

# Avtron M3 Large-Bore Encoders (M3-6/9, M3-G/J)



## Durable Optical Large-Bore Encoder

### The Most Durable Optical Large-Bore Encoder Available!

- Mill Duty
  - Wide-Gap Technology: Up to 8X larger gap between sensor and rotor
    - Up to 2500 PPR
  - No couplings required
  - Heavy duty bearings and seals
    - Rugged cast housing
    - Dust and liquid tight
  - Available in thru shaft and end of shaft models
  - Fits large motor and load shafts directly

## M3

Avtron M3 large bore hollow shaft mill duty optical hollow shaft encoders fit motor or load shaft from 1 1/2" to 2 3/8" [48mm-60mm].

Looking for solid shaft M3-1 and M3-2 models or small-bore M3 models? Use our [cross reference page](#) to replace these models with the latest Avtron models.

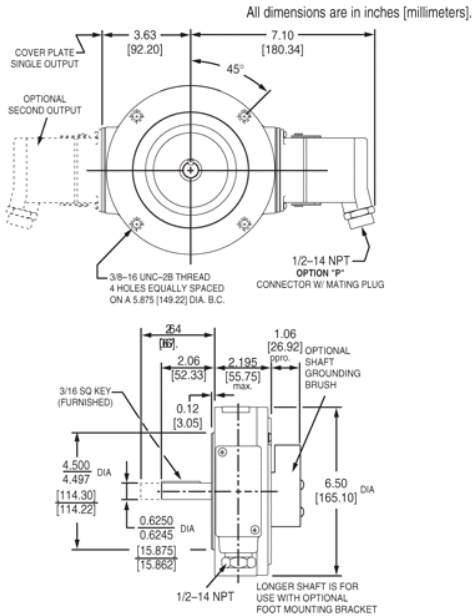
Forget tiny hollow shaft encoders that require shaft reduction and special protection! M3 mill duty encoders can accommodate up to a 2 3/8" shaft directly and are designed for use in rougher applications than ordinary optical encoders.

M3 has bigger bearings than light duty and commercial grade encoders to withstand more shaft vibration and stress. M3 encoders are designed with bigger, heavy-duty seals to keep contamination out of the encoder and keep your machines working.

M3 encoders offer a large variety of connector and mounting options to replace virtually any existing encoder or tachometer. When you install an Avtron M3, you've upgraded to the most durable optical encoder available anywhere!

Also available: Heavy mill duty [HS45](#) and severe duty [AV685](#) encoders.

## OUTLINE DRAWING



## MORE M3 ADVANTAGES

- | Highly resistant to electrical and magnetic motor and brake noise
- | Auxiliary channel offers separate low frequency outputs (1/4") at no extra charge on each output
- | Marker Pulse Standard
- | Available C-Face tether kits (4.5" to 16")
- | Available threaded rod torque arm
- | Optional OSHA finger guard
- | Optional shaft grounding brush
- | Optional dual output for backup, complete isolation between outputs
- | 1 Year No-Hassle Warranty

## M3 SPECIFICATIONS

**Operating Power:** 5-24 VDC, 5-18V, 12-24V; Current 120mA, no load

**Output Format:** A,A-, B,B-, C,C-; Marker Z,Z-

**Frequency Range:** 0 to 150 KHz

**PPR: 240-2500**

**Speed:**

5000 RPM Max. Std., shafts 1 1/2" to 1 5/8"

3600 RPM Max. Std., shafts 2" to 2 3/8"

(for higher speeds, consult factory)

**Temperature:** -40°\* to 85°C (\*-20° standard)

**Chemical:** Polyurethane enamel paint protects against salt spray, mild acids, and bases

**Weight: 7 lbs.**

All dimensions are in inches [millimeters].

Check out our website for more detailed specifications, drawings, and installation instructions. [www.avtronencoders.com](http://www.avtronencoders.com)

\* See instruction sheet for full list.

## SELECTION GUIDE

M3 PART NUMBERS AND AVAILABLE OPTIONS								
Model	Bore Size	Mounting Style	Line Driver	Output Location	PPR	Connector	Modifications	
M3-	7-2 3/8" G-48mm 8-1 1/2" D-52mm 9-1 5/8" E-58mm 6-2" H-60mm J- 2 1/8"	S- End of Shaft T- Thru Shaft G- End of Shaft with Grounding	1- 5 to 24 VDC 2- 5 to 18 VDC 3- 18 to 24 VDC 4- 5 to 24 V in, 5 V out	L- Single output left side R- Single output right side D- Dual output	240 600 256 1024 360 1200 480 2048 500 2500 512		000- None 003- Torque Arm Mount 005- -40° C Rating 008- 4.5" C-Face Mount 009- Northstar Pinout 015- Stainless Steel Shaft 016- 8.5" C-Face Mount	028- 12.5" C-Face Mount
Connector								
10 Pin Connector					6 Pin MS	5 Pin MS	Conduit Box	3 ft. Flex. Cable
MS		MS mini	EPIC	M940 replacement D- with Plug <sup>a</sup>	M737A replacement E- without Plug <sup>a</sup> F- with Plug <sup>a</sup> M727A replacement H- without Plug <sup>a</sup> J- with Plug <sup>a</sup>	N- with color coded leads T- with Terminal Block	W- Sealed, Pigtail X- Sealed, Industrial Connector without Plug Z- Sealed, Industrial Connector with Plug	
A- without Plug <sup>a</sup> B- with Flex. Conduit Adapter <sup>a</sup> C- with Plug <sup>a</sup>	K- with Flex. Conduit Adapter <sup>a</sup> L- with Plug <sup>a</sup> M- without Plug <sup>a</sup>	S- Baldor Twist Lock on 3 ft. Pigtail	P- with Plug V- without Plug					

<sup>a</sup> side exit    <sup>b</sup> bottom exit

All dimensions are in inches [millimeters].

Specifications and features are subject to change without notice.

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Nidec-Avtron Makes the Most Reliable Encoders in the World

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