



DataTaker DT82 Series4 Data Loggers  
Measurement and Control Instrumentation

# Stand alone intelligent data loggers

Robust, universal, intelligent data logger for supporting a wide range of applications

***dataTaker***

# Overview

The DataTaker DT82 series are intelligent data loggers, which are designed to target smaller applications. These data loggers capable of connecting to most arrays of sensors through versatile and analog and digital channels, highspeed counter inputs, phase encoder inputs and selection of SDI12 inputs (for DT82E) or serial inputs (for DT82I). They feature feedback control functions, alarm trigger, automatic data transfer and are compatible with various communication devices, making it perfect for stand-alone and remote applications.

DT82 series rugged design and wide operating temperature range will provide a reliable operation virtually in any environment. dEX software assists with logger configuration, viewing real-time data in charts, and retrieval of historical data for analysis.



## Data Logging

Data readout via USB or remote data transmission via mobile network/ Wi-Fi/ Ethernet.



## Connect Any Sensor

**Analog:** Voltage, Current, RTD, Thermocouple, Strain Gauge and Vibrating wire  
**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



## Warranty

3 Years of extended warranty on all the loggers



**Environmental** – Monitor surface and ground water conditions, changes in atmospheric conditions to forecast weather and the presence of air pollutants..



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

# DT82 DataTaker

## Key Benefits

- **Ease of deployment:** On-site connectivity via USB makes it easy to configure and test the deployed monitoring module
- **Universal:** Connects to any sensor. This universal logger can integrate with any type of sensor. Temperature, voltage, current, 4-20 mA loops, resistance, bridges, strain gauges, frequency, digital, serial and calculated measurements can all be scaled, logged and returned in engineering units or within statistical reporting
- **Robust:** With its solid aluminium case this logger is suitable for harsh environments
- **Cost effective:** Low maintenance product. Minimal attention needed after setup



## DT82E – Environmental Logger

Low end environmental logger with 2 analog inputs, designed for environmental sensors with SDI12 signal such as water level or water quality sensors.

## DT82I – Industrial Logger

Low end industrial logger with 2 analog inputs, designed for industrial sensors with serial signal using ASCII or MODBUS protocol. It is possible to integrate this logger to any existing SCADA system for process control.

## DT82EM – Integrated Modem Environmental Logger

An integrated modem features an access to 3G network of the logger. Utilise the DT82EM's automatic data delivery features to schedule your data to be automatically emailed to your inbox every day, week, month or other time interval.

## General Specifications

- **Analog input :** Isolated programmable, 6 single-ended, 4 differentials, 2 (3-wire/4-wire)
- **Effective resolution:** 18 bit
- **Analog sensors :** Voltage, Current, Thermocouples, RTD's, Thermistors, Monolithic Temp. Sensors, Strain Gauges, Bridge Sensors
- **Analog output :** Isolated programmable 16-bit DAC, 0-10 V or 0-20 mA
- **Maximum sampling :** 40 Hz
- **Excitation output :** 12 V/5 V selectable max. 150 mA
- **Switching :** Latching Relay max. 30 VDC, 1 A
- **Digital sensors :** Digital I/O, Counters (32 bit, maximum 100 kHz)
- **Internet protocol :** HTTP, FTP, SMTP
- **Power requirement :** 10...30 VDC
- **RTC Accuracy :** 1 min/year (0...+40°C)  
4 min/year (-40...+70°C)
- **Operating temperature :** -40...+70°C, 85% RH non-condensing
- **Storage :** 128 MB CF (upgradeable to 4GB),

8 GB USB flash drive (optional)

### Environmental Logger (DT82E)

- **Communication ports:** RJ45, RS232 (Host)
- **Communication protocol:** SDI12, MODBUS RTU (Slave), MODBUS TCP/IP

### Integrated Modem Environmental Logger (DT82EM)

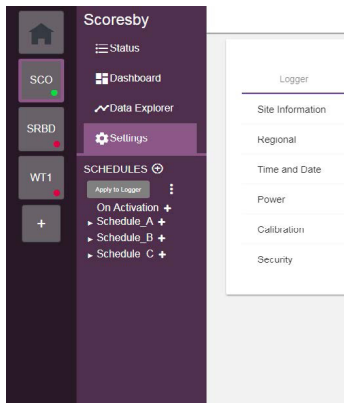
- **Communication ports:** RJ45
- **Communication protocol:** SDI12, MODBUS TCP/IP
- **SIM interface:** SIM Socket (1.8 V/3 V)
- **Data transfer:** Email or FTP

