



dataTaker workshop

Company Introduction



The world leader in serving science

What Do We Do?

- We design and manufacture intelligent data loggers
- Head office, sales and engineering is in Melbourne
- Manufacturing and service are in Brisbane
- Distributors in 44 countries around the world



In The Beginning ...

- dataTaker was founded in Melbourne in 1983
- Remained privately owned by the founders until 2002 when it was acquired by Grant Instruments (UK)
- Thermo Fisher Scientific acquired the company in June 2008

And now?

- Currently up to our 5th generation of products
- Over 40,000 loggers supplied worldwide
- Over 75% of our business is export; predominately to Europe, China and the USA

What is a Datalogger Anyway?

- A datalogger is a piece of hardware that monitors sensors and stores the data until it can be retrieved later for analysis



- The simplest form of datalogging would be to measure the length of a piece of string with a ruler and to write that measured length down on a sheet of paper

Why Would Anyone Need a Datalogger?

Information may be gathered for various reasons

- Research and development
- Systems or process monitoring or control
- Fault finding and identification
- Environment monitoring
- Legal or warranty protection

Then Why Datataker and Not a PLC?

What is more important? Collecting the data or controlling the process?

- Data Security
- PC not essential after programming
- Ease of use (USB memory stick data retrieval)
- Communication options (modems, networking)

Which one do I use?

- They're all mostly the same!
- Fit the model to the channel count
- 'G' versions support vibrating wire strain gauges
- 'E' version is low power



DT80
most common
general purpose



DT82 low cost
(reduced channel count and features)

DT80 & DT85 - Inputs

- DT80 – up to 15 analogue inputs *
- DT85 – up to 48 analogue inputs *
- 8 x digital inputs/outputs (software selectable)
- 4 x high speed counters
- 1 x serial sensor port (RS232, RS422, RS485)
- 4 x SDI-12 loops
- Phase encoder input

* Expandable with CEM20 expansion modules

DT82E & DT82I - Inputs

- Up to 6 analogue inputs
- 4 x digital inputs/outputs (software selectable)
- 4 x high speed counters

DT82E (Environmental)

- 1 x SDI-12

DT82I (Industrial)

- 1 x serial sensor port (RS232, RS422, RS485)
- 1 x phase encoder input

What's Inside The Box?

- DT80/DT82I has a 1.2AH internal battery
- DT85 has a 4AH internal battery
- 128MB compact flash card – up to 10 million data points
- USB memory stick port – programming and data retrieval
- Display and keypad
- Built-in web server
- Auto IP

What About Comms?

- Ethernet port
- USB host port (not DT82 series)
- RS232 serial port (can accept RS232 sensor input)
- Modbus master and slave (RS232 or TCP/IP)
- FTP server

CEM20 Expansion Module

- Expands one analogue channel out to 20
- Is a relay multiplexer
- All *dataTaker* analogue channel types are supported.



Comparison Matrix

Specification	DT80	DT85	DT82I	DT82E
No. of Analogue Channels	5	16	2	2
No. of Digital Channels	8	8	4	4
No. of SDI-12 Channels	4	4	0	1
Communication Ports	Ethernet, RS232, USB	Ethernet, RS232, USB	Ethernet, RS232	Ethernet, RS232
Internal Battery	Yes	Yes	Yes	No
CEM20 Compatible	Yes	Yes	No	No
LCD Display / keypad	Yes	Yes	Yes	Yes
Power Consumption (ext 12V @ 1 sec)	1350 mW	1350 mW	1350 mW	560 mW

What does all this really mean?

- We can read nearly any sensor you need
- Heaps of data storage
- Easy to use
- Get your data back locally via laptop or memory stick
- Get your data back remotely via network or modem
- Use Modbus to talk directly to SCADA systems
- Built-in processor = if we can write it we can do it

Environmental

- Weather Stations
- Waterway monitoring
- Effluent treatment monitoring
- Power monitoring
- Renewable energy

- Low power consumption
- Remote communications



Mining and Construction

- Mine wall stability monitoring
- Concrete curing
- Pile monitoring
- Structural Integrity
- Geologger with CEM20
- Vibrating wire sensors
- High channel counts



Education and Research

- CSIRO
- Laboratories
- Dept of Sustainability
- Pilot plants
- New product development
- Universities
- Civil Engineering
- Hydrology
- Materials Engineering
- Forestry

Automotive

- Cars and trucks
- Street sweepers & garbage trucks
- Trains, trams, ships
- GPS monitoring
- CANGate

