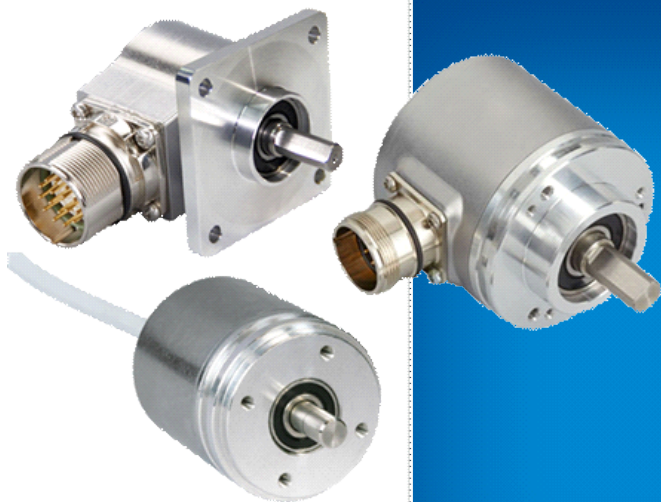


# AVTRON™ ENCODERS

## 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 Disc
- | 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.

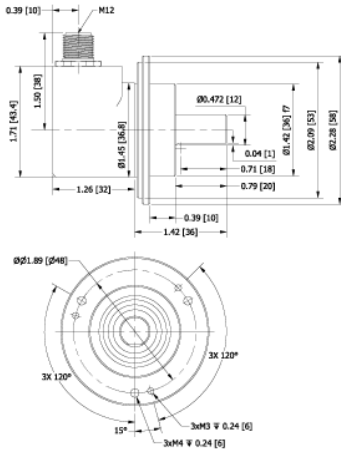
Our Wide-Gap technology provides for 10-20X larger air gap between sensor and rotor than ordinary optical encoder designs. Consider the resistance to vibration when you compare our 0.040" air gap to the typical 0.004" clearance from the thin, often flexible, optical disk spinning at full motor speeds. Our high-accuracy magnetic sensors provide high quality quadrature signals for precise velocity and position control with the durability of magnetic sensing technology.

Need an AV4 quick? We have select AV4 encoders available for 1 day shipping! Check out the new [Rush AV4](#) program.

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**

# MORE AV4 ADVANTAGES

- ▮ Digital mapping technology for high accuracy
- ▮ All-digital design, no trim pots or adjustments for longer life
- ▮ 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, sst 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]

Check out our website for more detailed specifications, drawings, and installation instructions. [www.avtronencoders.com](http://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 AQ - 500 AR - 512 AS - 600 AP - 720	AJ - 960 AW - 1000 AY - 1024 AZ - 1200 AV - 1440 AU - 1800 A3 - 2000 A4 - 2048 AT - 3072 A6 - 3600 AD - 4096 A8 - 4800 A9 - 5000 CA - 12700 CB - 10000	1 - 5-30V In & Out 4 - 5-30V In / 5V Out 6 - 5-24V In & 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 905 - 5' [2m] cable 915 - 15' [5m] cable 933 - 33' [10m] cable

SHAFT OPTION	HOUSING	SEALS (IP RATING)	CONNECTOR CODES	HOUSING	CONNECTOR EXIT	CONNECTOR CODES	CHANNEL	FLANGE STYLE
A	3, 5	A, G	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	A, B, C, D, R, T, U, 2, 3, 7, W	A	1 - 58mm w/36mm Pilot, 3x M3 & M4 on 48mm BC 2 - 58mm w/50mm Pilot, 3x M4 on 42mm BC 3 - 36.5mm Mini-Flange w/33mm Pilot, 4xM3 on 26mm BC 4 - 2.63" Square Flange, 1.25" Pilot, 4x 0.22 on 2.06 Sq. 5 - 2.63" Round Flange, 2.50" Pilot, 3x 10-32 on 1.88 BC & 4x 4-40 on 1.27 BC 6 - 36.5mm HD Round Flange, 30mm Pilot, 4x M4 on 24mm BC 7 - 42mm HD 316 SST Round Flange, 42mm Pilot, 4x M4 on 35mm BC 8 - 2.63" Square Flange, 1.25" Pilot + 3x 10-32 on 1.875" BC 9 - 2.50" Round Flange, 1.25" Pilot, 3x 10-32 & 6-32 on 1.88 BC, 3x 6-32 & 4x 4-40 on 2.00 BC A - 2.06" Square Flange, 1.25" Pilot, 4x 0.16 on 1.75" SQ B - 2.0" Round Flange, 1.25" Pilot, 3x4-40 on 1.5" BC & 4x10-32 on 1.625" BC E - PY Flange

\*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 (Rev Phasing) 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) Q - 10 Pin Mini Twistlock with Plug (Reverse 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



Nidec Industrial Solutions  
243 Tuxedo Avenue - Cleveland, Ohio 44131

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



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