TERA UKRAINE PJSC

HUMIDITY & TEMPERATURE DATA LOGGERS

DLT-01, DLT-02

The DLT-01 and **DLT-02 Data Loggers** are compact electronic devices designed for measuring and recording temperature and humidity data. The DLT-01 Temperature Data Logger and DLT-02 Humidity & Temperature Data Logger are specifically used for monitoring temperature and humidity levels during the transportation and storage of products. Additionally, DLT-01 and DLT-02 loggers equipped with external probes are employed for monitoring temperature during product transportation.

Setting up and retrieving data from these loggers is a straightforward process. Users can easily configure the data logger and access stored data by connecting it to their computer's USB port and using the user-friendly LoggerSoft software. The data stored within the logger's memory can be transferred to the computer in CSV or PDF file formats. These loggers are powered by long-life lithium batteries, ensuring reliable and continuous operation.
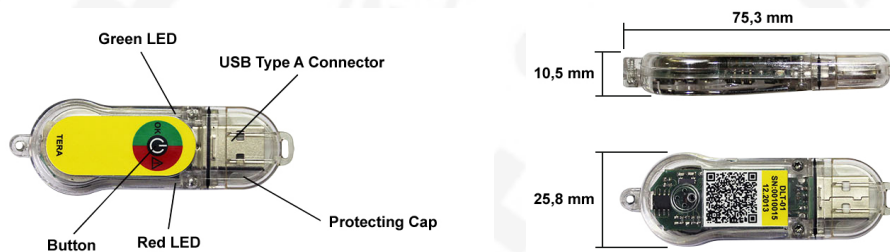
Key Features

- Measurement of air/product temperature and relative humidity.
- Data logging in a customizable mode, allowing users to define their own logging parameters.
- Logging of alarm events.
- Easy setup and data download by directly plugging the logger into a computer's USB port.
- Compatibility with standard Windows applications.
- Replaceable lithium battery for long-term use.
- Red and green LEDs to display modes and alarms.
- Flexible user configuration mode using the dedicated Loggersoft software.
- The ability to download data reports with graphs in PDF or CSV formats without the need for pre-installed software.

CE

Design

The Data Logger is constructed with a durable polycarbonate case featuring a standard USB connector, two LEDs, and a control button.

Green LED · USB Type A Connector · Button · Red LED · Protecting Cap · 75,3 mm · 10,5 mm · 25,8 mm

TECHNICAL SPECIFICATIONS			
Model Name	DLT-01	DLT-01-Pt[1]	DLT-02
Logger Specifications			
Q-ty of Measuring Channels	1	2	2
Available channel configurations[2]	IT	IT + ET	IHT
Logging Interval	From 1 minute to 1 hour		
Battery Type	CR2032, 3V		
Battery Lifespan (by regular conditions)	1 year (at 25°C and 1 min logging interval)		
Memory (readings)	48000 (temperature), 32000 (humidity & temperature)		
Internal Temperature Sensor Specifications			
Sensor Curve	TMP116		
Operating Temperature Range, °C	-20...60		
Accuracy, °C	0,5		
Response Time, seconds	180		
Internal Humidity & Temperature Sensor Specifications			
Sensor Curve			SHT31
Operating Temperature / Humidity Range	-		-30...60 °C / 0...100%
Accuracy			0,5 °C / 3%[3]
Response Time, seconds			180
External Temperature Probe Specifications			
Sensor Curve		Pt1000	
Operating Temperature Range, °C		-50...100, -50...250, -100...100	
Accuracy, °C	-	$\pm (0{,}4 + 0{,}002 \times |T|^{4})$	-
Connector		USB3	

[1] - the external temperature probe is provided separately
[2] - ET - external temperature probe, IT - internal temperature sensor, IHT - internal humidity and temperature sensor
[3] - relative humidity accuracy is 3% (10...90%), ≥ 4% (0...10% and 90...100%)
[4] - T - operating temperature range

Settings

Logger settings can be customized using the LoggerSoft software, which enables users to modify logger settings, read and save data. LoggerSoft is available to **DOWNLOAD FOR FREE HERE**.

