**Activating the Libero:** When you are ready to use the Logger, press and hold the TRANSIT key for at least 3 seconds. The display will read “logging Transit” or “DELY” if you have programmed a start/transit delay. Place the active logger in the shipping box or monitored equipment.

**Downloading Data:** Press and hold the ARRIVED key for at least 3 seconds. The display will read “Logging/Arrived”.

Plug the Logger into the USB port on your computer. A PDF file will automatically generate.

Drag and Drop the file to your desktop or designated folder (dragging and dropping the file will preserve the data that is embedded in the PDF)



### **To Apply the Same Configuration Profile to Another Logger.**

Put the Libero in the configuration mode (follow Steps 2 through 4 Above).

After you have selected the picture of the device (Step 4), choose Menu/Apply Configuration profile.

This will prompt you to open the original configuration profile that was saved on your computer.

