



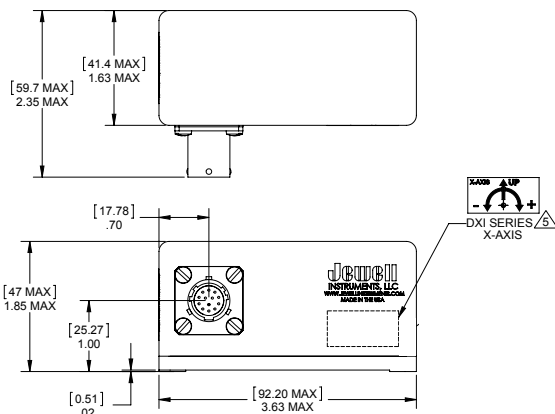
D750-100/200

Single or Dual Axis Digital Inclinometer

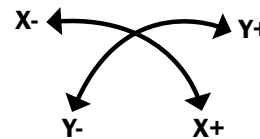
The Jewell D750-100 (Single Axis) and D750-200 (Dual Axis) Black Diamond Tiltmeter series are fluid damped inclinometers with RS485 digital output. The Jewell D750-100/200 Series is the digital version of the Black Diamond tilt sensor line for geotechnical measurement. It features a 0.001° resolution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

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

ELECTRICAL

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

ENVIRONMENTAL

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

NOTES:

1. Full range is defined as "from negative full input angle to positive full input angle"
2. Non-linearity is specified as deviation of output referenced to a best fit straight line, independent of misalignment.
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

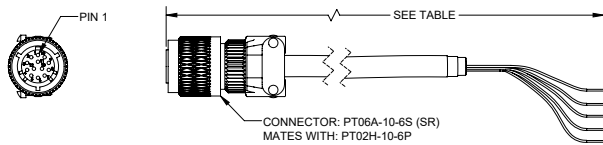
HOUSING MATERIAL	Anodized & Alodine Aluminum
WEIGHT	D750-100 8oz [226.80 g] D750-200 10oz [283.50 g]
PROTECTION CLASS (per IEC 529)	IP67
NEMA ENCLOSURE RATING	6
SEAL	MILD-STD-202 Method 112
CONNECTOR TYPE	MS27476Y10D35P
RECOMMENDED MATING CONN.	MS27473T10B35S

DIGITAL OUTPUT

INTERFACE	EIA-RS485 (default) EIA-RS422
PROTOCOL	Proprietary (custom)
BAUD RATE⁴	19200, 38400 , 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

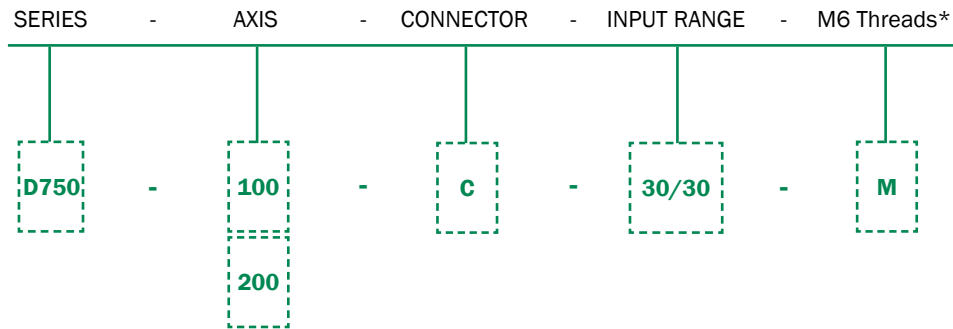
1	-	N/C
2	-	N/C
3	GREEN	CASE GROUND
4	BLUE	+ SERIAL PORT
5	YELLOW	- SERIAL PORT
6	-	N/C
7	-	N/C

8	-	N/C
9	-	N/C
10	-	N/C
11	BLACK	POWER RETURN
12	RED	+ POWER
13	-	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.