

# Avtron AV56S THIN-LINE III™ Encoders



## Stainless Steel Heavy Mill Duty Magnetic Modular Encoder 4.5" C-Face Mount

### STRONGER and SMARTER

- | Heavy Mill Duty
- | Simple, Secure Installation
- | All models are protected against all short circuits and wiring errors
- | Wide-Gap Technology: No Sensor Scraping or Adjustment
  - | Up to 50000 PPR
  - | No Couplings or Bearings
  - | Sealed Electronics
- | Self-Diagnostic LED and Alarm Output
  - | Universal 5-24V Operation
  - | 3 Year No-Hassle Warranty

### AV56S

AV56S THIN-LINE III™ stainless steel heavy mill duty modular magnetic encoders are designed for washdown and marine duty and fit a standard 4.5" motor flange. Other THIN-LINE III models, ranging from 115mm to 8.5", are available to fit other motor sizes.

THIN-LINE III encoders feature simple installation, durable construction, and clear diagnostics to eliminate encoder-related downtime:

First, the magnetic sensors are fully potted, to withstand dirt and liquids. No glass disks, no optics to clog. There are no moving, wearing parts!

The patented Wide-Gap™ rotors put an end to sensor damage, are simpler to install, and stay securely mounted to the shaft.

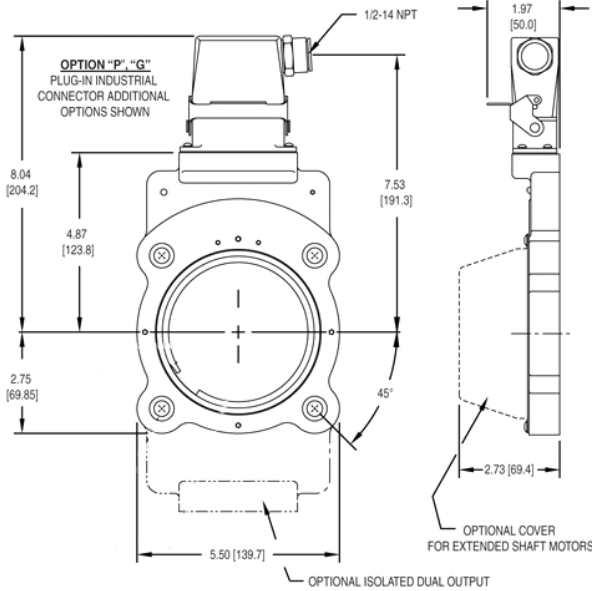
The universal 5-24V design drives longer cables and is protected against wiring errors and surges.

When you power up an AV56S, you know you installed it right: the green light tells you the digital self-tuning has set your AV56S optimally.

If at any time, the AV56S cannot produce ideal signals, the light changes to red and the remote alarm contact activates. If there are wiring errors, the LED will change to orange. However, the encoder keeps working as long as possible to give you time to schedule service.

With a real-world installation history of over 4,500,000 hour MTBF, AV56S encoders will keep your machine running 24/7/365!

## OUTLINE DRAWING



## MORE AV56S ADVANTAGES

- Replaces Avtron M56S, Northstar/Dynapar™ D5, D560, SL56; online cross reference guide available
- Shrugs off dirt, oil, and water contamination
- Highly resistant to electrical and magnetic motor and brake noise
- If damaged, electronics can be replaced without removing rotor
- Built-in motor position guide and diagnostic check
- No air gap adjustment required
- AV56S features stainless steel for washdown and marine applications
- Sealed thru-shaft option
- Fits shafts 0.500" - 3.188" [10 - 85 mm]
- 4,500,000+ hour MTBF design

## AV56S SPECIFICATIONS

**Operating Power:** Volts: 5 - 24 VDC; Current: 80mA, 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:** 1000/300m

**PPR:** 4 - 5000

**Speed:** 5400 RPM Max. std., for higher speeds, consult factory

**Electronics:** Fully Encapsulated, IP67 (see manual for details)

**Temperature:** -40° to 100°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:** 5 - 6 lbs [2.2 - 2.7 kg]

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

All dimensions are in inches [millimeters]; Specifications and features are subject to change without notice.

## SELECTION GUIDE

AV56S PART NUMBERS AND AVAILABLE OPTIONS									
Model	Housing Type	Shaft Size (Thru Shaft Rotor)	Cover Style	Line Driver	Single/Left Output (PPR)	Right Output (PPR)	Connector	Modifications	
AV56S	1- Single Output	T0- Non-std. Shaft Size XX- None  Thru Shaft Rotor US Metric TA- 0.500 M2- 10mm TB- 0.625 MA- 11mm TC- 0.875 M3- 12mm TD- 0.938 MB- 14mm TE- 1.000 MC- 15mm TF- 1.125 MD- 16mm TG- 1.250 M4- 18mm TH- 1.375 ME- 19mm TI- 1.500 MF- 24mm TJ- 1.625 MG- 28mm TK- 1.750 MH- 30mm TL- 1.875 MT- 32mm TM- 2.000 MJ- 36mm TN- 2.125 MK- 38mm TQ- 2.250 ML- 42mm TP- 2.375 MM- 45mm TR- 2.500 MN- 48mm TS- 2.625 MP- 52mm TU- 2.875 MR- 55mm TW- 2.750* MS- 60mm TV- 3.000 MU- 65mm T4- 3.125 MV- 70mm T7- 3.188 MW- 75mm TZ- 3.250 MY- 80mm MZ- 85mm	E- Extended Shaft Cover F- Flat Cover T- Flat Thru-Hole Cover with Shaft Seal.	6- 5-24V in/out 8- 5-24 V in, 5-24 V out high power 9- 5-24V in, 5V out	0- Non-std. Y- 1024 Z- 1200 F- 60 3- 2000 G- 100 4- 2048 H- 120 5- 2500 A- 128 D- 4096 L- 240 8- 4800 N- 256 9- 5000 P- 300 E- 360 B- 480 Q- 500 R- 512 S- 600 V- 900 J- 960	X- None	P- 10 Pin EPIC Industrial w/ Plug G- 10 Pin Industrial w/ Plug (Northstar pinout) 1- 10 Pin Stainless Steel Epic w/Plug (Crimp connectors only) W- 3 Ft. Cable, Sealed R- Mini Twist Lock (Mini MS) w/ mating plug S- Mini Twist Lock (Mini MS) on 3' cable w/mating plug	000- No Modification 004- Add Housing Drain (single output only) 005- Super Magnetic Shielding 4xx- Special PPR Enter Ø in the PPR code(s), select the special option code below 9xx- Special Cable Length, xx=length in feet	



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All dimensions approximate.