

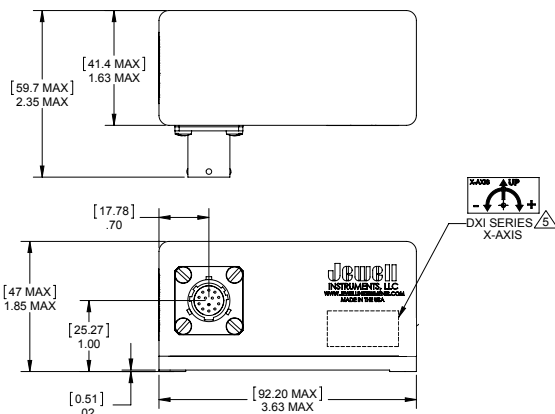
## D750-100/200

### Single or Dual Axis Digital Inclinometer

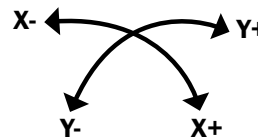
The Jewell D750-100 (Single Axis) and D750-200 (Dual Axis) Black Diamond Tiltmeter series are fluid damped inclinometers with RS485 digital output. The Jewell D750-100/200 Series is the digital version of the Black Diamond tilt sensor line for geotechnical measurement. It features a 0.001° resolution with RS485 digital output signal.

#### FEATURES:

- Digital output
- Resolution 0.001°
- Mechanical Shock 1500g 1msec ½ sine
- Industry Standard EIA RS485 and EIA RS422 output
- For use in high shock and vibration environments
- High Precision and Performance
- Low Noise



Dimensions: in [mm]



#### APPLICATIONS:

- Radar/Antenna Control
- Structural Monitoring
- Seismic Monitoring
- Platform Leveling

# PERFORMANCE SPECIFICATIONS DXI-100/200

## PERFORMANCE

<b>INPUT RANGE (°)</b>	<b>±1.0</b>	<b>±3.0</b>	<b>±14.5</b>	<b>±30.0</b>	<b>±60.0</b>
<b>NON LINEARITY (%FRO max)<sup>2</sup></b>	0.06	0.025	0.02	0.02	0.03
<b>SCALE FACTOR TOLERANCE (% max)</b>	0.1				
<b>SCALE FACTOR TEMP. SENSITIVITY (PPM/°C, max)</b>	100				
<b>OUTPUT AT 0° TILT (° max)</b>	±0.01	±0.01	±0.05	±0.05	±0.05
<b>0° OUTPUT TEMP. SENSITIVITY (°/°C, max)</b>	0.005				
<b>BANDWIDTH (-3dB, Hz, nominal)<sup>3</sup></b>	3	6	30	30	30
<b>TRANSVERSE AXIS MISALIGNMENT (° max)</b>	0.2	0.2	0.5	0.5	0.5
<b>RESOLUTION &amp; THRESHOLD (° max)</b>	0.001				
<b>POWER ON REPEATABILITY (° max)</b>	0.001				
<b>REPEATABILITY (° max)</b>	0.001	0.001	0.002	0.002	0.003

## ELECTRICAL

<b>NUMBER OF AXES</b>	1 or 2	
<b>SUPPLY VOLTAGE RANGE (VDC)</b>	10 to 30	
<b>NOISE (g rms, max)</b>	0.005	
<b>INPUT CURRENT (mA, max)</b>	Transmitting Not Transmitting	D750-100 32 mA & D750-200 50 mA D750-100 22 mA & D750-200 40 mA

## ENVIRONMENTAL

<b>OPERATING TEMP. RANGE</b>	-40° to +85°C
<b>STORAGE TEMP. RANGE</b>	-40° to +85°C
<b>VIBRATION</b>	20 grms
<b>SHOCK</b>	1500g, 1 msec, ½ sine

### NOTES:

1. Full range is defined as “from negative full input angle to positive full input angle”
2. Nonlinearity is specified as variation around the best straight line from null to full-range output.
3. In default condition without averaging enabled.
4. Default Baud Rate is 38400

\*Specifications subject to change without notice on account of continued product development

