

Avtron HS35M Encoders



Mill Duty Magnetic Hollow Shaft Encoder

Magnetic Durability in a Compact Encoder

Fits shafts 1/2" to 1 1/8"

Simple Installation

Up to 3072 PPR

Replaces Competitive Models without Rewiring

No Solder Industrial EPIC Connector Available

Fits end of shaft and through shaft applications

High Power Outputs Available

-20°C to +85°C Operation

Optional Dual Isolated Outputs

2 Year No-Hassle Warranty

Fully Insulated from Motor Shaft Currents

HS35M

HS35M encoders fit shafts from 1/2" to 1 1/8" [12mm to 30mm] easily, using a durable shaft insert. Models from 1/2" to 1" [12mm to 20mm] may be resized by replacing the insert, enabling our factory, distributors, and customer stockrooms to swiftly meet any need. The engineered resin housing is immune to most chemicals, and eliminates any possibility of shaft current or grounding problems.

Avtron encoders have superior shaft seals and bearings that stay sealed to keep out contamination caused by temperature cycling and liquid sprays.

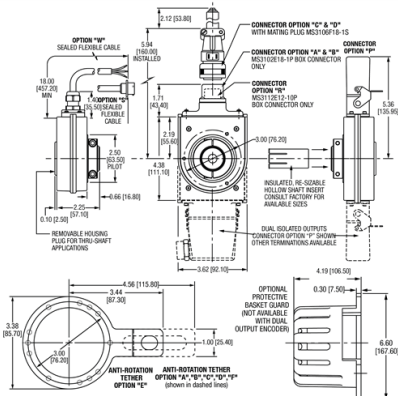
The HS35M offers high power outputs that can drive cables over 1000' [300m] with full short circuit and overvoltage protection!

The HS35M features two large bearings, one at each end of the enclosure for strength and resistance to damage. Many competitors use only a single bearing, or two tiny bearings side by side.

Often, optical encoders fail because of dust or water contamination that prevents the sensor from seeing the optical disk. The HS35M advanced magnetic technology sees through contamination and the fully sealed circuit design ensures your machine keeps working, even in mill environments.

The HS35M offers magnetic performance and moisture resistance, in a compact package, and for a great price. Select an Avtron HS35M and upgrade your machine today!

OUTLINE DRAWING



MORE HS35M ADVANTAGES

- All digital, design; no adjustments or potentiometers
- Innovative shaft ring retains collar during installation
- Advanced sensor technology
- Dual bearings, spaced farther apart, with synthetic lubricant for longer life
- No extra charge for signal complements and marker pulse (A,A-, B,B-, Z,Z-)
- Fully insulated from motor shaft currents
- Models 1/2" to 1" [12mm-20mm] can be resized by interchanging inserts
- Optional basket guard adds even more protection

MORE HS35M SPECIFICATIONS

Operating Power: Volts: 5 - 24 VDC; Current: 80mA, no load
 Output Format: A Quad B with marker (A,/A, B,/B, Z,/Z)
 Frequency Range: 0 to 165 KHz
 PPR: 1 - 3072 standard (for other PPR needs, consult factory)
 Speed: 4700 RPM Max., (for higher speeds, consult factory)
 Temperature: -20° to 85°C
 Environmental: IP65; NEMA 13 Rating
 Vibration: 5-2000Hz, 20Gs
 Shock: 50G, 11mS duration
 Weight: Single: 1.4 lbs. [635 g] Dual: 2.0 lbs. [905 g]
 Certifications: CE

All dimensions are in inches [millimeters].
 Specifications and features are subject to change without notice.

