

FASTAR is a fast response, shock resistant, non-contact displacement transducer designed to measure linear displacement (position).

A precision variable inductor with a stroke to body length ratio of almost 1:1, FASTAR has a body length approximately half as long as typical LVDTs. Used with a Sentech patented signal processor, it allows high speed displacement measuring with less error than other non-contact devices, with excellent immunity to EMI.

FASTAR consists of a movable core inside a coil-wound tube. As the core moves in or out, coil inductance changes. The processor generates a DC voltage proportional to the change in inductance.



FEATURES

- Body length only 1.3" longer than stroke
- Fast 35 μ S response
- $\pm 0.15\%$ linearity, ($\pm 0.10\%$ optional)
- Non contact technology
- Dynamic temperature compensation
- Resistant to external fields (EMI)
- Absolute continuous measurement
- Single coil wound with large gauge wire

BENEFITS

- Eases installation where space is limited
- Monitor high speed motions
- Accurate measurements
- No friction — long life, no hysteresis
- Stable over a wide temperature range
- No shielding required
- Accurate position at power up
- Better shock and vibration resistance than LVDT's

APPLICATIONS

- Cylinder feedback
- Roll position / Gap monitoring
- Automated production gauging
- Vibration analysis
- Robotic motion control
- X-Y positioning feedback
- Material handling systems
- Material testing equipment
- Injection molding machines
- Hydraulic presses
- Liquid level measurement
- Valve monitoring

Technical Specifications

Models	FS380	FS1K	FS2K	FS3K	FS4K	FS5K	FS6K	FS9K	FS12K	
Nominal Linear Range	0.76 (19)	2 (51)	4 (101)	6 (152)	8 (203)	10 (254)	12 (305)	18 (457)	24 (609)	inches (mm)

PERFORMANCE

Non Linearity	< ±0.15% standard (±0.10% optional)
Resolution	infinite
Repeatability	0.003% of full scale typical
Compensated Temperature Range	25°F to 175°F (-5°C to 80°C)
Operating Temperature Range	-60°F to 257°F (-50°C to 125°C)
Vibration Resistance	Meets MIL-STD 810C, Figure 514-5, Curve AK Time Schedule II Random Vibration Test (Overall g rms=20.7)
Shock Resistance	50 g's peak (6 milliseconds) half sine

ELECTRICAL*

Excitation	112 kHz
Frequency Response	DC to 15,000 Hz (-3 dB)
Response Time	35µS
Connections	10 ft (3m) coaxial cable: cable dia: 0.1" (2.5mm) with Mini DIN connector

PHYSICAL

Core Material	hard anodized aluminum
Transducer Construction	nickel plated steel

DIMENSIONS

