

# MS-22R series – Rotary Potentiometers



Manufactured in UK

- **Rugged Construction**
- **Compact Design**
- **Aluminium Housing**
- **IP67 Dual Seal Option**
- **Long Life**
- **Excellent Linearity**
- **High Operating Temperature**



The MS22R series of rotary potentiometers are designed to withstand the harsh environments of motorsport, testing and industrial applications. Using proven 'Conductive Plastic' technology, the sensors offer high performance and reliability at operational temperatures up to +175°C

The small and lightweight, 22.5mm diameter MS-22R is available with a choice of electrical angle, flange mount and shaft design options.

## Specifications

### Electrical

<b>Technology</b>	Conductive Plastic
<b>Electrical Angle</b>	45°, 125°, Dual 125°, 350°
<b>Nominal Resistance</b>	5K $\Omega$ +/-20%
<b>Max. Supply Voltage</b>	40VDC
<b>Output Signal</b>	Potentiometer (voltage divider)
<b>Resolution</b>	Essentially infinite
<b>Non Linearity</b>	$\leq 0.5\%$
<b>Repeatability</b>	$\leq 0.01\%$

### Mechanical

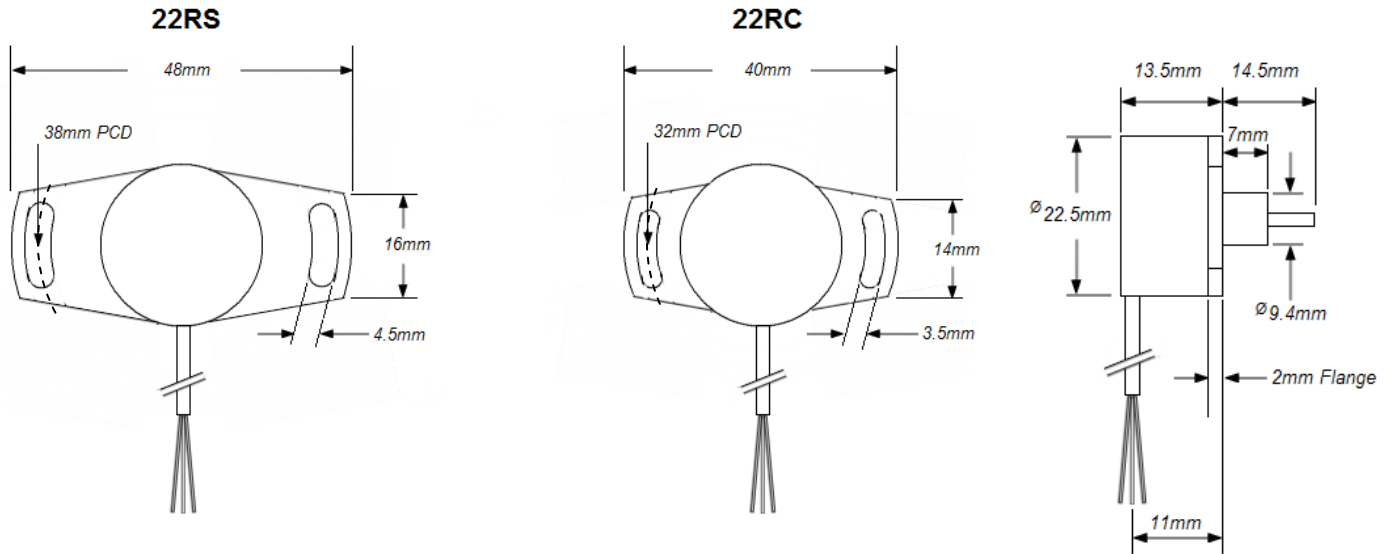
<b>Shaft Velocity</b>	600 RPM
<b>Mechanical Angle</b>	360° continuous rotation
<b>Mechanical Life</b>	>50 million operations (depending on installation and environmental conditions)
<b>Torque</b>	<3Ncm (IP67 seal)
<b>Housing Material</b>	Aluminium
<b>Shaft Material</b>	Stainless Steel
<b>Weight</b>	15g (without cable)

