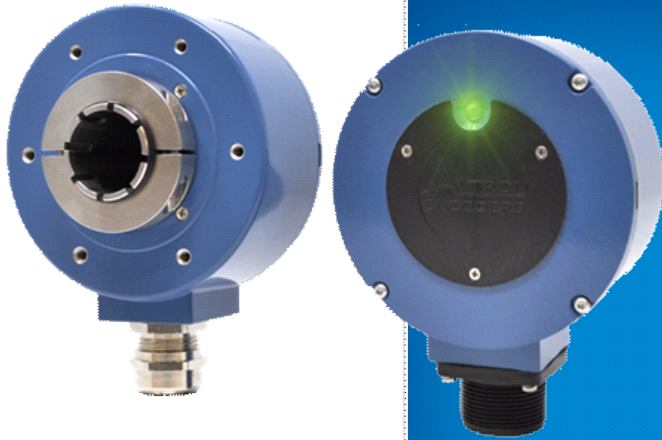


AVTRON™ ENCODERS  
**Avtron HS35X Encoder**

Rev: 06-24-22



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

**Magnetic Durability,  
Competitive Price!**

- | Fits Shafts 1/2" to 1" [12mm-25mm]
  - | IP66 Seals
  - | Up to 10,000 PPR
- | Fully Encapsulated Electronics
- | Onboard Diagnostics with LED
- | Drives up to 1000 feet [330m] cable
  - | Full Protection from Miswiring
- | Replaces Competitive Models Without Rewiring
  - | -40°C to +85°C Operation
  - | 2 Year No-Hassle Warranty

## HS35X

Finally--the breakthrough you've been waiting for--a HS35 magnetic encoder with fully encapsulated electronics, high IP rating AND a super-competitive price! The HS35X is drop-in compatible with all competitive HS35 size encoders, making replacements a breeze!

HS35X encoders fit shafts from 1/2" to 1" [12mm-25mm] 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 ceramic insulated ball bearings also provide isolation from motor shaft currents.

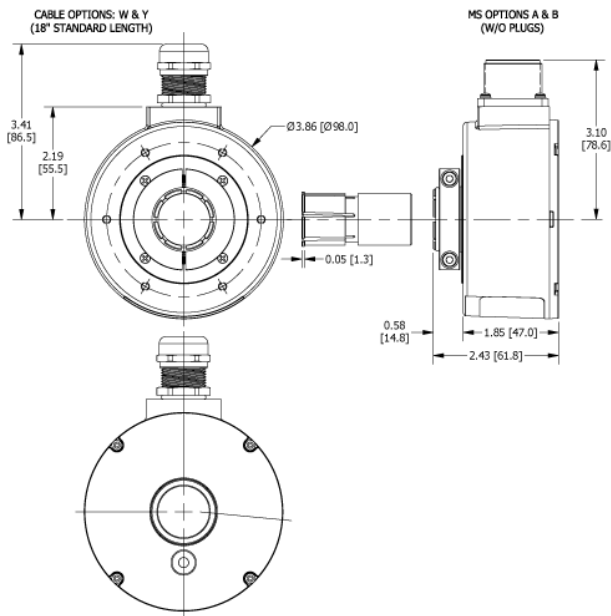
Optical encoders suffer so many failures--broken glass disks, misaligned masks, vibration problems, condensing liquids that confuse the optics...the list never ends! Our magnetic sensor system is fully protected against dust, dirt, liquids and condensation with a fully encapsulated electronic package. Our Wide-Gap electronics prevent rotor-sensor crashes too!

Who needs 6 different connector types on their machinery! Use the HS35X universal cable adapter system to use the same connector on every encoder!

Wondering if your encoder is working right? The HS35X has full diagnostics, informing you of signal quality, and ensuring there are no shorts in the wiring to or from the encoder.

Step up to the HS35X without paying more than your current price for a weak optical encoder!

