



dataTaker DT90 Series data loggers  
All-in-one monitoring of remote applications




# Compact, long-lasting, data loggers


A cost effective, easy to deploy solution for long-term environmental and industrial applications


instrumentos  
de medida


**dataTaker**





 **Data Logging**  
Data readout via USB or remote data transmission via 4G network.

 **Connect Any Sensors**  
Analog: voltage, current, RTD; Digital: SDI12, MODBUS, pulses

 **Notifications**  
Automatic alarms via SMS

 **Technical Support**  
Supporting you all the way from choosing a logger to your solution

 **Cloud Enabled**  
Access your data anywhere, anytime via DataTaker Live

 **Waterproof**  
IP67 Waterproof enclosure



**Hydrology** – Monitoring surface and ground water conditions, the occurrence and movement of water, the physical and chemical properties of water, and its relationship with the living and material components of the environment.



**Meteorology** – Monitoring changes of atmospheric conditions to forecast weather and the presence of air pollutants.



**Industrial** – Monitor and control process parameters from temperature profiling to design validation.

## Compact, all-in-one monitoring

The DT90 series of data loggers are compact, all-in-one monitoring modules with an integrated modem, specifically designed for remote applications. The rugged design and wide operating temperature range provides reliable operation in virtually any environment. These are low-power and cost-effective data loggers with a dedicated mounting handle for a simple and quick installation process.

Data retrieval and device configuration are available via USB interface for on-site communication. You can also use the automatic data delivery feature to send logged data to an FTP server at regular intervals. Alarm configurations can trigger SMS messages to multiple mobile phones.

DT90 programming software can easily take you through the setup of your logger and how you want the system to work, customised for you.

- **Ease of deployment:** Simple connectivity via USB on-site makes it easy to configure and test the deployed monitoring module
- **Universal:** Connects to any sensor. This universal logger can connect to any type of sensor. Analog\*: voltage, current, RTD; Digital: SDI-12, MODBUS, pulses
- **Rechargeable lithium ion battery:** Up to 300 days run time on one charge and the ability to connect directly to solar power, making this logger the best solution for your remote monitoring applications
- **Robust:** With its solid aluminium case and fully waterproof probe (IP68 rated), this logger is suitable for harsh environments
- **Cost effective:** Low maintenance product. Minimal attention needed after setup

\* Only DT90L



# General Specifications

## Scheduling of Data Acquisition

Number of channels: 26 (each has independent schedule setting)  
Schedule Rates: 1 second to 24 hours

## Alarms

Conditions: High or Low Threshold  
Number of conditions: 3  
Action: Send SMS, increase/ decrease transmission rate

## Data Storage

Internal Non Volatile  
Capacity: 16 MB (min 500,000 data points)

## Integrated Cellular Modem

Network selection 4G

## Power Supply

External power: 5-25 Vdc  
Solar panel: 9V or 12V

## Physical and Environment

Construction: Black anodized cast aluminium  
Working temperature: -40°C - +70°C  
Humidity: 0-100% RH (when the lid is closed)  
Ingress of Protection: IP67

## Included Accessories

Resource USB (software + user manual)  
USB communication cable

**Note:** SIM Card and Dataplan not included

# DT90 Series Options

The DT90N is perfect for setting up small stations that require multiparameter sensors that only have a digital output. The DT90L is designed for multiparameter applications and can interface with both analog and digital sensors. Both options share the same core functionality.

## DT90L (Lite)

This version uses a large 48 Wh integrated rechargeable lithium battery pack, and features both analog and digital inputs, with the whole design being fitted in a miniature 160 x 100 x 80 mm black powder-coated aluminum cast enclosure.

Work time example: sampling 1min – rain gauge, transmission 1h, solar panel 2W. Ability to work all-year round.

## DT90N (Nano)

The dataTaker nano option uses a smaller 16Wh integrated rechargeable lithium battery pack when compared to the DT90L. It is all digital (no analog inputs), with the whole design being fitted in a miniature 100 x 70 x 38 mm black powder-coated aluminum cast enclosure.

