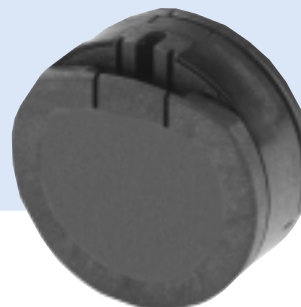


Series M14 Miniature Encoder

- Ideal economical feedback device for servo and stepper motors
- Short axial length and compact 1.5 inch diameter
- Easy “snap-on” installation
- High resolution to 1024 lines/rev and 200 kHz bandwidth
- Drop-in replacement for HP 5540
- CE Qualified



MOTOR MOUNT

APPLICATION/INDUSTRY

The M14 series of incremental optical encoders provides high performance feedback for precision motion control in a small, low cost package. Its high performance, advanced features, and competitive pricing make it the encoder of choice for a broad range of applications.

DESCRIPTION

The M14 optical encoder utilizes a patent-pending ASIC that integrates all encoder electronics, including the optoelectronic sensors, which enhances reliability and accuracy.

Quadrature A and B channels with up to 1024 lines per revolution and reference pulse are output as single-ended TTL/CMOS compatible signals.

SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Optical
Resolution: Incremental pulses per revolution; 200 to 1024
Phasing: $90^\circ \pm 18^\circ$ electrical
Symmetry: $180^\circ \pm 18^\circ$ electrical
Index Pulse Width: $90^\circ \pm 36^\circ$ electrical

ELECTRICAL

Supply Voltage: 5 VDC $\pm 10\%$
Supply Current: 10 mA, typ.
Output Signals: 2.5 V min. high (V_{OH}); 0.5 V max. low (V_{OL}); 6 mA sink/source (25°C), 4 mA (100°C)
Frequency Response: 200 kHz
Termination: 5 pin connector (accessory connector w/12" wires, part no. CA0060012)
Recommended Mating Connector: Amp Part Number 103969-4

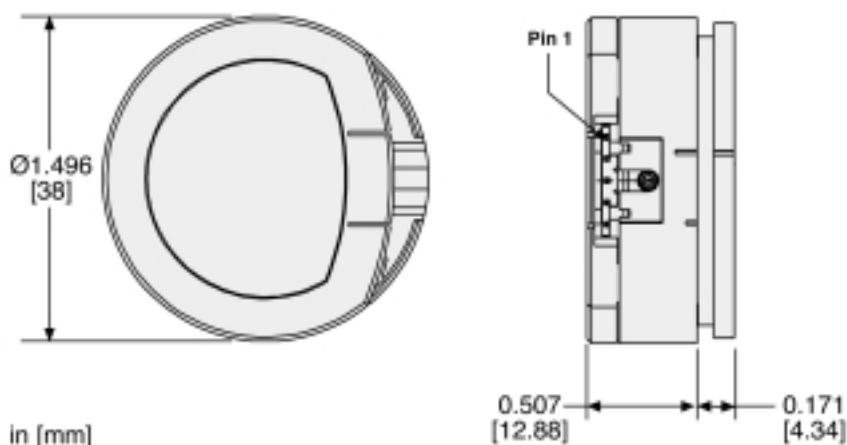
MECHANICAL

Weight: 0.22 oz (6.2 g)
Moment of Inertia: 0.16×10^{-5} oz-in-sec² (0.13 gm-cm²)
Hub Bore: 3.0, to 8.0 mm; 0.125, to 0.375 inch
Hub Dia. Tolerance: $+0.0004/-0.0000$ " (+0.010 mm/-0.000 mm)
Mating Shaft Length: 0.525" (13.3 mm) max.; 0.436" (11.07 mm) min.
Mating Shaft Runout: 0.001 TIR
Mating Shaft Endplay: >512 ppr: ± 0.003 " (± 0.076 mm); 500, 512 ppr: $+0.005/-0.003$ " ($+0.127/-0.076$ mm); <500 ppr: $+0.007/-0.003$ " ($+0.178/-0.076$ mm)

ENVIRONMENTAL

Operating Temperature: -40° to 100°C
Storage Temperature: -50° to 125°C
Relative Humidity: 90% non-condensing

Dimensions/Installation



MOTOR MOUNT

PIN	FUNCTION	CABLE WIRE
5	GND	BLACK
4	CH Z	BLUE
3	CH A	WHITE
2	Vcc	RED
1	CH B	BROWN

To order, complete the model number with code numbers from the table below:

Code 1: Model		Code 2: PPR		Code 3: Mounting Description		Code 4: Hub Bore Description	
M14		□□□□/0		□		□□□	
Ordering Information							
M14	1.5" Diameter Incremental Modular Encoder	0200/0	0	No mounting base	3.0	3.0 mm	
		0400/0	A	2x #2-56 on1.28" BC	4.0	4.0 mm	
		0500/0	B	3x #0-80 on 0.823" BC	5.0	5.0 mm	
		0512/0	C	2x #2-56 on 0.75" BC	6.0	6.0 mm	
		1000/0			8.0	8.0 mm	
		1024/0			125	0.1248 in	
					187	0.1873 in	
					249	0.2498 in	
					250	0.2501 in	
					312	0.3123 in	
			374	0.3748 in			
			375	0.3750 in			

Example: Kit for installing encoders with 0.1248" hub Bore= **MK M14 125**