### Industrial Logger (DT82I)

- **Internal battery:** 6V @ 1.2 Ah
- **Communication ports:** RJ45, RS232 (Host), RS232/RS485/RS422
- **Communication protocol:** MODBUS RTU (Master/Slave), SDI12, MODBUS TCP/IP, ASCII

# dEX 2.0 (Logger Software)

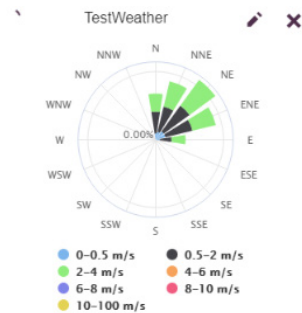
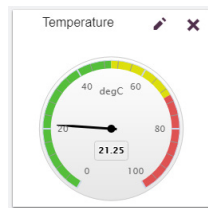
A software with intuitive graphical interface for programming DataTaker that allows you to configure, view real-time data in widgets or charts and retrieve your historical data for analysis.



After installation you can run dEX 2.0 and establish connection with your logger through TCP/IP connection either using Ethernet or USB ports.

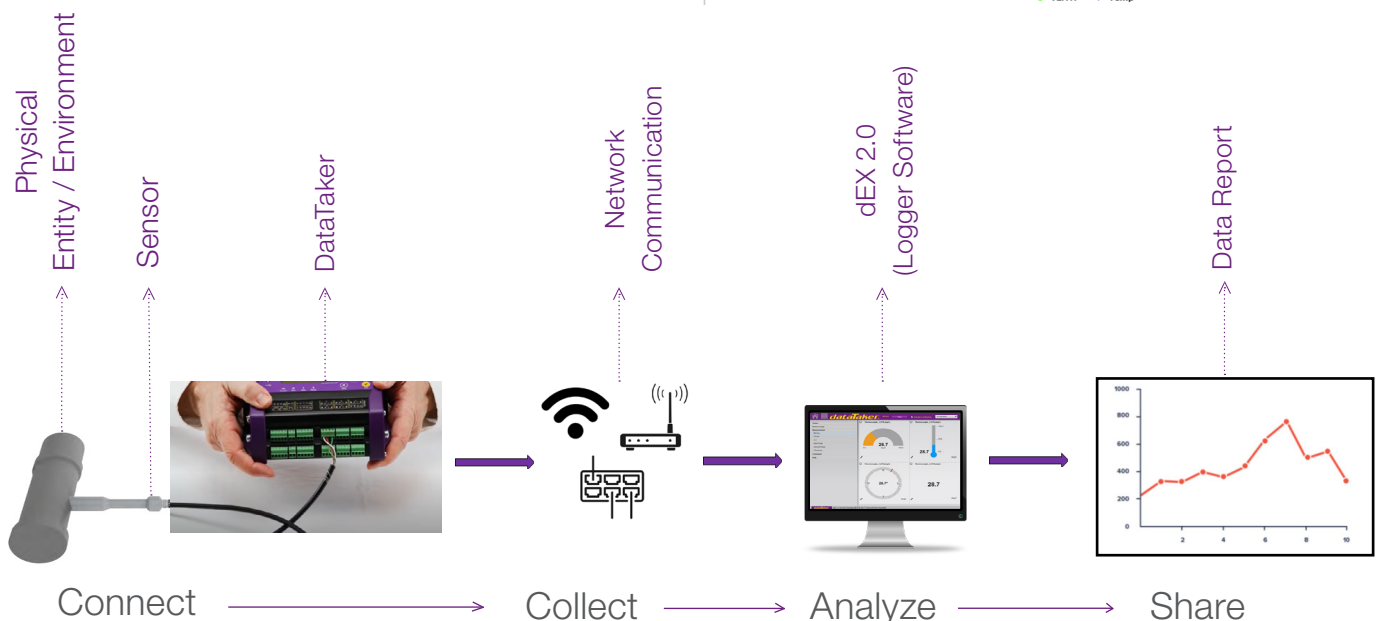
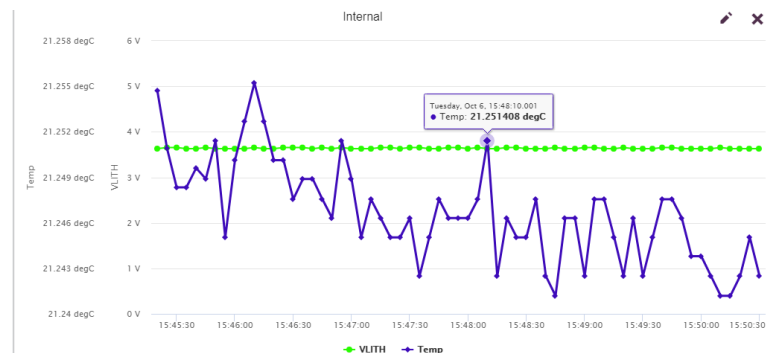
The software is available cross platform and will work on major operating system such as Windows, iOS and Linux.

