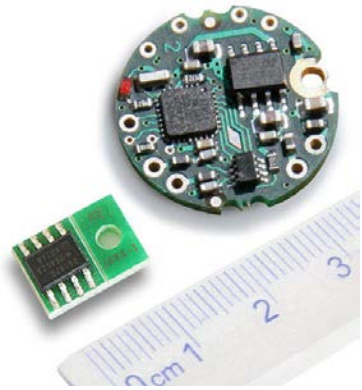
Embedded Digital Load Cell Converter/Strain Gauge Digitiser Module



Miniature format designed specifically to be incorporated directly into strain gauge sensors such as load cells, pressure transducers and torque sensors

Introduction

High speed and high precision digitizing capabilities, along with linearization and temperature compensation.

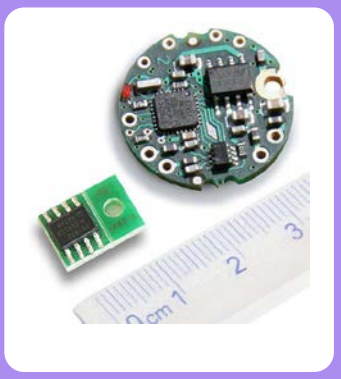
Ability to convert standard strain gauge load cells into digital load cells.

Available output formats include the RS485, ASCII, Modbus, CAN and MantraCAN (J1939). All are 4 wire bus and power formats offering connection of up to 32 sensors on just 4 wires.
Please Note: MantraCAN products will only work with Mantracourt software up to and including Windows Vista.

Try our ready to go Evaluation Kit which includes one free DCell.

Specification at a Glance

- ATEX component approval on CAN bus versions - Ex Na II
- Remote shunt calibration
- Temperature compensation
- Peak and trough recording
- Long cable lengths up to 1000 m
- Programmable dynamic filter
- Option of miniature digital temperature sensor module for wiring to DCell temperature sensor pcb board (shown above)
- Low profile, small 20 mm diameter diameter for mounting inside sensor

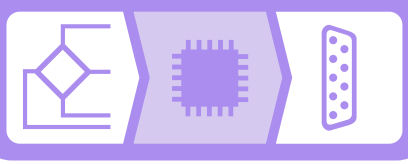


User Benefits

- Low profile, small 20 mm diameter diameter for mounting inside sensor
- Error reporting including strain gauge fault conditions
- Option of an in-line stainless steel enclosure
- Free software enabling 24 DCells to be viewed and logged simultaneously

Ideal Applications

- Civil Engineering
- Agriculture
- Marine
- Test & Measurement
- Torque Measurement



Related Product

EVAL KIT
Evaluations kits for DCell and DSC are available for stress free set up.Strain gauge data converter to RS232. Modbus, CAN, RS885

ILE
Stainless steel enclosure for DCell data converters and ICA

DSC
Card version available the strain gauge data converter to RS232. Modbus, CAN, RS885

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Related Software

24 Channel Logging
View and log up to 24 channels.

Instrument Explorer
Quick set up software event monitoring, data logging, calibration and configuration.

Case Study

The Application:
An Australian mango grower had to accurately weigh his produce. It they are not of a required minimum weight to be sold as fruit, they are under-sold for chutney.

The fruit's irregular shape make it difficult to weigh. As they moved along the conveyor for processing, their irregular shape caused them to bump and collide which the standard load cell picked up as 'noise', and made it impossible to accurately weigh the fruit

The Solution:
What was put in place was incredibly simple but effective. After the inspection section of the conveyor, the mango's are placed in individual egg-cup like trays to keep them stable when moving on

to the weigh beam. Now that the 'noise' is removed, the weighing system needs to be fast enough to respond.

Mantracourt's DCell load strain digitiser records 500 readings / Sec. This is fast enough to weigh the moving fruit and thereby accurately measure the weight of each individual fruit. The system allows only truly underweight products to be rejected.

CE & Environmental

Storage temperature	- 40 to +85ºC
Operating temperature	- 40 to +85ºC
Relative humidity	95% maximum non condensing

CE Environmental Approvals

European EMC Directive	2004/108/EC

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Designed, manufactured and supported in the UK

ISO 9001 REGISTERED FIRM

In the interests of continued product development, Mantracourt Electronics Limited reserves the right to alter product specifications without prior notice

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