

Linear Displacement Transducer System

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

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)

For DC Units, pair SCDR150 with an FS model, for more details contact Sentech (See SCDR150 datasheet)

Obsoleted Models

Models, Voltage Output, 10V DC	DCFS3/4	DCFS2	DCFS4	DCFS6	DCFS8	DCFS10	DCFS12	DCFS18	DCFS24
Models, Voltage Output, 4-20mA	DCIFC3/4	DCIFC2	DCIFC4	DCIFC6	DCIFC8	DCIFC10	DCIFC12	DCIFC18	DCIFC24

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 _{rm} =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

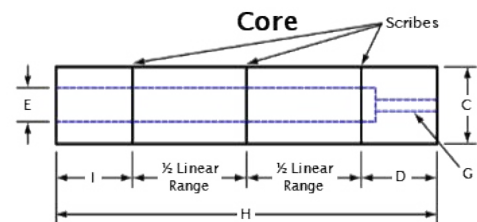
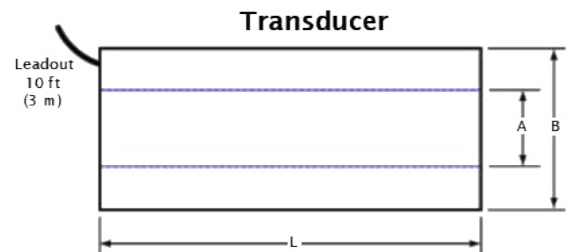
PHYSICAL

Core Material	Hard Anodized Aluminum
Transducer Construction	Nickel Plated Steel

*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.

FASTAR-BDS-JUN21



ALL MODELS				
A	B	C	E	G
.385 ±.005	.7485 ±.001	.375 ±.003	.277 ±.005	Either 6-32 UNC-2B or M4x0.7-6H
(9.78) ±(0.13)	(19.012) ±(0.026)	(9.53) ±(0.08)	(7.04) ±(0.13)	Select at order

	MODELS									
	FS380	FS1000	FS2000	FS3000	FS4000	FS5000	FS6000	FS9000	FS12000	
Nominal Linear Range	0.76 (19)	2.0 (51)	4.0 (101)	6.0 (152)	8.0 (203)	10.0 (254)	12.0 (305)	18.0 (457)	24.0 (609)	
D	0.72 (18.3)	0.89 (22.6)	0.88 (22.4)	0.88 (22.4)	0.88 (22.4)	0.88 (22.4)	0.88 (22.4)	0.88 (22.4)	0.88 (22.4)	
L Tol: ±0.005 (±0.13)	1.752 (44.5)	3.327 (84.5)	5.295 (134.5)	7.295 (185.3)	9.295 (236.1)	11.295 (286.9)	13.295 (337.7)	19.295 (490.1)	25.295 (642.5)	
H	1.812 (46.0)	3.387 (86.0)	5.355 (136.0)	7.355 (186.8)	9.355 (237.6)	11.355 (288.4)	13.355 (339.2)	19.355 (491.6)	25.355 (644.0)	
I	0.33 (8.4)	0.50 (12.7)	0.48 (12.2)	0.48 (12.2)	0.48 (12.2)	0.48 (12.2)	0.48 (12.2)	0.48 (12.2)	0.48 (12.2)	
Core Mass	0.17 (4.8)	0.27 (7.7)	0.43 (12.2)	0.59 (16.7)	0.75 (21.3)	0.91 (25.8)	1.07 (30.3)	1.55 (43.9)	2.03 (57.5)	

XX.XX = inches
(XX.XX) = mm Mass: oz
(g)