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
- 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
- Up to 16384 PPR

AV4

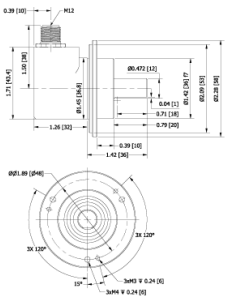
Avtron AV4 encoders are setting THE industry standard for incremental quadrature rotary encoders. This versatile lineup fits the same mounting patterns on all motors and machines as competitor units, but that's where the similarities end. We've incorporated Avtron magnetic sensing technology to this 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.

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

MORE AV4 SPECIFICATIONS

Operating Power: Volts: 5 - 30 VDC; Current: 140mA @ 5V, 70 mA @ 10 VDC, 40 mA @ 24 VDC, no load
Output Format: A Quad B with marker (A,/A, B,/B, Z,/Z) available
Frequency Range: 0 to 1 MHz
PPR: 1 - 16,384 Standard (for other PPR needs consult factory)
Speed: 6000 RPM Max., (for higher speeds, consult factory)
Axial Load: 9 lbs [40 N], Radial 25 lbs [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 [200-800 g]

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

AVTRON™ ENCODERS A Nidec BRAND

Nidec Industrial Solutions
243 Tuxedo Avenue - Cleveland, Ohio 44131
encoderhelpdesk@nidec-industrial.com
+1 216-642-1230 - www.avtronencoders.com

