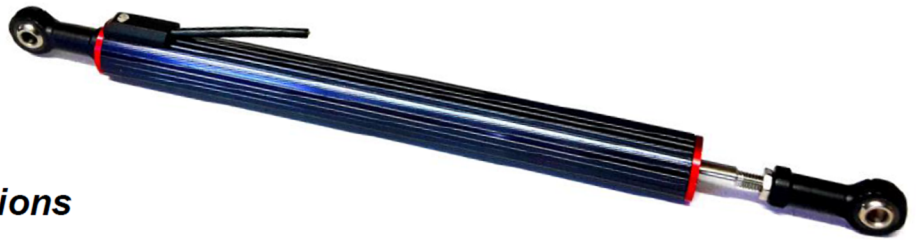


- **Rugged Construction**
- **Compact Design**
- **Sealed to IP67**
- **Long Life**
- **Excellent Linearity**
- **Regulated Output Options**



The SM19 series of 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 SM19 is available with stroke lengths up to 450mm, flange mount, a choice of potentiometer and regulated analogue outputs, sealing up to IP67.

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

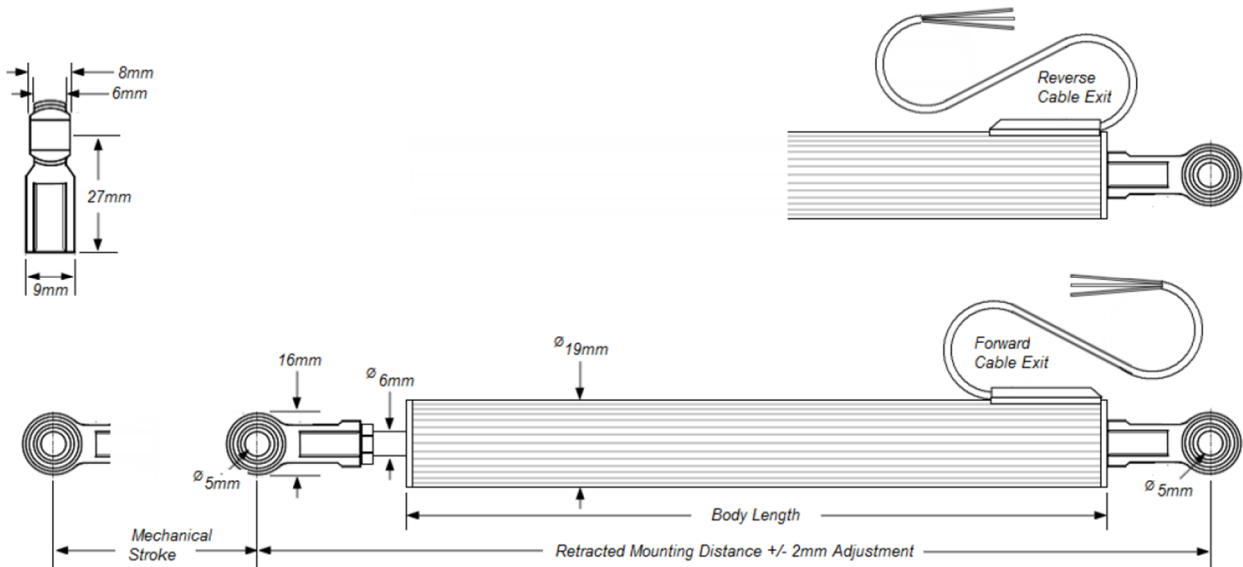
Operating Temperature	-40°C - +150°C (Potentiometer output) ; -30°C - +125°C (4-20mA, 0-5V, 0-10V output)
Stroke lengths	25mm – 450mm
Operational Speed	10m/s max
Electrical & Mechanical Life	>25 million operations (depending on installation and environmental conditions)
Housing Material	Aluminium
Shaft Material	Stainless steel
Sealing	IP54 (felt) ; IP65 (2 x Viton O ring) ; IP67 (PTFE U spring, Viton O ring)

SENSEL MEASUREMENT

41, rue des laitières – 94300 VINCENNES - FRANCE
Tél. : 01 56 88 25 78 - www.sensel-measurement.fr - contact@sensel-measurement.com
S.A.R.L au capital de 7500 Euros - SIRET 502 277 908 00013 - APE 7490 - N° TVA : FR40502277908

