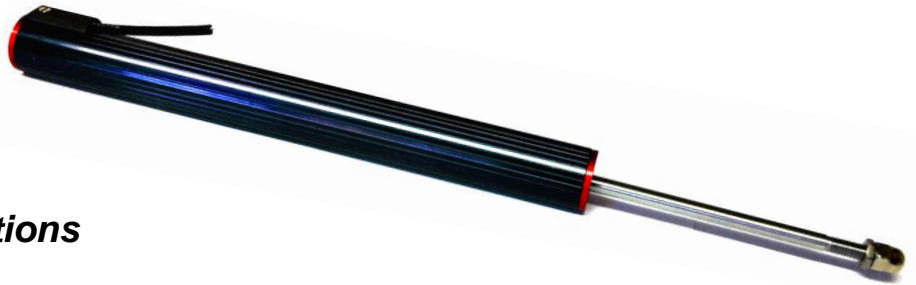


MS-19SR series – Spring Return Linear Potentiometers



Manufactured in UK

- **Rugged Construction**
- **Compact Design**
- **Sealed to IP65**
- **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% |

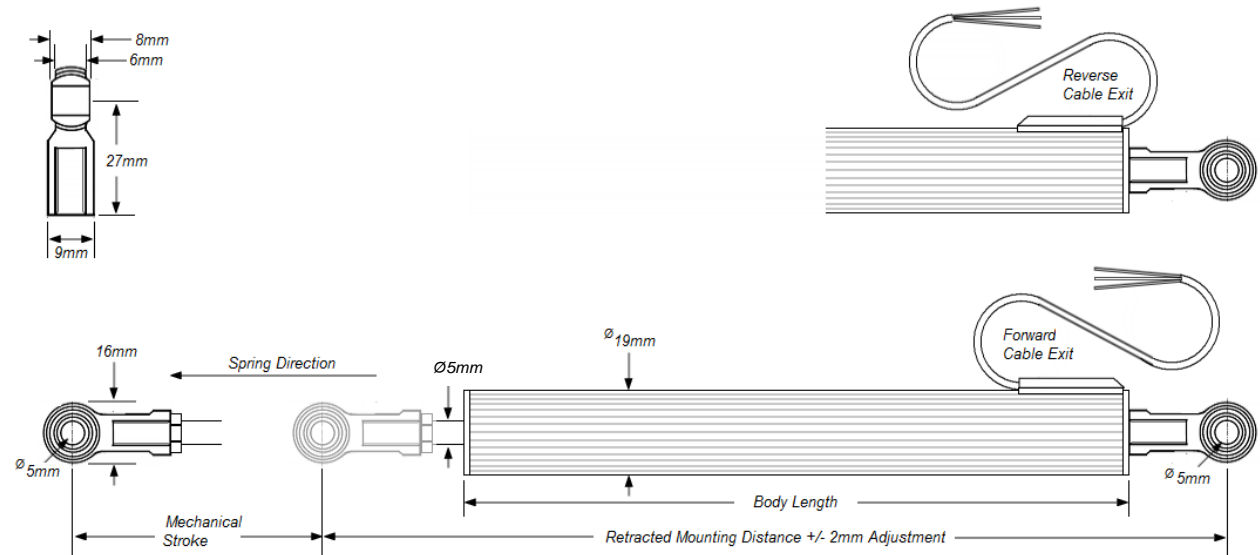
Mechanical

| | |
|------------------------------|---|
| 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

