

# C750-200 Series Dual Axis Tiltmeter

## 4-20mA Output



**Jewell**  
Instruments

*Making Sense Out of Motion...*

The Jewell C750-200 Black Diamond tiltmeter series is a 4-20mA output fluid-damped, dual-axis precision inclinometer.



The C750-200 offers the same performance and reliability as the A750-200 series, but with a convenient 4-20mA output signal. This solution is ideal for applications that require long cable runs such as platform/radar leveling and geotechnical monitoring.

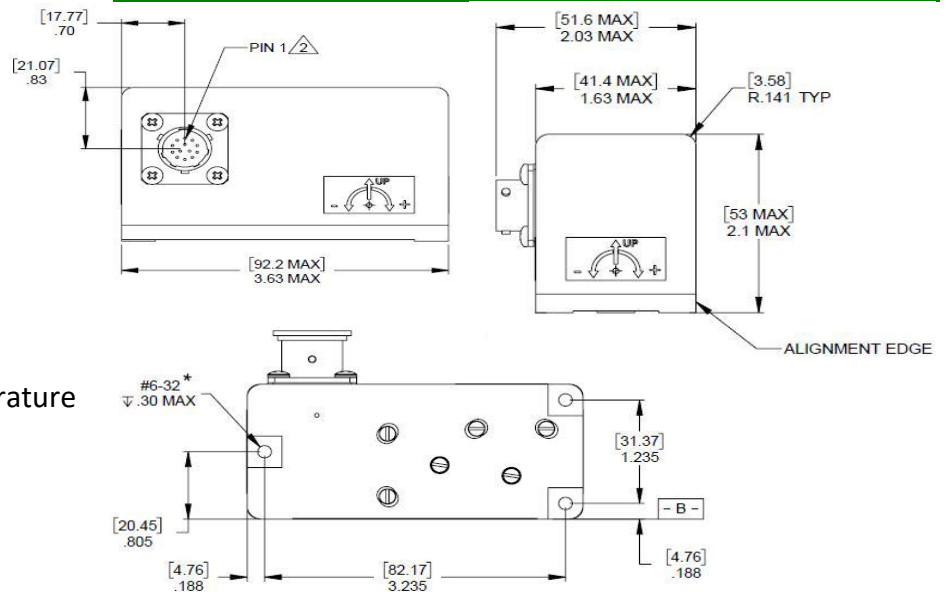
### Features & Benefits

- $\pm 1^\circ$  to  $\pm 90^\circ$  Input Full Range
- Micro Radian Resolution
- Available Internal Temp Sensor
- 4-20mA Output Signal
- Superior  $0^\circ$  Output Stability over Temperature
- Low Impedance Output

### Applications

- Radar & Antenna Leveling
- Weapons Platform Leveling
- Barge and Offshore Platform Control
- Deviation Surveys
- 2-Axis Machine Tool Leveling
- Bridge Structural Monitoring
- Submersible Control Feedback
- Offshore Platform Stability
- Production/Manufacturing Process Equipment

### Dimensional Drawing: C750-200 Tiltmeter Series



\*Also available in M3 metric through holes

### Pin-Out: C750-200 Tiltmeter Series

CONNECTOR	
PIN	FUNCTION
1	+20 TO +30 VDC
2	N/C
3	POWER RETURN
4	X-AXIS OUTPUT SIGNAL
5	SIGNAL COMMON
6	Y-AXIS OUTPUT SIGNAL
7	SIGNAL COMMON
8	TEMPERATURE OUT
9	N/C
10	N/C
11	N/C
12	N/C
13	N/C

Rev C

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### Specifications

#### PERFORMANCE

Input Range, deg.	±1.0	±3	±14.5	±30	±90
Full Range Output (FRO), mA, ±1 %	4-20	4-20	4-20	4-20	4-20
Nonlinearity, % FRO, maximum	0.05	0.05	0.03	0.03	0.04
Scale Factor, mA/g, nominal	458.4	152.9	32.0	16.0	8.0
Scale Factor Temp Sensitivity, PPM/°C, maximum	300	300	100	100	100
Bandwidth, (-3 dB), Hz, nominal	0.5	2.0	15.0	20.0	30.0
Transverse Axis Misalignment, deg, maximum	±0.25	±0.5	±0.5	±0.5	±0.5
Output at 0° Tilt, mA, maximum	12 ±0.6	12 ±0.6	12 ±0.3	12 ±0.3	12 ±0.3
0° Output Temp Sensitivity, mA/°C, maximum	0.024	0.009	0.002	0.001	0.001
Resolution and Threshold, μradians, maximum	1	1	1	1	1

#### ELECTRICAL

Input Voltage, VDC	+20 to +30
Input Current, mA, maximum	45
Output Noise, mArms, maximum	0.01

#### ENVIRONMENTAL

Operating Temperature Range	-40°C to +80°C
Storage Temperature Range	-60°C to +90°C
Vibration	20 grms
Shock	1000g, 1 msec, 1/2 sine
Seal	MIL-STD 202, Method 112
Weight	8.1 oz.