SELECTION GUIDE

MODEL	PPR	LINE DRIVER	SHAFT SIZE	CONNECTOR OPTIONS	WIRING EXIT	FLANGE STYLE	HOUSING SIZE	SEALS	CHANNELS	MODIFICATIONS
AV4	BB - 1 PPR BH - 7 PPR BN - 8 PPR BD - 10 PPR BF - 25 PPR BA - 30 PPR AA - 32 PPR BG - 40 PPR BJ - 42 PPR AF - 60 PPR AK - 80 PPR BC - 100 PPR AH - 120 PPR AC - 128 PPR AM - 200 PPR AL - 240 PPR A2 - 250 PPR AN - 256 PPR AE - 360 PPR AG - 400 PPR AB - 480 PPR AQ - 500 PPR AR - 512 PPR AS - 600 PPR AP - 720 PPR AJ - 960 PPR AW - 1000 PPR AY - 1024 PPR AZ - 1200 PPR CL - 1250 PPR BQ - 1270 PPR BK - 1365 PPR AV - 1440 PPR BE - 1500 PPR AU - 1800 PPR A3 - 2000 PPR A4 - 2048 PPR B4 - 2160 PPR BP - 2450 PPR B5 - 2500 PPR A5 - 2540 PPR CG - 3000 PPR AT - 3072 PPR A6 - 3600 PPR AD - 4096 PPR A8 - 4800 PPR A9 - 5000 PPR CE - 6000 PPR CD - 8192 PPR CB - 10000 PPR CH - 12500 PPR CA - 12700 PPR CF - 15000 PPR BL - 16384 PPR ZZ - Programmable PPR (1024PPR Default) Must purchase D52986 Programming Tool & Cable	6 - 5-24v In/Out Line Driver (7272) 9 - 5-24v In, 5v Out Regulated Line Driver (7272)	A - 0.25 in OD x 0.625 in. Shaft w/Flat (2.00 in. & 2.06 in., NEMA 34/42 & PY flanges only) B - 0.375 in.OD x 0.625 in. Shaft w/Flat (2 in. & 2.06 in. NEMA 34/42 & PY flanges only) C - 10mm OD x 20mm Long Shaft, w/Flat D - 0.375 in. OD x 1.0 in. Shaft w/Flat (2.63 in. flange only) E - 0.25 in OD x 0.875 in. Shaft w/Flat (2.50 & 2.63 in flanges only) F - 0.375 in.OD x 0.875 in. Shaft w/Flat (2.50 & 2.63 in. flanges only) R - 10mm OD x 20mm Long Shaft No Flat T - 6mm OD x 10mm Long shaft, No Flat G - 11mm OD without Flat, Keyed (G flange only)	A - 10 pin MS style No Plug Std Pin Out B - 10 pin MS style No Plug Reverse Phasing C - 10 pin MS style with Plug Avtron pin out D - 10 pin MS style with plug Reverse Phasing E - 6 pin MS style No Plug F - 6 pin MS style No Plug Reverse Phasing G - 6 pin MS style with Plug Avtron pin out H - 6 pin MS style with Plug Reverse Phasing J - 7 pin MS style No Plug Avtron Pin out K - 7 pin MS style No Plug Reverse Phasing M - 7 pin MS style with plug Avtron pin out N - 7 pin MS style with plug Reverse Phasing P - 4-pin DIN Form A, 18mm spacing Q - 10 pin Mini MS Twist Lock style with Plug Reverse Phasing R - 10 pin Mini MS Twist Lock style with Plug Std pin out T - M12 8 Pin Turck pin out 7 - M12 8 Pin Turck pin out Reverse Phasing U - M12 8 Pin USA pin out W - Cable 1m or special length 2 - M23 12 Pin Turck pin out 3 - M23 12 Pin USA pin out 5 - M12 5 Pin	R - Radial Side Exit A - Axial End Exit	1 - 58mm Round Flange, 36mm Pilot, 3x M3 M4 on 48mm BC 2 - 58mm Round Flange, 50mm Pilot, 3x M4 on 42mm BC 3 - 36.5mm Round Flange, 33mm Pilot, 4x M3 on 26mm BC 4 - 2.63 in. Square Flange, 1.25 in. Pilot, 4x 0.22 in. Corner Holes spaced 2.06 in. apart 5 - 2.63 in. Round Flange, 2.50 in. Pilot, 3x 10-32 on 1.875 in. BC & 4x 4-40 on 1.27 in. BC 6 - 36.5mm Heavy Duty Round Flange,30mm Pilot, 4x M4 on 24mm BC 7 - 42mm Round HD Stainless Flange & Pilot, 4x M4 on 35mm BC 9 - 2.50 in. Round Flange, 1.25 in. Pilot, 3x 10-32 & 8-32 on 1.875 in. BC, 3x 6-32 & 4x 4-40 on 2.00 in. BC A - 2.06 in. Square Flange, 1.25 in. Pilot, 4x 0.16 in. Corner Holes on 1.75 in. BC B - 2.00 in. Round Flange, 1.25 in. Pilot, 3x 4-40 on 1.5 in. BC. 4x 10-32 on 1.625 in. BC C - NEMA 34/42 Flange (2.44/3.25 in pilot, 0.187x4holes @2.952 BC) & 3/8 - 3/8 coupling) D - NEMA 34/42 Flange (2.44/3.25 in pilot, 0.187x4holes @2.952 BC) & 1/4 - 1/4 coupling) E - NEMA PY Flange (2.5 in pilot, 0.281x4holes @3.978 BC) G - B10 Flange	3 - 36mm 4 - 42mm 5 - 58mm	A - Shaft Seals, IP65, Aluminum Housing G - Shaft Seals, IP67, Aluminum Housing K - Shaft Seals, IP69K, Stainless Steel Housing X - No Shaft Seals, IP54, NOT RECOMMENDED	A - All Signals A, A/, B, B/, Z, Z/ B - A, A/ ,B, B/, No Marker Pulse E - A, B, Z No Complements F - A, B No Complements, No Marker	000 - No Special Features CEE - Add 18" adapter 10 pin MS to 6 pin MS, Single Ended, (A, B, Z only) CEB - Add 18" adapter 10 pin MS to 6 pin MS, Differential, No Marker Pulse (A, A/, B, B/) CJE - Add 18" adapter 10 pin MS to 7 pin MS, Single Ended, (A, B, Z only) CJB - Add 18" adapter 10 pin MS to 7 pin MS, Differential, No Marker Pulse (A, A/, B, B/ only) CRA - Add 18" adapter 10 pin MS to 10 pin Mini Twist Lock, All Channels (A, A/, B, B/, Z, Z/) C5E - Add 18" adapter 10 pin MS to 5 pin M12, Single Ended, (A, B, Z only) CTA - Add 18" adapter 10 pin MS to 8 pin M12, All Channels (A, A/, B, B/, Z, Z/) C2A - Add 18" adapter 10 pin MS to 12 pin M23, All Channels (A, A/, B, B/, Z, Z/) CWA - Add Mating 10 pin MS connector with 18" [0.5m] flying leads, All Channels (A, A/, B, B/, Z, Z/) 905 - 5 ft./2.0m Cable Built into Encoder 915 - 15 ft./5.0m Cable Built into Encoder 933 - 33 ft/10m Cable Built into Encoder

AVTRON™ ENCODERS A Nidec BRAND

Nidec Industrial Solutions
243 Tuxedo Avenue - Cleveland, Ohio 44131
encoderhelpdesk@nidec-industrial.com
+1 216-642-1230 - www.avtronencoders.com