## OUTLINE DRAWING



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

## MORE HS35X ADVANTAGES

- All digital, fully integrated design
- Superior ceramic ball bearings with synthetic lubricant for longer life
- Insulated from motor shaft currents
- Shaft ring retains clamping collar during installation
- No extra charge for signal complements and marker pulse (A,A/,B,B/,Z,Z/)
- Models can be resized by interchanging inserts
- Optional basket guard adds even more protection
- Wide-Gap Technology: Up to 10X larger gap between sensor and rotor
- Fits End of Shaft and Through Shaft Applications

## HS35X SPECIFICATIONS

**Operating Power:** Volts: 6-30 VDC; Current: 80mA, no load; 5V option available.

**Output Format:** A Quad B with gated marker (A,/A, B,/B, Z,/Z)

**Frequency Range:** 0 to 250 kHz @ 6V & 1m cable

**PPR:** 4 - 10000 standard (for other PPR needs, consult factory)

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

**Temperature:** -40° to 85°C\*\*\*

**Environmental:** IP66\* enclosure with fully encapsulated electronics

**Shaft Current Isolation:** 2500VRMS\*\*

**Vibration:** 10-2000Hz, 17Gs

**Shock:** 275G, 6mS duration

**Axial Bearing Load:** 500 N

**Radial Bearing Load:** 1200 N

**Weight:** 2.5 lbs. [635 g] approx.

**Certifications:** CE, UL Fire & Safety (pending)

All dimensions are in inches [millimeters]

Specifications and features are subject to change without notice.

\*Requires special ordering code

\*\*1" and 25mm bore sizes do not use a shaft insert and are not isolated from shaft currents

\*\*\* Contact the factory for additional temperature

## SELECTION GUIDE

| HS35X PART NUMBERS AND AVAILABLE OPTIONS |  |  |  |  |   |                      |  |                 |   |
|--|--|--|--|--|---|----------------------|--|-----------------|---|
| Model                                    | Output PPR   | Line Driver  | Bore Size  | Connector Options  | Shaft Style                                       | Protection           | Tether Options   | Channels        | Special Features  |
| HS35X                                    | M- 250<br>N- 256<br>Q- 500<br>R- 512<br>W- 1000<br>Y- 1024<br>C- 1500<br>3- 2000<br>4- 2048<br>5- 2500<br>T- 3072<br>D- 4096<br>9- 5000<br>2- 8192<br>1- 10000 | 1- 6-30V in / out<br>2- 6-30V in / 5V out<br>3- 5V in / 5V out | USA/SAE<br>B- 1/2"<br>C- 5/8"<br>D- 3/4"<br>E- 7/8"<br>F- 1" (Native Bore)<br>U- Universal SAE<br>1/2"-7/8" via inserts<br>(Native 1" bore)<br><br>METRIC<br>P- 12mm<br>Q- 14mm<br>R- 15mm<br>S- 16mm<br>V- 19mm<br>W- 20mm<br>Y- 25mm (Native Bore)<br>Z- Universal Metric<br>12-20mm via inserts<br>(Native 1" Bore) | A- 10 PIN MS, W/O Plug, Standard Phasing<br>B- 10 PIN MS, W/O Plug, Reverse Phasing<br>C- 10 PIN MS, W/ Plug, Standard Phasing<br>D- 10 PIN MS, W/ Plug, Reverse Phasing<br>W- M20 Cord Grip W/ 18" Cable<br>Y- M20 Cord Grip W/ 18" Cable (BEI Wire Colors) | U- Universal thru shaft<br>X- Thru shaft no cover | 0- None<br>1- Basket | X- None<br>A- Fan Cover 1/4-20<br>B- Fan Cover 5/16-18<br>C- Fan Cover 3/8-16<br>D- Fan Covers (A+B+C)<br>E- 4.500 C-Face<br>F- 8.500 C-Face<br>M- D + E<br>U- D + E + F<br>R- Block & Pin (BEI STYLE) | A- All Channels | 000- None<br>4xx- Special PPR (See Table)<br>9xx- Special Cable Length xx=Feet<br>090- IP66 Rated Sealing |



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Features and specifications are subject to change without notice.  
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All other trademarks and registered trademarks are the property of their respective owners. Nidec Industrial Solutions' standard warranty applies.  
All dimensions approximate.