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Modul DSCUSB



Modul DSCUSB Producator: LCM Systems DSCUSB Strain Gauge Load Cell USB Conditioning Module

Descriere

DSCUSB Strain Gauge Load Cell USB Conditioning Module

Features :

- Quick and easy connectivity via USB
- ASCII protocol
- Digital I/O
- High Speed to 500 readings/second
- Real mV/V calibration
- Very high stability
- Peak and trough recording
- Powered from USB port

The DSCUSB is a compact, high performance digital signal conditioner with USB connectivity aimed at applications which require high-accuracy measurement repeatability.

An option of a rugged metal enclosure makes the device suitable for all environments. Simply by plugging the device into a PC, data can be extracted from most strain gauge bridge input sensors and the acquired data displayed using free downloadable software. This software also facilitates the selection of various parameters such as display resolution and sample rates.

The DSCUSB can also be supplied as an OEM board for mounting into a separate enclosure or for integrating within another product.

No additional power supply is required. Although ideal for 1 to 1 interface the device can connect with multiple sensors with the use of a suitable hub. Available in ASCII protocol.

Including the DSCUSB into load cell based applications enables the building of very high accuracy load cells, using the built in linearization.

LCM Systems can also supply PC based software packages, specially written to interface with DCELL based load cells and pressure transducers. Please contact our technical department to discuss your requirements.LCM Systems can also supply PC based software packages, specially written to interface with DCELL based load cells and pressure transducers. Please contact our technical department to discuss your requirements.

Specification :

General Hardware				
Description	Min	Typ	Max	Units
Power Supply Voltage	4.35	5	5.25	Vdc
Average Operational Current (normal mode)		68	75	mA (350Ω bridge)
Operating Temperature Range	-40		+80	°C
Storage Temperature Range	-40		+80	°C
Humidty	0		95	%RH
Environmental Protection		IP50		
European EMC Directive		2004/108/EC		
Low Voltage Directive		2006/95/EC		
Measurement				
Description	Min	Typ	Max	Units
Bridge Excitation System		4 wire		
Bridge Excitation	4.5	5	5.25	Vdc
Bridge Impedance	80		5000	Ohms
Bridge Sensitivity (FR)	-3		+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
Gain Stability with time			30	ppm of FR
Non Linearity before Linearisation		5	25	ppm of FR
Internal Resolution		16 million		Counts/Division
Resolution @ 1HZ (noise stable) over 100s		200,000		Counts/Division
Resolution @ 10HZ (noise stable) over 100s		120,000		Counts/Division
Resolution @ 100HZ (noise stable) over 100s		50,000		Counts/Division
Signal Filtering	Dynamic recursive type - user programmable			
Communications				
The Load Cell to USB Adaptor will communicate as a simple serial device rather than a ‘native’ USB device. Once the device is plugged into a PC and the supplied drivers are installed, the device will appear as a Virtual Serial Port to the PC. We can will also supply a driver for its own ‘Instrument Explorer’ software. Because each device, when plugged into a PC, creates an additional serial port, the total number of devices that can be attached to the PC may be limited by the communication software’s ability to utilise these multiple ports i.e. an existing communication program may only support COM1 to COM4				
Support Modules				
The product is supplied with software to enable the configuration of the product. This is also available to download from LCM Systems website.				
Product Order Codes				

Description	Product Code			
Strain Gauge to USB Converter Cased	DSCUSB			
Uncased Module	DSCUSBOEM1			
Uncased Module with No Field Connectors	DSCUSBOEM			
DIN Rail Mounting Kit for USB PCBs	DSCUSBDIN			

General Hardware

Measurement

Communications

Support Modules

Product Order Codes