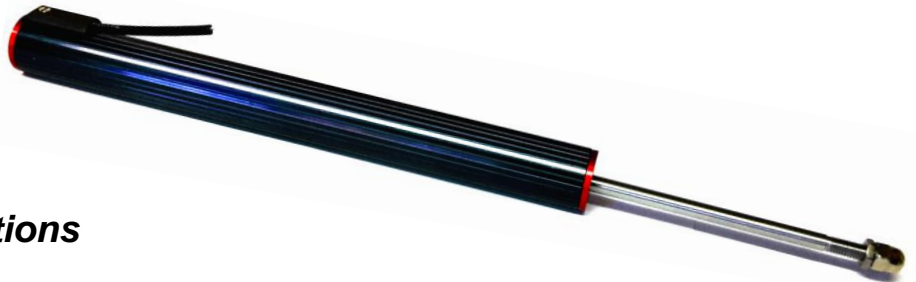


# MS-19SR series – Spring Return Linear Potentiometers



Manufactured in UK

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



The MS-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 MS-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%

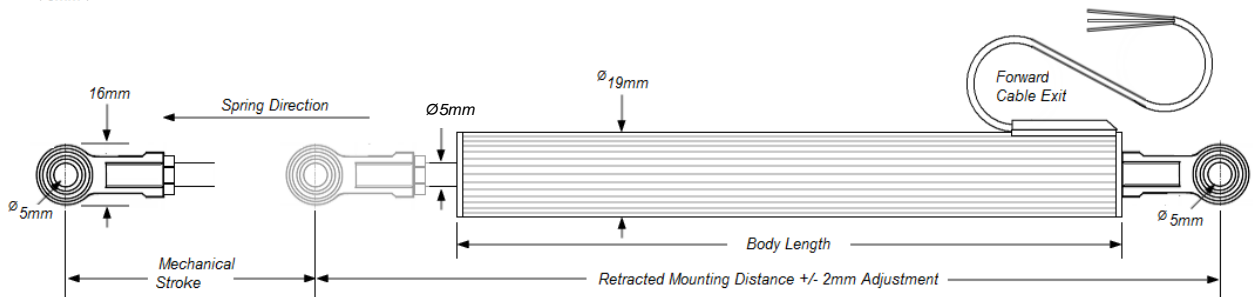
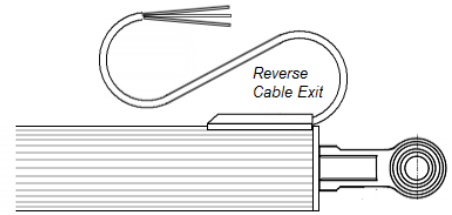
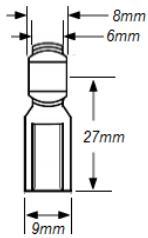
### Mechanical

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)

# MS-19SR series – Spring Return Linear Potentiometers

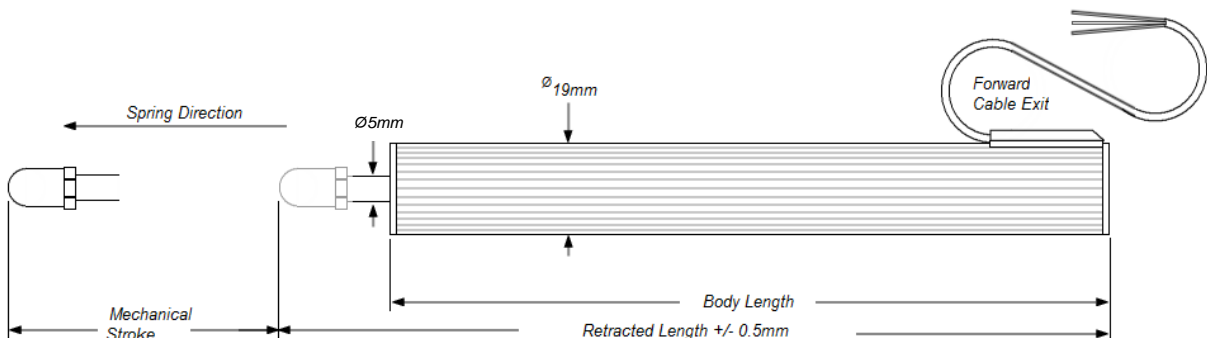
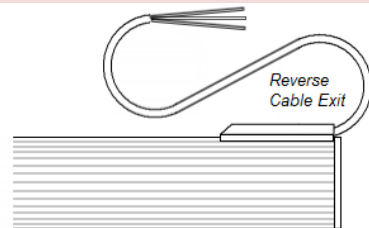
## MS-19SRM-

