

Strain Gauge Based

DISPLACEMENT TRANSDUCER

AML/SGD
Series



- 5mm, 10mm, 25mm, 50mm & 100mm Ranges Available
- Strain Gauge Based Design
- High Output Signal
- Excellent Accuracy - $< \pm 0.1\%$ up to 25mm, $< \pm 0.15\%$ above 25mm
- Good Thermal Stability
- Compact Size - Simple To Install
- 3 YEAR WARRANTY

DESCRIPTION

The SGD series of displacement transducers produce a linearly proportional voltage output in relation to the movement of a captive and guided spindle arrangement.

The design principle incorporates a 4-arm active wheatstone bridge with a nominal impedance of 350ohms. This concept ensures an excellent non-linearity, low current consumption and good temperature stability.

Their compact size and rugged construction make them ideal for use in a diverse range of applications, including; Research and Development, Industrial, Aerospace, Civil Engineering and Automotive.

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

Transducer Specialists...

APPLIED MEASUREMENTS LIMITED

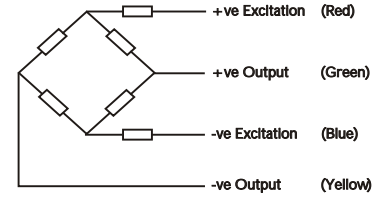
3 MERCURY HOUSE - CALLEVA PARK - ALDERMASTON - BERKSHIRE - RG7 8PN - UK

Tel: (+44) 0118 981 7339 Fax: (+44) 0118 981 9121 email: info@appmeas.co.uk Internet: www.appmeas.co.uk



SPECIFICATION

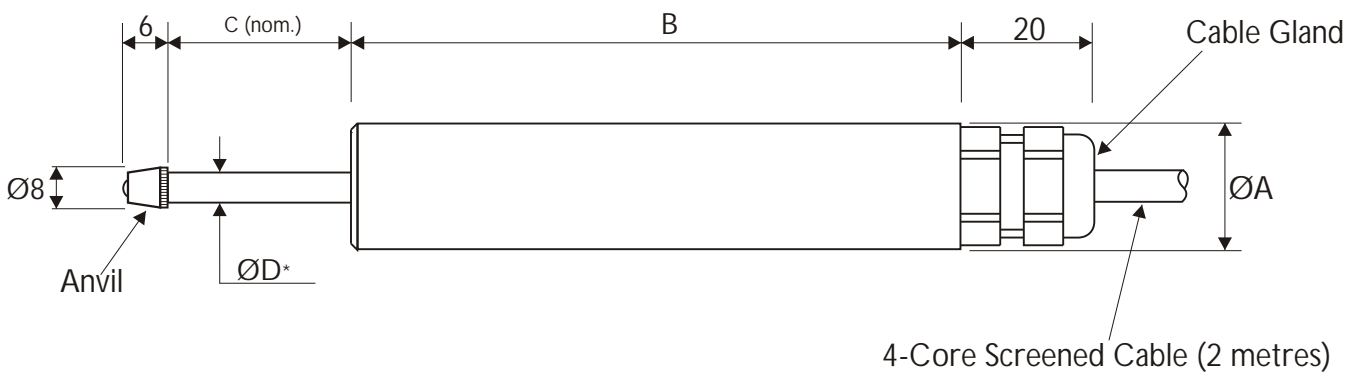
Wiring Schematic Diagram



CHARACTERISTICS	AML/SGD					UNITS
Stroke Length:	0-5	0-10	0-25	0-50	0-100	mm
Rated Output:	5.0	5.4	7.3	7.3	5.4	mV/V (nominal)
Non-Linearity:	<0.10 (0.15 on 50mm and above)					±% 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
On Zero:	<0.010					±% of Rated Output/ °C
Safe Overload:	See note 4 below					
Excitation:	2-10					Volts AC or DC
Current Consumption:	<30 @ 10Vdc					mA
Input Resistance:	350 (450 on 100mm)					Ohms (nominal)
Output Resistance:	350 (270 on 100mm)					Ohms (nominal)
Insulation Resistance:	>2000					Megaohms
Output Bandwidth:	100					Hz (nominal)
Spring Force:	50-250					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	600	grams

Operational Notes:

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.



Stroke Range	ØA	B	C	ØD*
5mm	17.4	88.8	6	4.8
10mm	17.4	88.8	11	4.8
25mm	17.4	104.5	26	4.8
50mm	17.4	157	51	4.8
100mm	25.4	266	105	5

*Spring is located on outside of plunger on 100mm version. Plunger diameter includes this spring.

