

# Model 902

## Slimline Biaxial Clinometer



140 Chestnut Street

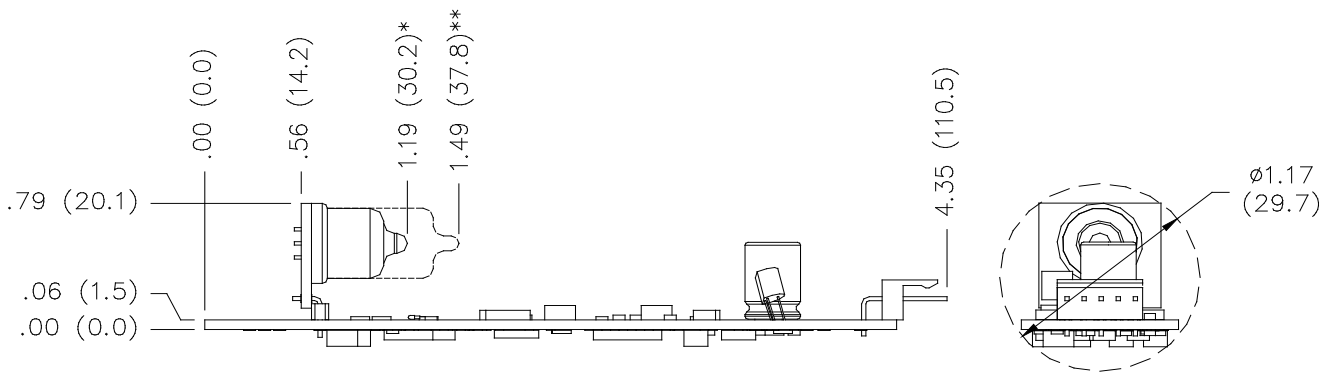
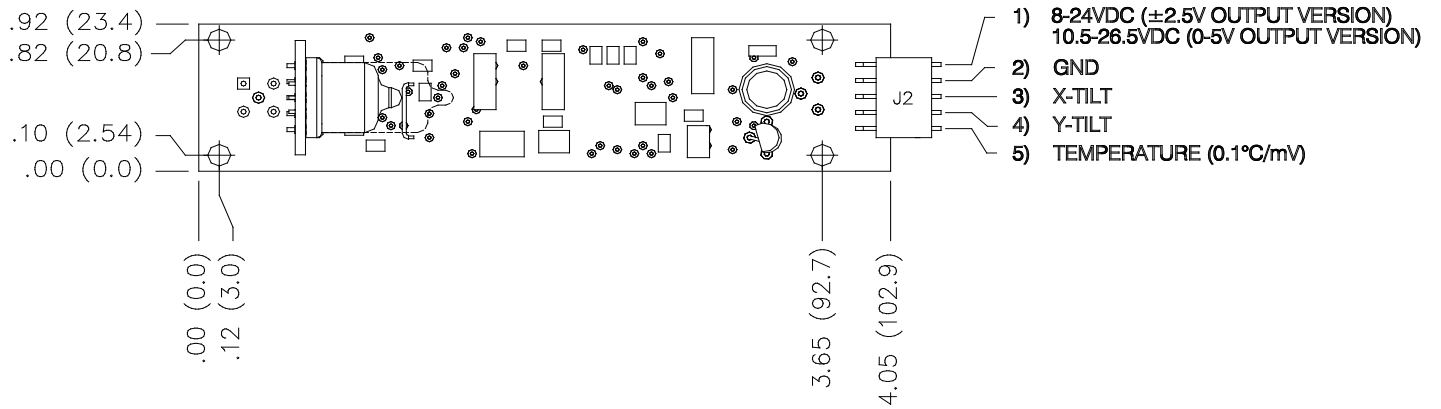
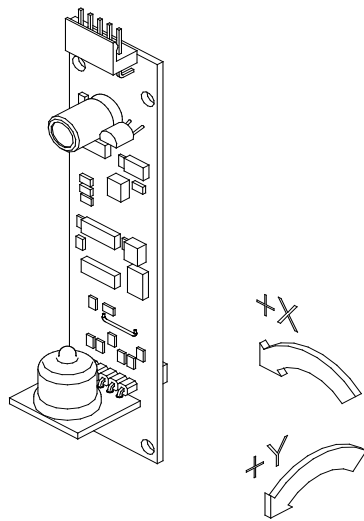
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Dimensions in inches (mm)

