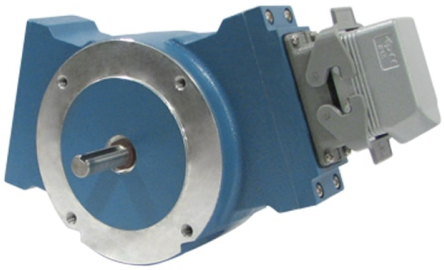
Avtron AV485 SMARTach™ III Encoders



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

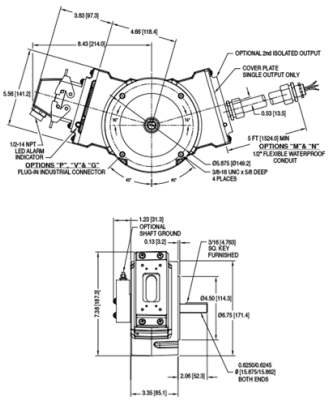
Magnetic Durability in a Compact Encoder

- Severe Mill DutyUp to 5000 PPR
- Replaces Competitive Models Without Rewiring
- Self-Diagnostic LED & Alarm Output
- Foot or NEMA 56C Face Mount
- Removable SensorsIP66 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 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

SELECTION GUIDE

AV485NXD9FXXW000

☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
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	9 - 5-24v, 5v fixed out (7272)	F - 60 PPR	X - No Right Output	X - No Right Output	W - 36 in. Sealed Cable w/Color Coded Leads	000 - No Special Options

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