

# TRAD19 series

## High Nuclear Radiation Tolerant LVDT Displacement Sensors

The TRAD19 series of LVDT displacement/position sensors are designed for precision position measurement in high-flux nuclear radiation environments, such as poolside inspection of nuclear fuel assemblies, valve position feedback for nuclear stage valves, superconducting proton accelerator pedals, particle accelerator pedal collimator, and more.

The TRAD19 series are manufactured by special materials and processes, and can work normally under the total dose of 1000kGy irradiation, and the series can also work stably under the high temperature of 200 °C.

This series has the technical advantages of high resolution, good repeatability, low impedance, high sensitivity, good linearity, environmental adaptability and reliability. The maximum linearity error is not more than ±0.25%.

The TRAD19 series has a variety of technical specifications for customers to choose from, in addition to the options already provided in the selection table, but also according to customer requirements for a variety of customized, including thread specifications, outlets, connectors, and other mechanical structure needs; and high pressure, high temperature, and other special applications, such as adapting to the environment.

To facilitate the actual application of the customer, we also supply a variety of accessories to match the sensor, the series related to the mounting fixture, signal processor and other accessories information, please contact us for advice.



### ● Applications

- Fuel Assembly Poolside Inspection
- Collimator Positioning
- Nuclear Valve Position Feedback
- Nuclear Power
- Nuclear Medical

### ● Features

- Diameter 19mm
- Range: ±1.25mm~±250mm
- Operating Temp.: -55°C~+200°C
- Stainless steel housing Sealing class: ICE IP61
- γ flux: 1000k Gy(10<sup>6</sup> Gy)

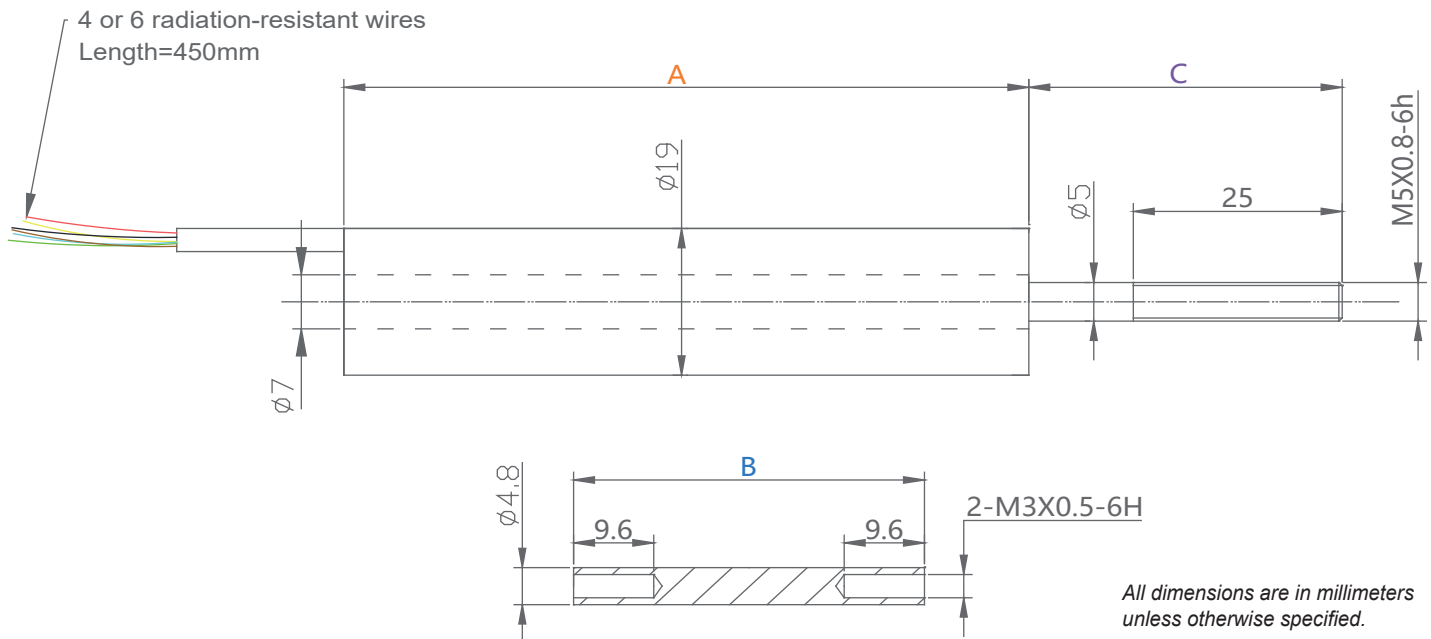
### Standards and Documentation

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

● General Specifications

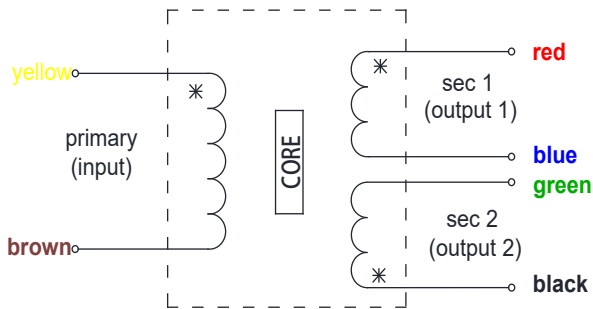
Parameters	Descriptions
Input voltage	1-9V AC, 3V rms (rated)
Input frequency	2.5 kHz(rated)
Linearity error	<±0.25% (Full stroke range)
Repeatability error	<0.01% (Full stroke range)
Hysteresis error	<0.01% (Full stroke range)
Operating temperature	-55°C to +200°C
Thermal coefficient	-0.02%/°C (rated)
Vibration resistance	20g, 2 kHz

● Dimensions



Parameters	Model	TRAD19-000625	TRAD19-001325	TRAD19-0025	TRAD19-005025	TRAD19-010025	TRAD19-015025	TRAD19-020025	TRAD19-025025	TRAD19-030025	TRAD19-040025	TRAD19-050025
Range	mm	±3	±6.5	±12.5	±25	±50	±75	±100	±125	±150	±200	±250
Dimension "A"	mm	49	67	127	163	259	319	391	451	487	607	775
Dimension "B"	mm	32	42	87.7	87.7	134.5	157.4	157.4	157.4	157.4	178	241
Dimension "C"	mm	41.5	37.5	67	93	1.3	139	163	283.5	165.5	335.5	393
Sensitivity	mV/V/mm	90	80	25	24	15	9.8	6.7	4.9	4.5	4.3	3.1
Primary impedance	Ω	≥325	≥1400	≥1200	≥1250	≥2150	≥2150	≥420	≥600	≥600	≥775	≥620

## ● Wiring Information



*Connect blue & green for differential output.*

## ● Contact us

Contact us for technical consultation or customization requests.

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