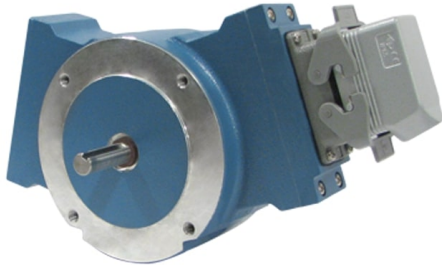


## Avtron AV485 SMARTach™ III Encoders



**Severe Mill Duty Magnetic Encoder;  
Foot or NEMA 56C Face Mount, 5/8"  
Solid Shaft**

### **Magnetic Durability in a Compact Encoder**

Severe Mill Duty Up to 5000 PPR

Replaces Competitive Models  
Without Rewiring

Self-Diagnostic LED & Alarm  
Output

Foot or NEMA 56C Face Mount  
Removable Sensors IP66 Enclosure

High-Power Output Standard

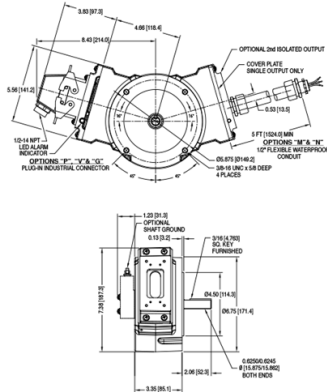
Outputs Fully Short Circuit  
Protected

Optional Dual Isolated Outputs

### **AV485**

The AV485 is designed to withstand the worst environments: buried in slag, coated in pulp, sprayed with salt water or cutting coolants, it keeps working. The modular, gull-winged design makes it easy to install and service; the base can be bolted in place without removing the encoder, and the AV5 wide-gap removable sensors require no adjustment or shimming. The sensors are fully potted to protect against liquids, and are interchangeable between AV850, AV485, and AV685 encoders. The universal 5-24V design drives longer cables and is protected against wiring errors and surges. A second backup output is available with the same or different PPR, and offers completely separate electronics for maximum uptime.

# OUTLINE DRAWING



# MORE AV485 SPECIFICATIONS

Operating Power: Volts: 5 - 24 VDC\*  
 Current: 100mA nom, no load  
 Output Format: A Quad B with Marker (A, /A, B, /B, Z, /Z)  
 Second Isolated Output: Optional  
 Frequency Range:  
     @5V, @ 1m cable, 250 kHz Max  
     @24V, @300m cable, #8 output, 45 kHz Max  
 Maximum Cable Length: 1000'  
 PPR: 4 - 50000\*\*\*  
 Speed: 5000 RPM Max\*\*\*\*  
 Electronics: Fully Encapsulated, IP67\*\*  
 Temperature: -40° to 120°C\* (150°C rotor)^  
 Vibration: 18 g's  
 Shock: 1 meter drop test  
 Chemical: Polyurethane enamel paint protects against salt spray, mild acids, and bases.  
 Weight: 14 lbs. [6.4 kg] / 16 lb [7.3 kg] dual output

\* Electrical specifications for SMARTach III model (serial #30,000 or higher), consult Nidec Industrial Solutions for earlier model specifications.

\*\* Certain connector options may reduce IP rating.

\*\*\*(PPR) Standard maximum PPR is 5000. Consult Factory with your application for PPRs up to 50,000.

\*\*\*\* (Speed) Maximum RPM may be limited for PPR > 2,500. Consult Factory with your application.

^ -20°C to 80°C Standard, requires high-temperature model and instrument air feed for 120°C rating

All dimensions are in inches [millimeters].

Specifications and features are subject to change without notice.

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

# SELECTION GUIDE

## AV485NXS8H8HG000

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MODEL	TEMPERATURE RATING	FOOT MOUNTING	SHAFT MOUNTING	LEFT OUTPUT LINE DRIVER	LEFT OUTPUT PPR	RIGHT OUTPUT LINE DRIVER	RIGHT OUTPUT PPR	CONNECTOR OPTIONS	MODIFICATIONS
AV485	N - -20°C to +80°C (Standard)	X - Standard NEMA 56C 4.5 in. Face Mount (No Foot Mount Included)	S - Standard Single Ended 5/8 in. x 2 in. Stainless Steel Shaft, with 3/16 in. Key way & Key	8 - 5-24v in, 5-24v out hi-power standard (HX)	H - 120 PPR	8 - 5-24v in, 5-24v out hi-power standard (HX)	H - 120 PPR	G - Industrial EPIC Style w/Lakeshore Pinout	000 - No Special Options



Nidec Industrial Solutions  
 243 Tuxedo Avenue - Cleveland, Ohio 44131  
 encoderhelpdesk@nidec-industrial.com  
 +1 216-642-1230 - [www.avtronencoders.com](http://www.avtronencoders.com)



Features and specifications are subject to change without notice. EU-SMART™, SMARTSafe™, SMARTTach™, THIN-LINE™, WIDE-GAP™, SAFETach™, and BULLSEYE32™ are trademarks of Nidec Industrial Solution. All other trademarks and registered trademarks are the property of their respective owners. Nidec Industrial Solutions' standard warranty applies. All dimensions approximate.