Work time example: sampling 1min – rain gauge, transmission 1h, solar panel 2W. Ability to work all-year round.



- **Analog Channels** – Up to 8 inputs with 16 bit resolution

- **Voltage** – Switchable range: 0-50 mV, 0-2.5 mV  
4 – 20 mA Current Loop

- **RTD** – PT100

- **Sensor Excitation** – Outputs: 5V or 12V

- **Digital Channels** – *Dedicated Counter Inputs*  
3 pulse counters inputs

- **SDI12** – 1 SDI12 input, up to 8 sensors @ 32 parameters

- **MODBUS Client** – Read data from MODBUS sensors/ devices on RS485 port

- **Power Supply & Physical Info** – Internal Battery: Lithium 48 Wh  
Dimension: 160 x 100 x 80 mm  
Weight: 1.1 kg

- **Digital Channels** – *Dedicated Counter Inputs*  
3 pulse counters inputs

- **SDI12** – 1 SDI12 input, up to 2 sensors @ 32 parameters

- **MODBUS Client** – Read data from MODBUS sensors/ devices on RS232 port

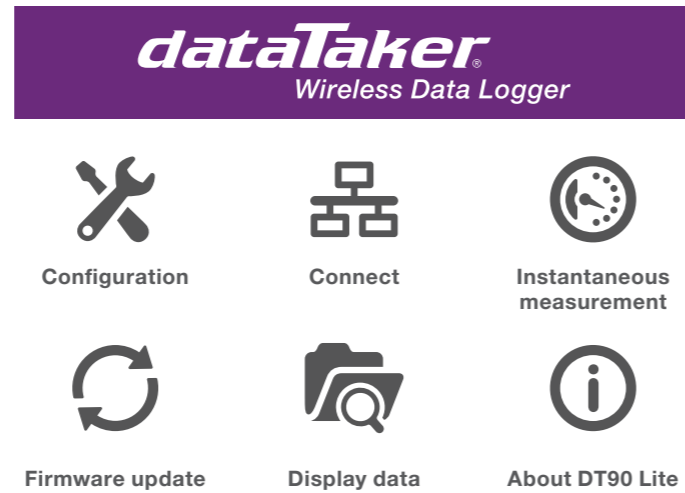
- **Power Supply & Physical Info** – Internal Battery: Lithium 16 Wh  
Dimension: 100 x 70 x 38 mm  
Weight: 700 g

# Configuration Software

DT90 configuration software is an intuitive graphical interface that allows you to configure your data logger, view real-time data in charts and retrieve your historical data for analysis. The application runs on your PC and interfaces the logger via USB port.

## Features:

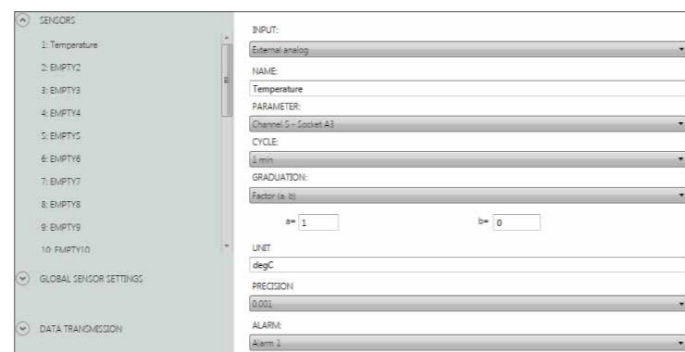
- Simple Interface for programming
- Easy alarm setup
- USB connection
- Ability to download historical data
- Display data in chart or table
- Export data into a CSV file
- Firmware upgrade interface



## Interface for programming

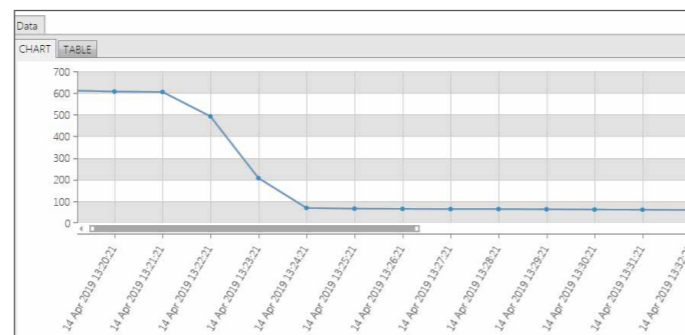
With a user-friendly interface for programming the logger, you can easily select the connected sensor location and enter the channel name and measurement unit. Following that, the setup is practically completed.

