

MINI POT – TWIN OUTPUT

22.5mm 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. The sensors are fully sealed to keep out dirt and dust but will not prevent the ingress of fluids. The twin output sensor has two independent wipers operating on separate tracks deposited onto a common substrate. Various lengths of electrically active track are available, up to a maximum of 160°.

Please request our installation datasheet for further details.

Electrical

- Electrical angle is shown on the order details
- Nominal track resistance 5kohm $\pm 20\%$
- Nominal resistance temperature coefficient $\pm 20\text{ppm}/^\circ\text{C}$
- Typical wiper current 5 μA
- Non-linearity (measured over the central 90% of the electrical angle) $\pm 0.4\%\text{FS}$ typ, $\pm 0.7\%\text{FS}$ max
- Insulation resistance $> 10\text{Gohm}$ @ 500Vdc
- Track length tolerance $\leq \pm 3^\circ$
- Half voltage position tolerance $\pm 2^\circ$ typ, $\pm 4^\circ$ max
- Linearity between tracks $\pm 3\%$

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 ident	Pin A	Pin 1	Supply 1
Green ident	Pin B	Pin 2	Ground 1
Red ident	Pin C	Pin 3	Signal 1
Blue ident	Pin D	Pin 4	Supply 2
Black ident	Pin E	Pin 5	Ground 2
Yellow ident	Pin F	Pin 6	Signal 2

Application

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

Mechanical

- Body Aluminium alloy, hard anodised and dyed black
- Maximum operational speed 120rpm
- Minimum rotational life 50 million cycles
- Weight less than 50g (including cable)
- Elastomer boot for strain relief to the sensor body

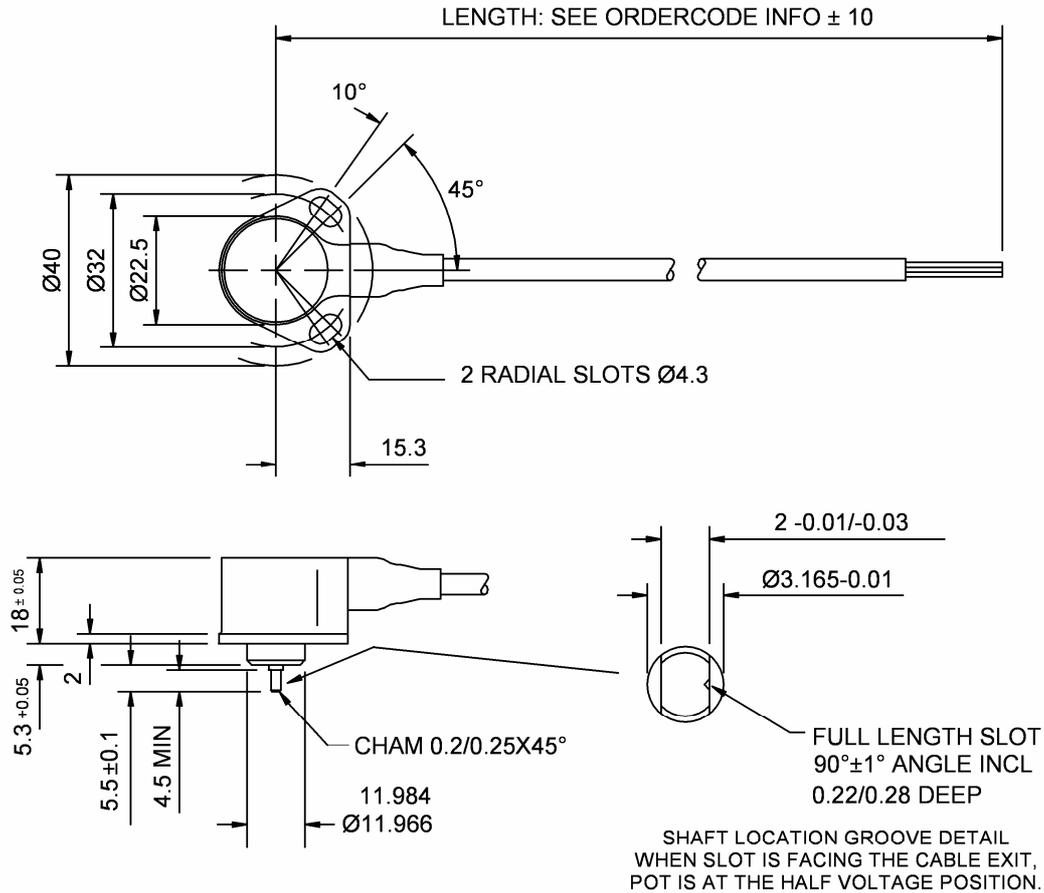
Design and manufacture is in-house, so if our existing designs do not suit your application, we can provide cost effective customised parts to suit even the most demanding application. No engineering charges are made for simple modifications such as customer specific connectors, cable protection and cable lengths. Electrical angles other than 160° or 120° may be liable to a Non-Recurring Engineering (NRE) charge. Please contact our technical consultancy service who will be pleased to help.

Environmental

- Vibration 50Hz to 2500Hz @ 40g 8hrs per axis
- Resistant to standard motorsport fluids
- Maximum humidity 100%
- DR25 jacketed cable
- Operating temperature -10 to +150°C

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Cable Length	Electrical Angle	Order Code
1000mm	120°	O 030 370 017 003
1000mm	160°	O 030 370 017 001