09/13/25

# Avtron AV485 SMARTach<sup>TM</sup> 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 50000 PPR

Replaces Competitive Models Without Rewiring

Self-Diagnostic LED & Alarm Output

Foot or NEMA 56C Face Mount Removable SensorsIP66 Enclosure

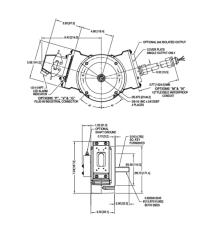
> High-Power Output Standard Outputs Fully Short Circuit Protected

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**

#### AV485NXD6FXXC000

| MODEL | TEMPERATURE<br>RATING        | FOOT<br>MOUNTING | SHAFT<br>MOUNTING   | LEFT OUTPUT<br>LINE DRIVER  | LEFT OUTPUT<br>PPR | RIGHT OUTPUT<br>LINE DRIVER | RIGHT OUTPUT<br>PPR | CONNECTOR<br>OPTIONS | MODIFICATIONS               |
|-------|------------------------------|------------------|---|---|--------------------|-----------------------------|---------------------|----------------------|-----------------------------|
| AV485 | N20°C to +80°C<br>(Standard) |                  | D - Dual 5/8 in. x 2<br>in. Stainless Steel<br>Shafts, each with<br>3/16 in. Key way &<br>Key | 6 - 5-24v in, 5-24v<br>out (7272)<br>recommended for<br>single-ended wiring<br>(A,B,Z, no<br>complements) | F - 60 PPR         | X - No Right Output         | X - No Right Output |                      | 000 - No Special<br>Options |



Nidec Industrial Solutions 243 Tuxedo Avenue - Cleveland, Ohio 44131 encoderhelpdesk@nidec-industrial.com +1 216-642-1230 - 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.

