

MICRO POT

14.3mm 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 300°. The unit is fully sealed against the ingress of fluids.

Electrical

- Electrical angle is shown in the order details
- Nominal track resistance 5kohm $\pm 20\%$
- Nominal resistance temperature coefficient $\pm 400\text{ppm}/^\circ\text{C}$
- Typical wiper current 5 μA
- Non-linearity (measured over the central 95% of the electrical angle into an infinite impedance load) $\pm 1\%\text{FS}$ typ, $\pm 1.5\%\text{FS}$ max
- Insulation resistance $>100\text{Mohm}$ @ 500Vdc
- Half voltage position tolerance $\pm 3^\circ$ typ, $\pm 4.5^\circ$ max

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

Cable and Connection Definition

- 24 AWG un-screened cable
- Cable length is shown on the order details but any length is available 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

Application

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

Mechanical

- Body Aluminium alloy, anodised and dyed black
- Shaft Stainless Steel
- Shaft seal O ring
- Maximum operational speed 500rpm
- Minimum rotational life 5 million cycles (over electrical angle), 10,000 cycles (outside electrical angle)
- Weight less than 40g (including cable)
- Polyester cable boss for strain relief to the sensor body

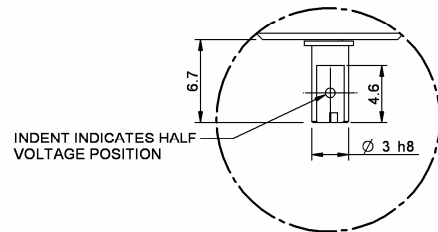
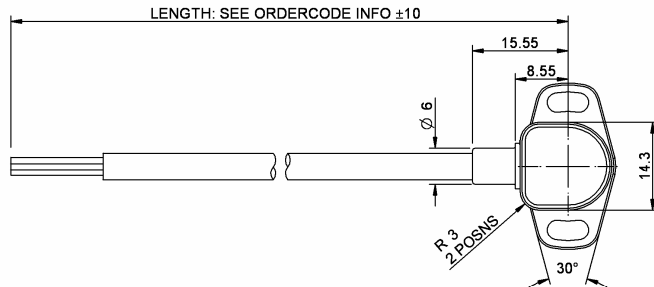
Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application. No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. Electrical angles other than 130° or 300° may be liable to a Non-Recurring Engineering (NRE) charge. Please contact our technical consultancy service who will be pleased to help.

Environmental

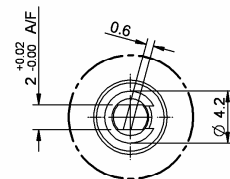
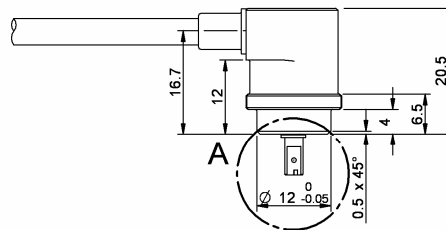
- Resistant to standard motorsport fluids
- Maximum humidity 100%
- Operating temperature -10 to +150 °C
- Viton jacketed cable
- Vibration 50 to 2500Hz @ 40g 8hrs per axis

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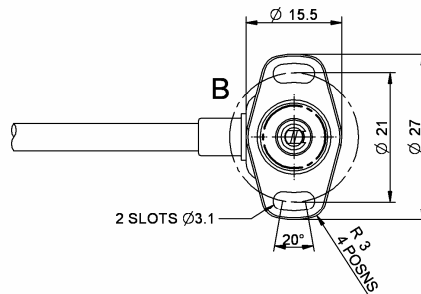
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DETAIL A
SHAFT DETAIL



DETAIL B
SHAFT SHOWN IN
HALF VOLTAGE POSITION



Cable Length	Electrical Angle	Order Code
1000mm	$130 \pm 6^\circ$	O 030 370 013 005
1000mm	$300 \pm 3^\circ$	O 030 370 013 006