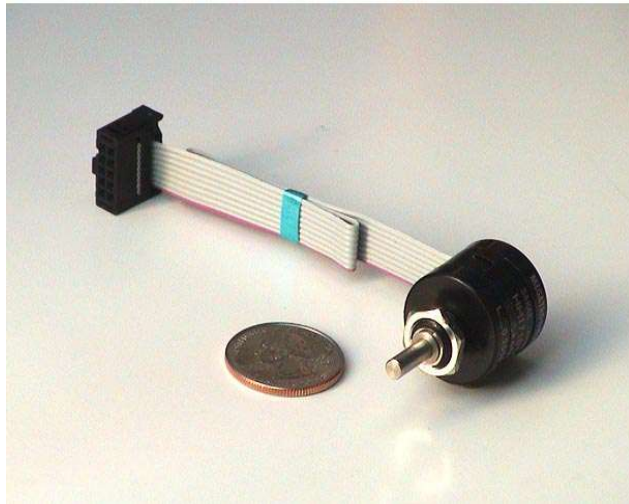




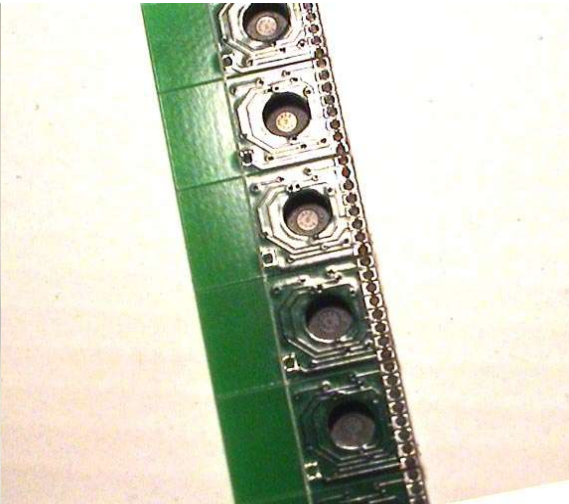
Part number: PE-1004

Miniature rotary encoder: Programmable. Incremental/Absolute.
Magnetic sensor: Magnetic field normal to the rotation axis.
Design Resolution: 10bit (2^{10} counts, 1024 encoder counts per motor revolution)
Measuring resolution: 0.351deg (6.1359mrad)
Output channels: Quadrature Ch A, Ch B
Voltage: 5V
Nominal current: 50mA
Maximum speed: 9,000 r.p.m. (~150,000c.p.s.)
Available options: Index pulse. Absolute position.
Recommended controller: SuprMotrV®
Dimensions: 11x11x5mm(OEM)

RS-232 and USB interfaces available separately for OEM applications.



Photo



OEM version

The **PE-1004** is delivered with a 20cm long ribbon cable. An **IDC** 10pin connector can be optionally added. The pin-out is listed below. Special polarized magnets included.

Pin 1	Motor + (Color coded and not used in most cases)
Pin 2	+5V to encoder
Pin 3	Encoder Ch. A
Pin 4	Encoder Ch. B
Pin 5	Ground.
Pin 6	Motor - (Not used in most cases)
Pin 7	NC (optional Absolute PWM see next page for Analog)
Pin 8	NC (optional Index)
Pin 9	NC
Pin 10	NC



Applications include: industrial automation, servo mechanisms and general motion control.

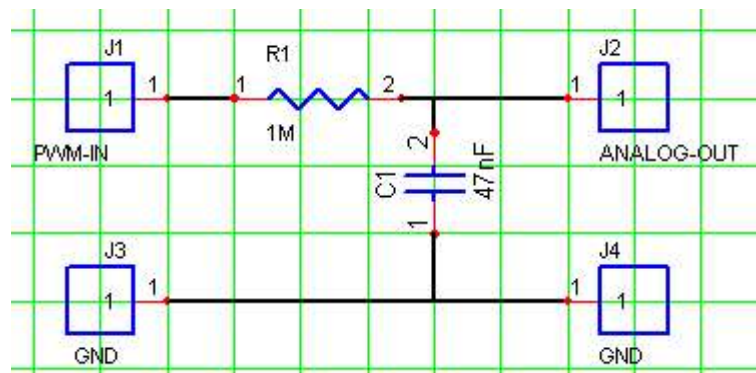
Can also be used as a potentiometer where a high duty cycle is expected and lifetime warranty is needed.

A 2mm diameter, 1mm thickness special polarized magnet is available for the OEM version.

Pin 1 is color coded on the ribbon cable.

To read the ABSOLUTE POSITION provided as a PWM signal connect to pin 7.

A 1MOhm resistor and 47nF capacitor wired as in the diagram below will convert the PWM signal to a high impedance analog output that can be read by an Operational Amplifier or directly in an A/D converter.



The PWM signal level is 0-5V for a 5V voltage input on PIN 2.

The Analog signal after filtering will swing between 0V at 0degrees and 5V at 359.65degrees.