

BG Systems FmtK Transducer

FmtK™

Overview

The FmtK is a robust high precision force transducer. Typical applications for the FmtK range from computer labs, industrial equipment, remotely piloted vehicles, payload control, and military equipment such as computer based training systems. The rugged design means that they will provide reliable service for extended periods, backed by a two year warranty.

The FmtK produces an output based on the force applied in either the lateral or longitudinal axis.

Key Features

Mechanical

External casing is stainless steel. Output shaft is a 2.2mm hardened stainless steel onto which a variety of knobs can be mounted. Gauges are mounted to shaft using Glass Fusion technology.

Electrical

The force applied to the transducer is measured by silicon strain gauges mounted as a bridge. It provides output voltage through a signal conditioning amplifier. The centering repeatability error is less than 0.5%.

Reliability

With no moving parts the life of the mechanical system has no limit when mounted and used correctly.

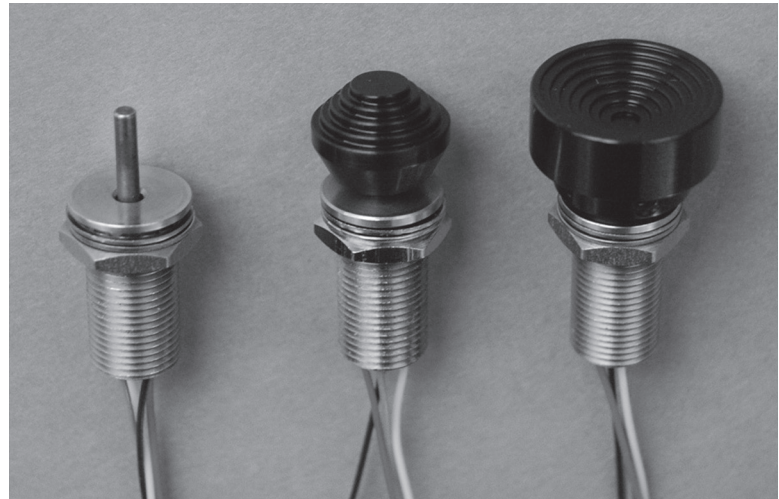
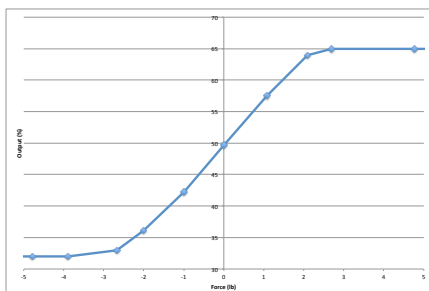
Knobs

The standard is a hat style anodized aluminum knob. Other options for one or two finger operation are available upon request.

Warranty

The FmtK transducers carry a 2 year warranty.

Output Plot



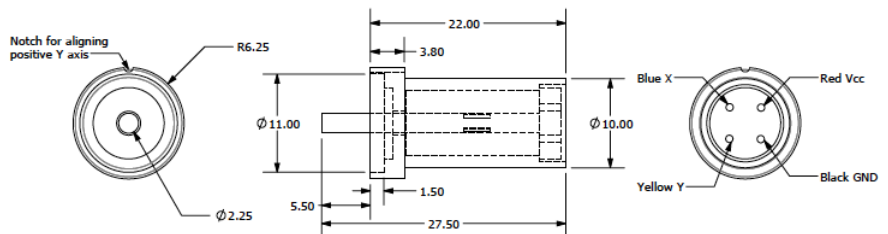
FmtK-b

FmtK-h

FmtK-i

Mechanical ICD

Thread on shaft: 3/8" x 32
Panel Cutout Hole: 10mm



Technical Specifications

Electrical

Vcc	5.00 vDC (12 vDC Max)
Output	40% - 60% Vcc (+/- 2%)
Center Voltage	50% Vcc (+/- 1.5%)
Supply Current	6 mA (at 5.00 vDC)
Sensitivity	0.023 V/N @ 5.00 vDC +/- 10%
Power Dissipation	0.03 mW (at 5.00 vDC)
Null Temperature Coeff	+/- 0.0003 V/C (at 5.00 vDC)
Resistance	800 Ohm +/- 40 Ohm
Resolution	Infinite
Linearity at 25°C	< 2.0 %

Physical (FmtK-b)

Weight	0.11 g
Length	27.5 mm
Below Panel	18.2 mm
Diameter	12.5 mm
Shaft Diameter	10.0 mm
Activation Force	+/- 6 lb in each axis max

Environmental

Operating Temperature	-20° C to 80° C
Storage Temperature	-70° C to 90° C
Operating Humidity	95% Rh at 40° C

Electrical Connections

Color	Function
Red	Vcc (+ve supply)
Black	GND (-ve supply)
Blue	X Axis (+ right)
Yellow	Y Axis (+ up)

Ordering Information

FmtK-001 - transducer with no knob
For options see Fmt-Hat-Types.pdf

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