

C750-150

Single-Axis Analog Inclinometer

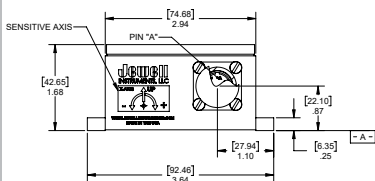
The C750-150 Series has the highest precision of the Black Diamond tilt sensor line. It is a rugged, high performance, single-axis tilt sensor designed for peak performance in extreme conditions. The fluid damped mechanism delivers superior noise rejection in high shock and vibration environments as well as excellent output stability. Units are available with a 6-pin connector, pin-terminals or flying leads. Available outputs include 0-5V and 4-20mA. Custom input ranges, filters and temperature compensation are also available on request.

FEATURES:

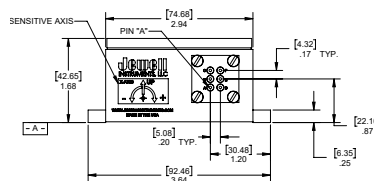
- Extremely Rugged
- High Accuracy
- Internal Temperature Sensor Available
- 4-20mA Outputs Available
- RoHS Compliant



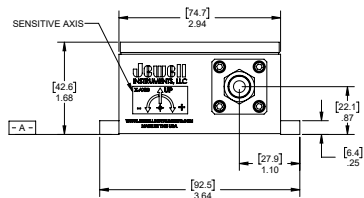
Connector Version



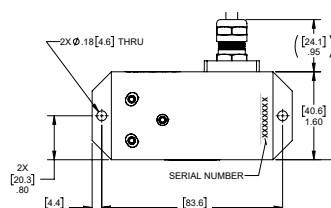
Pin-Terminal Version



Wired Version



Bottom View



Dimensions: in [mm]

APPLICATIONS:

- High-precision Geotechnical
- Oil and Gas, Riser Tilt Monitoring
- Bridge Sag & Sway
- Dam Monitoring
- Structural Analysis
- Platform Leveling

Performance Specifications

STATIC/DYNAMIC

INPUT RANGE (°)	±1	±3	±14.5	±30	±60	±90
FULL RANGE OUTPUT (mA) ¹	4-20					
NONLINEARITY (% FRO) ²	0.05	0.03	0.03	0.03	0.03	0.05
SCALE FACTOR (V/g) nominal	458.4	152.9	32.0	16.0	9.2	8.0
SCALE FACTOR SENSITIVITY (PPM/°C max)	350	300	100	80	80	80
BANDWIDTH (-3dB) Hz, nominal	0.5	2	15	20	30	30
TRANSVERSE AXIS MISALIGNMENT, ° max	±0.2	±0.5	±0.5	±0.5	±0.5	±0.5
0° OUTPUT (VDC) nominal	12 ±0.6	12 ±0.6	12 ±0.3	12 ±0.3	12 ±0.3	12 ±0.3
0° OUTPUT TEMP. SENSITIVITY (Volts/°C) max	0.024	0.01	0.002	0.001	0.001	0.0008
RESOLUTION & THRESHOLD (µrad) ³	1					

NOTES:

1. Full Range is defined "from negative full input angle to positive full input angle."
2. Nonlinearity is specified as deviation of output referenced to theoretical sine function value, independent of misalignment.
3. Full Resolution is achieved with noise reduction techniques

PIN OUTS

PIN & CONNECTOR OPTIONS

A	RED	POWER IN
B	WHITE	COMMON
C	BLACK	N/C
D	ORANGE	SIGNAL OUT
E		N/C
F	BLUE	N/C

WIRED OPTION

RED	POWER IN
WHITE	COMMON
BLACK	N/C
GREEN	SIGNAL OUT

ELECTRICAL

NUMBER OF AXES	1
INPUT VOLTAGE RANGE (VDC)	+20 to +30
INPUT CURRENT (mA, max)	40
NOISE (V _{rms} , max)	0.002
WEIGHT (g)	370

