SENSEL MEASUREMENT
CAPTEURS, ELECTRONIQUES & ACQUISITION DE DONNEES

- ***Rugged Construction***
- ***Compact Design***
- ***Sealed to IP67***
- ***Long Life***
- ***Excellent Linearity***
- ***Regulated Output Options***

The SM-19SR series of Spring Return linear potentiometers are designed to withstand the harsh environments of testing and industrial applications. Using proven 'Conductive Plastic' technology, the sensors offer high performance and reliability at operational temperatures up to +150°C

The heavy duty 19mm diameter SM-19SR is internally sprung and available with stroke lengths up to 150mm, flange mount, a choice of potentiometer and regulated analogue outputs, sealing to IP65.

Specifications

Electrical (Potentiometer Output)	
Technology	Conductive plastic
Max. Supply Voltage	40VDC
Resolution	Essentially infinite
Recommended Wiper Current	<10µA
Output Signal	Potentiometer (voltage divider)
Repeatability	≤0.01mm
Independent Linearity	≤0.5%

Electrical (Regulated Outputs)	
Technology	Conductive plastic with 'on board' signal conditioning
Supply Voltage	6-30VDC (4-20mA, 0-5V output) ; 11-30VDC (0-10V output)
Resolution	Essentially infinite
Reverse Polarity Protection	Yes
Output Signal	4-20mA ; 0-5VDC ; 0-10VDC regulated output options
Repeatability	≤0.01mm
Independent Linearity	≤0.5%

Mechanical	
Operating Temperature	-40°C - +150°C (Potentiometer output) ; -30°C - +125°C (4-20mA, 0-5V, 0-10V output)
Stroke lengths	50mm - 150mm
Operational Speed	10m/s max
Electrical & Mechanical Life	>25 million operations (depending on installation and environmental conditions)
Housing Material	Aluminium
Shaft Material	Stainless steel
Sealing	IP54 (felt) ; IP65 (Viton O ring)

SENSEL MEASUREMENT
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S.A.R.L au capital de 7500 Euros - SIRET 502 277 908 00013 - APE 7490 - N° TVA : FR40502277908

