

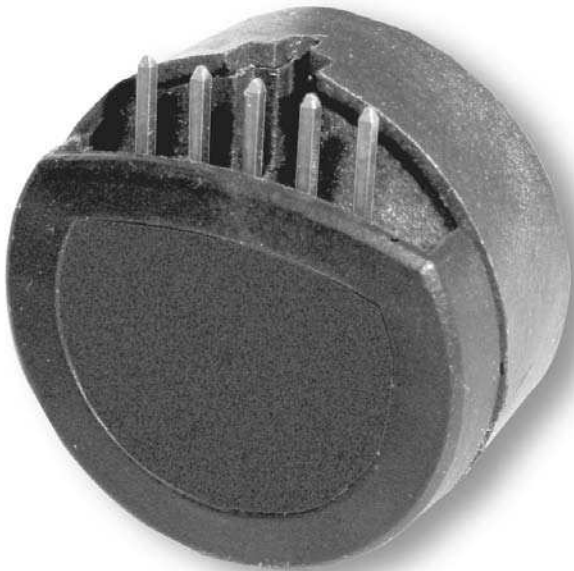
SERIES M9

Dynapar™ brand

Miniature Encoder

Key Features

- Super-Compact Modular Encoder for Small Servo and Stepper Motor Feedback
- Integrated ASIC for Enhanced Reliability and Accuracy
- Up to 512 PPR Resolution



SPECIFICATIONS

STANDARD OPERATING CHARACTERISTICS

Code: Incremental, Optical
Resolution: Incremental pulses per revolution; 100 to 512
Phasing: 90° ±18° electrical
Symmetry: 180° ±18° electrical
Index Pulse Width: 90° ±36° electrical

ELECTRICAL

Supply Voltage: 5 VDC ±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 header (accessory 12" wires w/connector, part no. CA0050012) or flying leads
Recommended Mating Connector: AMP part number 103675-4

MECHANICAL

Weight: 0.15 oz (4.14 g)
Moment of Inertia: 0.15 x 10⁻⁵ oz-in-sec² (0.11 gm-cm²)
Hub Bore: 1.5, 2.0, 2.5, 3.0, 4.0 mm; 0.125, 0.156 inch
Hub Dia. Tolerance: +0.0004"/-0.0000" (+0.010 mm/-0.000 mm)

Mating Shaft Length: See table
Mating Shaft Runout: 0.001 TIR
Mating Shaft Endplay: >256 ppr: ±0.003" (±0.076mm); 250, 256 ppr: +0.005/-0.003" (+0.127/-0.076mm); <250 ppr: +0.007/-0.003" (+0.178/-0.076mm)

ENVIRONMENTAL

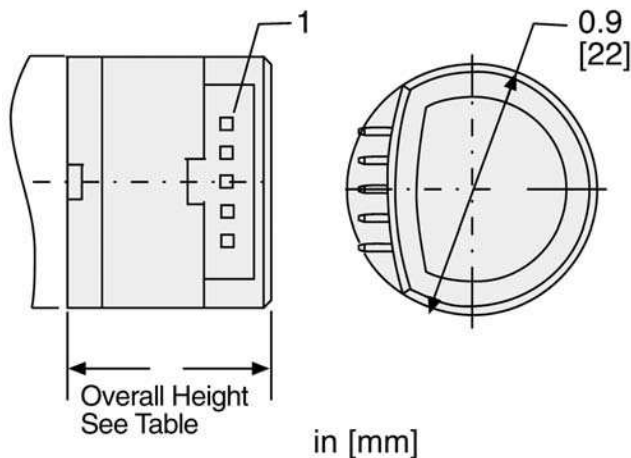
Operating Temperature: -20° to 100°C
Storage Temperature: -50° to 125°C
Relative Humidity: 90% non-condensing

OUTPUT WAVEFORMS & CONNECTIONS

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

(Direction CCW viewing encoder cover)

DIMENSIONS/INSTALLATION



IMPORTANT: To properly install Series M9, a specialized mounting kit must be purchased. Only one kit is required to install any number of encoders with the same hub bore size.

Kit Part Number:

MK M9



– Code 4 (from Models Table, above) designating Hub Bore requirement.

Example: Kit for installing encoders with 3.0 mm hub Bore= **MK M9 3.0**

Base (Code 3)	Overall Height inch (MM)	Motor Shaft Length inch (MM)	
		Max.	Min
A	0.583 (14.80)	0.437 (11.10)	0.377 (9.57)
C, D, E	0.717 (18.20)	0.571 (14.50)	0.511 (12.97)

Bases C and D provide clearance for motor-bosses with maximum dimensions of 0.5 in. Dia. x 0.15 in. high. Base E provides clearance for motor-bosses with maximum dimensions of 1.0 in. x 0.15 in. high

ORDERING INFORMATION

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		Code 5: Termination Description	
M9 <div><div><div>□</div><div>□</div><div>□</div><div>□</div></div>/0<div><div>□</div></div><div><div><div>□</div><div>□</div><div>□</div></div><div><div>□</div></div></div></div>									
Ordering Information									
M90.9" Diameter Incremental Modular Encoder	0100/0 0200/0 0256/0 0500/0 0512/0	0No mounting base A4x M1.6 on 0.728" BC, C2x #2-56 on 0.75" BC D3x #0-80 on 0.823" BC E2x #2-56 On 1.812" BC	2.0	2.0 mm	15 pin header 2flying leads				
			2.5	2.5 mm					
			3.0	3.0 mm					
			4.0	4.0 mm					
			125	0.125 in					
	156		0.156 in						
Special Order Consult Factory for Lead Time & Price 0300/0 0360/0		Special Order Consult Factory for Lead Time & Price 1.51.5 mm							



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DYNAPAR™
INNOVATION - CUSTOMIZATION - DELIVERY

WWW.DYNAPAR.COM

Headquarters: 1675 Delany Road • Gurnee, IL 60031-1282 • USA

Customer Service:

Tel.: +1.800.873.8731

Fax: +1.847.662.4150

custserv@dynapar.com

Technical Support

Tel.: +1.800.234.8731

Fax: +1.847.662.4150

dynapar.techsupport@dynapar.com

European Sales Representative

Hengstler GmbH
Umlandstrasse 49, 78554 Aldingen
Germany
www.hengstler.com

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