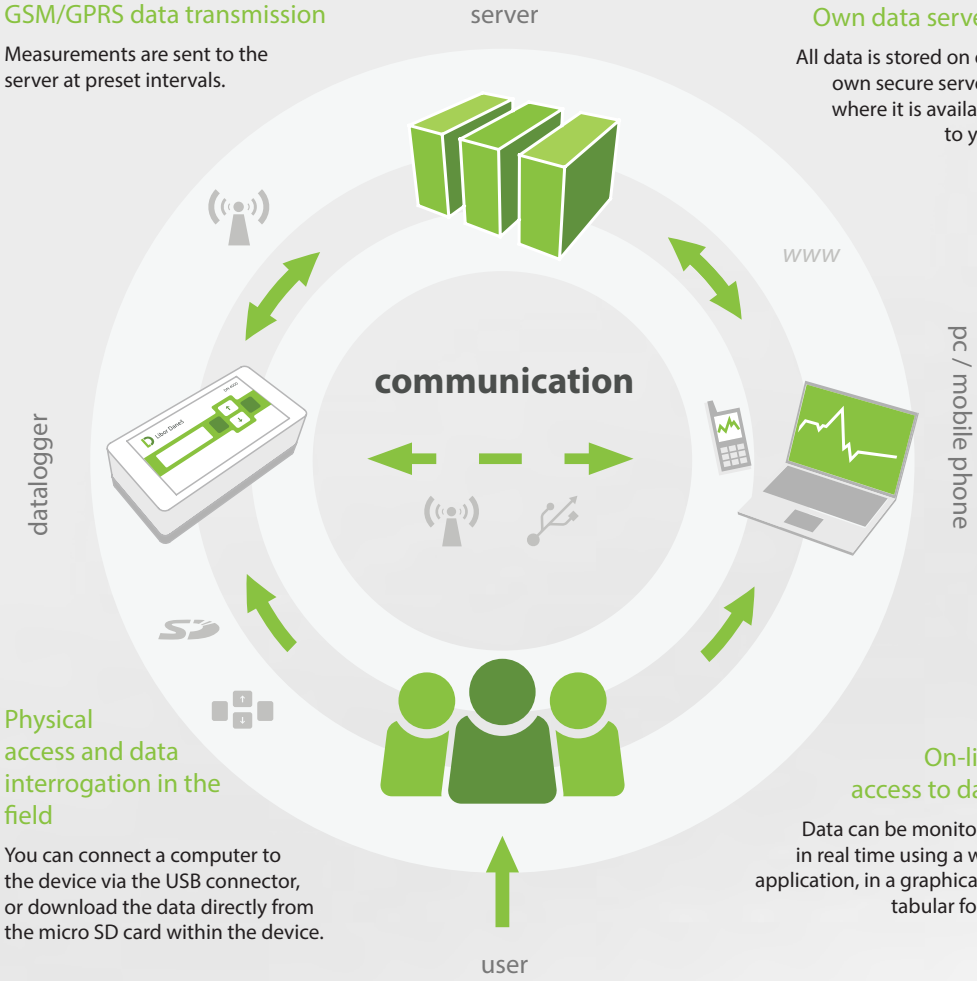
GSM/GPRS data transmission

Measurements are sent to the server at preset intervals.

Own data servers

All data is stored on our own secure servers, where it is available to you.



Physical access and data interrogation in the field

You can connect a computer to the device via the USB connector, or download the data directly from the micro SD card within the device.

On-line access to data

Data can be monitored in real time using a web application, in a graphical or tabular form.

Technical parameters

Inputs and outputs:

- 2x analogue input for measurement of voltage (range 0~100 mV or wider) and current (range 0~5 mA or wider)
- 2x digital impulse (counter) or binary input
- 2x digital output (also usable as sensor power supply)
- 1x USB port for communication with a PC (Mini USB connector)
- 1x RS-485 connects to intelligent sensors communicating using the HART protocol
- Logging interval: from 1 second to 24 hours (also suitable for pumping and slug tests)
- 8 MB Flash memory built in (holds at least 50,000 logged values) plus support for a micro SD/SDHC memory card up to 32 GB
- Primary power cell 3.6 V Li-SOCI2 (SAFT LSH20) with 13 Ah capacity
- Two cell option permits operation for 10 years without cell replacement (with hourly logging)
- External power supply option (suitable for Online mode)
- Operating temperature: -40 to +60 °C; protection rating: IP67
- Housing: polyurethane; dimensions: 160 x 80 x 60 mm

The datalogger is supplied with a whip antenna (which uses an FME connector), a mounting bracket and a silica gel bag (inside).

