

## Strain Gauge or Load Cell Digitiser Module (1 Channel)



*Designed to take one DSC card in a single IP65 / NEMA 4 rated enclosure for a practical solution of digital load cells with platforms, silos or any weighing which is connected to a PC and PLC's*

### Introduction

The function of the DSJ1 is to enable the easy connection of a load cell and a DSC Card for communications to a PC or PLC.

Supplied as an OEM device on a single 135 x 73mm PCB, it has options for fitting in an IP65 ABS Case, or to a DIN rail fixture.

When a DSC card or DCell is fitted to the DSJ1 PCB it will enable the connection of a load cell via a two-part connector, with a five-way two-part connector for the communications output and a D type 9 pin connector, as well as connections for digital inputs and outputs and external temperature sensor.

The communications output connection is RS232, RS485 or CAN depending on the DSC unit used.

### Specification at a Glance

- Bus connections for communication and power supply
- 2 part connectors for field terminals
- D type 9 pin connector for easy communications connection
- Option to terminate bus through 120 ohm resistor
- CAN compliant option
- 3 x screen clamps for EMC termination
- IP67 / NEMA 4 enclosure dimensions 160 x 80 x 55 mm

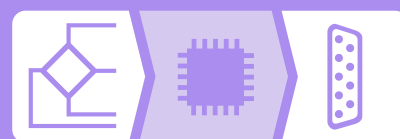


### User Benefits

- IP67 / NEMA 4 case for 1 digitiser module
- Green LED power indicator
- Red LED digital output indicator
- 3 year warranty

### Ideal Applications

- Civil Engineering
- Agriculture
- Marine
- Industrial Processing
- Silo & Weighing industry
- Test & Measurement



## Related Product



### DSC

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



### EVAL KIT

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



### DS485DIS

RS232 data display for DCell and DSC



### DSJ4

4 channel digital load cell converter CAN RS485 Modbus, or IP67 cased version available

## Case Study

British Antarctic Survey (BAS) is one of the world's leading environmental research centres and is responsible for the UK's national scientific activities in Antarctica.

### The Application:

At the Halley Research Station, the extreme environment poses great technical problems to construction engineers, where blizzards and snow drifts eventually bury everything and where the site has gone through a number of re-positioning exercises since 1957. The tension in the bracing wires needed to be constantly monitored to keep within safety limits and to ensure that the tension is spread evenly to avoid distortion.

### The Solution:

British Antarctic Survey have installed 20 of digital strain cards at its Halley Research Station.

The cards are used to monitor tension in the bracing wires of the station, which is built on steel legs buried deep in the ice. To



keep the structure square and true, each of the legs is braced outward with a stainless steel wire. It is vitally important that the wire tension limits are not exceeded as the temperature falls.

Each of the 20 wires are secured using a strain shackle which is connected to a DSC card housed in an environmental enclosure. The outputs of the 20 DSC cards are brought to a PC via a multi drop RS485 connection, and is managed by specifically designed software, where all 20 outputs are monitored for strain and temperature. There are facilities for calibration, logging, and printing out the tension data which can then be monitored remotely via means of communications to any area of the World.

## CE & Environmental

Storage temperature	- 40 to +85°C
Operating temperature	- 40 to +85°C
Relative humidity	95% maximum non condensing
IP rating	IP67 / NEMA 4

### CE Environmental Approvals

European EMC Directive	2004/108/EC
Low Voltage Directive	2006/95/EC



# Amber Instruments Ltd

Tel: +44 (0)1246 260250 | E-mail: [sales@amberinstruments.com](mailto:sales@amberinstruments.com)  
 Web: [amberinstruments.com](http://amberinstruments.com)  
 3 Mercury House, Calleva Park, Aldermaston, Berkshire, RG7 8PN.