

# Model A711-2, A716-2

## Floor-mount & Wall-mount Tiltmeter

The model A711-2 (floor-mount), and A716-2 (wall-mount) bolt or clamp to any surface, and are well suited for areas with heavy traffic or vibration. Electronic performance is identical to the model A701-2. Units include two switchable gains and two low-pass filter settings, and are sensitive to <math><0.1</math> urad. Output is a stable  $\pm 8$  DC voltage ( $\pm 16$  VDC differential). Applications include volcano monitoring, high-precision geotechnical engineering, bridge deflection monitoring, precision metrology, radar platform leveling, and high-accuracy tilt monitoring applications where bolt-on installations are required.



		Type-A version (High-gain)	Type-B version (Mid-Range)
Angular Range	High-Gain:	$\pm 800 \mu\text{radians}$ ( $\pm 0.046^\circ$ )	$\pm 0.8^\circ$
	Low-Gain:	$\pm 8000 \mu\text{radians}$ ( $\pm 0.46^\circ$ )	$\pm 8.0^\circ$
Scale Factor	High-Gain:	$0.1 \mu\text{radian/mV}$	$0.1^\circ/\text{V}$
	Low-Gain:	$1 \mu\text{radian/mV}$	$1^\circ/\text{V}$
Non-Linearity	High-Gain:	0.2%	0.2%
	Low-Gain:	2%	1.5%
Resolution		$0.1 \mu\text{radians}$	$1.0 \mu\text{radians}$
Repeatability		$1 \mu\text{radians}$ (static)	$2 \mu\text{radians}$ (static)
Time Constant		Filter on: 7.5 sec; Filter off 0.5 sec	Filter on: 7.5 sec; Filter off 0.4 sec
Kz Temp Coefficient (deg/C)		$\pm 3 \mu\text{radians}/^\circ\text{C}$ (typical)	$\pm 0.001^\circ/\text{C}$ (typical)
Ks Temp Coefficient (%/°C)		$0.05\%/^\circ\text{C}$ (typical)	
Output		$\pm 8\text{VDC}$ (single ended); $\pm 16\text{VDC}$ (differential)	
Channels		X-tilt, Y-tilt, Temperature	
Output Impedance		270 ohms	
Temperature Output		$0.1^\circ\text{C}/\text{mV}$ typical (single ended; $0^\circ\text{C} = 0\text{mV}$ )	
Power		$\pm 11$ to $\pm 15$ VDC @ $\pm 11$ and $-6\text{mA}$ , 250 mV ripple max, reverse polarity protected	
Environmental		$-25$ to $+70^\circ\text{C}$ operation; $-30$ to $+100^\circ\text{C}$ storage	
Dimensions		6 x 6 x 4 inches (15 x 15 x 10 cm), 3 lb (1.4 kg)	
Materials		Anodized and painted aluminum	
Cable		3m (10 ft) multi-conductor cable + overall shield, PVC jacket, connectors included	

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

### Order Code:

Floor-mount Version

A711 - 2

A: High Gain ( $\pm 0.46^\circ$ ) 2 Gains, 2 Filters  
 B: Mid Range ( $\pm 8^\circ$ ) 2 Gains, 2 Filters

Wall-mount Version

A716 - 2

A: High Gain ( $\pm 0.46^\circ$ ) 2 Gains, 2 Filters  
 B: Mid Range ( $\pm 8^\circ$ ) 2 Gains, 2 Filters