ENVIRONMENTAL

OPERATING TEMP. RANGE	-40° to +80°C
STORAGE TEMP. RANGE	-60° to +90°C
SHOCK	1500g, 0.5 msec, ½ sine

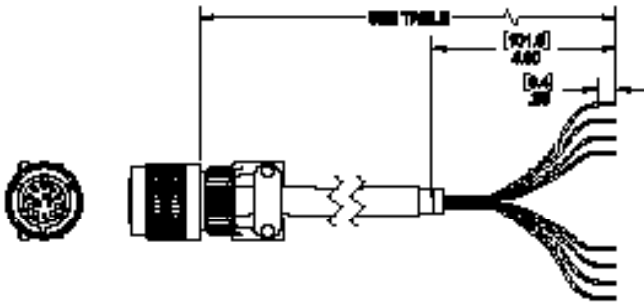
ENCLOSURE

SEAL	IP66
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ACCESSORIES

CONNECTOR CABLE

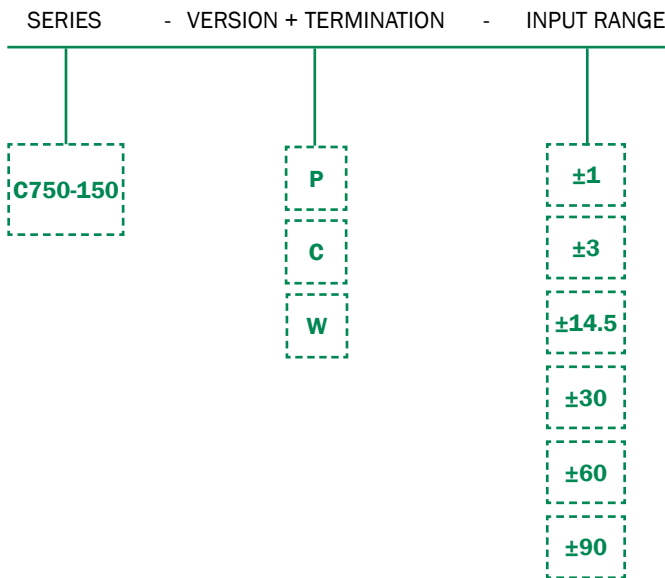


PART #	MODEL #	LENGTH m (ft)
62101011-001	6-Pin Mating Connector	-
879605-007	DSI-CBL-02M-1	2 (6.56)
879605-008	DSI-CBL-03M-1	3 (9.84)
879605-020	DSI-CBL-05M-1	5 (16.4)
Contact manufacturer for custom lengths		

ORDERING INFORMATION

HOW TO ORDER

Model Numbers are comprised of the series, the version, the connector option, and the input range.



	TERMINATION	MODEL #	PART #
±1	PIN	C750-150-P-1	98750-104
	CONNECTOR	C750-150-C-1	98750-98
	WIRED	C750-150-W-1	98750-110
±3	PIN	C750-150-P-3	98750-105
	CONNECTOR	C750-150-C-3	98750-99
±14.5	WIRED	C750-150-W-3	98750-111
	PIN	C750-150-P-14.5	98750-106
	CONNECTOR	C750-150-C-14.5	98750-100
±30	WIRED	C750-150-W-14.5	98750-112
	PIN	C750-150-P-30	98750-107
	CONNECTOR	C750-150-C-30	98750-101
±60	WIRED	C750-150-W-30	98750-113
	PIN	C750-150-P-60	98750-108
	CONNECTOR	C750-150-C-60	98750-102
±90	WIRED	C750-150-W-60	98750-114
	PIN	C750-150-P-90	98750-109
	CONNECTOR	C750-150-C-90	98750-103
	WIRED	C750-150-W-90	98750-115

850 Perimeter Road Manchester, NH 03103 USA

SENSORS: 800.227.5955 | METERS & AVIONICS: 800.638.3771
 www.jewellinstruments.com | sensors@jewellinstruments.com

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