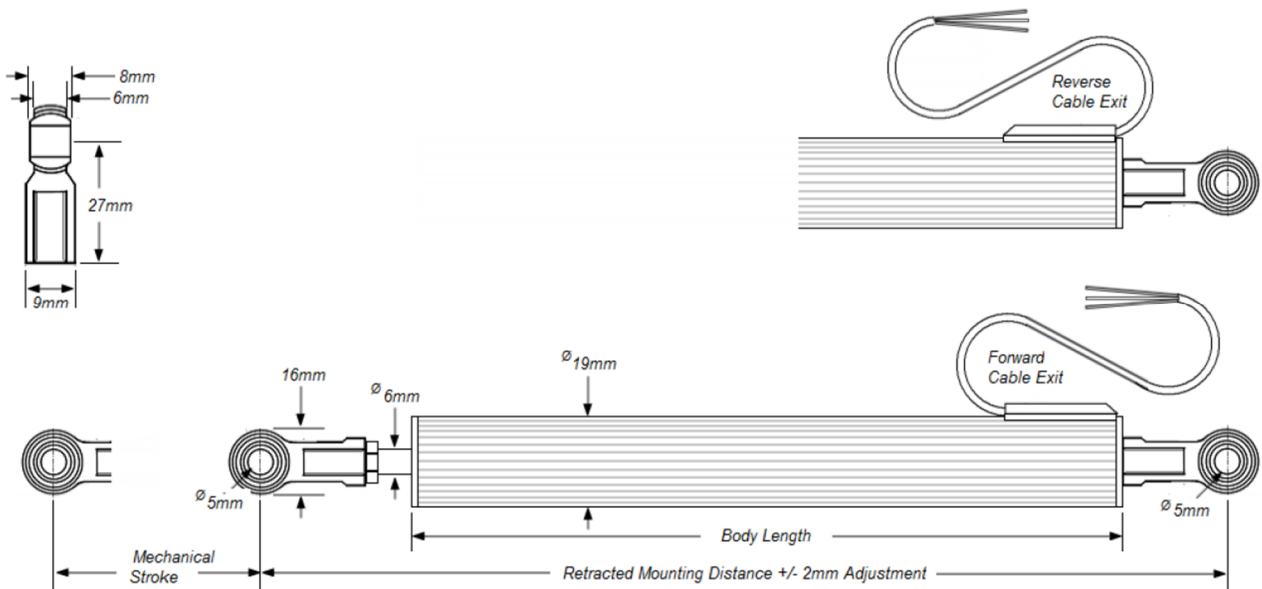
SM-19M-

Electrical Stroke (mm)	25	50	75	100	150	200	250	300
Retracted Mounting Distance (mm)	173	198	223	248	298	348	398	448
Min. Mechanical Stroke (mm)	27	52	77	102	152	202	252	302
Body Length (mm)	107	132	157	182	232	282	332	382
Approx. Weight Without Cable (g)	123	127	131	135	143	151	159	167
Resistance (K Ω +/-20%)	1.7	3.4	5	6.7	10	13.4	16.7	20
Mechanical Fixing	Rod End Bearings - \varnothing 5mm							



SM-19E-

Electrical Stroke (mm)	350	400	450
Retracted Mounting Distance (mm)	518	568	618
Min. Mechanical Stroke (mm)	352	402	452
Body Length (mm)	452	502	552
Approx. Weight Without Cable (g)	223	278	333
Resistance (K Ω +/-20%)	23.4	26.7	30
Mechanical Fixing	Rod End Bearings - \varnothing 5mm		



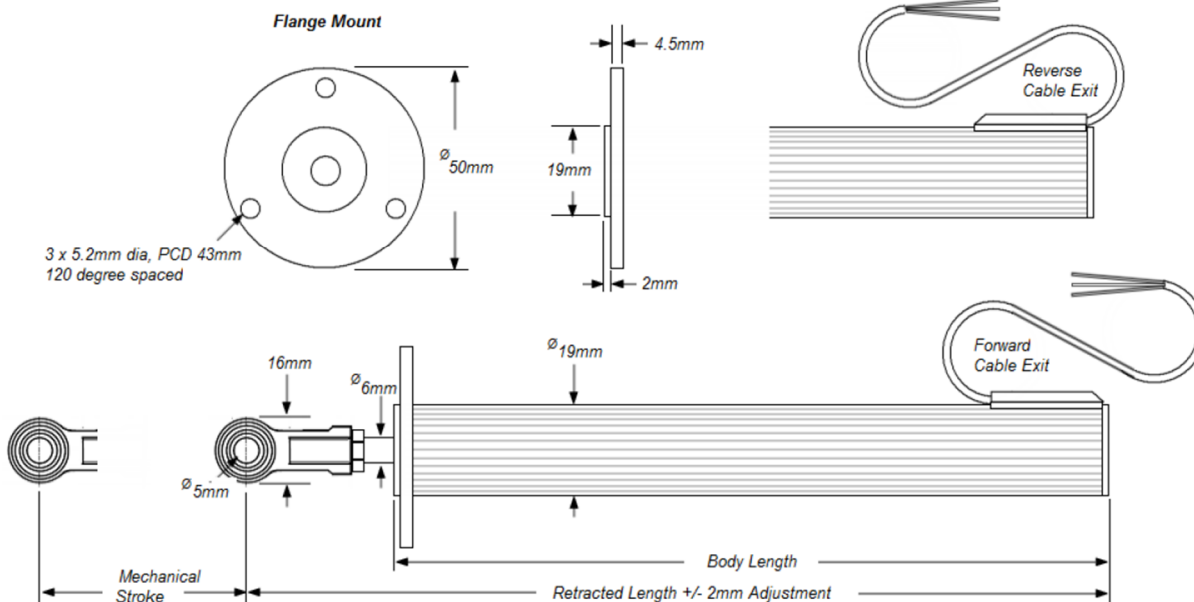
Flange Mount

Compatible with 19M – Refer to model for specifications, except below:

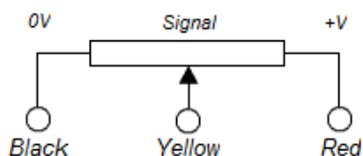
Rod End Bearing is removed from the rear of the sensor

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

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

Ordering Information

Please use the chart below to construct your product code...

Sample Product Code: SM – 19M – 150 – 67 – F – 000

Series	SM - 19
Mounting	M = Standard range E = Extended range
Stroke Length	Insert required length in mm 25 , 50 , 75 , 100 , 150 , 200 , 250 , 300 , *350 , *400 , *450 *19E only
Seal Rating	54 = IP54 65 = IP65 67 = IP67
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 (MS-19M only) Dual = Dual output (6 wire) SLV = Protective sleeve (refer to accessories below) 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



Protective Sleeve SLV For use with all models except **Flange Mount**

Material

Carbon fibre, Peek Ø25mm

Since the suitability of these products depends upon a wide range of factors not in our control, the manufacturer expects and understands that you will conduct the testing and evaluation necessary to determine that these products are suitable for your application. Whilst every effort is made to ensure the above details are correct at the time of printing, the manufacturer reserves the right to make material changes, and / or technical changes without notification.