\* MODELS 902, 902-T  
 \*\* MODELS 902-45, 902-45T

## Specifications: 900-Series Biaxial Clinometers (Analog Output Versions)

	<b>Models 900, 901, 902</b>	<b>Models 900-45, 901-45, 902-45</b>	<b>Models 900-H, 901-H, 902-H</b>
<b>OUTPUT CHANNELS</b>	X and Y tilt, ±2.5 VDC standard, 0-5 VDC available	X and Y tilt, ±2 VDC standard, 0-5 VDC available	X and Y tilt, ±2.5 VDC standard, 0-5 VDC available
<b>ANGULAR RANGE</b>	±25 degrees (50 degree span)	±50 degrees (100 degree span)	±10 degrees (20 degree span)
<b>SCALE FACTORS</b>	10 degrees/V typical	25 degrees/V typical	4 degrees/V typical
<b>LINEARITY</b>	1% over half span, 2.5% over full span typical; factory polynomials improve linearity by 10x	1.2% over half span, 7.5% of full span typical; factory polynomials improve linearity by 10x	1% of full span typical
<b>RESOLUTION</b>	0.01 degree	0.02 degree	0.005 degree
<b>REPEATABILITY</b>	0.02 degree at constant temperature	0.04 degree at constant temperature	0.01 degree at constant temperature
<b>HYSTERESIS</b>	<0.02 degree	<0.04 degree	<0.02 degree
<b>TEMPERATURE COEF.</b>	Span: +0.03%/°C, Zero: 10-20 arc sec/°C typical	Span: +0.03%/°C, Zero: 10-20 arc sec/°C typical	Span: +0.03%/°C, Zero: 10-20 arc sec/°C typical
<b>TIME CONSTANT, T</b>	150 msec; output is proportional to $1 - e^{-t/T} - 0.001e^{-t/5000T}$ where t = time in seconds		
<b>NATURAL FREQUENCY</b>	10 Hz		
<b>OUTPUT IMPEDANCE</b>	270 ohms, short circuit protected		
<b>POWER REQUIREMENTS</b>	+8 to +24 VDC (bipolar output version) or +10.5 to +26.5 VDC (0-5 V output version) @ 7 mA, 250 mV ripple max., reverse polarity protected		
<b>ENVIRONMENTAL</b>	-40° to +85°C operating and storage, 0-90% humidity, noncondensing		
<b>DIMENSIONS</b>	See drawing		
<b>WEIGHT</b>	0.5 oz (15 g)		
<b>MATERIALS</b>	Liquid-filled glass sensor, fiberglass PC board		
<b>TEMPERATURE OUTPUT (OPTIONAL)</b>	0.1°C/mV, ±0.75° C accuracy; 0°C = 0 mV (bipolar output version), 0°C = 2.5 V (0-5 V output version)		

### Ordering Information

<b>Models 900, 900-H &amp; 900-45</b>	2 x 2 inch (51 x 51 mm) square, horizontal
<b>Models 900-T, 900-TH &amp; 900-45T</b>	Adds temperature sensor
<b>Models 901, 901-H &amp; 901-45</b>	Slimline horizontal, 0.92 x 4.05 inch (23 x 103 mm)
<b>Models 901-T, 901-TH &amp; 901-45T</b>	Adds temperature sensor
<b>Models 902, 902-H &amp; 902-45</b>	Slimline vertical, 0.92 x 4.05 inch (23 x 103 mm)
<b>Models 902-T, 902-TH &amp; 902-45T</b>	Adds temperature sensor

To add the following features, specify option code after Model Number

Option Code	Feature
<b>0-5VUP</b>	0-5 volt output
<b>VISCDAMP</b>	Critically damped viscous sensor

All clinometers include prewired connector with 18-inch (450 mm) cable and calibration certificate with linear scale factors, look-up table and polynomial fits. Specifications subject to change without prior notice to reflect ongoing development.