



dataTaker®

Data Acquisition and Data Logging Systems

- Low Power, Event & Pulse Data Logger
- 7 Digital Channels
- Up to 166,500 Data Points
- Embedded Program Option For OEM Use
- Stand Alone & Real Time Data Acquisition
- Remote Monitoring & Control
- Removable Screw Terminals



Specifications

**The dataTaker DT53
General Purpose Digital Unit**

The dataTaker DT53 is a general purpose logger suitable for end user or OEM use. The DT53 features 4 digital channels for event, state, counting and outputs, plus 3 high speed counters inputs for rates up to 1kHz. Data logging speed is up to 100 samples per second.

Data can be conveniently and securely stored in battery backed RAM. Alarms may be set for all channels. The DT53's rugged steel construction makes the unit suitable for harsh environments. Datataker can supply the DT53 to OEM customers with your Logo or preferred colours.

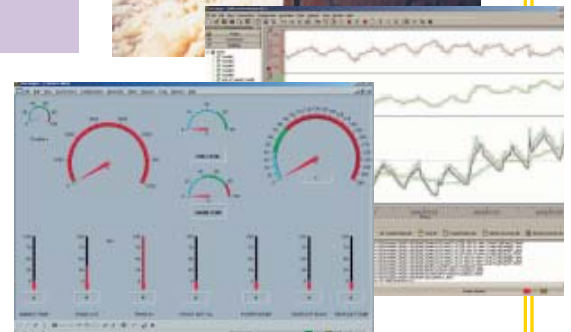


Applications include:

- Water Flow and Metering
- Tipping Bucket Rain Gauge
- Process & Machine Monitoring
- Production Downtime Moitoring
- Utility Monitoring
- Product Testing
- Fault Finding
- Research and Development
- Event Profiling
- Wind Speed
- Flow Profiling

The dataTaker Windows Based Software

Datataker produces a number of software packages including simple text based and graphical ('drag and drop') solutions for programming and management of the dataTaker range. Presentation of data can be by these standard packages or by using 3rd party software such as spreadsheets. DeLogger™ Pro 4 is our advanced package for remote and/or automated use of the dataTaker range.



Head Office

Australia
Datataker Pty Ltd
7 Seismic Court
Rowville Melbourne
Victoria 3178
Tel: +61 3 9764 8600
Fax: +61 3 9764 8997
Email: sales@datataker.com.au

Master Distributors

United Kingdom
Grant Instruments (Cambridge) Ltd
Shepreth
Cambridgeshire
SG8 6GB
Tel: +44 (0) 1763 264780
Fax: +44 (0) 1763 262410
Email: sales@datataker.co.uk

United States of America

Computer Aided Solutions
8588 Mayfield Rd, Suite One
Chesterland, OH 44026
Tel: +1 800 9 LOGGER
Tel: +1 440 729 2570
Fax: +1 413 375 6137
Email: sales@datataker.com

China

Earth Products China Limited
Rm 1205-06, Seapower Centre
73-77 Lei Muk Road
Kwai Chung Hong Kong
Tel: +852 2392 8698
Fax: +852 2395 5655
Email: info@epc.com.hk
Web: <http://www.epc.com.hk>



Digital Channels

Number of Channels

Bi-directional channels: 4
Dedicated counter channels: 3

Digital Input

Number: 4, shared with bi-directional channels
Input Type: logic level (protected with pull-up)

Counter Channels

Number: 4 low speed (10Hz) shared with bi-directional channels
3 high speed (1kHz, sleep mode) with switchable internal clocking options
Size: 16 bit (65535 counts)

Digital Output

Number: 4, shared with bi-directional channels
Output type: open-collector npn transistor
Rating: +30V, 100mA

Sensor Excitation

DC Voltage: 5V at 100mA (max.) switched

Sampling

Maximum sample speed: 100Hz

Calculation Channels

Any expression involving variables and functions including: sin(), cos(), tan(), asin(), acos(), atan(), abs(), sqrt(), average, maximum, minimum, time of max., time of min., variance, integral, histogram

Sensors - Comments

A wide range of sensor scaling and linearising facilities are provided including polynomials, expressions and functions

Scheduling of Data Acquisition

Number of schedules: 4 acquisition schedules
1 immediate schedule
1 alarm schedule
1 statistical Schedule

Scan triggers: time base or digital event
Conditional scanning: while digital input high
Time based scheduling: from seconds to months in increments of 1 second, 1 minute, 1 hour and 1 day
Maximum scheduled rate: 1 second or as fast as possible, typically 100 samples per second
Dynamic scan time base change: yes
Maximum number of channel entries: 110

Alarms

Condition: high, low, within range and outside range
Delay: optional time period for alarm response
Actions: set digital outputs, execute any *dataTaker* commands. Alarms can be combined in a logical fashion

Data Storage

Internal

Type: battery backed SRAM
Capacity: 166,500 data points

Download Data Format

Format: ASCII floating point, fixed point or exponential formats
Compatibility: spreadsheets, word processors, graphing packages, statistical programs and SCADA software

Serial Interface (RS232)

The DT53 is programmed and data extracted via the RS232 serial interface
Speed: 300 to 9600 baud (9600 default)
Handshake: XON and XOFF
Wake from sleep: yes
Isolation: 500V
Compatibility: computers, modems, satellite-modems, radio-modems and printers

System

Processor type: Z180, 18 MHz
Program storage: FLASH
Data storage: SRAM, battery backed
Indicator LED: sampling

Real Time Clock

For time stamping of data, scheduling and timers
Normal resolution: 1 second
Accuracy: 2 seconds per day (25°C)

Power Supply

Voltage range: 11 to 24Vdc or 9 to 18Vac
External battery input: 6V lead acid

Power Consumption

In normal mode: 1W (2W with ext. battery charging)
Sleeping: 2mW (350µA from 6V battery)
Typical low power operation: 20mW

Internal Backup Battery

For real time clock and internal data storage backup
Type: 3V 1/2AA Lithium

Physical and Environment

Construction: Powder coated fabricated steel
Dimensions: 260 x 110 x 55mm
Weight: 1.5kg (2.5kg shipping)
Environment temperature range: -45°C to 70°C
Humidity: 85%, non-condensing

Accessories Included

Comms cable: for PC
Software: Resource CD which includes DeLogger, DeTransfer, DePlot applications
Manuals: "Getting Started with dataTaker" "User's Manual"

Line adaptor: 110/240Vac, 500mA

Optional Accessories

External Battery (Recommended)

An external battery can be connected for stand alone data logging. The battery can be re-charged by the DT53 when main supply is restored/applied. (See power supply above)
Chemistry: lead acid gel cell
Voltage: 6V
Maximum charge current: 200mA
Temperature compensation charging: -10°C to +70°C
Operating time with 4Ahr battery:
Normal: approx. 24 hours
Low power: approx. 12 months

External Battery

Capacity: 1.2Ahr (GC-1.2) or 4Ahr (GC-4) for mounting external to the DT53

Internal Battery

0.5Ahr (Lead Acid) - factory fitted

Portable Carrying Case (PE500)

Capacity: 1 DT53 unit + battery
Environmental protection: IP66

DeLogger™4 Pro

Graphical programming and supervision software. Supports a large network of DT50, DT500 and DT800 range units connected via modem. Features include comprehensive plotting, reporting, mimics, database, web publishing and other powerful capabilities.

Warranty

The dataTaker DT53 is covered by a 3 year warranty on workmanship and parts. For further information on the dataTaker range, or for useful downloads, visit the dataTaker web site at www.datataker.com or contact your nearest DataTaker office or dealer.

www.datataker.com

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Your local dealer



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