

LISAB - LDS-type with mV/V output displacement sensor: 2020

Micro-Measurements Linear Displacement Transducer

Key Features	
Stroke	0-5 mm to 0-100 mm
Output	mV/V
Environmental Protection	IP54
Accuracy	$\pm 0.1\%$ (0-5mm to 0-25mm) $\pm 0.2\%$ (0-50mm to 0-100mm)
Warranty	3 Years

The MM displacement transducer uses strain gauge technology to provide a linearly proportional voltage output in relation to movement. The compact size and rugged construction makes them ideal for use in a diverse range of applications such as Geotechnical Testing, R&D, Aerospace, Civil Engineering and Automotive.

The strain gauge displacement transducer offers excellent accuracy of better than 0.1% on ranges 0-25mm and 0.2% on the 0-50mm and 0-100mm versions, with infinite resolution and long-term stability.

The design incorporates a 4-arm active Wheatstone bridge with a nominal impedance of 350 ohms.

This concept ensures excellent linearity, good temperature stability and low current consumption which is ideal for use in battery-powered systems and equipment.

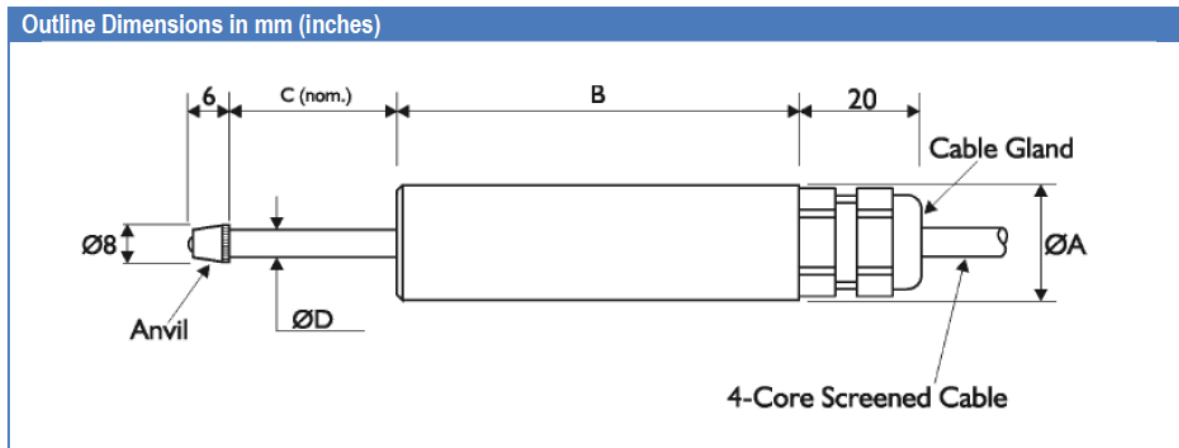
As a strain gauge based device, they are compatible with a broad range of standard analogue and digital instrumentation as used on load cells, pressure transducers and torque sensors.

Model:	Description:	Range:	Price:
MODEL LDS-5	DISPLACEMENT SENSOR-5MM	5mm	Ask us.
MODEL LDS-10	DISPLACEMENT SENSOR-10MM	10mm	Ask us.
MODEL LDS-25	DISPLACEMENT SENSOR-25MM	25mm	Ask us.
MODEL LDS-50	DISPLACEMENT SENSOR-50MM	50mm	Ask us.
MODEL LDS-100	DISPLACEMENT SENSOR-100MM	100mm	Ask us.

CHARACTERISTICS	LDS					UNITS
Stroke Length:	0-5	0-10	0-25	0-50	0-100	mm
Rated Output:	5.0	5.4	7.3	8.8	7.5	mV/V (nominal)
Non-Linearity:	<0.10			<0.20		±% of Rated Output
Repeatability:	<0.10					±% of Rated Output
Operating Temperature Range:	-10 to +60					°C
Temperature Effect On Output:	<0.010					±% of Rated Output/°C
Temperature Effect On Zero:	<0.010					±% of Rated Output/°C
Safe Overload:	See note 4 below					
Excitation:	10 recommended (2-15 acceptable)					Volts AC or DC
Current Consumption:	<30 @ 10Vdc					mA
Input Resistance:	350					Ohms (nominal)
Output Resistance:	350					Ohms (nominal)
Insulation Resistance:	>2000					MΩ
Output Bandwidth:	100					Hz (nominal)
Spring Force:	50-250 (100-400 on 100mm)					gf (progressive)
Construction:	Stainless Steel/Aluminium					
Environmental Protection:	IP54					
Cable:	2 Metre 4 Core Screened, bend radius 10mm					
Weight (excluding cable):	125	130	140	180	320	grams
<i>Operational Notes:</i>						
1. The outer case must not be distorted when clamping the sensor. A full diameter clamp is advised.						
2. The sensor is not recommended for use in hostile environments without additional protection.						
3. Special tools are required to remove the plunger tip (anvil) to avoid damage to the spindle.						
4. With the plunger tip (anvil) attached this forms a positive overload protection stop. If the anvil is removed, the threaded end of the plunger must not be allowed to enter the case.						

Connections:

Wire	Designation
RED	+ve excitation
BLUE	-ve excitation
GREEN	+ve signal
YELLOW	-ve signal
SCREEN	GND – Not connected to body



Dimensions	MODEL				
	LDS-5	LDS-10	LDS-25	LDS-50	LDS-100
ØA	17.4	17.4	17.4	17.4	25.4
B	88.8	88.8	104.5	157	264
C	6	11	26	51	102
ØD	4.8	4.8	4.8	4.8	4.8