# PERFORMANCE SPECIFICATIONS

## ENCLOSURE

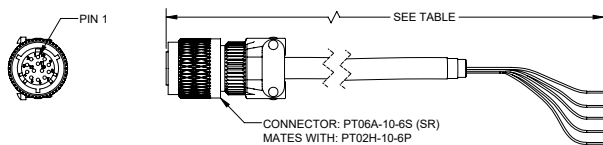
<b>HOUSING MATERIAL</b>	Anodized & Alodine Aluminum
<b>WEIGHT</b>	D750-100 8oz [226.80 g] D750-200 10oz [283.50 g]
<b>PROTECTION CLASS</b> (per IEC 529)	IP67
<b>NEMA ENCLOSURE RATING</b>	6
<b>SEAL</b>	MILD-STD-202 Method 112
<b>CONNECTOR TYPE</b>	MS27476Y10D35P
<b>RECOMMENDED MATING CONN.</b>	MS27473T10B35S

## DIGITAL OUTPUT

<b>INTERFACE</b>	EIA-RS485 (default) EIA-RS422
<b>PROTOCOL</b>	Proprietary (custom)
<b>BAUD RATE<sup>4</sup></b>	19200, <b>38400</b> , 57600, 115200, 230400

# ACCESSORIES

## CONNECTOR CABLE



PART #	MODEL #	LENGTH m (ft)
F847774-001	13-Pin Circular Connector	-
879839-02	DXX-CBL-03M-2 (3M)	3 (9.84)
879839-01	DXX-CBL-05M-2 (5M)	5 (16.4)
Contact manufacturer for custom lengths		

## PIN OUTS

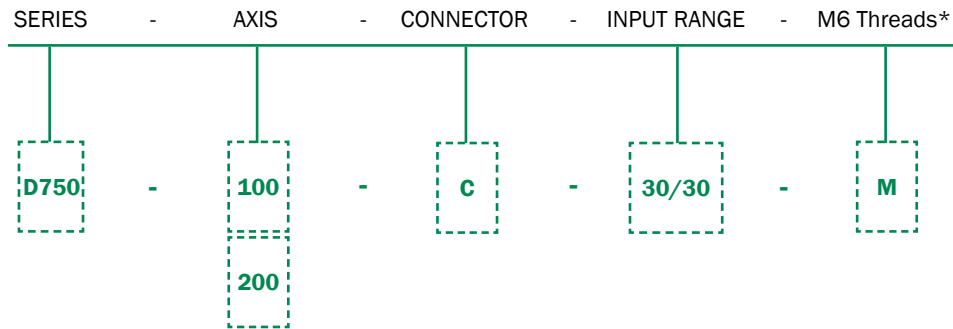
<b>1</b>	-	N/C
<b>2</b>	-	N/C
<b>3</b>	GREEN	CASE GROUND
<b>4</b>	BLUE	+ SERIAL PORT
<b>5</b>	YELLOW	- SERIAL PORT
<b>6</b>	-	N/C
<b>7</b>	-	N/C

<b>8</b>	-	N/C
<b>9</b>	-	N/C
<b>10</b>	-	N/C
<b>11</b>	BLACK	POWER RETURN
<b>12</b>	RED	+ POWER
<b>13</b>	-	N/C

# ORDERING INFORMATION

## HOW TO ORDER

Model Numbers are comprised of the series, the axis, the input range, and options.



\*Leave options blank if not needed

### Standard Version

	AXES	MODEL #	PART #
±1.0	1	D750-100-C-1	98750-120
	2	D750-200-C-1/1	98750-130
±3.0	1	D750-100-C-3	98750-121
	2	D750-200-C-3/3	98750-131
±14.5	1	D750-100-C-14.5	98750-122
	2	D750-200-C-14.5/14.5	98750-132
±30.0	1	D750-100-C-30	98750-123
	2	D750-200-C-30/30	98750-133
±60.0	1	D750-100-C-60	98750-124
	2	D750-200-C-60/60	98750-134

### M6 (Metric) Mounting Threads

	AXES	MODEL #	PART #
±1.0	1	D750-100-C-1-M	98750-170
	2	D750-200-C-1/1-M	98750-180
±3.0	1	D750-100-C-3-M	98750-171
	2	D750-200-C-3/3-M	98750-181
±14.5	1	D750-100-C-14.5-M	98750-172
	2	D750-200-C-14.5/14.5-M	98750-182
±30.0	1	D750-100-C-30-M	98750-173
	2	D750-200-C-30/30-M	98750-183
±60.0	1	D750-100-C-60-M	98750-174
	2	D750-200-C-60/60-M	98750-184

NOTE: Numbers provided are for the standard RS485 digital interface with no additional options.