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Libor Daneš

DN4000
Compact

Datalogger DN4000 Compact

A technologically modern device, intended mainly for quick installations in field conditions, wherever accurate and reliable measurement of levels, temperatures and flow rates directly in boreholes and water sources is required.

Small size
Dimensions of 160 x 80 x 60 mm and snap-hook ensure easy installation in the field

GSM/GPRS
Data transmission via GSM / GPRS, data on the web, SMS warning and query messages

Increased environmental protection
Operating temperature: -40 to +60 °C; protection rating: IP67

Sensors and probes
Can be connected via RS-485 or analogue and digital inputs

Low power consumption
5 years of operation with GSM / GPRS data transmission without the need to replace the power cell

Local data querying
Data in the internal memory and micro SD card can be uploaded by a PC through the USB

Libor Daneš

DN4000 Compact – intended for quick installations in the field

- Measurement of level and temperature directly in the borehole and water sources
- Measurement of level, temperature, flow, water quality in river profiles
- For alarm and warning systems of flood protection
- For rain gauge stations
- Measurement of soil variables (temperature, humidity, etc.) – agricultural fields

DN4000
Compakt

GSM / GPRS data transmission

The built-in quad-band GSM / GPRS modem transmits measurement data over TCP/IP to the server and sends alarm messages via SMS. The pre-installed GSM antenna may be replaced with another type depending on the signal strength at the site. Data can be sent either immediately after the measurement (requires external power supply), or at specific intervals (daily, weekly, etc.), or immediately upon reaching the alarm values.

SMS

Text messages can be used to check the status of the measured variables. By setting the alarm messages (up to 4 priorities) warnings can be sent to up to 16 telephone numbers when set values are exceeded (or not reached). If you dislike the preset message format, you can create your own.

SIM card and tariff

For the GSM operation both flat and prepaid SIM cards can be used. The remaining credit and the status of the GSM network in the field can be found on the datalogger display, via SMS query, or from the server.

