

Avtron AV4 Encoders



Magnetic Light Mill Duty Solid Shaft Encoder, 2"-2.5" [36mm-58mm] Flange Mount

Magnetic Durability in a Compact Encoder

- | Shaft Sizes Include 1/4", 3/8", 6mm & 10mm
- | No Optical Glass Disk
- | Resists Dust, Dirt, and Liquids
 - | Up to 16384 PPR
- | Drop-in Mechanical Replacement for Any Optical Encoder
- | Compatible Pinouts: No Rewiring
 - | Up to IP69K Rating Available
 - | -40°C to +85°C Operation
 - | 2 Year No-Hassle Warranty

AV4

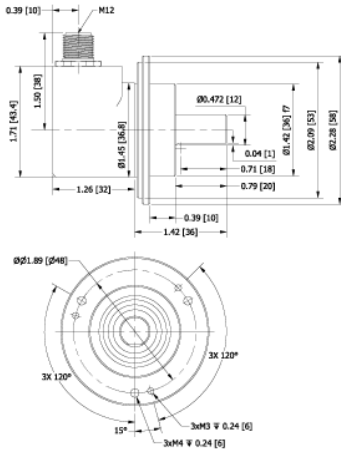
Avtron AV4 encoders are setting THE industry standard for incremental quadrature rotary encoders. This versatile lineup fits the same mounting patterns on all motors and machines as competitor units, but that's where the similarities end. We've incorporated Avtron magnetic sensing technology to this affordable set of encoders! This makes AV4 more resistant to dust, dirt, oil and other liquids that make ordinary optical encoders fail.

Our Wide-Gap technology provides for 10-20X larger air gap between sensor and rotor than ordinary optical encoder designs. Consider the resistance to vibration when you compare our 0.060" air gap to the typical 0.004" clearance from the thin, often flexible, optical disk spinning at full motor speeds. Our high-accuracy magnetic sensors provide high quality quadrature signals for precise velocity and position control with the durability of magnetic sensing technology.

Our magnetic AV4 encoders are setting a new standard for quality, durability, and performance. Select an Avtron AV4 today!

OUTLINE DRAWING

Flange style 1 - 58mm w/36mm Pilot, 3x M3 & M4 on 48mm BC



FOR COMPLETE LIST OF FLANGE STYLES PLEASE REFER TO INSTRUCTION SHEET

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

SELECTION GUIDE

MODEL	PPR	LINE DRIVER	SHAFT SIZE	CONNECTOR*	CONNECTOR EXIT	FLANGE STYLE	HOUSING SIZE	SEALS	CHANNEL	MOD CODE
AV4	BA - 30 AA - 32 AK - 80 BC - 100 AH - 120 AC - 128 AM - 200 AL - 240 AN - 256 AE - 360 AG - 400 AB - 480 AD - 500 AR - 512 AS - 600 AP - 720	1 - 5-30V In & Out 4 - 5-30V In / 5V Out	A - 0.25" OD x 0.625" Long with Flat B - 0.375" OD x 0.625" Long with Flat C - 10mm OD x 20mm Long with Flat R - 10mm OD x 20mm Long w/o Flat T - 6mm OD x 10mm Long w/o Flat	See Connector Codes table for compatible Connector & Housing	A - Axial (end) R - Radial (side)	See Chart Below	3 - 36mm 4 - 42mm (SST) 5 - 58mm	A - IP65 Seals, Alum Housing G - IP67 Seals, Alum Housing J - IP67 Seals, SST Housing K - IP69K Seals, SST Housing (with "4" housing size only)	A - All Channels (A, A, B, B, Z, Z) B - A, A, B, B, No Marker E - A, B, Z, No Compliments	000 - NONE 901 - 1' [0.3m] cable 902 - 2' [0.6m] cable 903 - 3' [0.9m] cable 905 - 5' [1.5m] cable 910 - 10' [3m] cable 915 - 15' [4.5m] cable 920 - 20' [6m] cable 925 - 25' [7.5m] cable 930 - 30' [9m] cable

SHAFT OPTION	HOUSING	SEALS (IP RATING)
A	3, 5	A, G
B	3, 5	A, G
C	Al (3, 4', 5)	A, G, J, K
R	3, 5	A, G, J
T	3, 5	A, G, J

CONNECTOR CODES	HOUSING	CONNECTOR EXIT
A, B, C, D, E, F, G, H, J, K, M, N, R	3 - 36mm 5 - 58MM	R - Radial (side) ONLY A - Axial (end) ONLY
2, 3, 5, T, U, W	3, 4, 5	AR

