

# DSI-1000 Series Digital Slope Indicator Display

**Dual Axis Panel Mount Display available for a wide variety of applications.**

The Jewell **DSI-1000 Series** is a microprocessor based panel meter designed to take the output from Jewell's gravity referenced inclinometers and display it as an angle. The compact unit provides the  $\pm 15$ VDC sensor excitation with dual channel inputs. It conditions the inclinometer output and displays the angle down to 0.001 degrees.

## Features

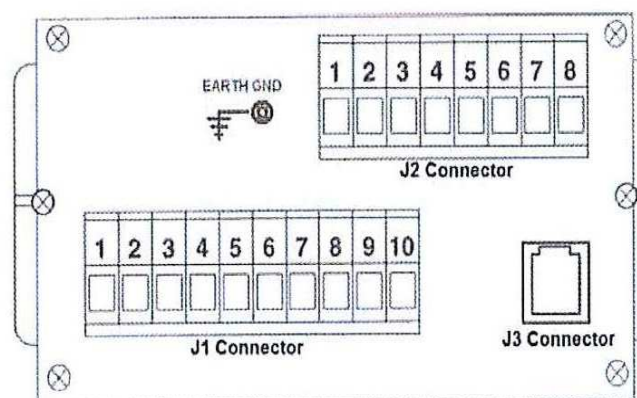
- Dual Channel Inputs
- Front Panel Digital Zero (Tare)
- Splash Proof Bezel
- Heavy Duty Aluminum Case
- Front Panel Switches for Programming and Calibration
- 6 Digits, 0.56" LED Readout with Negative Indication
- Two Set-Points with Relay Closures
- Short Case, Only 4" Behind Panel Depth
- Programmable for Different Range Inclinometers
- RS232 Interface Standard
- 0 to 10VDC Analog Output
- $\pm 15$  VDC Sensor Excitation

## Applications

- Industrial: Used in conjunction with our inclinometer to provide a readout of the tilt in degree format
- Marine: Alarm monitoring system
- Industrial: Monitoring Remote Sensors
- Fire Trucks: Monitoring tilt angle of ladders



Back Panel Drawing: *DSI-1000 Series Digital Slope Indicator*



### J1 Connector

- 1 – Power +
- 2 – Power Neutral
- 3 – Serial 485+/TX 232
- 4 – Serial 485-/RX 232
- 5 – Digital GND
- 6 – Limit 1
- 7 – Common 1
- 8 – Limit 2
- 9 – Common 2
- 10 – **Optional Remote Input**

### J2 Connector

- 1 - +Input 1
- 2 - -Input 1
- 3 - +Input 2
- 4 - -Input 2
- 5 – Excitation Plus
- 6 – Excitation Minus
- 7 – Analog Out
- 8 – Analog GND

### J3 Connector

- Ethernet Input
- RJ45 Connector
- Option

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## Performance

Display	6 digit, fourteen segment red LED 0.56 inches high
Full Scale	Programmable; $\pm 1.000^\circ$ , $\pm 3.000^\circ$ , $14.50^\circ$ , $\pm 30.00^\circ$ , $\pm 90.00^\circ$
Accuracy	$\pm 0.01\%$ of reading $\pm 2$ counts of LSD up to $60.00^\circ$ $\pm 0.1\%$ of reading $\pm 2$ counts of LSD from $60.00^\circ$ to $89.00^\circ$
Polarity Indication	"_" Displayed
Resolution, Auto-Ranged	$0.001^\circ$ below $10^\circ$ $0.01^\circ$ above $10^\circ$
Tare	up to 50% of span from single front panel switch
Analog Output	0 to 10VDC tracks display
Limit Outputs	Two form "A" relay closures rated 28Vdc at 0.25A

## Analog to Digital Conversion

Technique	18 Bit Effective Resolution
Rate	7 conversions per second

## ASCII RS232 Serial Interface - Standard (RS485 and Ethernet Option)

Format	1 start bit, 8 data bits, 1 stop bit, no parity bits
Baud Rates, Programmable	9600, 4800, 2400, 1200, 600, 300, 150, 75

Electrical	Standard	Optional
Input Voltage (47 to 500 Hz)	105 to 132 Vac	10-15 Vdc
Input Current	<50mA	<600mA
Inclinometer Excitation	$\pm 15$ VDC ( $\pm 15$ mA)	

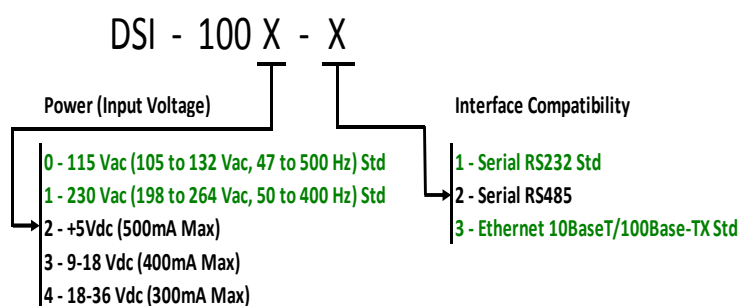
## Environmental

Temp Range, Operating	-20 to +60°C
Temp Range, Survival	-25 to +85°C

## Options

- RS485 Compatible Interface
- Ethernet Interface 10 Base-T/100 Base TX
- +5vDC Power 500mA Max
- 4-20mA Output Max Load 600  $\Omega$
- Analog Output, Tracks Input 0-10Vdc
- 9-18Vdc Power 400mA Max
- 230Vac; 50-400Hz Input Power
- 18-36Vdc Power 300mA Max
- Sunlight Readable Red LED

## How to Order



Standard Part Numbers	Description
DSI - 1000-1	115 Vac with RS232 Interface
DSI - 1000-3	115 Vac with Ethernet 10BaseT/100Base-TX
DSI - 1001-1	230 Vac with RS232 Interface
DSI - 1001-3	230 Vac with Ethernet 10BaseT/100Base-TX

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*Making Sense out of Motion...*

## Ordering Information

Model Number	Part Number
DSI-1000-1	848509-001
DSI-1000-3	848509-002
DSI-1001-1	848509-003
DSI-1001-3	848509-004
DSI-1004-1	848509-005
DSI-1000-2	848509-006
DSI-1001-2	848509-007
DSI-1002-1	848509-008
DSI-1002-2	848509-009
DSI-1002-3	848509-010
DSI-1003-1	848509-011
DSI-1003-2	848509-012
DSI-1003-3	848509-013
DSI-1004-2	848509-014
DSI-1004-3	848509-015

## Cable Assemblies

Model Number	Part Number
DSI-CBL-006-1	879605-001
DSI-CBL-010-1	879605-002
DSI-CBL-006-2	879605-003
DSI-CBL-010-2	879605-004
DSI-CBL-006-3	879605-005
DSI-CBL-010-3	879605-006
DSI-CBL-02M-1	879605-007
DSI-CBL-03M-1	879605-008
DSI-CBL-02M-2	879605-009
DSI-CBL-03M-2	879605-010
DSI-CBL-02M-3	879605-011
DSI-CBL-03M-3	879605-012

\*Additional fee applied for calibrating a mating unit with the DSI-1000