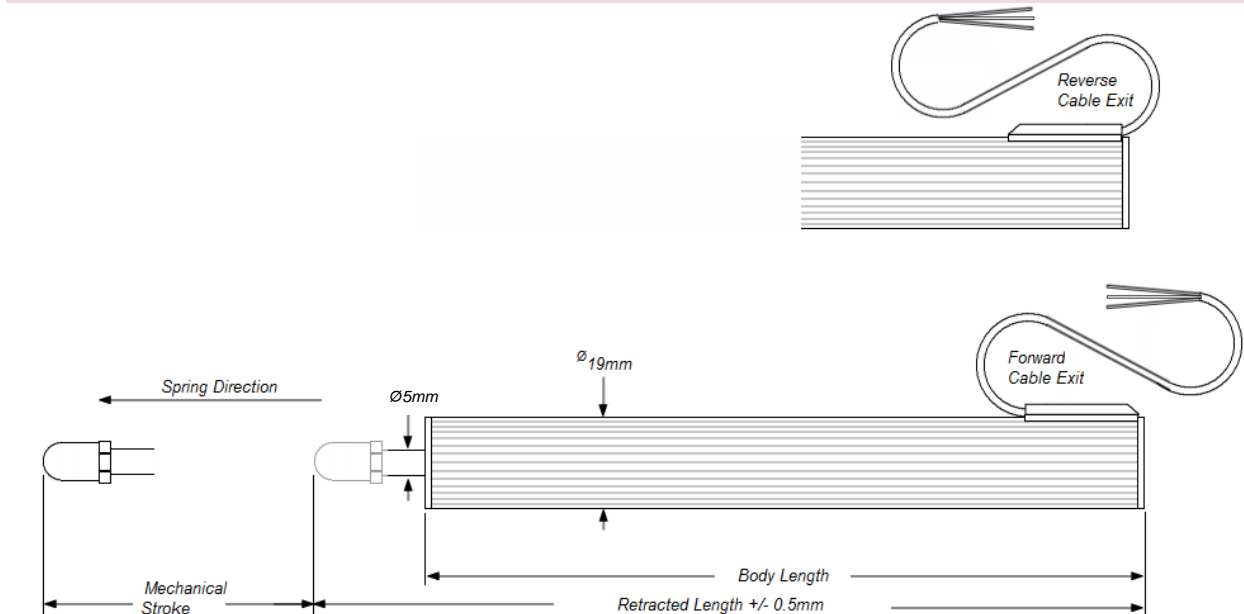
MS-19SRM-

| | | | |
|----------------------------------|--------------------------------------|-----|-----|
| 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 Ω +/-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 |
| Mechanical Stroke (mm) | 52 | 102 | 152 |
| Body Length (mm) | 182 | 232 | 332 |
| Approx. Weight Without Cable (g) | 127 | 135 | 151 |
| Resistance (K Ω +/-20%) | 3.4 | 6.7 | 10 |
| Shaft End | M5 Dome Nut | | |



MS-19 series – Heavy Duty Linear Potentiometers

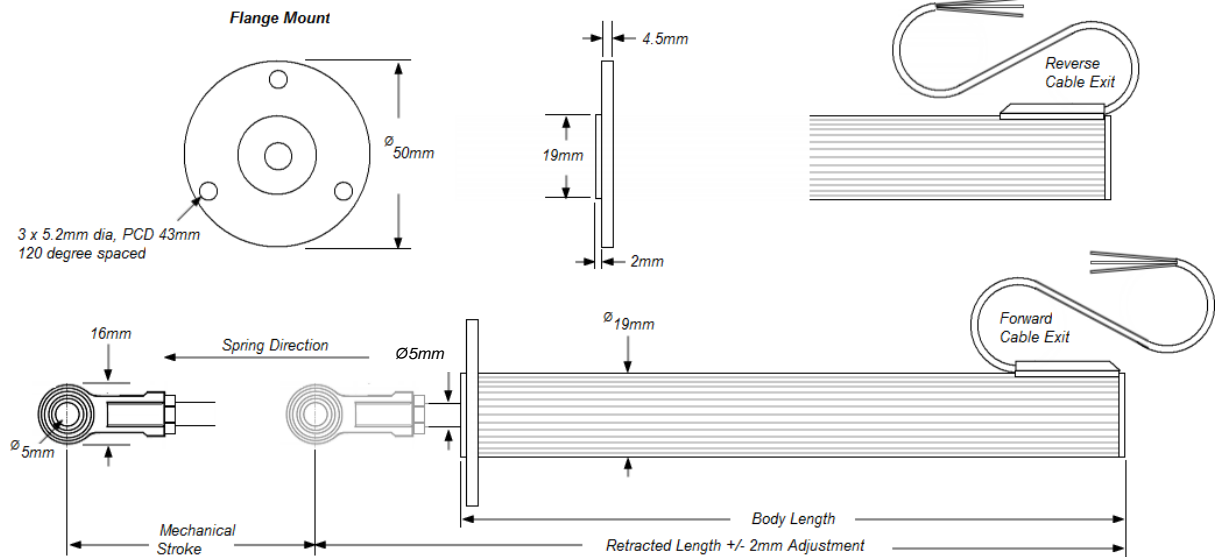
Flange Mount

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

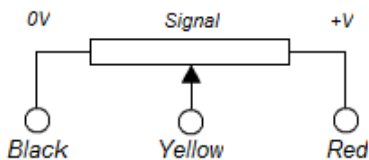
Rod End Bearing is removed from the rear of the sensor (MS-19SRM)

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 |
| 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 |

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**

| | |
|---|-----------|
| Series | MS – 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 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.