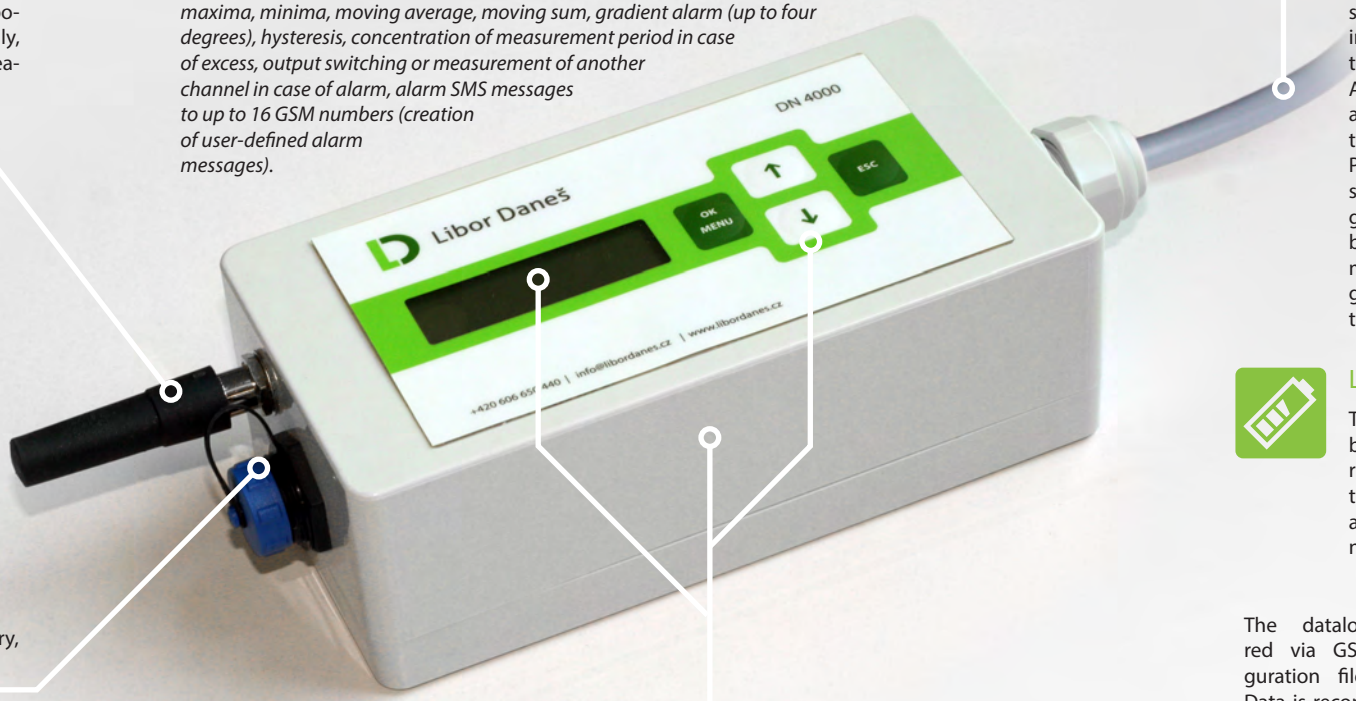
USB port for PC

For direct communication with a PC, the datalogger is equipped with a USB connector protected by a waterproof cap. Communication is protected by several levels of passwords, each of them providing a different set of permissions for accessing values and making configuration changes.

Measurement channels

Each channel can be named as needed; data can be recorded at varying intervals (1 second to 24 hours); measurement (analogue value, counter, binary status, equipment hours) and/or logging modes. You can create virtual channels for every measured channel (i.e. channels whose values are obtained by calculation) and set alarms to indicate up to four limit states.

Examples: difference between two channels, flow calculation, averages, maxima, minima, moving average, moving sum, gradient alarm (up to four degrees), hysteresis, concentration of measurement period in case of excess, output switching or measurement of another channel in case of alarm, alarm SMS messages to up to 16 GSM numbers (creation of user-defined alarm messages).



Micro SD card for memory expansion

Install a Micro SD/SDHC card with up to 32 GB of extra memory to store more than 50,000 values between data uploads, or record for longer (a year or more). The Micro SD/SDHC card can also be used for data transfer and complete datalogger configuration without the need for a PC in the field.

Device design

Polyurethane case, LCD display and four push buttons enable easy control of the device and its measuring sensors. Parameter setting can be changed in the field without the need for a PC. Its small size of 160 x 80 x 60 mm allows an easy mounting, for example using a snap-hook.

Increased environmental protection

Operating temperature: -40 to +60 °C; protection rating: IP67

Sensors and Probes

A great advantage is the ability to connect intelligent sensors that communicate via RS-485 using the HART protocol and have more advanced features than simple analogue probes. It is very easy to work with a connected probe after automatic loading; it is even possible to connect several of these intelligent probes and devices to the RS-485 loop at the same time. Analogue and digital inputs are provided for connection to all commonly used sensors. Probe wires are connected to the screw terminals inside the datalogger. Inside the housing, there is a bag of silica gel, which captures any moisture not only within the datalogger, but also in the capillary tube of the level probe.

Low power consumption

The measurement datalogger can be powered by two Li-SOCI2 primary cells that can be easily replaced in the field; these ensure operation for at least five years, even if the GSM network is used.

The datalogger can also be configured via GSM (you can create the configuration file through the web interface). Data is recorded in the datalogger memory as daily files in an easily readable text form, which enables fast searching. The data file contains an identification header (serial number, name, measuring channels). The datalogger also records operational logs recording parameter changes and system failure. Data transmission may be encrypted in order to increase data security.