### Environmental

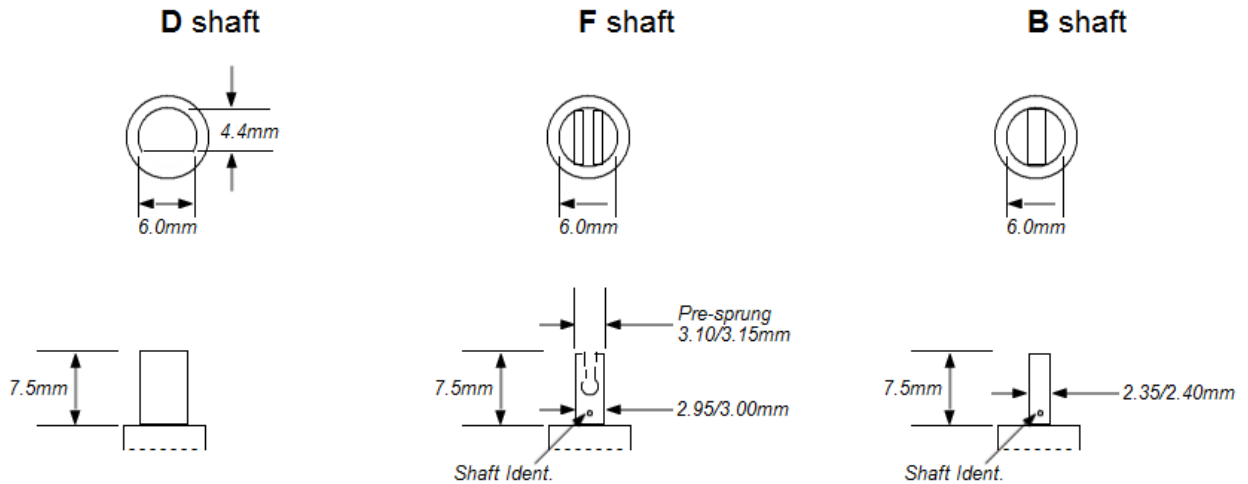
<b>Sealing</b>	IP65 or IP67
<b>Operating Temperature</b>	-40°C - +175°C
<b>Vibration &amp; Shock</b>	5-2000Hz random , 3m drop onto concrete

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## Dimensions



## Shaft Options:



## Electrical Connection

Wiring	+Ve Supply	0V Supply (GND)	Signal
Single Output	RED	BLACK	YELLOW
Dual Output (125° only)	BROWN	BLUE	WHITE (Green wire = Not Used)
<b>Cable Type</b>	3 or 6 wire Raychem 55A, 26AWG, FDR 25 sleeve		
<b>Cable Length</b>	Approximately 500mm *		
<b>Output Signal</b>	Output signal may be reversed (CW or CCW) by swapping connections to the (Red & Black) or (Brown & Blue) wires. DO NOT connect +Ve Supply to the Yellow or White wires, as this will cause damage to the sensor element.		
<b>Alignment</b>	Sensor output is at approximate electrical centre, when shaft flat (D) or shaft ident (F, B) is aligned with the cable exit.		

### \*Custom Options available

See ordering information

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## Ordering Information

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

**Sample Product Code: MS – 22RS – 350 – 67 F – 000**

<b>Series</b>	MS-22R
<b>Housing</b>	
S = Standard flange mount (refer to drawing)	
C = Compact flange mount (refer to drawing)	
<b>Electrical Angle</b>	
Insert required electrical angle in °	
045 = 45°	
125 = 125°	
350 = 350°	
<b>Seal Rating</b>	
65 = IP65	
67 = IP67	
<b>Shaft Style</b>	
D = Shaft design D (refer to drawing)	
F = Shaft design F (refer to drawing)	
B = Shaft design B (refer to drawing)	
<b>Options</b> (multiple options may be selected, separated by – between codes)	
000 = No options selected	
D125 = Dual Output (125° only)	
Lxxxx = Cable length in mm (500mm cable supplied as standard)	

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.