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## 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 50000 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

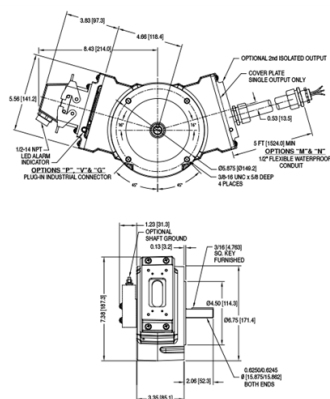
Optional Dual Isolated Outputs

1 Year No-Hassle Warranty

### **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 q'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 ratings.

\*\*\* (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

## AV485NXD80XXC402

									
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)	D - Dual 5/8 in. x 2 in. Stainless Steel Shafts, each with 3/16 in. Key way & Key	8 - 5-24v in, 5-24v out hi-power standard (HX)	0 - Special PPR	X - No Right Output	X - No Right Output	C - 10 pin MS style w/Plug & Flex Cond. Adapt.	402 - 150 PPR (Special) Left Output (Set Left PPR Code to 0)