

DSI-1000 Series Digital Slope Indicator Display

Making Sense out of Motion...

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 $\pm 15\text{VDC}$ sensor excitation with dual channel inputs. It conditions the inclinometer output and displays the angle down to 0.001 degrees.



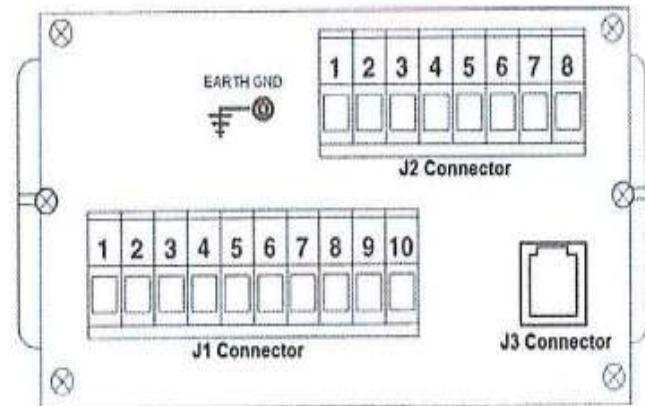
Back Panel Drawing: DSI-1000 Series Digital Slope Indicator

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
- $\pm 15\text{ VDC}$ 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



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° , $\pm 30.00^\circ$, $\pm 90.00^\circ$
Accuracy	$\pm 0.01\%$ of reading ± 2 counts of LSD up to 60.00° $\pm 0.1\%$ of reading ± 2 counts of LSD from 60.00° to 89.00°
Polarity Indication	"_" Displayed
Resolution, Auto-Ranged	0.001° below 10° 0.01° above 10°
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	± 15 VDC (± 15 mA)	

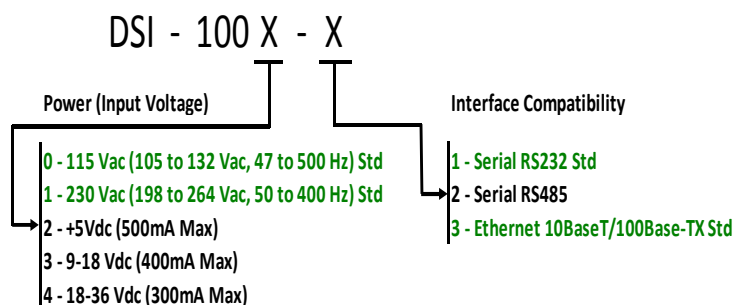
Environmental

Temp Range, Operating	-20 to $+60^\circ\text{C}$
Temp Range, Survival	-25 to $+85^\circ\text{C}$

Options

- RS485 Compatible Interface
- Ethernet Interface 10 Base-T/100 Base TX
- +5vDC Power 500mA Max
- 4-20mA Output Max Load 600 Ω
- 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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