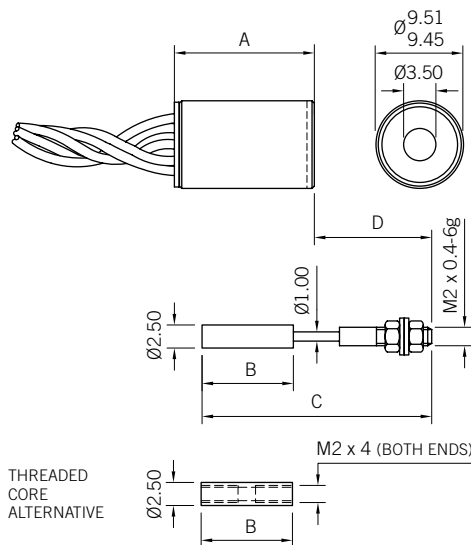
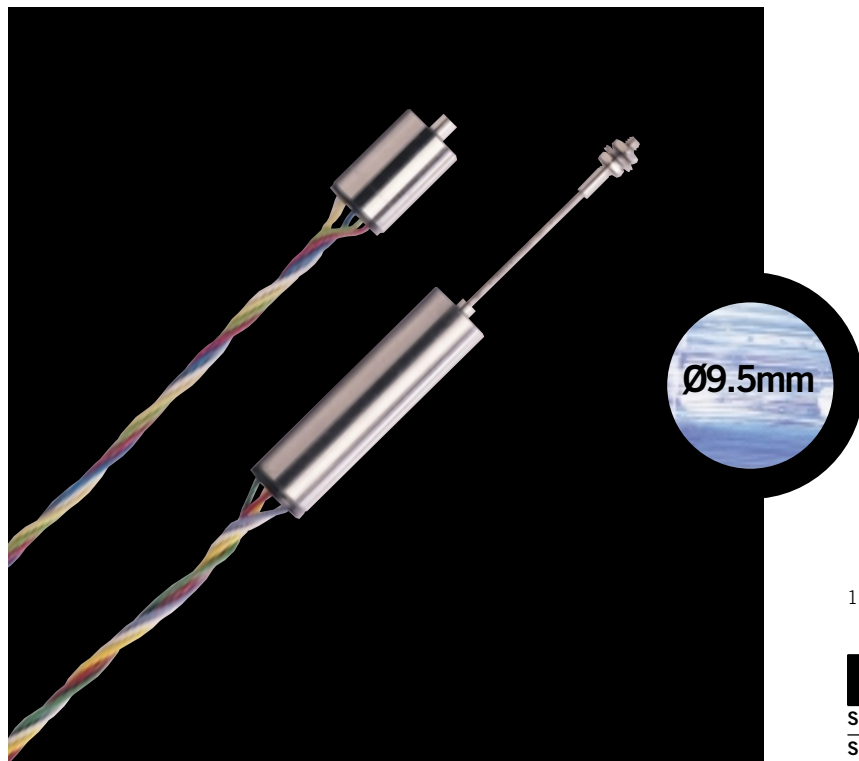




SM series

AC miniature displacement transducers



1.72 UNF threaded core also available

Type	'A' Body Length	'B' Core Length	'C' Core + Carrier	'D' At Null
SM1	15.10/15.25	9.90	24.90	12.70
SM3	34.90/35.05	20.60	42.60	15.30

- > Rugged construction
- > Short body length
- > Good performance

SM transducers cover two standard linear ranges from $\pm 1\text{mm}$ to $\pm 3\text{mm}$. They are designed for measuring displacement in applications where infinite resolution and repeatability are required in a very small size.

The coils are wound on a PPS (40% GL) former and housed in a stainless steel case. The epoxy bonded construction makes the device suitable for operation in wet or oily environments and in applications with high levels of mechanical stress.

The core and push rod assembly moves friction-free within the sensor, an alternative design is available where only the core, threaded at both ends, is provided. Recommended push rod material is titanium. Other materials can be used, but with varying effects on the electrical characteristics.

Product type	Analogue SM series	
Free	SM1	SM3
Measurement		
Measurement Range (mm)	± 1	± 3
Linearity ¹ (% FRO)	0.25%	
Mechanical		
Material	400 Series stainless steel	
Standard cable length (m)	0.5 (PU)	
Length of carrier (protruding at 0 position)	12.7	15.3
Transducer weight ± 0.5 (g)	6	8
Mass of moving components ± 0.2 (g)	0.5	1.5
Environmental		
Storage Temperature (°C)	-40 to +100	
Operating Temperature (°C)	-40 to +85	
IP rating	None	
Electrical Interface (LVDT)		
Energising Voltage (Vrms)	1 to 10	
Sensitivity at 10 kHz (mV/V/mm $\pm 15\%$)	142	136
Energising Current at 5 kHz (mA/V)	3.8	1.8
Zero Phase Frequency (kHz)	14	3.9

¹ All analogue LVDT transducers calibrated at 3V, 5kHz frequency into a 100k Ω load. 100k Ω for the unplugged versions.