

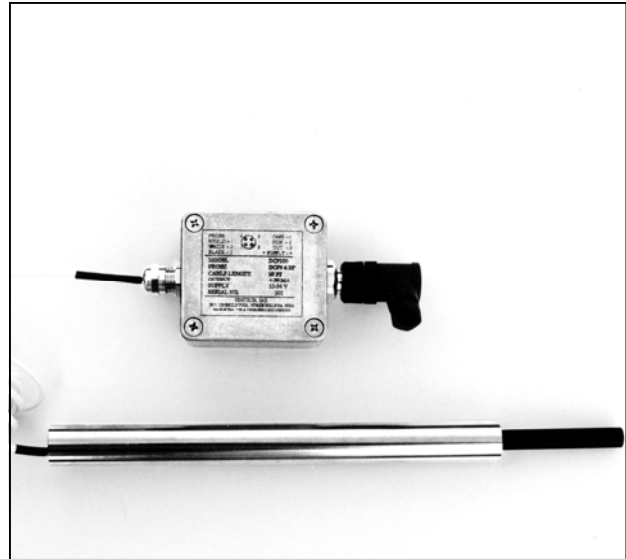
The DC FASTAR® is a high response, shock resistant, non-contact displacement measuring system, designed to measure linear displacement (position).

The DC FASTAR® position transducer consists of a cylindrical body and a low mass, aluminum moveable core and a compact signal processor connected to the transducer with a 10' (3 meter) cable.

A precision variable inductor with a stroke to body length ratio of almost 1:1, the DC FASTAR® has a body length approximately half as long as a typical LVDT having a comparable measurement range.

The DC FASTAR'S® patented signal processor allows high speed displacement measurements with better precision than other non-contact devices. Developed for use in rugged factory environments, the compact NEMA 4 (IP 65) rated signal processor is placed at or near to its transducer, allowing the use of low cost power and signal lines to run long distances to readout or control devices. It is highly resistant to EMI and RFI interference.

Operating from single ended +10 to +36V DC, units are available with outputs of ±10V DC, 0 to 10V DC or 4-20mA suitable for feeding PLCs, readouts or other control devices.



## FEATURES

- Fast 35  $\mu$ S response, Low reciprocating mass
- ±10V DC, 0 to 10V DC or 4-20mA outputs
- Dynamic temperature compensation
- ±0.15% linearity, (±0.10% optional)
- +10 to +36 V DC input
- Body length only 1.3" longer than stroke
- Resistant to external fields (EMI, RFI)
- Absolute continuous measurement
- Single coil wound with large gauge wire

## APPLICATIONS

- Cylinder position feedback
- Roll position / Roll Gap monitoring
- Automated production gaging
- Vibration analysis
- Robotic motion control
- X-Y position feedback
- Dancer/Tensioning rolls
- Tensile testing equipment
- Injection molding machines
- Hydraulic press monitoring
- Liquid level measurement
- Valve position monitoring

## BENEFITS

- Monitor high speed motions
- Works well with long cable runs
- Stable over a wide temperature range
- Accurate measurements
- Suitable for mobile applications
- Ideal for limited space installations
- No shielding required
- Accurate position at power-up
- Better shock and vibration resistance than LVDT's

## Technical Specifications

Models, Voltage Output, 10V DC	DCFS3/4	DCFS2	DCFS4	DCFS6	DCFS8	DCFS10	DCFS12	DCFS18	DCFS24	
Models, Current Output, 4-20mA	DCIFS3/4	DCIFS2	DCIFS4	DCIFS6	DCIFS8	DCIFS10	DCIFS12	DCIFS18	DCIFS24	
Nominal Linear Range	0.76 (19)	2 (51)	4 (101)	6 (152)	8 (203)	10 (254)	12 (305)	18 (457)	24 (609)	inches (mm)

## TRANSDUCER

Non Linearity	0.15% standard (0.10% optional)
Resolution	0.001% FS
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	100 g's peak (6 milliseconds) half sine
Transducer Construction	Nickel Plated steel housing, epoxy seal
Core	Low mass anodized aluminum

