LIBERO PDF Logger®
A most cost efficient solution!

DIRECT COST – visible

- Monitoring device / Datalogger
- Software
- Interface and data cable

INDIRECT COST – hidden

- Software installation, support, IQ/OQ, user training
- Stock keeping of various logger types
- Time lost until monitoring device is back for evaluation
- Read-out and creation of evaluation report and readable back-up standard
- Exception handling & approval process

CONCLUSION

LIBERO PDF Logger® saves up to 50% of the hidden costs.

Benefits

User:
Ease of use and productivity

- Easy handling, no specific procedures needed, no wrong manipulations possible
- Clearly structured display for immediate visibility of any temperature deviations during transportation
- Shortened workflow thanks to the unique feature of the automatically generated analysis and compound report

Supply Chain Manager:
Productivity and Flexibility

- Quick and easy availability of supply chain history
- Straightforward transmission of complete reports (data and graphics) thanks to PDF/A format
- Parameters can be set according to your requirements in order to follow your SOP's
- Detailed evaluation of raw data possible with elproLOG ANALYZE Software
- Problems within the cold chain can rapidly be isolated, illustrated and then definitively be solved
- Full control thanks to worldwide standardized reports (PDF/A file format)
- No specific training required

Purchase Manager:
Cost efficiency

- Excellent price/performance ratio
- No cost for worldwide software training, SW validation, SW support, software upgrading activities or user training
- Swiss quality product – life time warranty

Quality Manager:
Assured quality

- PDF/A file format is an approved ISO standard
- Alarm indicators according to WHO standards
- Helps to be compliant with the provision of GMP/GLP/FDA (21CFR11), USP 1079
- 5 programmable alarm ranges according to PDA Technical Report No 39 (cold chain guidance for medical products: maintaining the quality of temperature-sensitive medicinal products through the transportation environment)
- Validation certificate inclusive, optional multi point calibration
- IQ/OQ documentation is made available

IT Manager:
Reliability and seamless integration

- No specific evaluation software necessary (Adobe®Reader®)
- No additional hardware required (USB port/PC)
- No additional infrastructure cost for software validation, upgrade policy and end user support
- No user training necessary

Financial Director:
Cost savings

- Cost effective solution for total cold chain monitoring
- Safe investment thanks to proven technology, ELPRO's compatibility strategy and the long-term experience of ELPRO in providing professional data logging solutions

Technical Data

- **Record options:**
  Multiple use (Ti1) or single use (Ti1-S)
- **Record mode:**
  Start/stop and loop (Ti1)
- **Temperature measurement range:**
  -35°C to +70°C
- **Temperature accuracy:**
  ± 0.2 °C (-10 °C to 25 °C)
  ± 0.5 °C for the ranges of -35 °C to -10 °C and 25 °C to 70 °C
- **Resolution:**
  1/10 °C
- **Memory capacity:**
  16'000 measuring data points
- **Measurement interval and display renewal:**
  1 minute or more, programmable
- **Programmable temperature alarms:**
  a) 2 limits or
  b) 5 multiple alarm ranges, conform wit PDA Technical Report No 39 (Cold Chain Guidance for Medical Products: Maintaining the Quality of Temperature-sensitive Medicinal Products through the Transportation Environment)
- **Start-up delay:**
  0 minutes to 1 day
- **Battery life:**
  3.6V Lithium Battery
  Ti1: 400 days / Ti1-S: 100 days
- **Display:**
  Multifunction LCD, size: 23.5 x 23.5 mm, statistics functionality

- **Evaluation report (Adobe®PDF/A):**
  Includes a text area, a chart visualizing the temperature curve of the current transport section and the raw data of all transport sections. There are 8 lines at 80 characters available for sender-specific information.
- **Supported operating systems:**
  Windows, Mac, Linux
- **Datalogger configuration:**
  Libero configuration utility & Libero SmartStart downloadable free of charge from www.pdf-logger.com
- **PDF Data Logger:**
  Built-in PDF file generator that automatically establishes a complete evaluation report including all raw data
- **Display functionality:**
  - Start and end marking with TRANSIT and ARRIVED buttons
  - Current temperature measurement (last stored value)
  - Status OK or ALARM
  - Indicator whether limit value has been exceeded
  - Remaining battery life in days
- **Software (at sender):**
  - Libero Configuration Utility
  - Libero SmartStart
- **Interface:** USB – Universal Serial Bus
- **Case:** ABS plastic material
- **Protective Class:** IP 54
- **Dimensions:** 95 x 40 x 12 mm
- **Weight:** 40 g
- **Application area:**
  Supply chain temperature monitoring

Team Libero

Temperature and humidity data evaluation without any software, PDF/A report inclusive, via USB port anywhere in the world:
ELPRO presents its team of independent specialists with specific qualities.

LIBERO Ti1 & Ti1-S

- Team leader of Libero PDF Logger®s
- Internal temperature sensor for -35°C..+70°C
- Application area: Transport monitoring of temperature sensitive products

LIBERO Ti1-D (DRY ICE)

- Libero PDF Logger® with internal temperature sensor
- Temperature range: -80°C..+70°C
- Battery life: 100 days or 20 days at -80°C (dry ice)
- Application areas: Monitoring of dry ice shipments

LIBERO Te1-N & Te1-P* (EXTERNAL SENSORS)

- Libero PDF Logger® with an external sensor connected to the USB port (patent solution)
- Te1-N with NTC sensor for temperatures of -80°C..+85°C
- Te1-P with PT100 sensor for temperatures of -200°C..+200°C
- Battery life: 3 years
- Application areas: Monitoring of cryo and dry ice shipments, liquid nitrogen and cooling cabinets, temperature monitoring

LIBERO THi1* (TEMPERATURE & HUMIDITY)

- Libero PDF Logger® with internal temperature and humidity sensor
- Temperature range: -35°C..+70°C
  Humidity range: 0..100 %
- Battery life: 3 years
- Application areas: Transport monitoring for temperature and humidity sensitive products

* Te1-P and THi1 available in Q1/2009

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