

CEM20

Channel Expansion Module

dataTaker®

Intelligent Data Logging Products

- Compact size
- Extremely low power
- Cost effective method of adding analog channels to a data logger.
- Each CEM20 multiplexes 20 analog channels into one analog channel on the data logger.



Increased channel capacity

Increasing the channel capacity of the *dataTaker DT80* range is made very easy by adding *dataTaker* Channel Expansion Modules (*CEM20*). Each *CEM20* adds an extra 20 universal data logging channels to the *dataTaker* data logger. A *dataTaker CEM20* connects to one analogue channel of the *dataTaker* data logger. This effectively expands the total channel capacity of the *DT80* to 300 inputs and the *DT85* to an incredible 800 inputs.

Incorporating the same dual isolation technology as the *DT80* range *dataTaker* data loggers each channel of the *CEM20* can be used for two isolated inputs or three common reference inputs so the maximum inputs increases further :-

Maximum Input Capacity

	Four wire Isolated Input	Two wire Isolated Input	Two wire Common Reference Input
DT80	100	200	300
DT85	300	600	800

Easy set up and connection

Connecting a channel expansion module to a *dataTaker* data logger is very easy. The *CEM20* is powered directly from the *dataTaker* data logger 12V output. Analog output connections of the *CEM20* wired to any analog channel of the data logger. See sample wiring diagram shown.

Solid construction and design

The construction of the *CEM20* is similar to the rugged *dataTaker DT80* range. The case is made from an anodized aluminium extrusion with powder coated steel end plates. Removable screw terminals provide flexible options for installation and maintenance.

Compatibility

The *dataTaker CEM20* is compatible with the following *dataTaker* data loggers :-
dataTaker DT80 Series 2
dataTaker DT80c Series 2
dataTaker DT85 Series 2
dataTaker DT85c Series 2

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Applications

Building & Construction Industry

Concrete cure monitoring
 Building services

Geotechnical

Dam monitoring
 Land Slip
 Mining
 Tunnels

Scientific & Research

Thermal Profiling
 Thermistor arrays
 Static load testing

General Industry

Thermal Profiling
 Oven calibration
 Refrigeration monitoring
 Process monitoring

Specifications

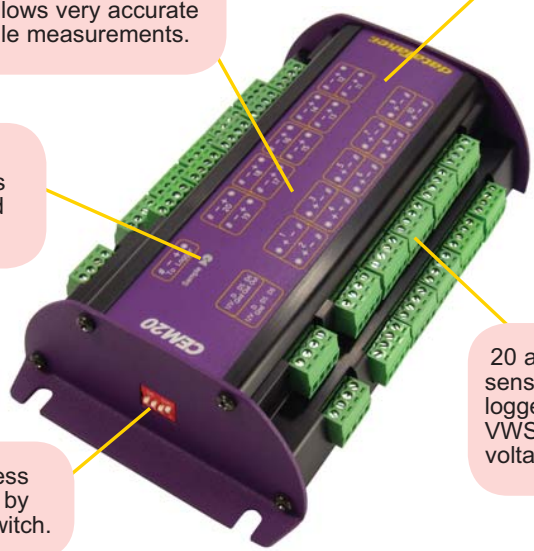


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Internal RTD temperature reference allows very accurate thermocouple measurements.

Proven relays from the DT80 range provides excellent isolation between channels and resistance to over voltage damage. Maximum sample speed is 12Hz.

Status LED indicates measurement activity and is a useful commissioning and troubleshooting aid.



Simple address configuration by 4-way DIP switch.

20 analog input channels for sensors supported by DT80 range loggers, includes thermocouples, VWSG, RTDs, 4-20mA loops, voltage, resistance, frequency etc.

Connections to Logger

Digital control connections: 5D & 6D in/out terminals
Power Connections: 12V & DGND twin terminals

Analog Connections: *, +, -, #

Each CEM20 attached to a logger uses a separate 4 wire analog channel on the logger.

Max distance for digital control signals: 500mm

Max number of CEM20 units per data logger:

DT80 & DT80G (Series 2 only): 5
DT85 & DT85G (Series 2 only): 15

Multiplexer

Type: Relay multiplexer

Maximum Input Voltage: 30Vdc

Maximum Sampling Speed: 12Hz

System

Status LED: Sample activity

Address Selection: 4-way DIP switch. Address 1-15

Power Supply

Recommended: Logger's switched 12V output

Alternative: External regulated 12Vdc ± 5%

Power Consumption

Sampling: 0.36W (12V 30mA)

Idle: CEM20 is automatically turned off when not sampling.

Physical and Environment

Construction: Powder coated steel and anodized aluminium

Dimensions: 180 x 100 x 50mm

Weight: 0.55kg

Temperature Range: -45°C to 70°C

Humidity: 85% RH, non-condensing

Assessories Included

Analog and control cables for connection to the dataTaker data logger.

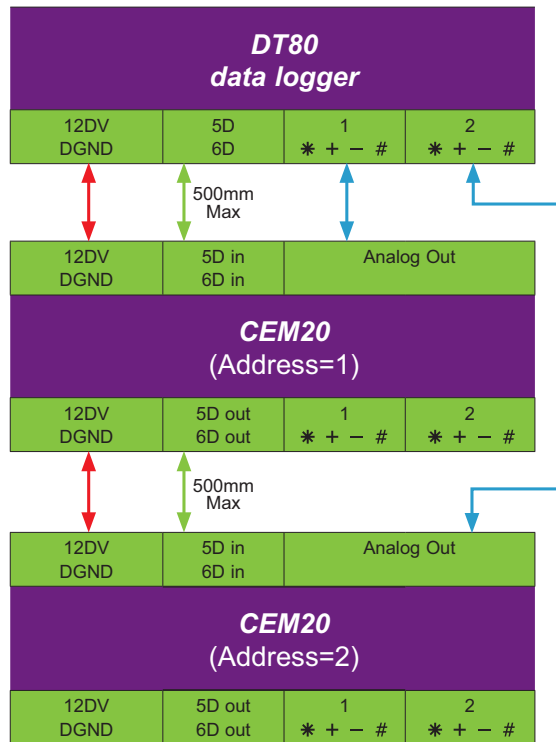


Diagram shows Functional connections for DT80 data logger and two CEM20 units.

For full technical specifications download the user's manual from our website.

www.datataker.com



Your local distributor

Warranty: The dataTaker CEM20 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 distributor.

Quality Statement: Datataker operates a Quality Management System complying with ISO9001:2000. 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.

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