



APPLIED MEASUREMENTS LTD.
Transducer Specialists...

+44 (0) 118 981 7339

info@appmeas.co.uk

<https://appmeas.co.uk>

DSC-USB Load Cell Digitiser

Key Features:

- High Speed – 100 readings/second max
- High Stability – with 1 part in 200,000 resolution
- High Performance
- USB Interface
- Compact
- Rugged IP50 Enclosure
- Simple Connectivity
- No Additional Power Supplies
- Free USB Toolkit Software
- Easy Monitoring and Data Logging
- Multi-Channel Systems can be supported
- Available Ex-Stock



Simple USB Connection Converts the Transducer Signal to Digital Input

If you need a simple sensor to PC connection in a desktop setting, the DSC-USB is ideal. The compact [DSC-USB interface](#) is designed to convert strain gauge transducer signal into a digital output direct to the PC via the USB port. The simple 'plug and play' direct connection to the PC means the data can be viewed immediately on screen and the results can be logged to a CSV file for further manipulation later in any spreadsheet program, without the need for amplifiers, filters and multimeters.

The DSC-USB interface delivers high performance and high accuracy readings direct to the PC with no need for additional power supplies as the device is powered by the USB port.

It is ideal as a 1 to 1 interface, it can connect with multiple sensors with the use of a suitable hub, please speak to our sales team. An optional DTEMP digital temperature sensor module is available to enable an advance 5-point temperature compensation of measurements.

The DSC-USB is perfect for all strain gauge bridge based sensors including load, weight, force, torque and pressure & displacement. Once the data has been received by the PC the FREE downloadable DSC-USB Toolkit software enables configuration, calibration and logging capabilities.

For additional channels of data logging the free downloadable DSCLog24 software is available which enables up to 24 channels of data monitoring and logging.

If you require faster higher speed readings, try the [new DSCUSB-FQ fast USB load cell interface](#), which delivers high speed readings of 4800 samples per second! [Contact our technical sales team.](#)

Options:

- DTEMP External Digital Temperature Sensor Module



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Industries:

- Laboratory Testing
- Educational Environments
- Research & Development
- Test and Measurements
- Medical

Applications:

- Medical Weight Monitoring Systems
- Weighing Scales for Health & Fitness
- Force Testing Using Signal Conditioners
- Research & Development
- Test and Measurements

Specification:

Parameter	Min	Typical	Max	Units
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Strain Gauge Measurement	4 Wire			
Strain Gauge Excitation Voltage	4.5	5	5.25	Vdc
Strain Gauge Drive Capability	80	-	5000	Ohms
Strain Gauge Sensitivity	-3	2.5	3	mV/V
Offset Temperature Stability		1	4	ppm/°C
Gain Temperature Stability		3	5	ppm/°C
Offset Stability with Time		20	90	ppm of FR (1)
Gain Stability with Time			30	ppm of FR (2)
Non Linearity before Linearization		5	25	ppm of FR
Internal Resolution		16 Million		Counts/divs
Resolution @ 1Hz readings (noise stable) over 100s	Ohms	200,000		Counts/divs
Resolution @ 10Hz readings (Noise stable) over 100s		120,000		Counts/divs
Resolution @ 100Hz readings (Noise stable) over 100s		50,000		Counts/divs
Signal Filter	Dynamic recursive type user programmable			
Power Supply Voltage	4.5	5	5.5	Vdc
Power Supply Current		68	75	mA
Data Transmission Rate		115.200		kbps
Output Cable Length			5	m
Output Temperature Measurement Resolution		0.0625		°C
Output Temperature Measurement Accuracy (-10 to 85)		0.5		°C
Output Temperature Measurement Accuracy (-55 to 125)		2.0		°C
Output Temperature Update Speed		5		Seconds
Operating Temperature Range	-40		+85	°C
Storage Temperature	-40		+85	°C
Humidity	0		95	%RH
Protection	IP50			
Dimensions – Cased Version	70.5 x 51 x 20mm excluding 9-way 'D' type socket connector.			



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Dimensions (mm):



DSCUSB cased 71 x 51 x 20 mm (2.79 x 2 x 0.78") excluding connectors, with a D9 connector & female micro USB connector, supplied with a USB to micro USB cable (150 cm 4ft 11")

Ordering Codes:

Core Product	Capacity (inc Engineering Units)	Cable Length (m)	Specials Code	Result
DSC-USB				DSC-USB

Case Study:

[Accurate S-Beam Load Cell Measures Cable Tension Of Light Aircraft](#)



In light aircraft the flight control system must have correctly adjusted cables to maintain correct rudder movement, smooth direction and precise level and control of flight. Calmet Laboratory Services used an s-beam load cell and DSC-USB load cell digitiser to check the accuracy of the aircraft tension meters when applying tension to a cable. The cable tension readings from the DBBSM s-beam load cell were sent to the DSCUSB strain gauge digitiser which converted the strain gauge transducer inputs into a digital USB serial output.

Associated Products:



[Load Cells & Force Sensors](#)



[T24 Wireless Telemetry Range](#)



[AML/SGD Displacement Sensor](#)



[Pi600 Pressure Sensor](#)



[Torque Transducers & Torque Sensors](#)