CONNECTOR CODES	CHANNEL
A, B, C, D, R, T, U, 2, 3, 7, W	A
E, F, G, H, J, K, M, N	B, E
5	E

FLANGE STYLE		
1 - 58mm w/36mm Pilot, 3x M3 & M4 on 48mm BC	5 - 2.63" Round Flange, 2.50" Pilot, 3x 10-32 on 1.88 BC & 4x 4-40 on 1.27 BC	8 - 2.63" Square Flange, 1.25" Pilot & 3x 10-32 on 1.875" BC
2 - 58mm w/50mm Pilot, 3x M4 on 42mm BC	6 - 36.5mm HD Round Flange, 30mm Pilot, 4xM4 on 24mm BC	9 - 2.50" Round Flange, 1.25" Pilot, 3x 10-32 & 8-32 on 1.88 BC, 3x 6-32 & 4x 4-40 on 2.00 BC
3 - 36.5mm Mini-Flange w/33mm Pilot, 4xM3 on 26mm BC	7 - 42mm HD 316 SST Round Flange, 42mm Pilot, 4x M4 on 35mm BC	A - 2.06" Square Flange, 1.25" Pilot, 4x 0.16 on 1.75" Sq
4 - 2.63" Square Flange, 1.25" Pilot, 4x 0.22 on 2.06 Sq		

*4" Housing only available with "K" seals

CONNECTOR			
A - 10 pin MS w/o Plug, Avtron/BEI Pinout B - 10 pin MS w/o Plug, Dynapar HS35 Pinout (Rev Phasing) C - 10 pin MS with Plug, Avtron/BEI Pinout D - 10 pin MS with Plug, Dynapar HS35 Pinout (Rev Phasing)	E - 6 pin MS w/o Plug, BEI/Avtron HS35 Pinout F - 6 pin MS w/o Plug, Dynapar HS35 Pinout (Rev Phasing) G - 6 pin MS with Plug, BEI/Avtron HS35 Pinout H - 6 pin MS with Plug, Dynapar HS35 Pinout (Rev Phasing)	J - 7 pin MS w/o Plug, Avtron/BEI HS35 Pinout K - 7 pin MS w/o Plug, Dynapar HS35 Pinout (Rev Phasing) M - 7 pin MS with Plug, Avtron/BEI HS35 Pinout N - 7 pin MS with Plug, Dynapar HS35 Pinout (Rev Phasing)	R - 10 Pin Mini Twistlock with Plug T - M12-8 pin w/o Plug, Global Pinout 7 - M12-8 pin w/o Plug, Global Pinout (Rev Phasing) U - M12-8 pin w/o Plug, USA Pinout
2 - M23-12 Pin w/o Plug, Leine & Linde and Hubner pinout 3 - M23-12 Pin w/o Plug, Inverted Hubner Signals 5 - M12-5 Pin w/o Plug W - 3.2ft [1m] Cable (also use with special mod 900)			

MORE AV4 ADVANTAGES

- 1 Digital mapping technology for high accuracy
- 1 All-digital design, no trim pots or adjustments for longer life
- 1 Advanced magnetic sensor technology

AV4 SPECIFICATIONS

Operating Power: Volts: 5 - 30 VDC; Current: 140mA @ 5V, 70mA @ 10V DC, 40mA @ 24V DC, no load

Output Format: A Quad B with marker (A,A-, B,B-, Z,Z-) available

Frequency Range: 0 to 1mHz

PPR: 1 - 16,384 Standard (for other PPR needs consult factory)

Speed: 6000 RPM Max., (for higher speeds, consult factory)

Axial Load: 9lbs [40 N], Radial 25lbs [110 N]

Max. Temperature: -40° to +85°C

Environment: up to IP69K (when provided with shaft seals, ss housing)

Vibration: 10 g (10 Hz – 1000 Hz, EN 60068-2-6)

Shock: 100 g (half sine 6 ms, EN 60068-2-27)

Weight: 0.44-1.76 lbs [200-800g]



All dimensions are in inches [millimeters]. Specifications and features are subject to change without notice. EU-SMART™, SMARTSafe™, SMARTach II™, THIN-LINE™, THIN-LINE II™, WIDE-GAP™, and BULLSEYE32™ are trademarks of Nidec Avtron Automation. All other trademarks and registered trademarks are the property of their respective owners.