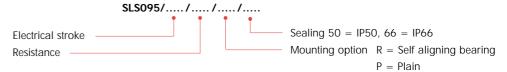
# SLS095 LINEAR DISPLACEMENT SENSOR

SLS095 is designed to provide maximum performance benefits within an extremely compact body diameter of 9.5mm, with stroke lengths from 10 to 100mm. The miniature size of this sensor makes it ideal for applications in robotics, animatronics, medical equipment and motorsport data acquisition.

#### PERFORMANCE

Electrical stroke E	mm	10	20	30	40	50	75	100				
Resistance ±10%	kΩ	0.4†	0.8	1.2	1.6	2.0	3.0	4.0	<sup>†</sup> ±15% for SLS 095/10			
Independent linearity	±%	0.5	0.35	0.25	0.25	0.25	0.15	0.15				
Power dissipation at 20°C	W	0.2	0.4	0.6	0.8	1.0	1.5	2.0				
Applied voltage maximum	Vdc	8.9	17.9	26	40	44	67	74				
Resolution		Virtually infinite										
Hysteresis (repeatability)		Less than 0.01mm										
<b>Operational temperature</b>	°C	-30 to +100										
Output smoothness		To MIL-R-39023 grade C 0.1%										
Insulation resistance		Greater than 100M $\Omega$ at 500Vdc										
Operating mode		Voltage divider only - see Circuit Recommendation below										
Wiper circuit impedance		Minimum of 100 x track resistance or $0.5M\Omega$ (whichever is greater)										
Operating force maximum												
sealed	gf	300 in horizontal plane										
unsealed	gf	100 in horizontal plane										
Life at 250mm per second		Typically greater than 100 million operations (50 x 10 <sup>6</sup> cycles) at 25mm stroke length										
Dither life		200 million operations (100 x 10 $^\circ$ cycles) at ±0.5mm, 60Hz										
Sealing		IP50 standard - IP66 see options										
Shaft seal life		20 million operations (10 x 10 <sup>e</sup> cycles)										
Shaft velocity maximum	m/s	2.5										
Vibration		RTCA 160D 10Hz to 2kHz (random) @ 4.12g (rms) - all axes										
Shock		40g 6mS half sine										
CIRCUIT		Hybrid	track p	otentior	neters fe	eature a	a high w	iper con	tact resistance, therefore operational checks			
RECOMMENDATION		should	be car	ried out	only in	the volt	age divi	der moo	le. Hybrid track potentiometers should be			
		used o	nly as v	oltage o	dividers,	with a	minimu	m wiper	circuit impedance of 100 x track resistance			
		or 0.5M $\Omega$ (whichever is greater). Operation with wiper circuits of lower impedance will degrade										
		the output smoothness and affect the linearity.										
OPTIONS												
IP 66 sealing		Desia	ned to	accept i	ntegral	shaft se	al to aiv	ve IP66	rating			
Mounting		Designed to accept integral shaft seal to give IP66 rating Can be supplied with self aligning bearings or a plain body for use with body clamps or flange										
5			ting kit.			.99						
			ung int									
ACCESSORIES					Γ	Body	clamp I	kit - SA2	200841			
		Moun	iting kits	s		2	ge kit - S					
					L		,					
AVAILABILITY		All sta	andard	confiau	rations	can be	supplied	l rapidly	r from the factory - check with your local supplier			
			ore deta	0			1.1		· · · · · · · · · · · · · · · · · · ·			

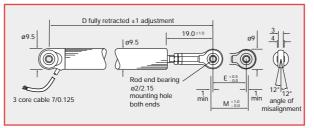


**ORDERING CODES** 

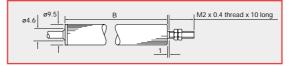
## DIMENSIONS AND MOUNTING OPTIONS

Note: drawings not to scale

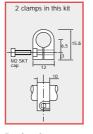
#### SELF ALIGNING BEARING MOUNTING

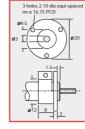


### PLAIN BODY MOUNTING



#### MOUNTING OPTIONS





Body clamp SA200841

Flange mounting SA200842

Electrical stroke E	mm	10	20	30	40	50	75	100
Mechanical stroke M	mm	12.5	22.5	32.5	42.5	52.5	77.5	102.5
Body length B	mm	45.5	55.5	65.5	75.5	85.5	110.5	135.5
Between centres D		70	80	90	100	110	135	160
Weight approximate								
(mounting option R)	g	11	13	14.5	16	17.5	21.5	25.5

#### **ELECTRICAL CONNECTIONS**

3 core cable: PUR sheathed 0.3m long with PTFE insulated 7/0.125 cores.