Utilising Angular JS which allows one page application for simplicity, this dEX 2.0 draws a new approach on programming and viewing data like never been before.



## Features:

- Compatible to previous dEX program
- Improved UI design with single centralise page which is easier to move between functions.
- Offline configuration (program template creation)
- Improved programming approach on schedule / channel creation
- Re-defining alarm declaration
- Re-defining MODBUS and SDI12 channels creation
- Home functions that target multiple loggers



# Technical Specifications

**Table 1 Technical specifications**

| Comparison Table for Dataloggers              |       |       |        |
|-----------------------------------------------|-------|-------|--------|
| Feature                                       | DT82E | DT82I | DT82EM |
| Analog input channels                         | 2     | 2     | 2      |
| Analog output channels                        | ✓     | ✓     | ✓      |
| Digital I/O channels (open-drain outputs)     | 3     | 4     | 3      |
| Digital I/O channels (logic outputs / SDI-12) | 1     | –     | 1      |
| Relay output-1 latching relay                 | 4     | ✓     | ✓      |
| High speed counter inputs                     | 4     | 4     | 4      |
| Phase encoder inputs                          | –     | 2     | –      |
| RS232/422/485 communications port             | –     | ✓     | –      |
| RS232 host port                               | ✓     | ✓     | –      |
| Ethernet port                                 | ✓     | ✓     | ✓      |
| USB memory device port                        | ✓     | ✓     | ✓      |
| Switched isolated 5/12 V power output         | ✓     | ✓     | ✓      |
| Battery charger for internal/external battery | –     | ✓     | –      |
| Internal battery (capacity in Ah)             | –     | 1.2   | –      |
| Modbus master function                        | –     | ✓     | –      |
| Modbus slave (TCP/IP)                         | ✓     | ✓     | ✓      |
| LCD display & keypad                          | ✓     | ✓     | ✓      |
| Status LEDs                                   | 4     | 4     | 4      |
| Integrated modem                              | –     | –     | ✓      |

**Quality Statement:** DataTaker operates a quality management system complying with ISO 9001:2008. It is DataTaker's policy to supply customers with products which are fit for their intended purpose, safe in use, perform reliably to published specification and are backed by a fast and efficient customer support service.

**Trademarks:** DataTaker is a registered trademark.

**Specifications:** DataTaker reserves the right to change product specifications at any time without notice.



#### DataTaker DT82 Series 4 Range

| Dataloggers               | Channels                       | Product Code             |
|---------------------------|--------------------------------|--------------------------|
| DataTaker DT82E Series 4  | 2-6 Analog, 8 digital channels | DT4DT82E, *DT4DT82E-AL   |
| DataTaker DT82I Series 4  | 2-6 Analog, 8 digital channels | DT4DT82I, *DT4DT82I-AL   |
| DataTaker DT82EM Series 4 | 2-6 Analog, 8 digital channels | DT4DT82EM, *DT4DT82EM-AL |

**Accessories included in data logger:** DataTaker resource thump drive, AC adaptor, screwdriver & USB cable

\*DT4DT82E-AL, \*DT4DT82I-AL, \*DT4DT82EM-AL products are excluded from the above stated standard accessories.

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#### In Australia:

For customer service, call 1300-735-292

To fax an order, use 1800-067-639

To email an order, [ordersau@thermofisher.com](mailto:ordersau@thermofisher.com)

#### In New Zealand:

For customer service, call 0800-933-966

To fax an order, use 0800-329-246

To email an order, [ordersnz@thermofisher.com](mailto:ordersnz@thermofisher.com)

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