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 (K $\Omega$ +/-20%)	3.4	6.7	10
Mechanical Fixing	Rod End Bearings - $\varnothing$ 5mm		



## MS-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 (K $\Omega$ +/-20%)	3.4	6.7	10
Shaft End	M5 Dome Nut		



# MS-19 series – Heavy Duty Linear Potentiometers

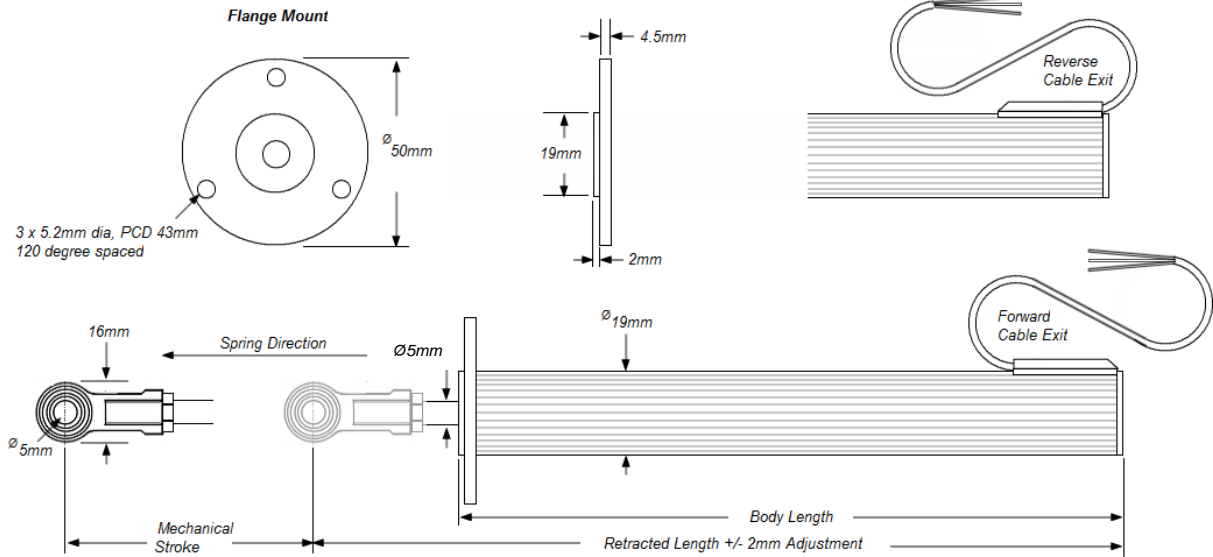
## Flange Mount

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

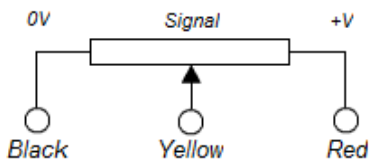
Rod End Bearing is removed from the rear of the sensor (MS-19SRM)

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

# MS-19 series – Heavy Duty Linear Potentiometers

## Ordering Information

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

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

<b>Series</b>	MS – 19SR
<b>Mounting</b>	
<b>M = Rod End Bearings</b>	
<b>A = No Fixings</b>	
<b>Stroke Length</b>	
Insert required length in mm	
<b>50 , 100 , 150</b>	
<b>Seal Rating</b>	
<b>54 = IP54</b>	
<b>65 = IP65</b>	
<b>Cable Exit Direction</b>	
<b>F = Forward facing cable exit</b>	
<b>R = Reverse facing cable exit</b>	
<b>Options</b> (compatible options may be selected, separated by – between codes)	
<b>000 = No options selected</b>	
<b>FL = Flange Mount</b>	
<b>Dual = Dual output (6 wire)</b>	
<b>DG12 = 2 x Body Clamp ( use with MS-19SRA)</b>	
<b>420 = 4-20mA regulated output (single output only)</b>	
<b>V05 = 0-5VDC regulated output (single output only)</b>	
<b>V10 = 0-10VDC regulated output (single output only)</b>	
<b>Lxxxx = Cable length in mm (500mm cable supplied as standard)</b>	

## Accessories



**Body Clamp DG12** For use with MS-19SRA

**Material** Aluminium, Rubber Lined

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.