

# STANDARD POT

## 30mm Diameter



The output of a rotary potentiometer is a voltage which changes in direct proportion to the shaft angle. A constant voltage is required across the supply and ground wires of the sensor. No internal end stops are fitted, so continuous rotation is possible. Various lengths of electrically active track are available, up to a maximum of 340°. All units are sealed to keep out dirt and dust but some models can be fully sealed against the ingress of fluids.

Please request our installation datasheet for further details.

### Electrical

- Electrical angle is shown on the order details
- Nominal track resistance  
3kohm  $\pm 20\%$  (electrical angle less than 308°)  
5kohm  $\pm 20\%$  (electrical angle 308° or above)
- Nominal resistance temp. coeff.  $\pm 200\text{ppm}/^\circ\text{C}$
- Typical wiper current 5 $\mu\text{A}$
- Non-linearity\*  $\pm 0.5\%\text{FS}$  typ,  $\pm 0.7\%\text{FS}$  max
- Insulation resistance  $> 50\text{Mohm}$  @ 500Vdc
- Track length tolerance  $\pm 2.5^\circ$
- Half voltage position tolerance  $\pm 2^\circ$  typ,  $\pm 4^\circ$  max

### Cable and Connection Definition

- 22 AWG un-screened cable
- Cable length is shown on the order details but any length is available on request
- Cable outlet boot can be supplied rotated through any angle on request
- Various automotive and military standard connectors are available
- Connection
 

White wire	Pin A	Pin 1	Supply
Green wire	Pin B	Pin 2	Ground
Red wire	Pin C	Pin 3	Signal

Viewed from the end of the shaft, clockwise rotation increases the resistance between supply and signal

\* measured over the central 90° of electrical angle

### Application

- Throttle position, steering wheel angle, gear drum position, accelerator pedal position, clutch pedal position.

### Mechanical

- Maximum operational speed 120rpm
- Minimum rotational life 50 million cycles
- Weight less than 75g (including cable)
- Elastomer boot for strain relief to the sensor body

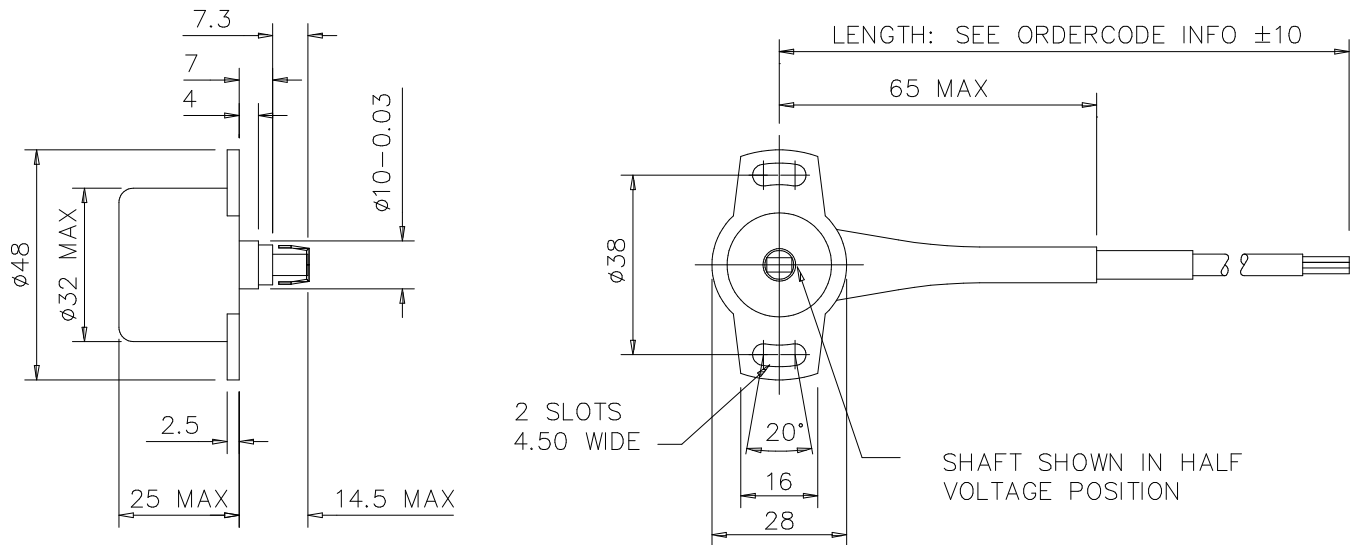
Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application. No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. Please contact our technical consultancy service who will be pleased to help.

