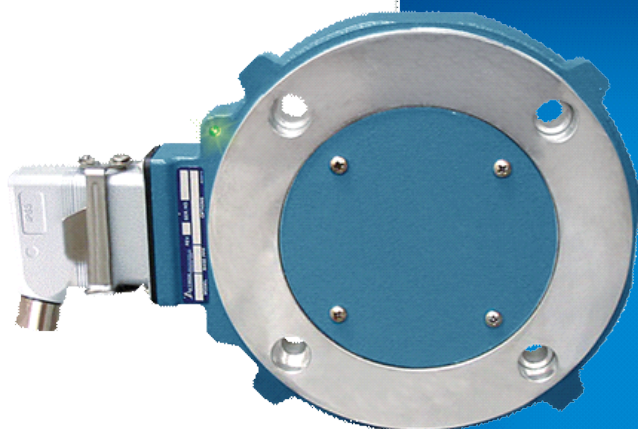


Avtron AV85 THIN-LINE III™ Encoders



Heavy Mill Duty Magnetic Encoder 8.5" 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

AV85

AV85 THIN-LINE III™ heavy mill duty modular magnetic encoders fit standard 8.5" C-Face motors and 8.5" flanges commonly used for NEMA brake mounting. Other THIN-LINE III models, ranging from 115mm to 6.75", are available to fit other motor sizes, and AV125 is available for 12.5" NEMA brake applications.

The AV85 is perfect for brake motor applications where the encoder is sandwiched between the motor and brake. With a real-world installation history of over 4,500,000 hour MTBF, you don't have to worry about replacing the encoder!

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™ Cam Screw 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 AV85, you know you installed it right: the green light tells you the digital self-tuning has set your AV85 optimally. If at any time the AV85 cannot produce ideal signals, the LED changes to red and the remote alarm contact activates. However, the encoder keeps working to give you time to schedule service. Any time there are wiring errors, the LED changes to orange. AV85 is the ideal solution to keep your motor and drive system running 24/7/365!

OUTLINE DRAWING

MORE AV85 ADVANTAGES

- Replaces Avtron M85, Northstar/Dynapar™ D8, D850, S8, S85, S850, SL85, ST85; online cross reference guide available
- Shrugs off dirt, oil, and water contamination
- Highly resistant to electrical and magnetic motor and brake noise
- Patented Cam Screw Rotor™ eliminates rotor slipping
- Built-in motor position guide and diagnostic check
- No air gap adjustment required
- Corrosion-resistant coating on all metal surfaces
- Second C-face included for outboard brake/accessory mount
- Sealed thru-shaft option
- Fits shafts 0.500" - 3.188" [10 - 85 mm]
- 4,500,000+ hour MTBF design

AV85 SPECIFICATIONS

Operating Power: Volts: 5 - 24 VDC; Current: 100mA, 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: 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: 2 - 3 lbs [0.9 - 1.36 kg]

Check out our website for more detailed specifications, drawings, and installation instructions. www.avtronencoders.com

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

SELECTION GUIDE

AV85 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
AV85A	1- Single Output 2- Dual Output	C8- Non-std. Shaft Size None Thru Shaft Rotor US CA- 0.500 D2- 10mm CB- 0.625 DA- 11mm CC- 0.875 DB- 12mm CD- 0.938 DB- 14mm CE- 1.000 DC- 15mm CF- 1.125 DD- 16mm CG- 1.250 DA- 18mm CH- 1.375 DE- 19mm CI- 1.500 DF- 24mm CJ- 1.625 DG- 28mm CK- 1.750 DH- 30mm CL- 1.875 DI- 32mm CM- 2.000 DJ- 36mm CN- 2.125 DK- 38mm CO- 2.250 DL- 42mm CP- 2.375 DM- 45mm CR- 2.500 DN- 48mm TS- 2.625 DP- 52mm TU- 2.875 DR- 55mm TW- 2.750 DS- 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 D- Dome Cover	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. V- 600 F- 60 J- 960 G- 100 W- 1000 H- 120 Y- 1024 A- 128 Z- 1200 L- 240 3- 2000 N- 256 4- 2048 P- 300 5- 2500 E- 360 D- 4096 B- 480 8- 4800 Q- 500 9- 5000 R- 512	0- Non-std. V- 600 F- 60 J- 960 G- 100 W- 1000 H- 120 Y- 1024 A- 128 Z- 1200 L- 240 3- 2000 N- 256 4- 2048 P- 300 5- 2500 E- 360 D- 4096 B- 480 8- 4800 Q- 500 9- 5000 R- 512 X- None	W- 3ft. Cable, Sealed	000-No Modification 004-Add Housing Drain (single output only) 005-Super Magnetic Shielding 4xx-Special PPR Enter 0 in the PPR code(s), select the special option code below 9xx-Special Cable Length, xx=length in feet 00W- Connector on 18" cable: Use w/ options "T", "U"

Connector Options						
Mounted on Encoder			Mounted on Flex cable			00W
10 Pin MS	10 Pin EPIC	10 Pin mini MS	7 Pin MS	10 Pin MS	10 Pin EPIC	(*)8 Pin M12
Not Available	Q- w/ plug Northstar pinout P- w/ plug	R- w/ plug	J- w/o plug	Y- 12" cable w/o plug on conduit box (Large Encoder Pinout)	Q- 18" cable w/o plug on remote mount blade Z- 36" cable w/ plug	T- w/o plug (Turck Pinout) U- w/o plug (US Pinout)

(*)Requires Special option 00W



Nidec Industrial Solutions
243 Tuxedo Avenue - Cleveland, Ohio 44131

encoderhelpdesk@nidec-industrial.com
+1 216-642-1230 - www.avtronencoders.com



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All other trademarks and registered trademarks are the property of their respective owners. Nidec Industrial Solutions' standard warranty applies.
All dimensions approximate.

