

RPE-1 ROTARY ENCODER

Features

A rotary position encoder based on contactless magnetic sensors.
Robustly built with two ball bearings.
Suitable for speeds up to 7500rpm, with 10 bit accuracy.

- Absolute analog voltage output
- 8mm, 6mm or 6.35mm diameter shaft
- Also available in incremental quadrature and absolute PWM output. See RPE-2



Typical applications:

- Digital potentiometers
- Valve angle sensor
- Lever angle sensor
- Industrial actuator position
- Motor speed sensor
- Gearbox speed sensor
- Robotics encoder
- Control position indicator
- Front panel switch
- CNC Machine tool position
- Rotary position sensing
- Handwheel / Jogwheel encoder

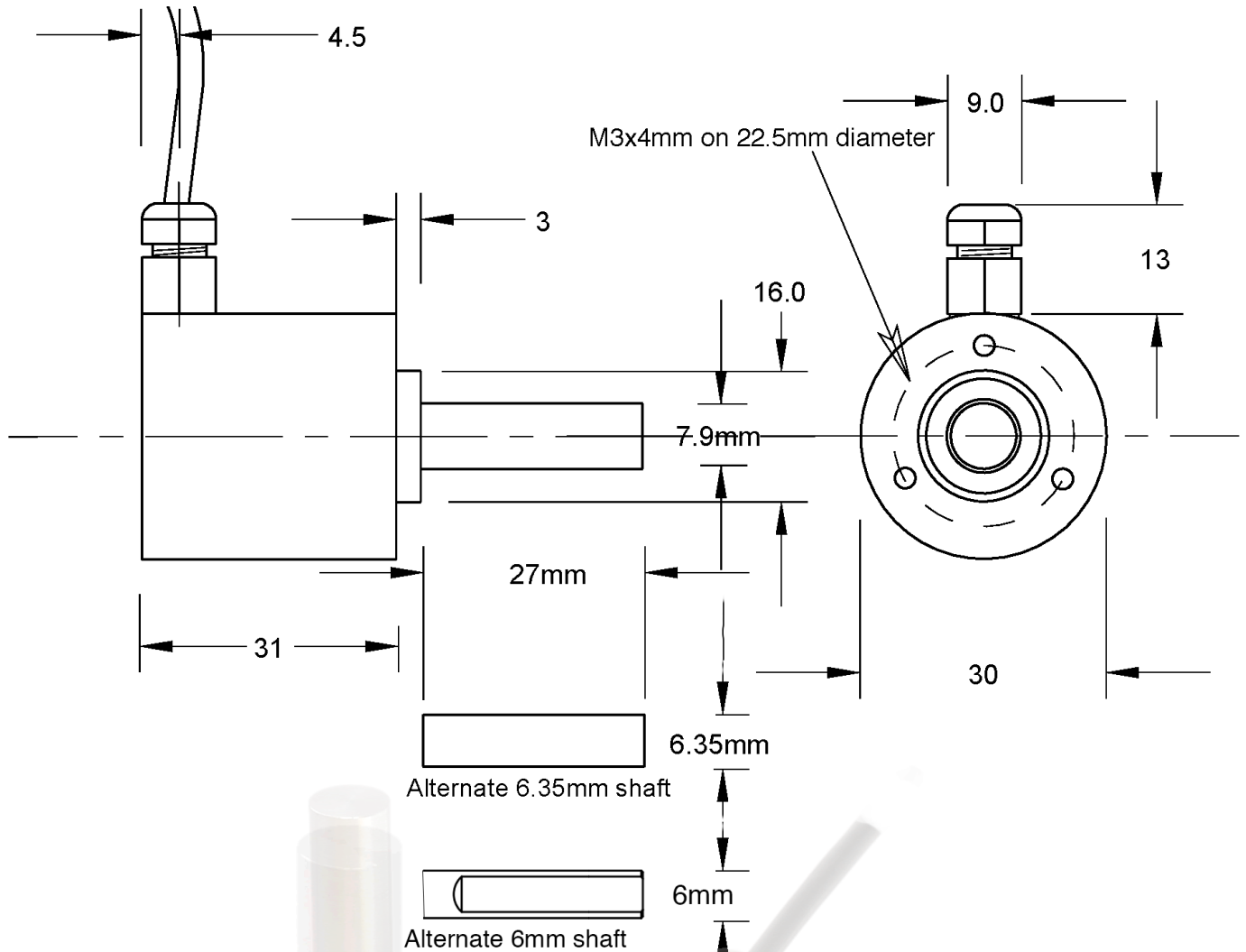
Technical Data

Electrical

Supply Voltage (VDD)	4.5-5.5V	Operating speed	360° continuous rotation. Maximum speed 3000rpm with v-ring seal, 7500rpm without seal.
Supply Current	21mA	Shaft support	Dual 8mm ID ball bearings.
Resolution	10 bit	Construction material main body and shaft	6061 Anodized Aluminium.
Output	10 bit absolute analog output voltage output 0-VDD for 0-360° linear voltage increasing for clockwise rotation, decreasing for counter-clockwise rotation.	Ingress Protection	IP50 if v-ring seal is in place.
RoHS status	Compliant	Mount	16mm flange with 3 x M3 holes 4mm thread on 22mm diameter. (screws supplied)
Sampling rate	10.4k samples per second (ksps)	Weight	75-77g (depending on model).
		Termination	Colour coded multicore cable, flying leads. ext.dia 3.3mm, int.dia 0.7mm. 580mm minimum length.

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Nominal External Dimensions



Wiring

WIRE	SYMBOL	DESCRIPTION
Red	VDD	4.5-5.5V DC
Black	VSS	Ground
Green	Output	Voltage output 0-VDD for 0-360° rotation

RPE1 part numbers:

- RPE1-8 8mm diameter shaft
- RPE1-635 6.35mm diameter shaft
- RPE1-6 6mm diam. shaft with flat

Encoders can be purchased directly from [sinusoid.com](https://store.sinusoid.com/)

For further enquiries or quantity purchases contact

<https://store.sinusoid.com/>