- Notes:
- 1 - Full range is defined as "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.

Rev C

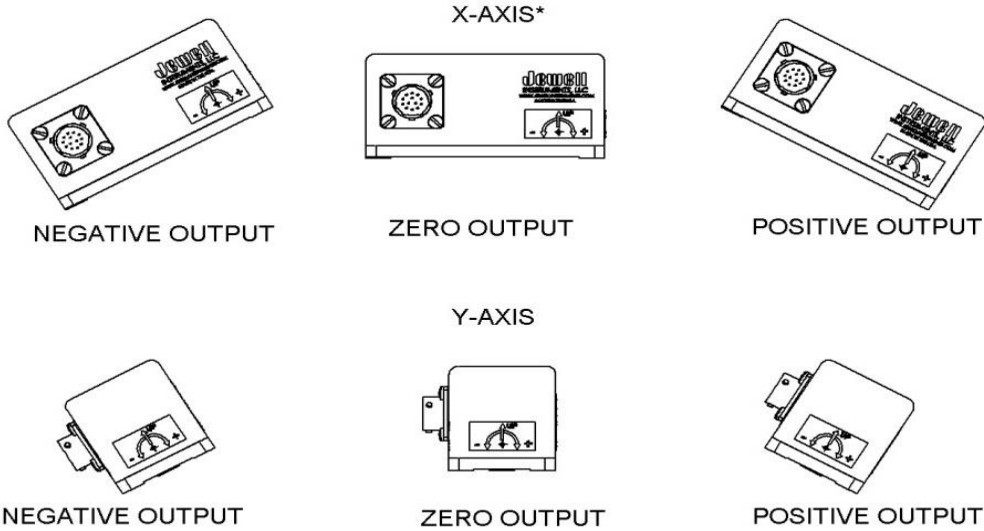
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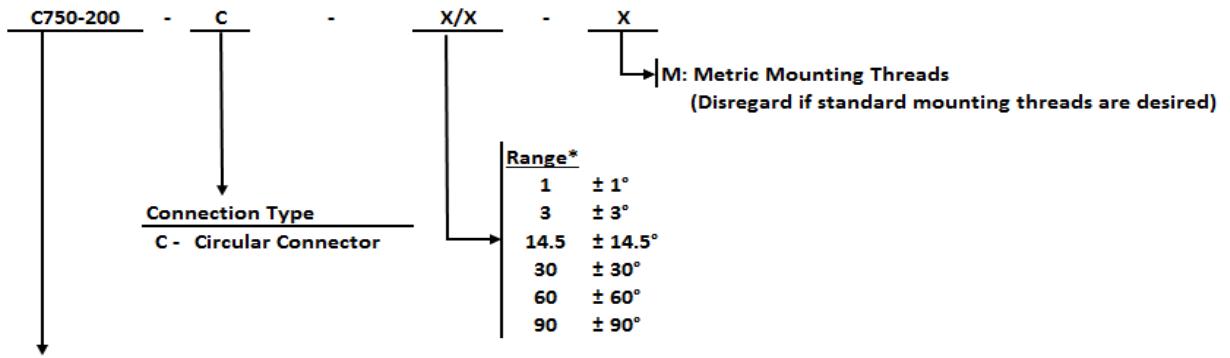
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### Tilt Configuration



\*SENSITIVE AXIS THIS DIRECTION ONLY

### How to Order



Series

C750-200 - Damped, Black Diamond Dual Axis Tiltmeter with 4-20mA Output

\*Range configurations can be customized according to application

Example:

C750-200-C-1/1-M

4-20mA output, damped, circular connector, ±1.0° range, two axes, metric mounting threads

### Accessories

#### Mating Connector

Description	Part Number
Standard 13-pin connector	847774-002

#### Cable Assemblies\*

Description	Part Number
6 Ft Cable	879605-003
10 Ft Cable	879605-004
2 M Cable	879605-009
3 M Cable	879605-010

\*All cable assemblies come with mating connector