HRAD19 series

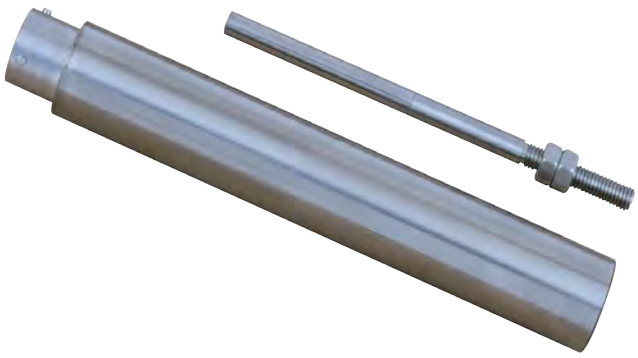
Radiation resistant LVDT position sensors

Abek Sensors introduces the HRAD 19 series of radiation-resistant LVDT displacement sensors, which are suitable for position measurement applica-tions in the presence of nuclear radiation exposure, such as nuclear fuel assembly pool side inspection, nuclear-grade valve position feedback, supercon-ducting proton accelerators, particle accelerator collimators, etc. The HRAD19 series is produced with special materials and processes, and can work normally at a total irradiation dose of 500k Gy, and the series can also work continuously and stably at a high temperature of 200°C.

The HRAD 19 series of displacement transduc-ers are available in capacities from 1 mm to 500 mm. It has the characteristics of high resolution, good repeatability, and low latency.

The HRAD 19 series has a variety of specifica-tions for customers to choose from, in addition to the options already provided in the selection table, it can also be customized according to the customer's requirements in many aspects, including thread specifications, cable outlets, joint types and many other mechanical requirements.

In order to facilitate the actual application of the customer, we also supply a variety of accessories to match the sensor, the series of related mounting fixtures, signal processing equipment, cables and other accessories, please contact us for information.



Features

Radiation resistant dose 500k Gy

High temperature resistance 200°C

Range: ±3mm-±250mm

Aviation connector

Sealing class: IEC IP-68

Linearity: <±0.25% FS

AC excitation: 400Hz~5kHz

Applications

Nuclear fuel assembly poolside inspection

Collimator positioning

Nuclear-grade valve position feedback

Nuclear power

Nuclear medicine

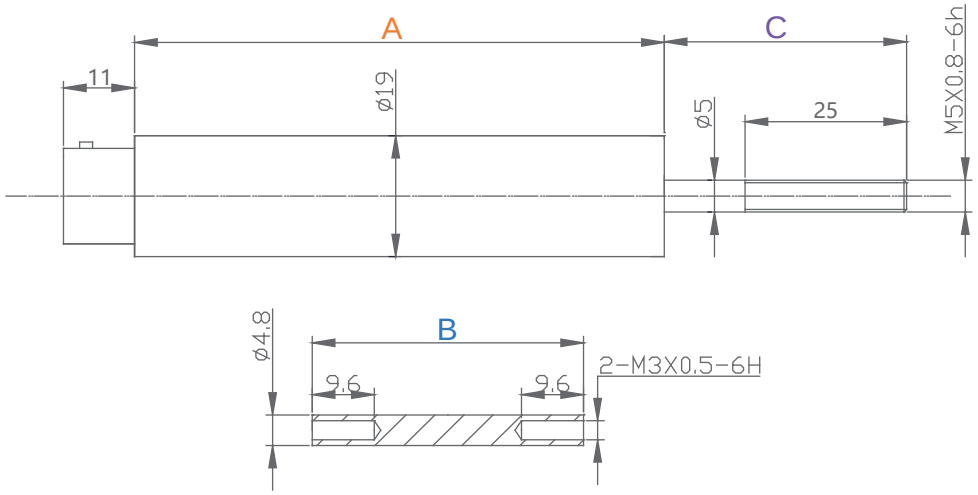
Standards and Documentation

GJB 150A-2009	Laboratory enviro methods for military material
JJF 1305-2011	Calibration specification for linear displacement sensors
GJB 8350-2015	General specification for linear displacement sensors

Specifications

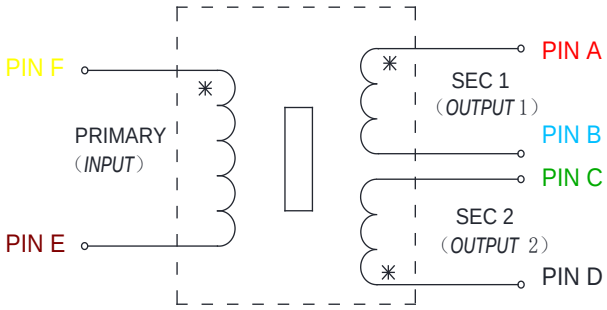
Parameter	Description
Input Voltage:	1to12V AC，3.0 Vrms (nominal)
Input Frequency:	400 to 10.0 kHz，2.5kHz (nominal)
Linearity Error:	<±0.25% of FRO
Repeatability Error:	<0.01% of FSO
Hysteresis Error:	<0.01% of FSO
Operating Temperature:	-55℃ to +200 ℃
Thermal Coefficient	-0.02%/°C (nominal)
Shock Survival:	20g，2 K Hz

Dimensions



Parameter	Model	HRAD19 -000625	HRAD19 -001325	HRAD19 -002525	HRAD19 -005025	HRAD19 -010025	HRAD19 -015025	HRAD19 -020025	HRAD9 -025025	HRAD19 -030025	HRAD19 -040025	HRAD19 -050025
Range	mm	±3	±6.5	±12.5	±25	±50	±75	±100	±125	±150	±200	±250
Dimension "A"	mm	68	82	148	187	277	346	411	474	501	626	804
Dimension "B"	mm	32	42	87.7	87.7	134.5	157.4	157.4	157.4	157.4	178	241
Zero position."C"	mm	39	38	67	93	106	135	159	278	266	285	388
Sensitivity	mV/V/mm	90	80	25	24	15	9.8	6.7	4.9	4.5	4.3	2.8
Primary impedance	Ω	≥325	≥1400	≥1200	≥1250	≥2150	≥2150	≥420	≥600	≥600	≥775	≥620

Wiring Information



PT02A-10-6P
Connector

PIN	Cable color
Pin A	Red
Pin B	Blue
Pin C	Green
Pin D	Black
Pin E	Brown
Pin F	Yellow

CONNECT PINS (B) AND (C)FOR DIFFERENTIAL OUTPUT

Contact us

Contact us for technical consultation or customization requests.

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