The logger features two LEDs that provide the following indications:
- Alarms during archiving.
- Logger status (archiving in progress, logger pending launch, archiving canceled).
- Low battery.
- Data transfer mode on PC.

These LEDs help users easily monitor and understand the logger's status and any active alarms.

The LEDs' indication can be activated by pressing the button to minimize battery discharge. Here's how the button press works:
- A single quick press of the button allows you to view alarms during archiving.
- Two quick presses of the button enable you to view the logger's status.
- Low battery status can also be checked using the button if needed.

This button functionality helps conserve battery life while providing access to important information when required.

PC connection

The logger can be connected to a PC in two different modes:
- **USB Flash Memory Mode:** In this mode, the logger functions like a USB flash drive. You can upload a text file with archived data in CSV format (compatible with Excel) or a PDF report (compatible with Acrobat Reader) directly from the logger to your PC.
- **USB Device Mode for Data Transfer:** When the logger is connected in this mode, you should use the LoggerSoft software. LoggerSoft allows you to retrieve all archived data from the logger and customize the logger's settings as needed.

These two modes provide flexibility for accessing and managing the data recorded by the logger.

| INDICATION WHILE PC CONNECTED		
LEDs	**Status**	**Description**
🟢 ⚪	Steady GREEN	Flash memory mode
⚪ 🔴	Steady RED	COM-Port mode
🟢 🔴	Blinking separately (100 – 5000 milliseconds, no pause).	Logger is under loader control (firmware via COM-Port, no archiving)

INDICATION BY ONE QUICK PRESS THE BUTTON		
LEDs	**Status**	**Description**
🟢 ⚪	Steady GREEN (1 sec)	Result of logger working is **OK**
⚪ 🔴	Steady RED (1 sec)	Result of logger working is **ALARM**

| INDICATION BY TWO QUICK PRESSES THE BUTTON		
LEDs	**Status**	**Description**
🟢 🔴	Short blink simultaneously (100 ms)	Archiving is not launched
🟢 🔴 / 🟢 ⚪	Short blink simultaneously (100 ms), then GREEN is steady (1 sec)	Archiving launch is shifted (logger is pending time expire)
🟢 🔴 / ⚪ 🔴	Short blink simultaneously (100 ms), then RED is steady (1 sec)	Memory is full (archiving doesn't operate anymore)
🟢 ⚪	3 blinks (200 ms)	Archiving is with disable ALARM
🟢 🔴	3 blinks for GREEN LED (200 ms), RED LED is steady	Archiving is in progress. Delayed launch of the alarm activation is started
🟢 🔴	3 blinks simultaneously (200 ms)	Archiving is with enable ALARM

LOW BATTERY INDICATION		
LEDs	**Status**	**Description**
🟢 🔴	3 blinks separately (200 ms, no pause)	Low battery
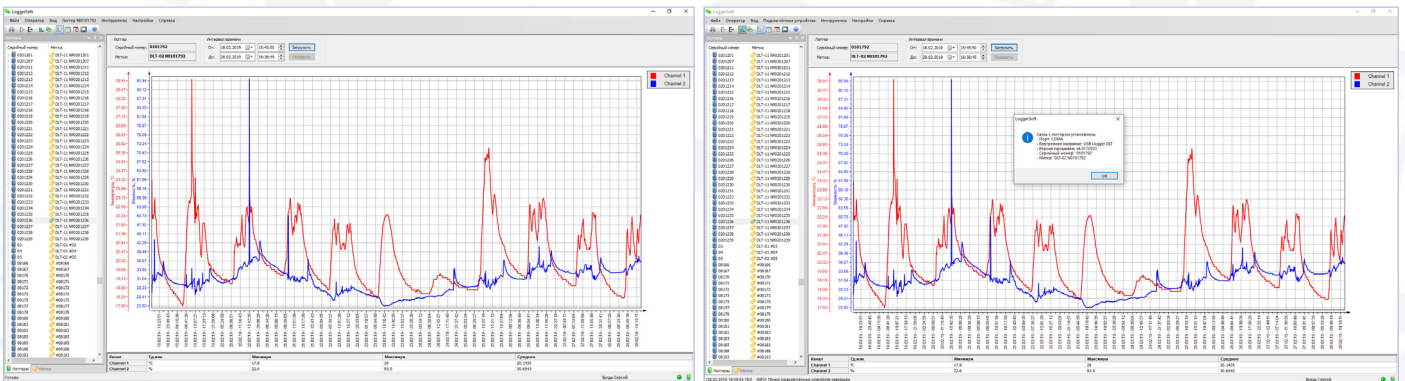
LoggerSoft is the software used to operate Data Loggers powered by TERA Ukraine. This software offers a range of functionalities, including the ability to customize logger settings, access event logs and archives, view and analyze data, and generate reports. All data collected by the logger is stored in a database and can be easily accessed and analyzed at any time.

