SLS220 LINEAR DISPLACEMENT SENSOR

Penny+Giles
A Curtiss-Wright Company

SLS220 linear displacement sensors have a 10mm or 20mm stroke range with a spring loaded operation and a mounting flange to allow easy installation. Contained within a high strength Nylatron® housing, this provides good chemical resistance and low weight. The internal potentiometer assembly is protected to IP66. Suited to OEM and process monitoring applications, this new sensor replaces Penny+Giles HLP220 model.

PERFORMANCE

Electrical stroke E	**mm**	***10***	***20***
Resistance	**kΩ**	0.4 ±15%	0.8 ±10%
Independent linearity	**±%**	0.5	0.35
Power dissipation at 20˚C	**W**	0.2	0.4
Applied voltage maximum	**Vdc**	8.9	17.9
Resolution		Virtually infinite	
Hysteresis (repeatability)		Less than 0.01mm	
Operational temperature	**°C**	–30 to +100	
Output smoothness		To MIL-R-39023 grade C 0.1%	
Insulation resistance		Greater than 100MΩ at 500Vdc	
Operating mode		Voltage divider only - see Circuit Recommendation below	
Wiper circuit impedance		Minimum of 100 x track resistance or 0.5MΩ (whichever is greater)	
Operating force maximum	**kgf**	4.0	
Life at 250mm per second		Typically greater than 20 million operations (10 x 10^6 cycles)	
Sealing		Internally sealed to IP66 (spring loaded plunger is unsealed, so care must be taken when selecting for environments which have a risk of particle contamination)	
Shaft velocity maximum	**m/s**	2.5	

CIRCUIT RECOMMENDATION

Hybrid track potentiometers feature a high wiper contact resistance, therefore operational checks should be carried out only in the voltage divider mode. Hybrid track potentiometers should be used only as voltage dividers, with a minimum wiper circuit impedance of 100 x track resistance or 0.5MΩ (whichever is greater). Operation with wiper circuits of lower impedance will degrade the output smoothness and affect the linearity.

AVAILABILITY

All standard configurations can be supplied rapidly from the factory - check with your local supplier for more details

ORDERING CODES

SLS220/...../.....

Electrical stroke

Resistance

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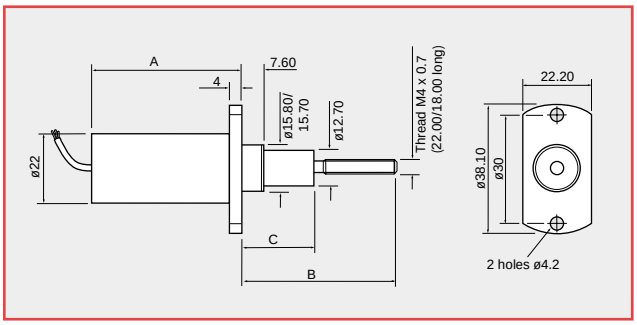
DIMENSIONS

Note: drawings not to scale



Electrical stroke E	**mm**	***10***	***20***
Mechanical stroke M	**mm**	***12.5***	***22.5***
Body length A	**mm**	44.4	54.4
Shaft extended - B	**mm**	43	53
Shaft extended - C	**mm**	20	30
Weight approximate	**g**	45	50

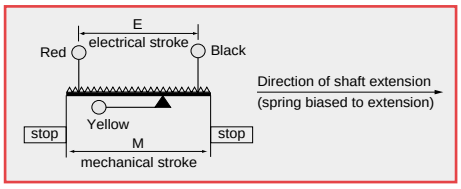
Note: Nominal shaft position is fully extended (spring loaded)

MATERIALS

Body	Nylatron® MC901 (blue)
Shaft	Stainless steel

ELECTRICAL CONNECTIONS

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



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