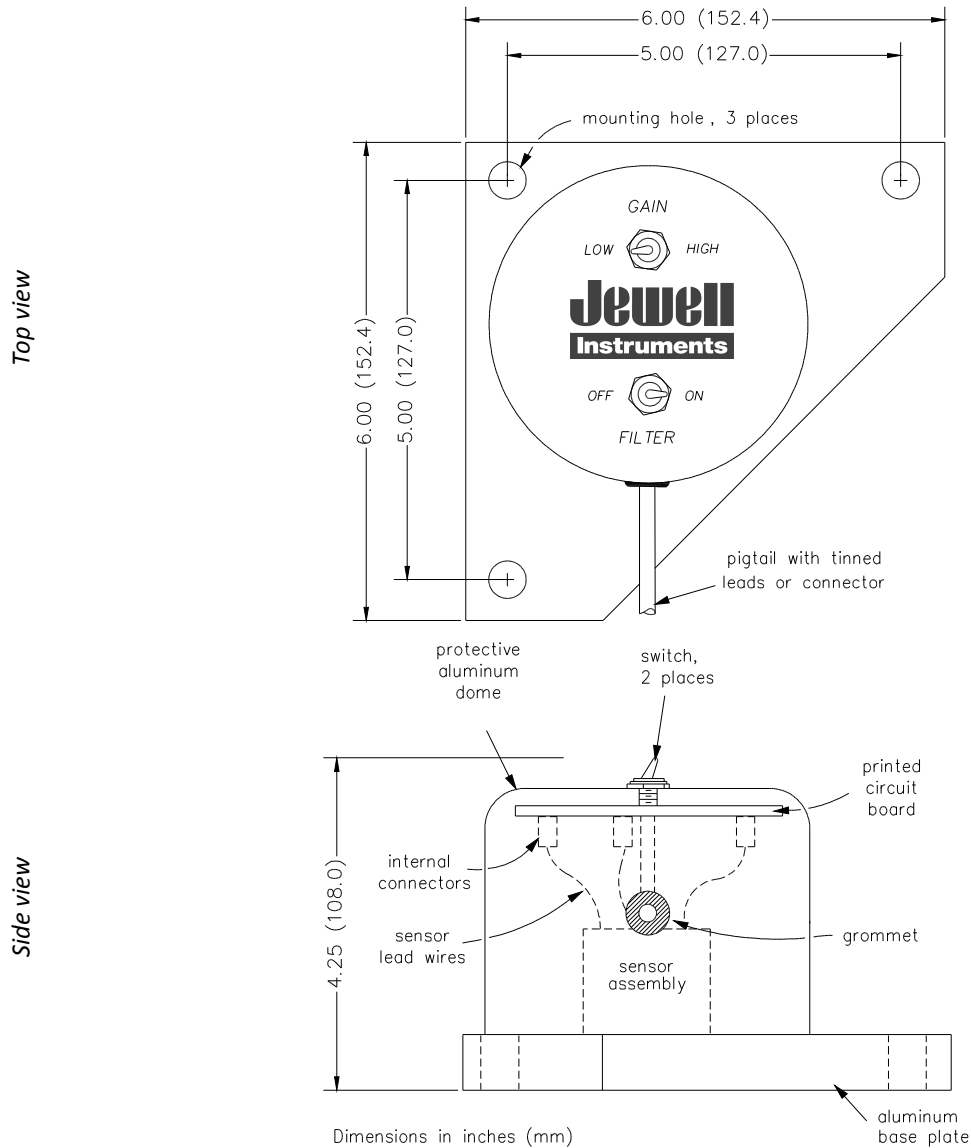
### Accessories:

Part No.	Description
70304	Power/signal cable, 10-conductor (specify total length on order)
62301	Female panel receptacle (mates to 62302 tiltmeter connector)
62304	Extra female in-line receptacle (one included with tiltmeter)
719-AL	Vertical mounting bracket (L-bracket)
718-AL	Mounting plate (speeds installation)

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### Dimensions:



### Wiring/Pin-out:

Wire Color	Function	Bendix Connector
Red	+12 to +15V Power	H
Black	Power Ground	A
Violet	-12 to -15V Power	B
Blue	+Y-tilt out	G
Brown	-Y-tilt out	K
Gray	-X-tilt out	J
Green	+X-tilt out	C
White	Signal ground	E
Yellow	Temperature out	D