One of the notable features of LoggerSoft is its flexible system for managing user access rights, which allows for different permission levels for staff members. It also supports operation within a local network, enabling simultaneous access to data for multiple users. LoggerSoft is optimized to run on Windows 10.

You can download the software for free here.
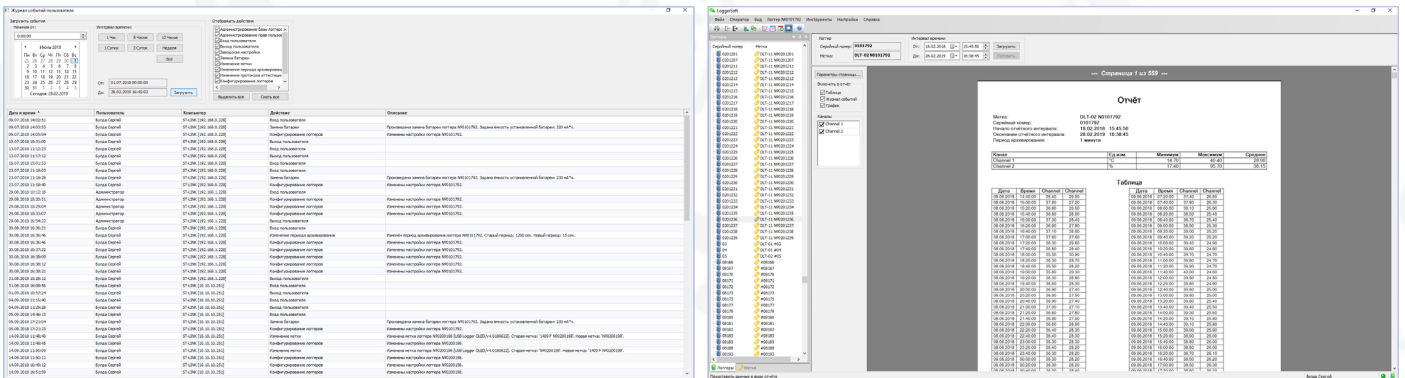
Key Features

- Reading and saving logger's settings
- Reading data saved in the logger's memory
- Viewing archives for specific time periods
- Automatic or manual graphic scaling for each axis
- Viewing humidity and temperature measurements in table or graphic format
- Printing graphics, tables, and reports
- Accessing and viewing the logger's event log
- Accessing and viewing the user's event log
- Setting the archive period
- Configuring humidity and temperature ranges for alarm triggers
- Selecting the data recording mode: **CYCLICAL** or **UNTIL MEMORY FILL**.

- Choosing the report format: CSV or PDF
- Setting options for archiving launch:
  - Immediate after pressing the button
  - With a delay after pressing the button
  - Immediate after configuration
  - With a delay after configuration
  - At a specific time
- Precomputing the remaining time of the logger's operation until the battery needs to be changed
- Local network support for multiple users
- Searching for connected loggers
- Viewing and setting information related to the metrological attestation of the connected logger

The system requirements for LoggerSoft software are as follows:
- CPU: 1 GHz or faster
- Memory: 512 MB RAM or more
- Free space for program files: 50 MB or more
- Free space for the database: 4 GB or more

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