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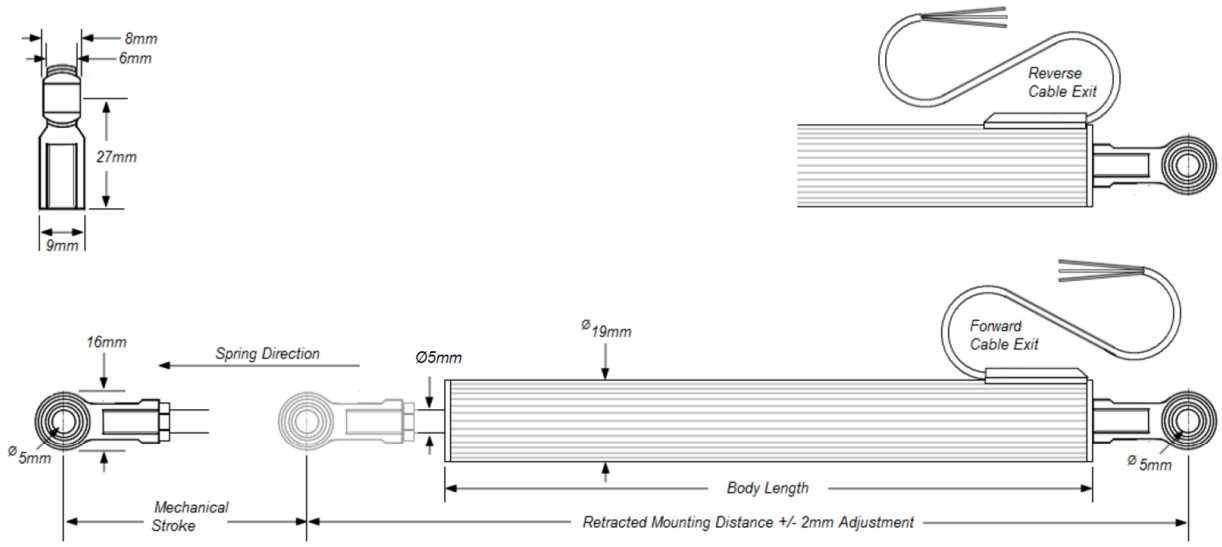
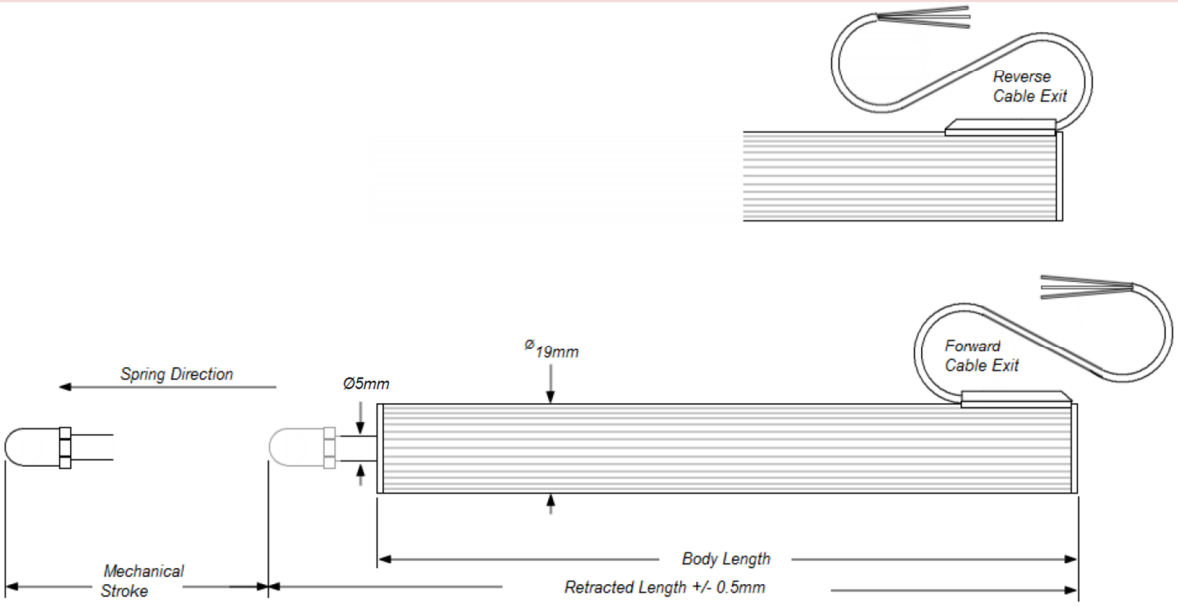
SM-19SRM-

Electrical Stroke (mm)	50	100	150
Retracted Mounting Distance (mm)	248	298	398
Min. Mechanical Stroke (mm)	52	102	152
Body Length (mm)	182	232	332
Approx. Weight Without Cable (g)	135	143	159
Resistance (KΩ +/-20%	3.4	6.7	10
Mechanical Fixing	Rod End Bearings - Ø5mm		



SM-19SRA-

Electrical Stroke (mm)	50	100	150
Retracted Length (mm)	208	258	358
Min. Mechanical Stroke (mm)	52	102	152
Body Length (mm)	182	232	332
Approx. Weight Without Cable (g)	127	135	151
Resistance (KΩ +/-20%)	3.4	6.7	10
Shaft End	M5 Dome Nut		



