

# Model 501 Dual Channel Amplifier

## PRODUCT SUMMARY

The Model 501 dual channel position sensing amplifier was designed with a 1.5 MHz frequency bandwidth with auto polarity, auto range selection, and an external control port. Maximum output voltage range is 10 volts. The range indicators are four range LED illuminated for HI-LO sum levels. The current model uses quadrant or tetra-lateral position sensing detectors.

<b>Number of channels</b>	2 (X and Y)
<b>Input Current Range</b>	<b>Gain at sum output (V/A)</b>
Range 1: 1.0mA to 10 mA	500 ohms
Range 1: 250 $\mu$ A to 2.5 mA	2K
Range 1: 60 $\mu$ A to 600 $\mu$ A	8.4K
Range 1: 15 $\mu$ A to 150 $\mu$ A	33.6K
<b>Range Selector</b>	Auto range
<b>Detector Polarity</b>	Auto polarity
<b>External Port Control</b>	Permits external selection of range and polarity
<b>Output Voltage</b>	
Sum	Gain x ( $I_D + I_E$ )
Position	10V x ( $I_D - I_E$ ) / ( $I_D + I_E$ )
<b>Output Voltage Range</b>	
Sum	0 to 10 V
Position	$\pm 10$ V
<b>Output Connectors</b>	BNC
<b>Detector Input Connector</b>	6 contact circular DIN
<b>External Port Connector</b>	8 contact circular DIN
<b>Frequency Bandwidth</b>	DC to 1.5 MHz
<b>DC drift</b>	TBD
<b>Noise, rms</b>	TBD
<b>Output Impedance</b>	50 ohms
<b>Range Indicators</b>	HI/LO signal-level LEDs and four range LEDs
<b>Output Adjustments</b>	
Span	Adjustable scale factor for position output.
Zero	$\pm 0.33$ V offset for position output
<b>Operating Temperature</b>	0 to 50°C
<b>Accessories Supplied</b>	External CE power supply included.

**UDT INSTRUMENTS**

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