

Avtron AV115 THIN-LINE III™ Encoders



Heavy Mill Duty Magnetic Modular Encoder 115mm Flange Mount

Magnetic Durability in a Compact Encoder

Heavy Mill Duty
Simple, Secure Installation
Wide-Gap Technology: No Sensor Scraping or Adjustment
4 - 50000 PPR
No Couplings or Bearings
Sealed Electronics
Self-Diagnostic LED and Alarm Output
Universal 5-24V Operation
3 Year No-Hassle Warranty
Adapters available to fit Euro 85mm B-Flanges
All models are protected against all short circuits and wiring errors

AV115

AV115 THIN-LINE III™ heavy mill duty modular magnetic encoders fit standard 115mm flange motors. Adapters are available to fit European B-flange (85mm/100mm BC) motors. Other THIN-LINE III models, ranging from 4.5" to 8.5", are available to fit other motor sizes as needed. For Euro B-flange, [AV45](#) is also available.

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 AV115, you know you installed it right: the green light tells you the digital self-tuning has set your AV115 optimally. If at any time, the AV115 cannot produce ideal signals, the light 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.

With a real-world installation history of over 4,500,000 hour MTBF, AV115 encoders will keep your machine running 24/7/365!

1.0 M MIN
CABLE LENGTH

35.3 MAX

17.13

115.025
DIA

115.000
DIA

4.6

3.0

(21.3)

LED ALARM INDICATOR

62.0

65.3

21.3

132.3

132.5

60°

140.4

100.9 MAX

10.75 DIA 4 HOLES
EQUALLY SPACED
ON A 150.0 DIA

100.9 MAX
EQUAL OUTPUT UNITS ONLY

OPTIONAL 7C
SEALED FLEXIBLE CABLE
ADDITIONAL OPTIONS
SHOWN BELOW

Ø2.0 (0.35 MM) LEADS
7X30 I/P STRIPPED
BARE ENDS ARE STRIPPED
9.5 AND TINNED

OPTIONAL COVER
FOR EXTENDED
SHUTT MOTORS
SEE NOTE 4

OPTIONAL ISOLATED DIA. OUTPUT

- Resists failures from dirt, oil, and water contamination
- Highly resistant to electrical and magnetic motor and brake noise
- If damaged, electronics can be replaced without removing rotor
- Highest rotor holding force available for crane/hoist/brake applications
- No air gap adjustment required
- Fits shafts 11mm - 85mm
- Fits Nidek FEK motors
- 4,500,000+ hour MTBF design
- Thin Profile
- Dual Flange Standard
- Marker Pulse Standard
- -40°C thru +100°C Operation Standard
- Excellent for gear motors and brake applications
- Patented Cam Screw Rotor™ eliminates rotor slipping
- Built-in rotor position guide and diagnostic check

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

Max. Instantaneous Current Output: 3000 mA

PPR: 4 - 50000

Speed: 5000 RPM Max. std., for higher speeds, consult factory

Electronics: Fully Encapsulated, IP67**
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: 0.9kg to 1.36kg.

