SLS130 LINEAR DISPLACEMENT SENSOR

The SLS130 range is designed to provide performance benefits within a compact, lightweight package in stroke lengths from 25 to 200mm.
With a choice of mounting options and accessories, this sensor is ideally suited to a wide range of industrial applications.

PERFORMANCE

Electrical stroke E	**mm**	***25***	***50***	***75***	***100***	***125***	***150***	***175***	***200***
Resistance ± 10%	**kΩ**	1	2	3	4	5	6	7	8
Independent linearity									
guaranteed	**± %**	0.25	0.25	0.15	0.15	0.15	0.15	0.15	0.15
typical	**± %**	0.15	0.15	0.15	0.10	0.10	0.07	0.07	0.07
Power dissipation at 20˚C	**W**	0.5	1.0	1.5	2.0	2.5	3.0	3.5	4.0
Applied voltage maximum	**Vdc**	22	44	67	74	74	74	74	74
Electrical output		Minimum of 0.5% to 99.5% applied volts							
Resolution		Virtually infinite							
Hysteresis (repeatability)		Less than 0.01mm							
Operational temperature	**°C**	–30 to +100 (tested to +130 for 12 hours duration)							
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									
sealed	**gf**	500 in horizontal plane							
unsealed	**gf**	250 in horizontal plane							
Life at 250mm per second		Typically greater than 100 million operations (50 x 10^6 cycles) at 25mm stroke length							
Dither life		200 million operations (100 x 10^6 cycles) at ± 0.5mm, 60Hz							
Sealing		IP50 standard - IP66 see options							
Shaft seal life		20 million operations (10 x 10^6 cycles) - replaceable							
Shaft velocity maximum	**m/s**	10							
Vibration		RTCA 160D 10Hz to 2kHz (random) @ 12.6g (rms) - all axes							
Shock		Less than 0.04% output change @ 2500g - all axes							

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.

OPTIONS

Compact shaft	Compact shaft will reduce dimension D by 25mm
Integral shaft seal - IP 66	Designed to accept integral shaft seal to give IP66 rating
Extended cable length	10m output cable can be specified
Mounting	Body clamp, flange or quick release balljoint mounting kits can be supplied
Protective sleeve	For all stroke lengths - self aligning bearings only. See ordering code
Spring loaded shaft kit	For stroke lengths 25 to 150mm with /L shaft option and /50 sealing option only

ACCESSORIES

Mounting kits — Body clamp kit - SA200264, Flange kit - SA200266
Quick release balljoint (Heim) - SA200337

Protective sleeve - SA202984/...../.....
Shaft L= Long, C= Compact
Electrical stroke (select to match SLS130 sensor)

Spring loaded shaft kit - SA200265/stroke (For use with option L/50 units only)

AVAILABILITY

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

ORDERING CODES

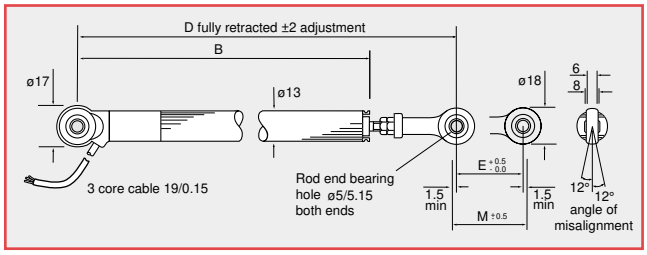
SLS130/...../...../...../...../.....

- Electrical stroke
- Shaft L = long, C = compact
- Protective sleeve N= None, P= Fitted
- Cable 1 = 1m, 10 = 10m
- Sealing 50 = IP50, 66 = IP66

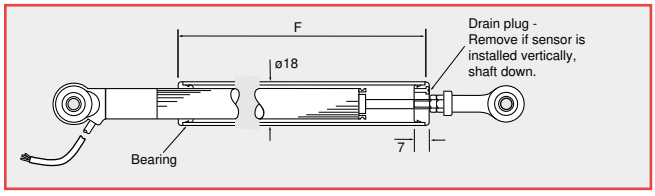
DIMENSIONS AND MOUNTING OPTIONS

Note: drawings not to scale

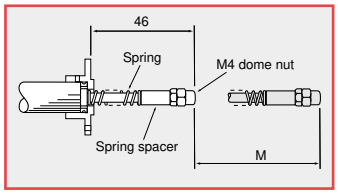
SELF ALIGNING BEARING MOUNTING



PROTECTIVE SLEEVE OPTION - P



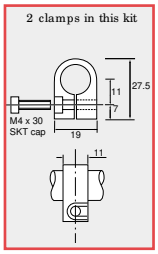
SPRING RETURN OPTION †



SA200265/stroke

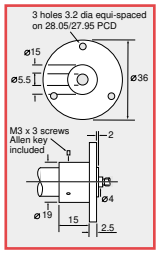
(25 to 150mm stroke lengths and /L/50 options only)

MOUNTING OPTIONS



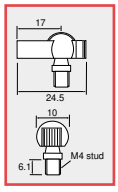
Body clamp

SA200264



Flange mounting

SA200266



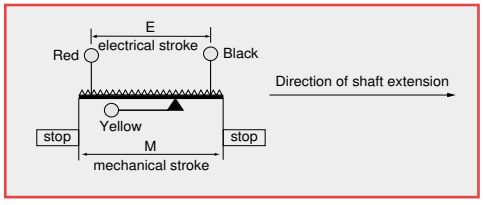
Quick release ball joint

SA200337

Electrical stroke E	**mm**	***25***	***50***	***75***	***100***	***125***	***150***	***175***	***200***
Mechanical stroke M	**mm**	***29***	***54***	***79***	***104***	***129***	***154***	***179***	***204***
Body length B	**mm**	110.5	135.5	160.5	185.5	210.5	235.5	260.5	285.5
Between centres D									
standard sensor (L)	**mm**	173.6	198.6	223.6	248.6	273.6	298.6	323.6	348.6
compact shaft sensor (C)	**mm**	148.6	173.6	198.6	223.6	248.6	273.6	298.6	323.6
Sleeve length F									
standard sensor (L)	**mm**	102	127	152	177	202	227	252	277
compact shaft sensor (C)	**mm**	77	102	127	152	177	202	227	252
Weight approximate									
standard sensor (L)	**g**	64	71	78	85	92	99	106	113
compact shaft sensor (C)	**g**	60	67	74	81	88	95	102	109

ELECTRICAL CONNECTIONS

3 core cable: PUR sheathed 1m long with ETFE insulated 19/0.15 cores.



† Body clamp or flange mounting options should be ordered seperately