

# Avtron M3 Hollow Shaft

## The Most Durable Optical 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
- Fits large motor and load shafts directly
- Optional shaft grounding
- Optional dual isolated outputs
- Available in thru shaft and end of shaft models

**M3-3 thru -9** mill duty optical hollow shaft encoders fit any motor or load shaft from 5/8" to 2 3/8". Other models are available for face/flange (M3-1) and foot (M3-2) mounting (solid shaft coupled).

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

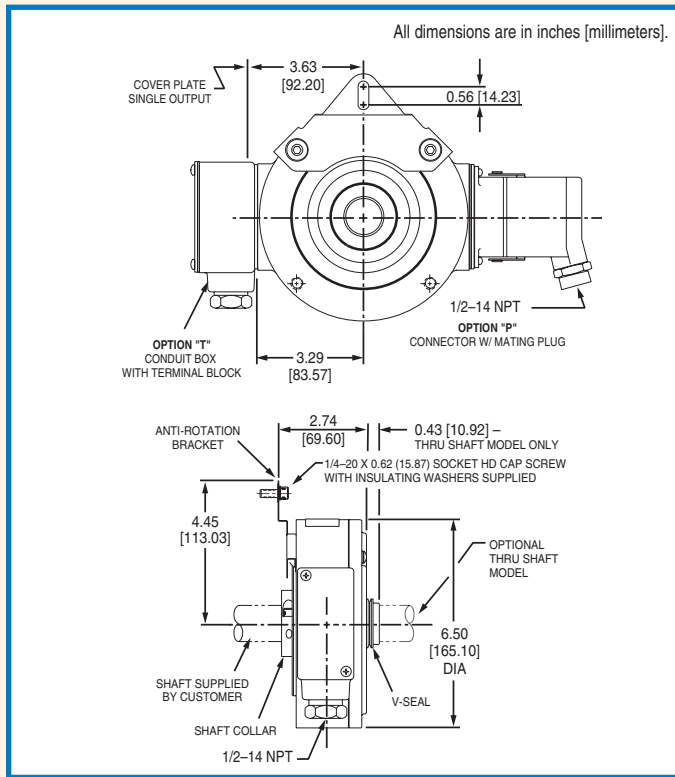
directly and are designed for use in rougher applications than ordinary optical encoders.

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!

# M3 Optical, Hollow Shaft Encoder (5/8" to 2 3/8") [12mm to 60mm]

## OUTLINE DRAWING



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

## 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
- Electrically isolated shafts available
- Optional stub shaft kits for GE motors, 180-6000 Frame
- Available C-Face tether kits (4.5" to 16")
- Available threaded rod torque arm
- Optional OSHA finger guard

## M3 SPECIFICATIONS

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

**Output Format:** A,  $\bar{A}$ , B,  $\bar{B}$ , C,  $\bar{C}$ ; Marker Z,  $\bar{Z}$

**Frequency Range:** 0 to 150 KHZ

**PPR:** 240-2500

**Speed:** 5000 RPM Max. Std., shafts 5/8" 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.

## SELECTION GUIDE

Model	Bore Size	Mounting Style	Line Driver	Output Location	PPR	Connector	Modifications*
<b>M3-</b>	<b>0-</b> Non-Standard <b>3-</b> 5/8" <b>B-</b> 12mm <b>A-</b> 3/4" <b>C-</b> 16mm <b>4-</b> 1" <b>F-</b> 25mm <b>5-</b> 1 1/8" <b>G-</b> 48mm <b>8-</b> 1 1/2" <b>E-</b> 58mm <b>9-</b> 1 5/8" <b>D-</b> 52mm <b>6-</b> 2" <b>H-</b> 60mm	<b>S-</b> End of Shaft <b>T-</b> Thru Shaft <b>G-</b> End of Shaft with Grounding	<b>1-</b> 5 to 24 VDC <b>2-</b> 5 to 18 VDC <b>3-</b> 18 to 24 VDC <b>4-</b> 5 to 24 V in, 5 V out	<b>L-</b> Single output left side <b>R-</b> Single output right side <b>D-</b> Dual output	240 600 256 1024 360 1200 480 2048 500 2500 512		<b>000-</b> None <b>003-</b> Torque Arm Mount <b>005-</b> -40° C Rating <b>008-</b> 4.5" C-Face Mount <b>009-</b> Northstar Pinout <b>015-</b> Stainless Steel Shaft <b>016-</b> 8.5" C-Face Mount <b>028-</b> 12.5" C-Face Mount <b>035-</b> Insulated Shaft
<b>Connector</b>							
<b>10 Pin Connector</b>				<b>6 Pin MS</b>	<b>5 Pin MS</b>	<b>Conduit Box</b>	<b>3 ft. Flex. Cable</b>
<b>MS</b>	<b>MS mini</b>	<b>EPIC</b>	<b>M940 replacement</b>	<b>M737A replacement</b>	<b>M727A replacement</b>	<b>N-</b> with color coded leads <b>T-</b> with Terminal Block	<b>W-</b> Sealed, Pigtail <b>X-</b> Sealed, Industrial Connector without Plug <b>Z-</b> Sealed, Industrial Connector with Plug
<b>A-</b> without Plug <sup>s</sup> <b>B-</b> with Flex. Conduit Adapter <sup>s</sup> <b>C-</b> with Plug <sup>s</sup>	<b>K-</b> with Flex. Conduit Adapter <sup>b</sup> <b>L-</b> with Plug <sup>b</sup> <b>M-</b> without Plug <sup>b</sup>	<b>S-</b> Baldor Twist Lock on 3 ft. Pigtail <b>P-</b> with Plug <b>V-</b> without Plug	<b>D-</b> with Plug <sup>b</sup>	<b>E-</b> without Plug <sup>s</sup> <b>F-</b> with Plug <sup>s</sup> <b>H-</b> without Plug <sup>s</sup> <b>J-</b> with Plug <sup>s</sup>			

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

All dimensions are in inches [millimeters]. Specifications and features are subject to change without notice.