### Environmental

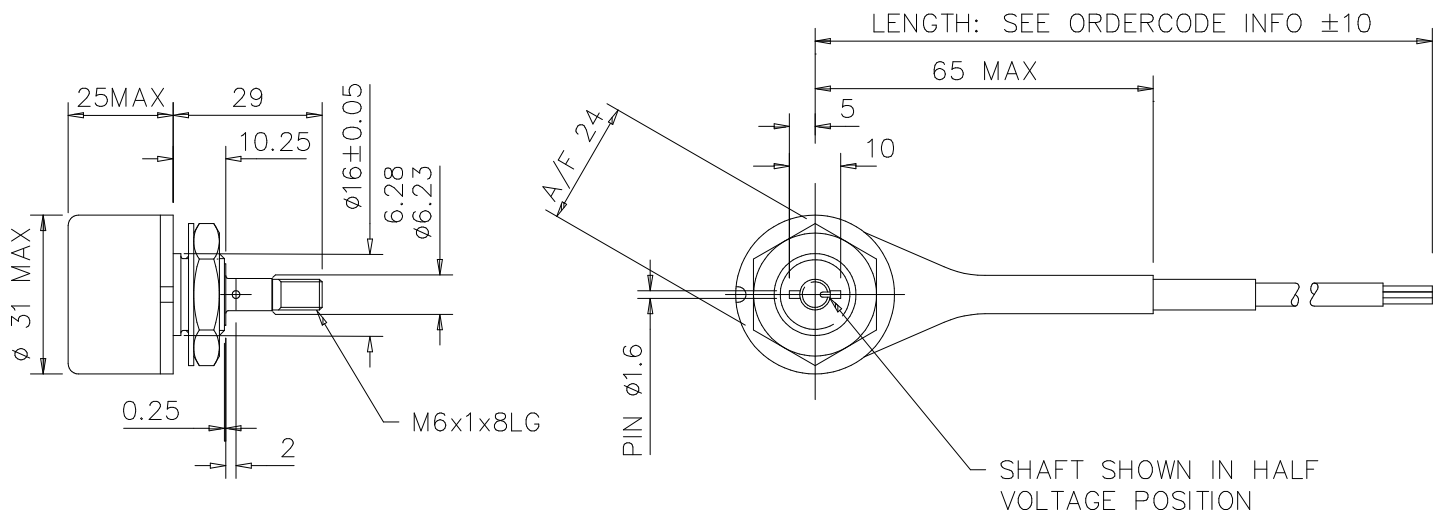
- Vibration 50 to 2500Hz @ 40g 8hrs per axis
- Resistant to standard motorsport fluids
- Maximum humidity 100%
- Operating temperature -10 to +150°C
- Viton jacketed cable
- Aluminium alloy body, hard anodised and dyed black

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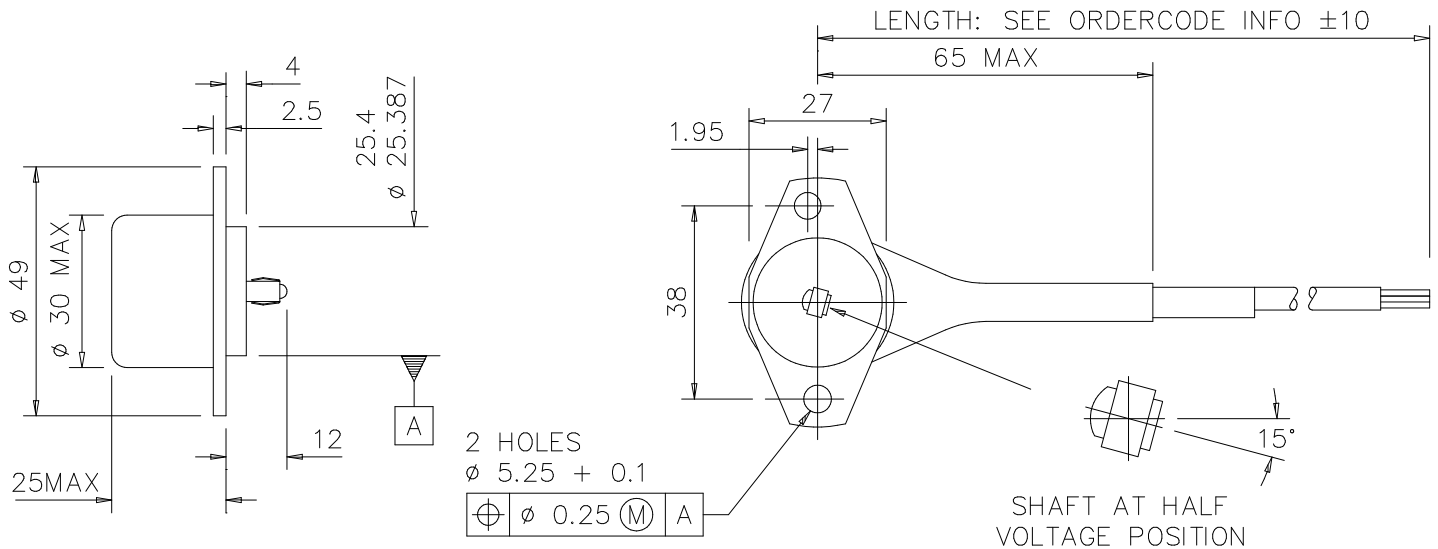
Cable Length	Electrical Angle	Order Code
1000mm	100°	O 030 370 010 003
1000mm	130°	O 030 370 010 004
1000mm	308°	O 030 370 010 005



Cable Length	Electrical Angle	Order Code
500mm	308°	O 030 370 004 004

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<b>Cable Length</b> 1000mm	<b>Electrical Angle</b> 340°	<b>Order Code</b> O 030 370 016 000
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