

Description

The D-CAN is a high performance digital signal conditioner with a host of additional features for the precision measurement of strain gauge based transducers., providing a CANBus output.

There are two product types available in the range; the DSC and DCELL. Both products offer a high speed CAN output.

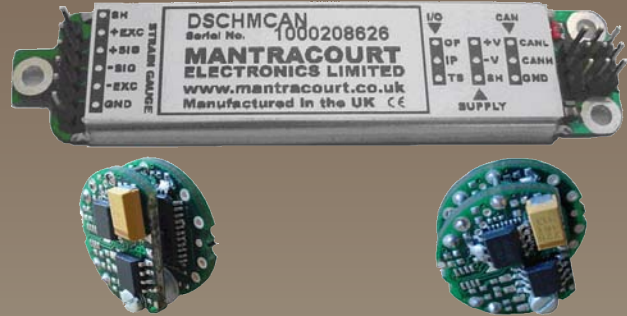
The DCELL PCB is designed to fit inside the majority of sensors, providing a 'digital' load cell with the benefit of very high stability and a RS485 output.

Including the D-CAN into load cell based products enable the building of very high accuracy load cells, using the built in linearization and temperature compensation facility.

For applications where it is not possible to fit the DCELL within the transducer, there is an in line housing available (Model ILE).

For the DSC version of the product there is the DSJ1, which is a junction box "docking station" sealed to IP65, for the simple installation of a single DSC; or a 4-way version; the DSJ4.

D-CAN CANBus Digital Strain Gauge to Data Converter



Features

- Simple mounting using M2 screw
- Connections via plated through holes
- Low profile to fit in very small apertures
- Baud rates to 230k
- High speed to 500 Readings/Sec
- $\pm 15KV$ ESD protected
- Real mV/V calibration
- Noise Immunity 5x heavy industrial level
- Diagnostics LED
- Remote shunt calibration
- Very high stability
- Peak and trough recording
- Programmable dynamic filter
- Operating voltage (5.4 – 18Vdc)

Typical Applications

- Vessel weighing
- Performance Yacht rig monitoring
- Vehicle weighing
- Automotive force measurement

CANBus Digital Strain Gauge to Data

Specification

Product Description	DLCH High Stability			DLCS Industrial Stability			Units
	Min	Typ	Max	Min	Typ	Max	
Bridge Excitation	4.5	5	5.25	4.5	5	5.25	VDC
Bridge Impedance	320	350	5000	320	350	5000	Ohms
Sensor Impedance (18v supply)	320	350	5000	320	350	5000	Ohms Δ
Sensor Impedance (12v supply)	120	350	5000	120	350	5000	Ohms Δ
Bridge Sensitivity	-3		+3	-3		+3	mV/V
Offset Temperature Stability		1	4		5	10	ppm/°C
Gain Temperature Stability		3	5		30	50	ppm/°C
Offset Stability with time		0.002	0.008		0.0035	0.016	%FR
Gain Stability with time			30			300	ppm of FR/1 st year
Non Linearity		0.0005	0.0025		0.0005	0.0025	%FR
Internal Resolution		16 Million			16 Million		Counts/Divisions
Resolution @ 1Hz (Noise Stable)	⊙	400,000			100,000		Counts/Divisions
Resolution @ 10Hz (Noise Stable)	⊙	120,000			40,000		Counts/Divisions
Resolution @ 100Hz (Noise Stable)	⊙	50,000			10,000		Counts/ Divisions
Resolution @ 500Hz (Noise Stable)	⊙	18,000			5,000		Counts/ Divisions
Optional	Min	Typ	Max	Min	Typ	Max	Units
Temp Measurement Resolution		0.1			0.1		°C
Temp Measurement Accuracy		1			1		°C

Notes: From original offset at any time ⊙ Stability over 100 seconds Δ Subject to supply voltage (see electrical specifications)

Electrical	Min	Typ	Max	Min	Typ	Max	Units
Power Supply Voltage	5.4	12	18	5.4	12	18	Vdc
Power Supply Noise/Ripple			100			100	mVac pk-pk
Supply Current (350R Bridge)		45	60		45	60	mA
Power@10V Supply (350R Bridge)		350			350		mW
Excitation System		4 wire			4 wire		

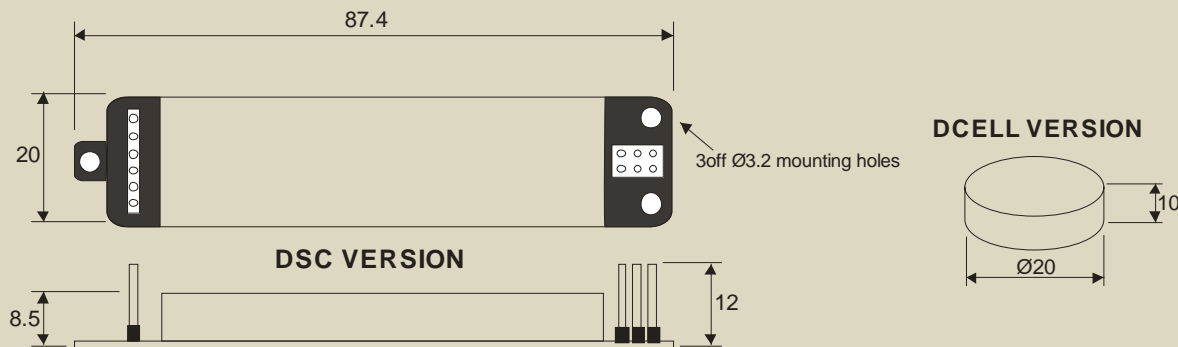
Communications	Min	Typ	Max	Min	Typ	Max	Units
CAN bit Rate	10K		1M	10K		1M	Bits/second
Protocols	CANopen, MANTRACAN						

CE & Environmental

Storage temperature	-40 to +85°C
Operating temperature	-40 to +85°C
Relative humidity	95% maximum non-condensing
Safety/Low Voltage Directive	73/23/EEC amended by 93/68/EEC BS EN 61010-1:2001, IEC 1010-1-1990
EMC Directive	89/336/EEC Basic Standard BS EN 61326:1998
EMC Emissions	BS EN 55011:1998
EMC Immunity	BS EN 61000-42:1995 BS EN 61000-4-3:2002 BS EN 61000-4-4:2004 BS EN 61000-4-11:2004

Mechanical Dimensions

All dimensions in millimeters



TYPE: D-CAN

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Product Order Codes

DCell High Stability

Product Code

CANopen Protocol	DLCHCOP
MantraCAN Protocol	DLCHMCAN

DSC High Stability

Product Code

CAN open Protocol	DSCHCOP
MantraCAN Protocol	DSCHMCAN

DCell Industrial Stability

Product Code

CANopen Protocol	DLSCCOP
MantraCAN Protocol	DLCSMAN

DSC Industrial Stability

Product Code

CAN open Protocol	DSCCOP
MantraCAN Protocol	DSCMCAN

Due to continual product development, LCM Systems Ltd. reserves the right to alter product specifications without prior notice.

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TYPE: D-CAN