

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

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Body length only 1.3" longer than stroke

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Fast 35  $\mu$ S response

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$\pm 0.15\%$  linearity, ( $\pm 0.10\%$  optional)

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Non contact technology

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Dynamic temperature compensation

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Resistant to external fields (EMI)

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Absolute continuous measurement

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Single coil wound with large gauge wire

## BENEFITS

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Eases installation where space is limited

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Monitor high speed motions

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Accurate measurements

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No friction — long life, no hysteresis

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Stable over a wide temperature range

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No shielding required

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Accurate position at power up

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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

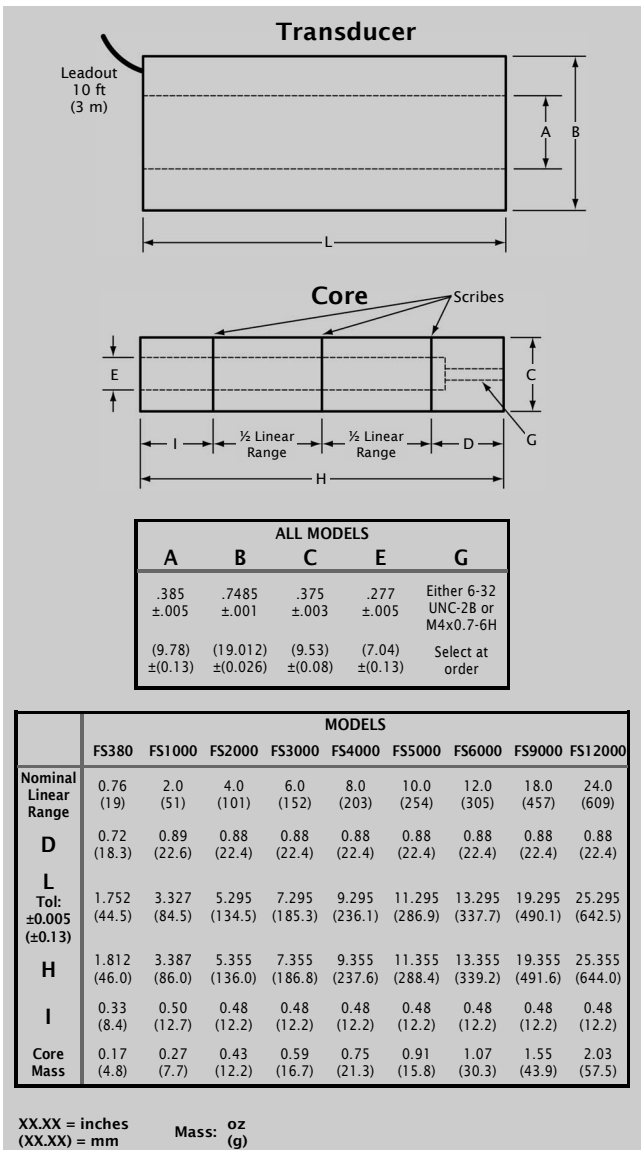
## ELECTRICAL\*

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



\*When used with Fastar signal processors

Fastar and related products are protected by one or more of the following patents: U.S. 4,667,158; 4,327,350; 4,368,575; 4,912,409; 4,864,232; 4,866,378; 5,068,607; U.K. 2054954; Japan 1498268; France 8014767; 8101087. Additional U.S. and Foreign patents pending.

### WARRANTY

All Sentech Inc. products are warranted against defective materials and workmanship. This warranty applies for a period of one year from the date of delivery to the original purchaser. Any product that is found within the one year period not to meet these standards will be replaced or repaired at the discretion of Sentech Inc. No other warranty is expressed or implied. Although Sentech Inc. manufactures its products to exacting specification standards, we assume no responsibility for their misuse. Sentech Inc. accepts no liability for damages, incidental or punitive, in applications using our products. *Please note:* It is solely the user's responsibility to properly install and maintain transducers. Sentech Inc. manufactures its products to meet stringent specifications and cannot assume responsibility for those consequences arising from their misuse or unauthorized modification.

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