Further enhancement on this channel can also be done by adding scaling or enabling an SMS alarm for up to 3 numbers.



## Display data in chart format

Data can be downloaded and plotted directly on a chart interface using the product software. Customise your data points and axis by modifying the date/time range using either a horizontal slider or zoom in/out option. Functionality to export data into a CSV file is also available.



# Collect, Share, Process.



## dataTaker Live

This powerful and versatile cloud service makes collecting, monitoring, analysing, sharing and storing information from your dataTaker easier.

- Monitor: Real-time remote access to measurements from anywhere at any time and allowing configuration changes for dataTaker loggers from your PC, smartphone or tablet
- Store & Share: Synchronise and save data to your personal cloud account. dataTaker Live dashboard lets you collaborate and share data
- Collect: Automatic data uploading from sensors, loggers or industrial gateways to your personal cloud service account
- Analyse: Data analysis with standard and custom scripts

Find out more at [thermofisher.com.au/datatakerlive](http://thermofisher.com.au/datatakerlive)



# Optional Accessories

Solar Panel with brackets and 1 m cable  
Rating: 2W, 5W or 10W

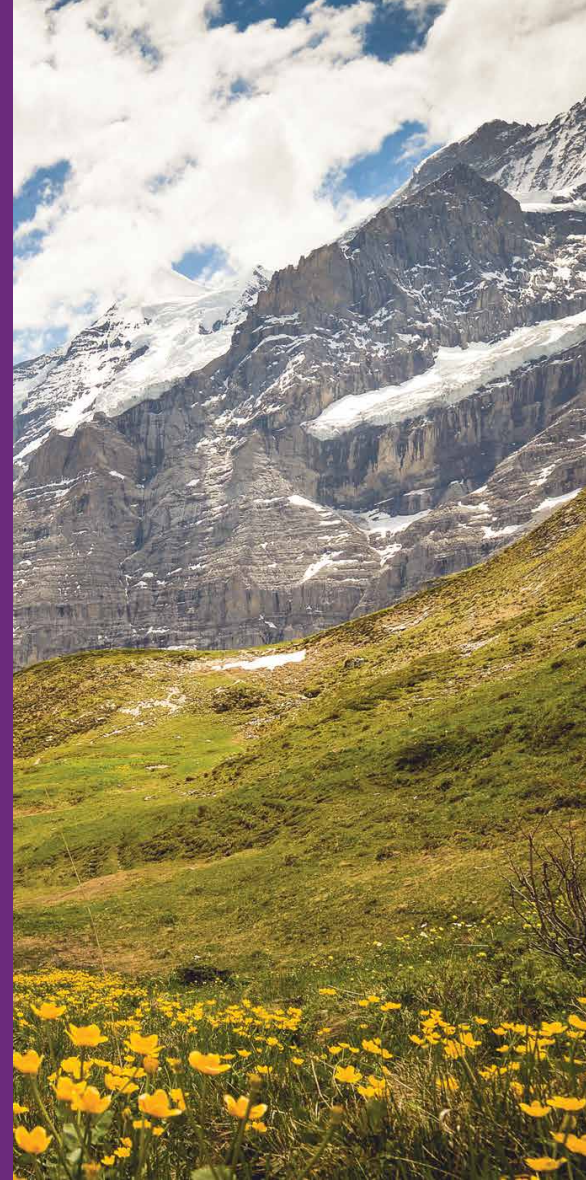
Power adaptor 230 V  
Cable length: 1 meter or 5 meter

Mounting bracket  
Type: pole mounting or DIN rail mounting

Antenna

- Straight antenna with screw
- Straight antenna with magnetic base
- Dome antenna

  IP67



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