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



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SELECTION GUIDE

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MODEL	HOUSING TYPE	ROTOR BORE SIZE	COVER STYLE	LINE DRIVER	SINGLE/LEFT OUTPUT PPR	RIGHT OUTPUT PPR	CONNECTOR OPTIONS	MODIFICATIONS
AV115	1 - Single Output 2 - Dual, Isolated Outputs	XX - No Rotor BA - 17mm keyed bore with bolted-on rotor (B35790) D2 - 10mm Thru-Shaft Rotor DA - 11mm Thru-Shaft Rotor D3 - 12mm Thru-Shaft Rotor DB - 14mm Thru-Shaft Rotor DC - 15mm Thru-Shaft Rotor DD - 16mm Thru-Shaft Rotor D6 - 17mm Thru-Shaft Rotor D4 - 18mm Thru-Shaft Rotor DE - 19mm Thru-Shaft Rotor D7 - 20mm Thru-Shaft Rotor DF - 24mm Thru-Shaft Rotor D5 - 25mm Thru-Shaft Rotor DG - 28mm Thru-Shaft Rotor DH - 30mm Thru-Shaft Rotor DT - 32mm Thru-Shaft Rotor DJ - 36mm Thru-Shaft Rotor DK - 38mm Thru-Shaft Rotor DL - 42mm Thru-Shaft Rotor DM - 45mm Thru-Shaft Rotor DN - 48mm Thru-Shaft Rotor DO - 50mm Thru-Shaft Rotor DP - 52mm Thru-Shaft Rotor DR - 55mm Thru-Shaft Rotor DS - 60mm Thru-Shaft Rotor MU - 65mm Thru-Shaft Rotor MV - 70mm Thru-Shaft Rotor MW - 75mm Thru-Shaft Rotor MY - 80mm Thru-Shaft Rotor MZ - 85mm Thru-Shaft Rotor	E - Extended (Pie-Pan Style) Cover F - Flat Outboard Cover, Low-Profile T - Outboard Seal Plate for Thru-Shaft with V-Ring Seal X - No Cover Plate	6 - 5-24v in, 5-24v out (7272) Best for Single Ended Wiring (A, B, Z, no complements) 8 - 5-24V In/Out (HX) Hi-Power Line Driver, Fully Protected Outputs 9 - 7-24V In, 5v fixed outputs (7272)	F - 60 PPR G - 100 PPR H - 120 PPR A - 128 PPR L - 240 PPR N - 256 PPR P - 300 PPR E - 360 PPR B - 480 PPR Q - 500 PPR R - 512 PPR S - 600 PPR V - 900 PPR J - 960 PPR Y - 1024 PPR Z - 1200 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR D - 4096 PPR 8 - 4800 PPR 9 - 5000 PPR 0 - Special PPR	X - No Right Output F - 60 PPR G - 100 PPR H - 120 PPR A - 128 PPR L - 240 PPR N - 256 PPR P - 300 PPR E - 360 PPR B - 480 PPR Q - 500 PPR R - 512 PPR S - 600 PPR V - 900 PPR J - 960 PPR Y - 1024 PPR Z - 1200 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR D - 4096 PPR 8 - 4800 PPR 9 - 5000 PPR 0 - Special PPR	A - 10 Pin MS Connector, no plug, Avtron Pin Out B - 10 Pin MS Connector, no plug, Dynapar Pin Out C - 10 Pin MS Connector, with plug, Avtron Pin Out D - 10 Pin MS Connector, with plug, Dynapar Pin Out G - Ind'l w/Northstar Pinout (EPIC Style connector), w/mating plug Q - Ind'l w/Remote Base Mount for Baldor TEFC/BC Motors (EPIC style) w/LED Diagnostics + alarm output P - Ind'l (EPIC Style connector) w/mating plug + LED diagnostics Z - Ind'l on 1 M Cable (side entry) (EPIC Style) w/LED diagnostics + alarm output W - 1 M Cable w/LED diagnostics + alarm output R - 10 pin Mini-MS style (Bayonet) w/LED diagnostics S - 10 pin Mini-MS style (Bayonet) on 18 inch cable w/LED diagnostics Y - 10 pin MS style connector on 12 inch cable w/LED diagnostics T - M12 connector on cable (Turck pinout) U - M12 connector on cable (US pinout)	000 - None 004 - Add Drain hole (Single Output Only) 005 - Super Magnetic Shielding Added 006 - Right Angle Cable Exit (for cable W or remote bases Q, Z) 008 - Special wiring, black extended housing shaft cover with grounding lug 016 - Remote Q Connector with 6" Cable Extension 00W - Special Connector on 36 in/1m cable0 901 - 0.3m/1' Special Cable Length 902 - 0.6m/2' Special Cable Length 903 - 0.9m/3' Special Cable Length 904 - 1.2m/4' Special Cable Length 905 - 1.5m/5' Special Cable Length 910 - 3m/10' Special Cable Length 915 - 4.5m/15' Special Cable Length 920 - 6m/20' Special Cable Length 925 - 8m/25' Special Cable Length 930 - 9m/30' Special Cable Length 933 - 10m/33' Special Cable Length