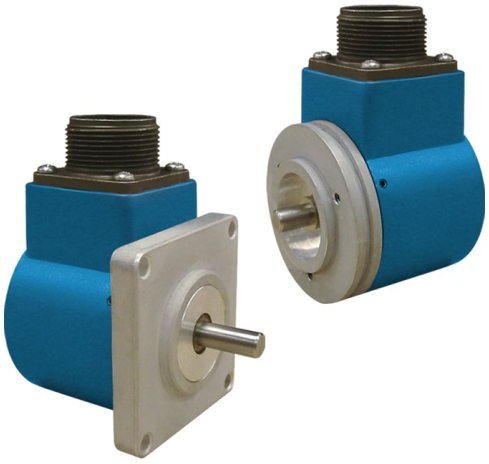
Avtron AV20 Encoders



Optical Light Mill Duty Solid Shaft Encoder, 2" Flange Mount

Magnetic Durability in a Compact Encoder

- Shaft Sizes include 1/4", 3/8", and 10mm
- Simple Installation
- Unbreakable Optical Disk
- Up to 3600 PPR
- Wide-Gap Technology: Up to 8X larger gap between sensor and rotor
- Direct Replacement for Model H20 and Others without Rewiring
- Industry Standard Face or Flange Mounting
- IP65/Nema 4 Rating: Dust and Liquid Tight
- Superior Bearings and Seals
- -40°C to +100°C Operation *
- 2 Year No-Hassle Warranty

AV20

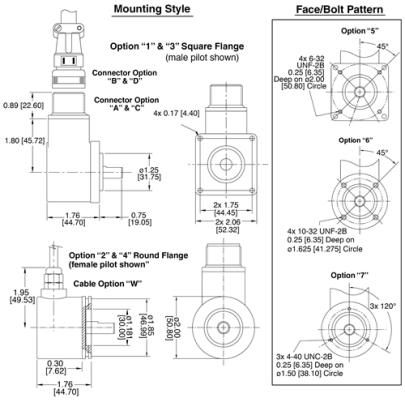
AV20 encoders look like industry standard incremental quadrature rotary encoder units, and fit the same mounting patterns on all machines. That's where the similarity ends. Our AV20 encoders can withstand conditions that make other encoders fail. The solid aluminum housing and stainless steel shaft offer increased durability in tough environments.

Avtron AV20 encoders have superior shaft seals and bearings that stay sealed to keep contaminants out, through temperature cycling and liquid sprays. Our encoder seals are protected by mechanical barriers to prevent flexing or failure. Avtron's superior bearings permit much larger side and axial loads for pulley and belt applications, and feature synthetic lubricants for even longer life in all applications.

Many competitive optical encoder designs risk sensor damage from any vibration or shock: sensors ride less than four thousandths of an inch from the thin, often flexible, optical disk spinning at full motor speeds. Some designs even use thin glass disks in "industrial" products! Avtron uses only unbreakable disks and a sensor to disk gap over 8X larger than the competition.

Our optical AV20 encoders are setting a new standard for quality, durability, and performance. Select an Avtron AV20 today!

OUTLINE DRAWING



MORE AV20 ADVANTAGES

- All-digital design, no trim pots or adjustments for longer life
- Advanced sensor technology
- Superior bearings with synthetic lubricant for longer life
- No extra charge for signal complements and marker pulse
- More than 2X the axial and side load capability of the competition
- Superior line drivers withstand short circuits and reverse voltage wiring errors

MORE AV20 SPECIFICATIONS

Operating Power: Volts: 5 - 28 VDC; Current: 50mA, no load
Output Format: A Quad B with marker (A,/A, B,/B, Z,/Z) available
Frequency Range: 0 to 125 kHz
PPR: 1 - 3600 Standard (for other PPR needs consult factory)
Speed: 6000 RPM Max., (for higher speeds, consult factory)
Axial Load: 100 lbs [45 kg] max.
Radial Load: 100 lbs [45 kg] max.
Temperature: -40° to 100°C *
Environment: IP65 (when provided with shaft seals)
Vibration: 5-2000 Hz
Shock: 50G, 11mS duration
Weight: 0.575 lbs [260 g]
* Please consult factory for temperature/speed derating

