

AVTRON™ ENCODERS  
**Avtron HS35A Encoders**

Rev: 03-24-22



**Light Mill Duty Optical Hollow  
Shaft Encoder: 1/2"-1" [12mm-  
25mm]**

**Tough and Compact! HS35A**

- | Fits shafts 1/2" to 1"
- | Simple Installation
- | Up to 5000 PPR
- | Unbreakable Optical Disk
- | Wide-Gap Technology: Up to 8X larger gap between sensor and rotor
- | Replaces Competitive Models without Rewiring
- | Fits end of shaft and through shaft applications
- | IP65/Nema 4, 13 Rating: Dust and Liquid Tight
- | Superior Bearings and Seals
- | -20°C to +100°C Operation
- | 2 Year No-Hassle Warranty

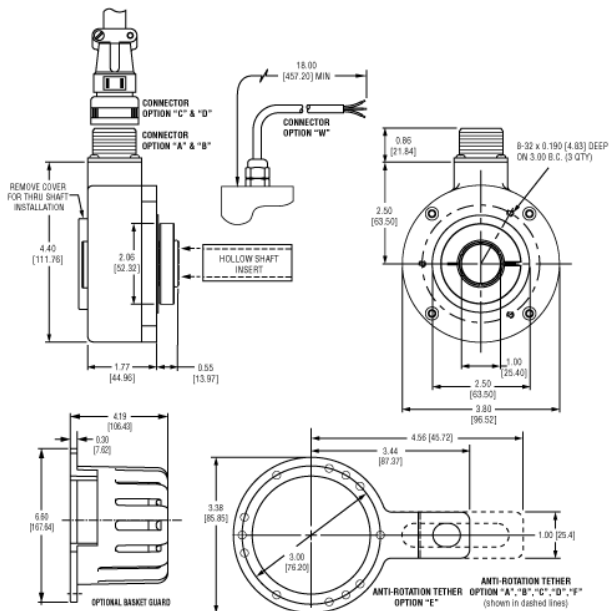
HS35A encoders fit shafts from 1/2" to 1" easily, using a durable shaft insert. Units may be resized by replacing or removing the insert, enabling our factory, distributors, and customer stockrooms to swiftly meet any need. The shaft insert and insulated bearings also provide isolation from motor shaft currents, while permitting case grounding to meet NEC requirements.

Avtron encoders have superior shaft seals and bearings that stay sealed to keep out contamination caused by temperature cycling and liquid sprays. Our encoder seals are protected by mechanical barriers to prevent flexing or failure, and Avtron's superior bearings feature synthetic lubricants for even longer life.

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 HS35A encoders use superior sensor, disk, bearing, and seal technology to give top performance in industrial conditions. Select an Avtron HS35A today!

## OUTLINE DRAWING



## MORE HS35A ADVANTAGES

- ✓ All digital, fully integrated design
- ✓ No mechanical adjustments or trim potentiometers
- ✓ Innovative shaft ring retains collar during installation
- ✓ Advanced sensor technology
- ✓ Superior bearings with synthetic lubricant for longer life
- ✓ No extra charge for signal complements and marker pulse (A,A-, B,B-, Z,Z-)
- ✓ Insulated from motor shaft currents
- ✓ Models can be resized by interchanging inserts
- ✓ Optional basket guard adds even more protection

## HS35A SPECIFICATIONS

**Operating Power:** Volts: 5 - 28 VDC; Current: 50mA, no load  
**Output Format:** A Quad B with marker (A,A-, B,B-, Z,Z-)  
**Frequency Range:** 0 to 125 KHz  
**PPR:** 100 - 5000 standard  
**Speed:** 6000 RPM Max., (for higher speeds, consult factory)  
**Temperature:** -20° to 100°C  
**Environmental:** IP65; Nema 4, 13 Rating  
**Vibration:** 5-2000Hz  
**Shock:** 50G, 11ms duration  
**Weight:** 1.6 lbs [730g]

All dimensions are in inches [millimeters].

Check out our website for more detailed specifications, drawings, and installation instructions. [www.avtronencoders.com](http://www.avtronencoders.com)

Specifications and features are subject to change without notice.

## SELECTION GUIDE

HS35A PART NUMBERS AND AVAILABLE OPTIONS									
Model	PPR	Line Driver	Bore Options	Connector Options	Mounting Style	Protection	Anti-Rotation Tether Options	Channels	Special Features
HS35A	G- 100 K- 200 L- 240 M- 250 E- 360 Q- 500 R- 512 S- 600 W- 1000 Y- 1024 Z- 1200 3- 2000	1- 5-28V (7272) 2- 5-28V, open collector (7273) 4- 5-28V in, 5V out (7272)	Q- Non-std. B- 1/2 C- 5/8" D- 3/4" E- 7/8" F- 1" P- 12mm U- Universal 1/2" to 7/8" (all U.S. inserts) Z- Universal 12mm to 20mm (all metric inserts)	See Table Below	U- Universal End-of-Shaft & Thru Shaft	0- None 1- Basket	X- None A- Fan cover, 1/4-20 B- Fan cover, 5/16-18 C- Fan cover, 3/8-16 D- Fan cover, all E- 4.5" or 6.75" C-Face F- 8.5" C-Face M- 4.5" C-Face or Fan Cover R- Pin and block U- Universal (all tether options)	A- A <sub>A</sub> , B <sub>B</sub> , Z <sub>Z</sub> B- A <sub>A</sub> , B <sub>B</sub> , Z <sub>Z</sub> D- A <sub>A</sub> E- A <sub>B</sub> , Z <sub>Z</sub> F- A <sub>B</sub>	000- None 9xx- Specify cable length xx=feet (use w/ option "W") 00W- Connector on cable

\*Only available with MS 6 and 7 pin connectors

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\*Requires option code "00W"

Connector Options					
10 Pin MS	6 Pin MS	7 Pin MS	8 Pin M12	10 Pin Mini-twist lock*	Cable
A- w/o plug (std. phasing) B- w/o plug (Dynapar HS35 phasing) C- "A" w/ plug D- "B" w/ plug	E- w/o plug (std. phasing) F- w/o plug (Dynapar HS35 phasing) G- "E" w/ plug H- "F" w/ plug	J- w/o plug (std. phasing) K- w/o plug (Dynapar HS35 phasing) M- "J" w/ plug N- "K" w/ plug	T- w/o plug (Turck Pinout) U- w/o plug (US Pinout) Z- w/ plug (US Pinout) reverse phasing	R- 10 pin mini twist lock w/o plug (bulkhead) S- 10 pin mini twist lock on cable*	W- 18" flex. cable (std. phasing) Y- 18" flex. cable BEI wire colors (std. phasing)



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 All dimensions approximate.