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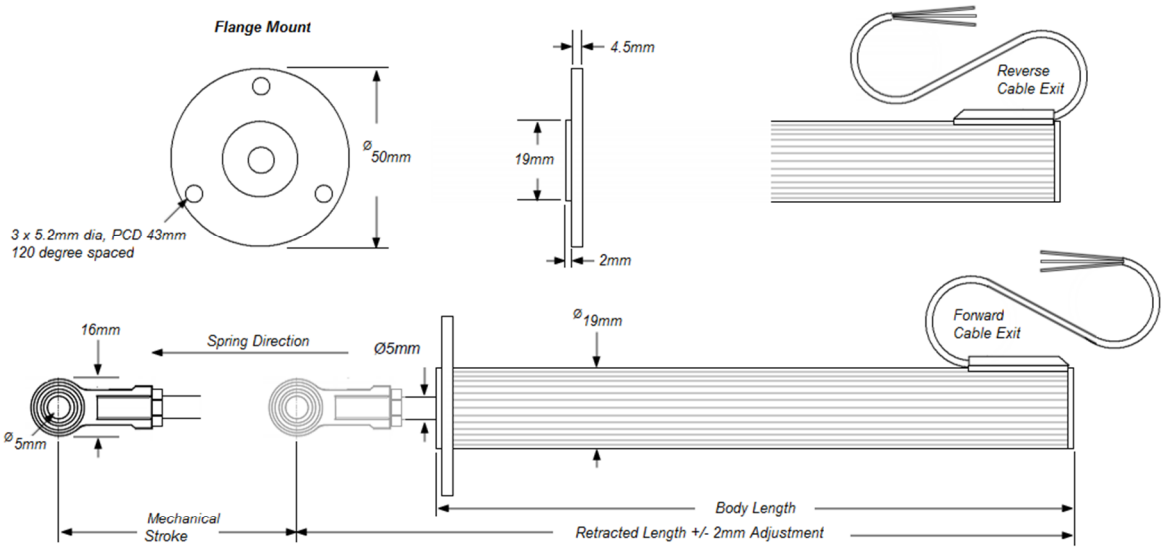
Flange Mount

Compatible with 19SRM and 19SRA – Refer to model for specifications, except below:

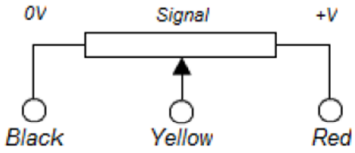
Rod End Bearing is removed from the rear of the sensor (19SRM)

Retracted Length (mm) = Retracted Mounting Distance -27mm (19SRM)

Body Length (mm) = +4.5mm



Electrical Connection (Potentiometer output)



Wiring	+Ve Supply	0V Supply (GND)	Signal	
Single Output	RED	BLACK	YELLOW	
Dual Output (option)	BROWN	BLUE	WHITE	(Green wire = Not Used)
Output Signal	Output signal may be reversed by swapping connections to the Red & Black and Brown & Blue wires. DO NOT connect +Ve supply to the Yellow or White wires, as this will cause damage to the sensor element.			

Electrical Connection (0-5VDC ; 0-10VDC output)

Wiring	+Ve Supply	0V Supply (GND)	Signal
Single Output	RED	BLACK	YELLOW

Electrical Connection (4-20mA output) 2 wire

Wiring	+Ve Supply	0V Supply (GND)	
Single Output	RED	BLACK	(Yellow wire = Not Used)

Electrical Cable

Cable Type	Raychem 55A, 24AWG, FDR 25 sleeve	(dual output = 26AWG)
Cable Length	Approximately 500mm	

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Ordering Information

Please use the chart below to construct your product code…

Sample Product Code: **SM – 19SRM – 100 – 65 – F – 000**

Series **SM– 19SR**

Mounting

M = Rod End Bearings

A = No Fixings

Stroke Length

Insert required length in mm

50 , 100 , 150

Seal Rating

54 = IP54

65 = IP65

Cable Exit Direction

F = Forward facing cable exit

R = Reverse facing cable exit

Options (compatible options may be selected, separated by – between codes)

000 = No options selected
FL = Flange Mount
Dual = Dual output (6 wire)
DG12 = 2 x Body Clamp (use with MS-19SRA)
420 = 4-20mA regulated output (single output only)
V05 = 0-5VDC regulated output (single output only)
V10 = 0-10VDC regulated output (single output only)
Lxxxx = Cable length in mm (500mm cable supplied as standard)

Accessories

Body Clamp DG12 For use with 19SRA

Material Aluminium, Rubber Lined