## SYSTEM

Power Input	+10 to +36 VDC @ 26 mA + loop current Supply current increases directly with loop current
Output	±10V DC (DC-FS), 0 to 10V DC or 4-20mA (DCI-FS)
Frequency Response	DC to 10,000 Hz (-3 dB)
Response Time	35µS
Warm-up Time	2 minutes for power input < +20V DC
Operating Temp. Range	-30°F to +140°F (-34°C to +60°C)
Temp. Coeff. of Span	-0.008%/°F (-0.016%/°C) FSO
Temp. Coeff. of Zero	-0.002%/°F (-0.004%/°C)
Transducer Connections	10 ft ±2" (3m) coaxial cable, Teflon® jacketed, cable dia: 0.1in (2.5mm)
Input/Output Connections	4 pin connector, mating conn. Turck #B8241-0, furnished. Recommended cable: 4 conductor #22AWG shielded
Controls	Zero and Span

## ORDERING INFORMATION

- Specify Model Number
- Specify English or Metric threaded core

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.

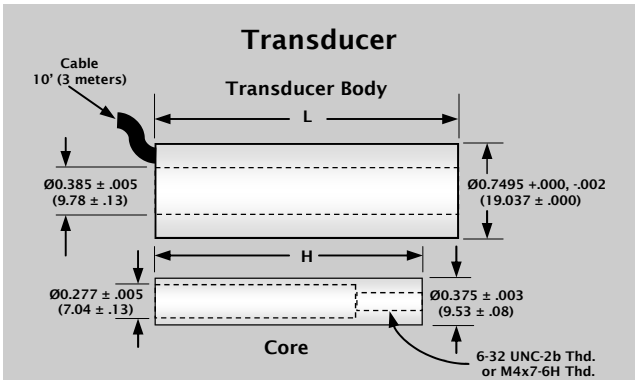
### WARRANTY

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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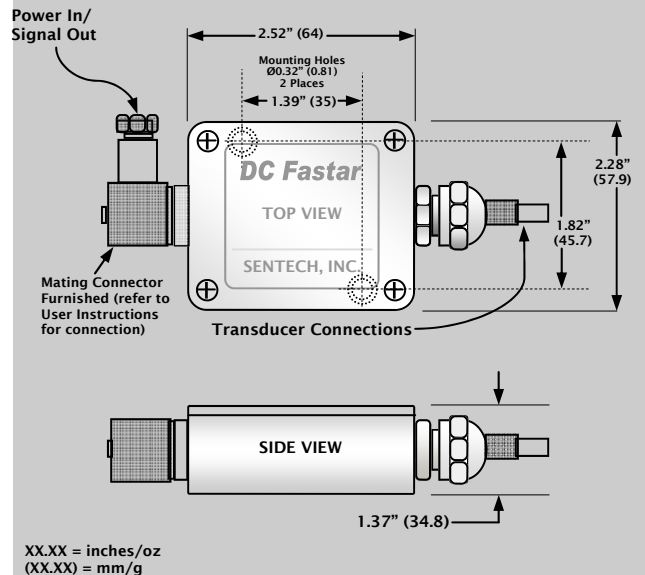
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## DIMENSIONS



	DC, DCI MODELS								
	FS3/4	FS2	FS4	FS6	FS8	FS10	FS12	FS18	FS24
L	2.26 (57.3)	3.83 (97.3)	5.80 (147.3)	7.80 (198.1)	9.80 (248.9)	11.80 (299.7)	13.8 (350.5)	19.80 (502.9)	25.80 (655.3)
H	1.812 (57.33)	3.387 (97.33)	5.355 (147.32)	7.355 (198.12)	9.355 (248.92)	11.355 (299.72)	13.555 (299.72)	19.355 (502.92)	25.355 (655.32)
Core Mass	0.17 (4.8)	0.27 (7.7)	0.43 (12.2)	0.59 (16.7)	0.75 (21.3)	0.91 (15.8)	1.07 (30.3)	1.55 (43.9)	2.03 (57.5)

## Signal Processor



XX.XX = inches/oz  
(XX.XX) = mm/g

# DC FASTAR®

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DC FASTAR-BDS-AUG05  
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