RPE4 4-20mA Absolute Rotary Encoder

Features

A rotary position encoder with absolute 4-20mA current loop output, based on contactless magnetic sensors.

Robustly built with two ball bearings. Suitable for speeds up to 7500rpm, with 12 bit accuracy.

- Absolute analog current output 4-20mA
- Wide supply voltage of 12-30VDC
- 8mm, 6.35mm and 6mm diameter shaft
- 8mm and 6.35mm dia. shaft available with shorter shaft
- Also available in absolute voltage output - RPE1 and incremental quadrature and absolute PWM output - RPE2



Typical applications:

- •Long run cabling
- •Materials handling
- •Mining
- •Industrial actuator position
- •Door position sensing
- •Robotics encoder
- •Lever angle sensor
- •Control position indicator
- •Valve angle sensor
- •Rotary position sensing
- •Motor speed sensor
- •Front panel switch
- •Handwheel /Jogwheel encoder
- •Gearbox speed sensor
- •CNC tool position indicator

Technical Data

Electrical

Supply Voltage (VDD)	12VDC to 30VDC
Supply Current	41mA @ 30VDC supply
Resolution	12 bit
Output	12 bit absolute analog current 4-20mA for 0-360° linearly increasing for clockwise rotation, decreasing for counter-clockwise rotation.
RoHS status	Compliant
Sampling rate	10.4k samples per second (ksps)

Mechanical

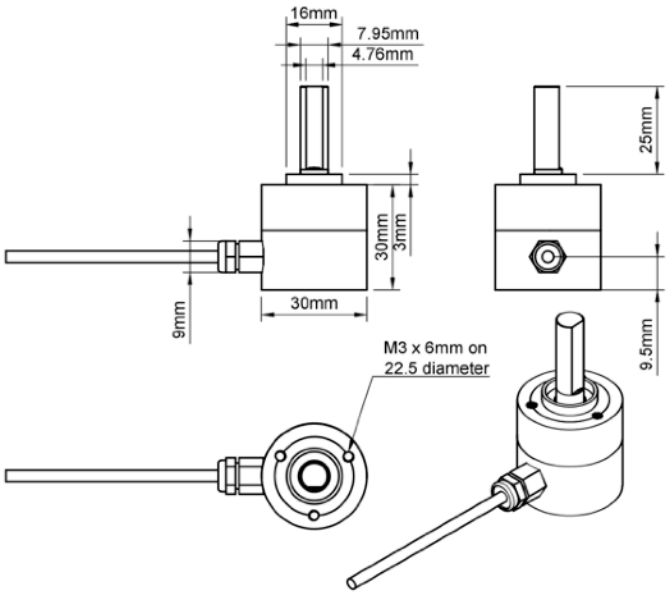
Operating speed	360° continuous rotation. Maximum speed 3000rpm with v-ring seal, 7500rpm without seal.
Shaft support	Dual 8mm ID ball bearings.
Construction material main body and shaft	Anodized Aluminium.
Ingress Protection	IP50 if v-ring seal is in place.
Mount	16mm flange with 3 x M3 holes 4mm thread on 22.5mm PCD. (screws supplied)
Weight	62g
Termination	• Colour coded multicore cable 3 x 22AWG, flying leads. ext.dia 3.5mm, 580mm minimum length. • Custom termination available for quantity

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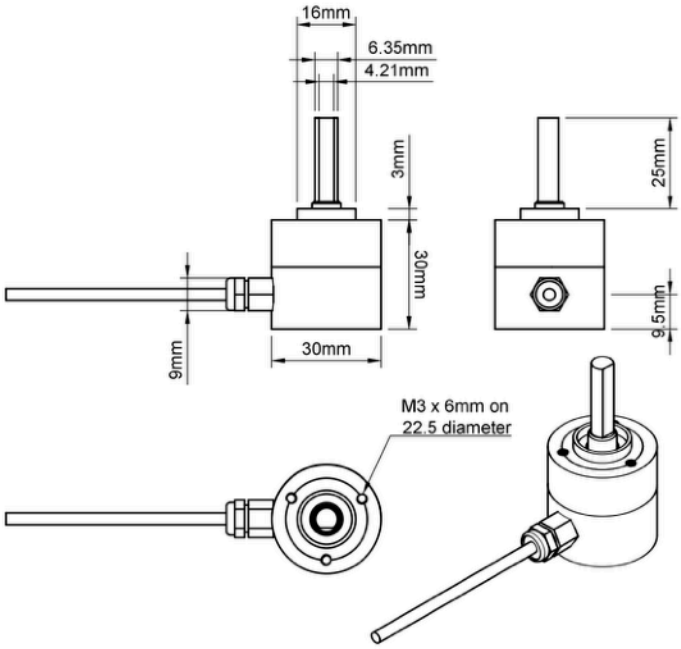
RPE4 4-20mA Absolute Rotary Encoder

