

Avtron Model M685

SMARTach Magnetic Encoder, 1 1/8" Hollow Shaft Mount



The Toughest Hollow Shaft Encoder Built!

- Severe Mill Duty
- Up to 1200 PPR
- Simple Installation
- Replaces Competitive Models Without Rewiring
- Self-Diagnostic LED & Alarm Output
- Removable Sensors
- End of Shaft and Thru Shaft Models Available
- IP66 Enclosure
- High-Power Output Standard
- Optional Dual Isolated Outputs
- 1 Year No-Hassle Warranty

M685 is designed for use in the worst environments with constant exposure to water, oil, dirt, and salt spray. The Viton™ seals protect the huge encoder bearings, and the fully encapsulated magnetic sensor technology shrugs off liquids, dust, and dirt. Liquids and condensation kill ordinary encoders; the M685 ignores them and features a one-way breather to let excess liquids drain out.

What makes an M685 SMARTach so smart? The redundant, removable sensors ensure 100% uptime. SMARTach sensors feature a diagnostic system with LED output and optional alarm contact. The system monitors and adjusts the waveform of the encoder to compensate for real-world changes. If the signal is not ideal, the alarm output and LED inform the machine operator that the

sensor module should be checked, before a failure occurs!

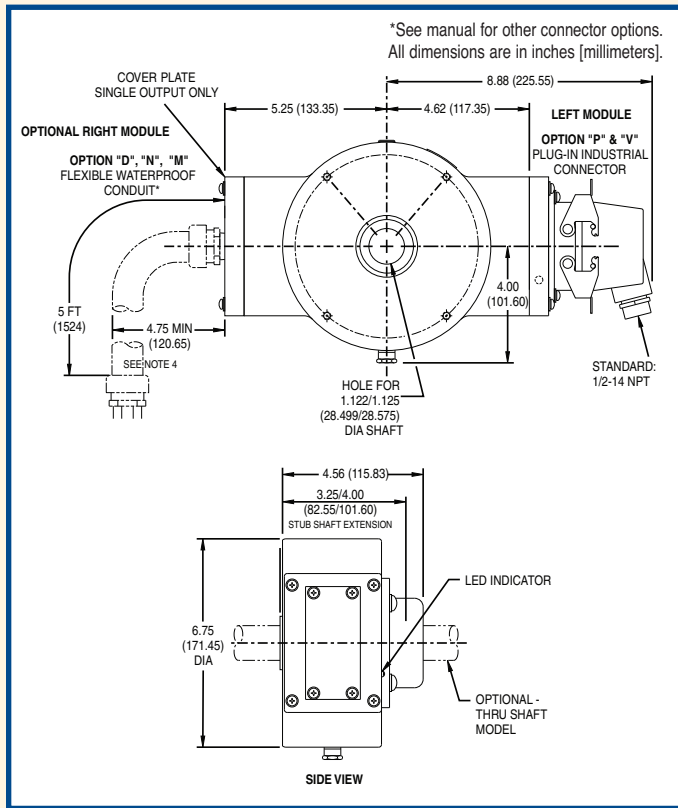
With a full range of connectors and stub shafts to fit any application, it's easy to use the best hollow shaft encoder ever made: Specify Avtron M685!



QUALITY SYSTEM CERTIFIED TO ISO 9001
www.avtronencoders.com

M685 Magnetic Hollow Shaft Encoder (1 1/8") [28.58mm]

OUTLINE DRAWING



Check out our web site for more detailed specifications, drawings, and installation instructions. www.avtronencoders.com

MORE M685 ADVANTAGES

- Adaptive electronics find problems before they cause failure
- Polyurethane 2-coat paint, fully corrosion resistant
- No mechanical adjustments
- No sensor shimming required
- Dual oversize bearings, spaced farther apart
- Synthetic bearing lubricant for longer life
- Optional overspeed switch
- Optional shaft grounding
- Huge range of stub shaft adapters available to fit shafts from 1 3/8" to 12"

M685 SPECIFICATIONS

Operating Power (Each Sensor): Option 1: 12-15V, 80mA

Option 3: 5-18V, 300mA

Option 5: 5-24V, 300mA

Output Format: A Quad B (A, \bar{A} , B, \bar{B}) with optional marker Z, \bar{Z}

Frequency Range: 0 to 75 KHz

Maximum Cable Length: 2000' [600m] ***

PPR: 240 - 1200

Speed: 300/600/1200 PPR: 3600 RPM Max.

256/512/1024 PPR: 4200 RPM Max.

240/480/960 PPR: 4500 RPM Max.

Temperature: -40°* to 71°C

Environmental: IP66**; Nema 4, 13 Rating

Weight: 15 lbs. [6.4 kg]; 17lbs [7.7kg] dual output

C € Rated

*-17°C Standard.

**Connector options may reduce IP rating.

***Hi-power outputs; see manual for details.

SELECTION GUIDE

M685 PART NUMBERS AND AVAILABLE OPTIONS (including M484L sensors)

Model	Shaft Options**	Base PPR	Left Module				Right Module										
			Marker	Range (PPR)	Connector	Volts	Marker	Range	Connector	Volts							
M685L M484L (Sensor Only)	End of Shaft - - Std. G- w/shaft Ground Thru Shaft T- Std.	48- 480 51- 512 60- 600	Z- Marker - None	L- Low Range (Base PPR x 1/2) M- Medium Range (Base PPR x 1) H- High Range (Base PPR x 2)	N- Wire Leads Only M- Wire Leads w/ non-conductive adapter C- 10 Pin MS w/ Plug D- MS w/ 5' Flex. Cable L- 10 Pin MS Elbow w/ Plug T- Terminal Box S- Terminal Box w/ non-conductive adapter P- Plug-in Industrial G- Plug-in Industrial (Northstar pinout) V- Plug-in Industrial w/ non-conductive adapter	1- 12-15V (4428) hi-power 3- 5-18V (4428) hi-power 5- 5-24V (7272)	M685L: Same Code Format as Left Module M484L: Not Applicable										
			<table border="1"> <thead> <tr> <th colspan="2">Options and Accessories</th> </tr> </thead> <tbody> <tr> <td>484017 484018</td> <td>Mounting Wrenches</td> </tr> <tr> <td>A24343</td> <td>Shaft Grounding Kit</td> </tr> <tr> <td>B21958</td> <td>Tether/Torque Arm</td> </tr> </tbody> </table>							Options and Accessories		484017 484018	Mounting Wrenches	A24343	Shaft Grounding Kit	B21958	Tether/Torque Arm
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** Thru and Shaft Ground not applicable on M484L. Sensor Only.																	

The removable sensor assemblies included with Model M685L Encoders are identified by model number M484L. A sensor assembly consists of a sensor module and a connector option.



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