

09/15/25



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

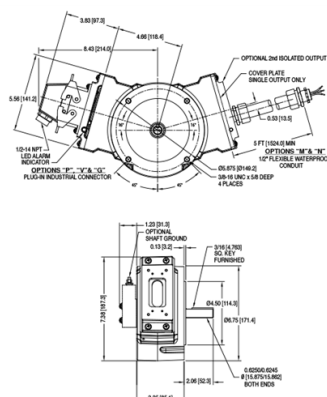
Optional Dual Isolated Outputs

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

SELECTION GUIDE

AV485NXS80XXC402

									
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)	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)