Nominal External Dimensions

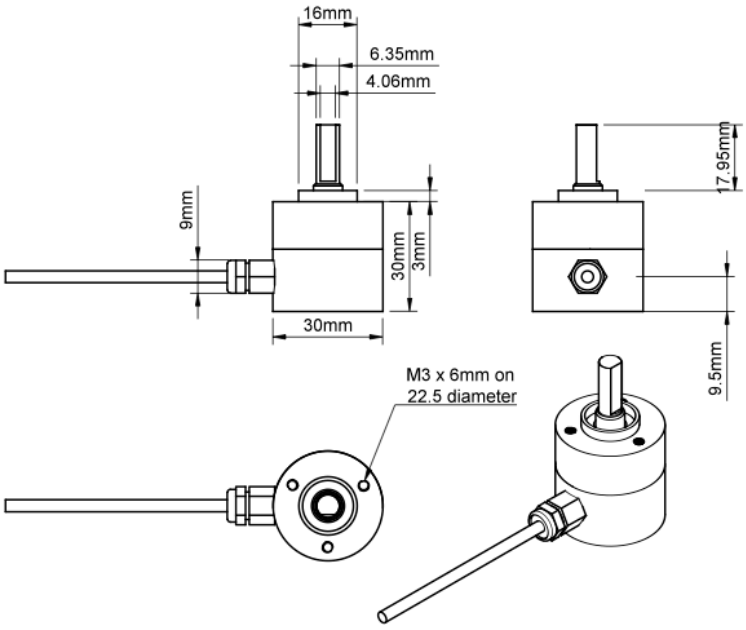
RPE4-8 Dimensions



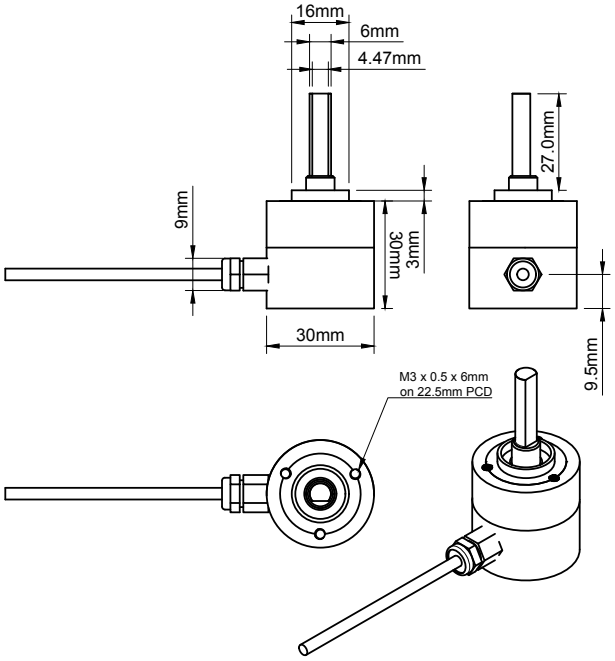
RPE4-635 Dimensions



RPE4-635-S Dimensions



RPE4-6 Dimensions



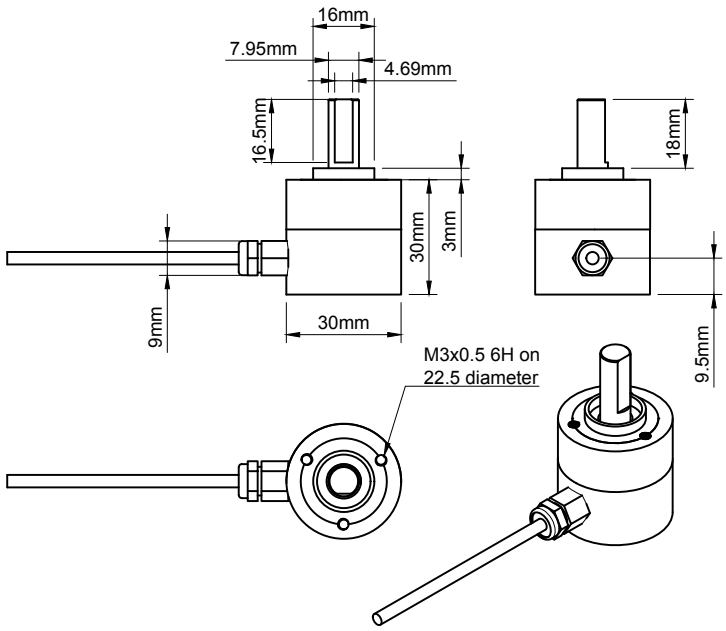
zero point (4/20mA) position is flat on shaft facing

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RPE4 4-20mA Absolute Rotary Encoder

Nominal External Dimensions (cont.)

RPE4-8-S Dimensions



zero point (4/20mA) position is flat on shaft facing

Wiring connections

WIRE	SYMBOL	DESCRIPTION
Red	VDD	12-30V DC
Black	VSS	Ground
White	Output	Current output 4-20mA

RPE4 part numbers:

RPE4-8	**8mm diameter shaft**
RPE4-8-S	**8mm diameter, short shaft**
RPE4-635	**6.35mm diameter shaft**
RPE4-635-S	**6.35mm diameter, short shaft**
RPE4-6	**6mm diameter shaft**

Encoders can be purchased directly from
store.sinusoid.com

For further enquiries, quantity or
custom purchases please contact us

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