mantracourt

DSJ1

Strain Gauge or Load Cell Digitiser Module (1 channel)

Instruction Sheet

Features

- Bus connections for communication and power supply
- 2 part connectors for field terminals
- D type 9 pin connecter for easy communications connection
- Green LED power indicator
- Red LED digital output indicator
- Push switch to simulate digital input
- Option to terminate bus through 120 ohm resistor
- CAN compliant - option
- 3 x screen clamps for EMC termination
- 3 year guarantee

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.

Designed to take one DSC card in a single enclosure, the DSJ1 offers a convenient and practical solution to the installation of digital load cells with platforms, silos and any weighing systems where connection to PC and PLC's is an essential requirement of the system.

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.

Notes for installation & preparing for use

For the operational and communication requirements of the DSC card, refer to the DSC User Manual Instructions.
The DSC card is mounted on the main PCB with 3 pillars.
The PCB is supplied with an 8 way two-part connector J2 for the load cell; details of the connections are shown on the layout diagram on the reverse of this sheet.
The D type connector J3 or J1, the 5 way two-part connector provides one-to-one connection to RS232 as well as, RS485 or CAN. LK1 and LK5 provide selection for D Type function i.e RS232 or CAN/RS485 . The J1 connector also provides the power connections. J4 a two-part 3 way connection is provided for connection of a digital input and output. J2 provides connections to the strain gauge and external temperature sensor; alternatively an external temperature sensor can be used which can be selected by using LK3.

Connection details are shown on the layout diagram on the reverse of this sheet.

Cable Screening: It is strongly recommended that all cable screens are connected to the screen clamps provided, adjacent to the cable entry points.

A green LED in the centre of the PCB provides an indication of power. A red LED indicates a digital output which is selectable using LK4.

A push switch SW1 can be used to simulate a digital input.

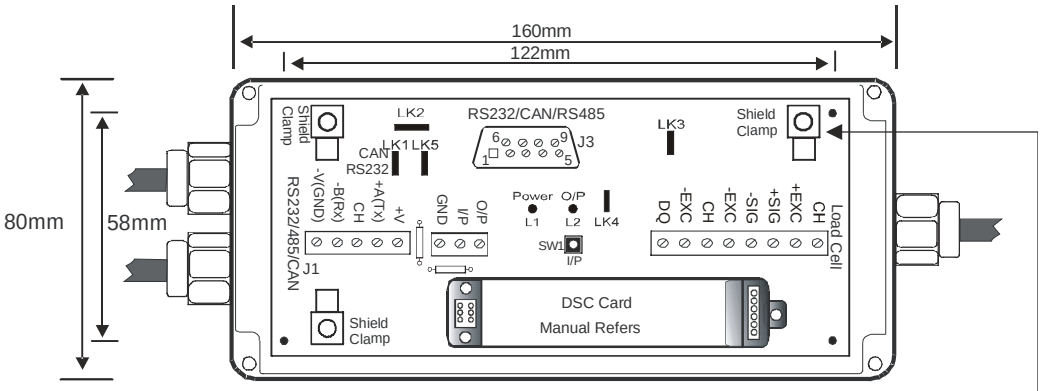
Link LK2 is used to provide a 120R terminating resistor RS485 or CAN connections.

Power supply specifications

Supply Voltage	5.8 to 18V dc
Power	0.5 to 1.5 watts

CE & Environmental Approvals

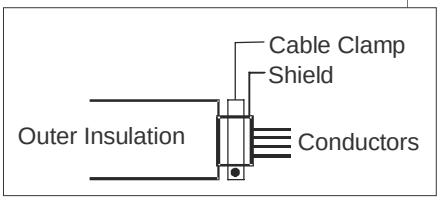
Storage temperature	-20 to +70ºC	EMC Emissions	BS EN 55011:1998
Operating temperature	-10 to 50ºC		
Relative humidity	95% maximum non condensing	EMC Immunity	BS EN 61000-42:1995
Safety/Low Voltage Directive	73/23/EEC amended by 93/68/EEC		BS EN 61000-4-3:2002
	BS EN 61010-1:2001, IEC 1010-1-1990		BS EN 61000-4-4:2004
EMC Directive	89/336/EEC		BS EN 61000-4-11:2004
	Basic Standard BS EN 61326:1998		



Depth 55mm

Shield Clamp: Farnell part nos 353- 8266, 853-8278 or
353-8280 depending upon cable size used.
3 x IP65 Gland for cable size 4.5 to 7mm
Fixing Centres of M4: 122 x 58mm

Shield Clamp Detail



Link Description	
LK1 & LK5	Select connections to Dtype, RS232 or CAN/RS485
LK2	Provides 120R terminating Resistor for CAN/RS485
LK3	Selects on board temperature sensor or external device connected to J2
LK4	Connects digital output to Output LED

J1 Connector Detail			J3 D Type Connector Detail			
RS485	CAN	RS232	J3 PIN	RS485	CAN	RS232
+ V	CAN V+	+ V	2	B	CAN L	Tx
A	CAN H	Tx	3	-	-	Rx
CH	CAN SH	CH	5	GROUND	GROUND	GROUND
B	CAN L	Rx	7	A	CAN H	N.C.
-V	CAN GND	GND and -V	-	-	-	-

For RS485 Link as for CAN LK1 and LK5

ISO 9001
REGISTERED FIRM

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

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