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

AVTRON™ ENCODERS A Nidec BRAND

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SELECTION GUIDE

MODEL	PPR	LINE DRIVER	SHAFT SIZE	CONNECTOR OPTIONS	WIRING EXIT	MOUNTING	FACE/BOLT PATTERN	SEALS	CHANNELS	MODIFICATIONS
AV20	A - 1 PPR C - 25 PPR F - 60 PPR G - 100 PPR H - 120 PPR K - 200 PPR P - 300 PPR E - 360 PPR Q - 500 PPR R - 512 PPR S - 600 PPR T - 625 PPR U - 720 PPR W - 1000 PPR Y - 1024 PPR Z - 1200 PPR 1 - 1250 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR 6 - 2540 PPR 7 - 3600 PPR	1 - 5-28v In/Out (7272) 2 - 5-28v In/Open Collector Out (7273) 4 - 5-28v In, 5v Out (7272)	A - 1/4 in. diameter Shaft w/Flat B - 3/8 in. diameter Shaft w/Flat N - 1/4 in. diameter shaft w/o Flat P - 3/8 in. diameter Shaft w/o Flat C - 10mm diameter Shaft, w/Flat R - 10mm diameter Shaft w/o Flat	A - 10 pin MS style w/o Plug, Avtron Pinout B - 10 pin MS style w/o Plug, Reverse Phasing C - 10 pin MS style w/Plug, Avtron pinout D - 10 pin MS style w/plug, Reverse Phasing W - Cable (18" or special length) E - 6 pin MS style w/o Plug F - 6 pin MS style w/o Plug, Reverse Phasing G - 6 pin MS style w/plug, Avtron pinout H - 6 pin MS style w/plug, Reverse Phasing J - 7 pin MS style w/o Plug, Avtron Pinout K - 7 pin MS style w/o Plug, Reverse Phasing M - 7 pin MS style w/plug, Avtron pinout N - 7 pin MS style w/plug, Reverse Phasing T - M12 on cable, Turck Pinout (use 00W Option Code) U - M12 on cable, USA Pinout (Use 00W Option Code)	A - Side (Radial)	1 - 2.06 in. Sq. Flange w/1.25 in. Pilot, 1.75 in. side to side hole spacing 2 - 2 in. Servo Flange w/1.25 in. Pilot, 1.875 in. groove 3 - 2.06 in. Sq. Flange w/1.181 in. Rabbet, 1.75 in. side to side hole spacing 4 - 2 in. Servo Flange w/1.181 in Rabbet, 1.875 in. Groove	X - No Additional Face Drill Holes 5 - (Square Flange Only): 4 x 6-32 tapped holes on a 2 in. B.C. 6 - 4 x 10-32 tapped holes on a 1.625 in. B. C 7 - 3 x 4-40 tapped holes on a 1.5 in. B. C.	X - (NOT Recommended) No Seals A - Shaft Seals (best all around) (male pilot only) B - Shielded Bearings (for female pilot housings)	A - All Signals (A,A/,B,B/,Z,Z/) (NA w/6, 7 pin conns.) B - A,A/,B,B/ (complements, no marker) E - A, B, Z (no complements, marker) D - A, /A (Single Phase with complement) F - A, B (no complements, no marker)	000 - No Special Features 001 - Improved Cable Sealing 00W - Connector on Cable (see conn list) 901 - 1'/0.3m Cable Built into Encoder 902 - 2'/0.6m Cable Built into Encoder 903 - 3'/0.9m Cable Built into Encoder 905 - 5'/1.5m Cable Built into Encoder 910 - 10'/3m Cable Built into Encoder 915 - 15'/4.5m Cable Built into Encoder 920 - 20'/6m Cable Built into Encoder 925 - 25'/7.5m Cable Built into Encoder 930 - 30'/9m Cable Built into Encoder 933 - 33'/10m Cable Built into Encoder

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