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

SELECTION GUIDE

MODEL	LEFT OUTPUT PPR	RIGHT OUTPUT PPR	LINE DRIVER	HOLLOW SHAFT BORE SIZE	CONNECTOR OPTIONS	MOUNTING	PROTECTION	ANTI-ROTATIONAL TETHER	CHANNELS AND MODIFICATIONS
HS35M	F - 60 PPR T - 80 PPR G - 100 PPR H - 120 PPR K - 200 PPR L - 240 PPR M - 250 PPR N - 256 PPR P - 300 PPR E - 360 PPR Q - 500 PPR R - 512 PPR S - 600 PPR U - 720 PPR V - 900 PPR W - 1000 PPR Y - 1024 PPR Z - 1200 PPR 1 - 1250 PPR 2 - 1440 PPR	X - No Right Output F - 60 PPR T - 80 PPR G - 100 PPR H - 120 PPR K - 200 PPR L - 240 PPR M - 250 PPR N - 256 PPR P - 300 PPR E - 360 PPR Q - 500 PPR R - 512 PPR S - 600 PPR U - 720 PPR V - 900 PPR W - 1000 PPR Y - 1024 PPR Z - 1200 PPR 1 - 1250 PPR	6 - 5-28v In/Out (7272) 8 - 5-24v In/Out (HX) 9 - 5-28v In, 5v Out (7272)	B - 1/2 in. via insert C - 5/8 in. via insert D - 3/4 in. via insert E - 7/8 in. via insert F - 1 in. (Native Bore) G - 1-1/8 in. (Native Bore) U - 1/2 in. thru 7/8 in. Inserts (Universal USA) P - 12mm via insert Q - 14mm via insert R - 15mm via insert S - 16mm via insert V - 19mm via insert W - 20mm via insert Y - 25mm Bore (Native Bore) Z - 30mm Bore (Native Bore) 1 - 12mm thru 20mm bore (Universal metric)	E - 6 Pin MS Style on 18 in. Cable, w/o Plug, Avtron/BEI Pin Out F - 6 Pin MS Style on 18 in. Cable, w/o Plug, Dynapar HS35 Pin Out G - 6 Pin MS Style on 18 in. Cable, with Plug, Avtron/BEI Pin Out H - 6 Pin MS Style on 18 in. Cable, with Plug, Dynapar HS35 Pin Out J - 7 Pin MS Style on 18 in. Cable, w/o Plug, Avtron/BEI Pin Out K - 7 Pin MS Style on 18 in. Cable, w/o Plug, Dynapar HS35 Pin Out M - 7 Pin MS Style on 18 in. Cable, with Plug, Avtron/BEI Pin Out N - 7 Pin MS Style on 18 in. Cable, with Plug, Dynapar HS35 Pin Out A - 10 Pin MS Style w/o Plug, Avtron/BEI Pin Out B - 10 Pin MS Style w/o Plug, Dynapar HS35 Pin Out C - 10 Pin MS Style with Plug, Avtron/BEI Pin Out D - 10 Pin MS Style with plug, Dynapar HS35 Pin Out P - 10 Pin Mini-Epic Style with Plug V - 10 Pin Mini-Epic Style w/o Plug L - 10 Pin Mini-Epic Style with Plug, L&L Pin Out 3 - 10 Pin Mini-Epic Style with Plug, Hubner Pin Out R - 10 Pin Mini-MS Style Twist-Lock (Baldor/Bayonet Style) with plug, Avtron/BEI pinout S - 10 Pin Mini-MS Style Twist-Lock (Baldor/Bayonet Style) on 18 in. Cable w/o plug, Avtron/BEI Pin Out Y - 10 Pin MS Style on 12 in. Cable, with Plug, Avtron Pin Out T - M12 Euro on 18 in. Cable, Turck Pin Out	U - Universal (Thru & End of Shaft)	0 - No Protective Basket 1 - Protective Basket Included	X - No Tether Hardware A - 0.25 inch 20 T-Bolt Fan Cover Tether B - 0.3125 inch 18 T-Bolt Fan Cover Tether C - 0.375 16 T-Bolt Fan Cover Tether D - All T-Bolt Fan Cover Tethers - A, B, C E - 4.5 inch NEMA 56C Face Tether F - 8.5 inch FC Accessory Face Tether G - 12 inch - 300mm Threaded Rod Torque Arm H - A and F Tether Kits M - D and E Tether Kits N - Rotational Clamp for adjusting marker pulse position P - 115mm Threaded Rod Torque Arm Tether, replaces Northstar HS35M, HSD35 1 - 10mm Square Grid Fan Cover Tether (HS35Tether-1) U - All Tether Kits A-F	A00 - Standard, No Special Features, All Channels A, A1, B, B1, Z, Z1 J00 - All Channels (A, A1, B, B1, Z, Z1) 1/4 Gated Marker Pulse A High & B High A01 - (Obsolete-Use 4xx Option Codes Below for Special PPR) A0W - Connector on Cable, all channels (A, A1, B, B1, Z, Z1) B0W - Connector on Cable, channels (A, A1, B, B1) (no marker pulse) E0W - Connector on Cable, channels (A, B, Z) (no compliments) F02 - Connector on Cable, channels (A, B), special pinout, 1400 PPR, special OEM label F0W - Connector on Cable, channel (A, B) (no marker pulse) 401 - 1270 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 402 - 150 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 403 - 50 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 404 - No Left Output PPR, 16 (Special) Right Output PPR (Set Right PPR Code = 0) 405 - 16 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 406 - 6000 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 407 - 2800 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 408 - 1400 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 409 - 30 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 410 - No Left Output PPR, 6000 (Special) Right Output PPR (Set Right PPR Code = 0) 411 - 12000 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 413 - 30 (Special) Left Output PPR, 30 (Special) Right Output PPR (Set Left and Right PPR Codes = 0)

MODEL	LEFT OUTPUT PPR	RIGHT OUTPUT PPR	LINE DRIVER	HOLLOW SHAFT BORE SIZE	CONNECTOR OPTIONS	MOUNTING	PROTECTION	ANTI-ROTATIONAL TETHER	CHANNELS AND MODIFICATIONS
	B - 1500 PPR 6 - 1800 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR C - 3072 PPR 9 - 5000 PPR 0 - Special PPR	2 - 1440 PPR B - 1500 PPR 6 - 1500 PPR 6 - 1800 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR C - 3072 PPR 9 - 5000 PPR 0 - Special PPR			U - M12 Euro on 18 in. Cable, USA Pin Out 6 - M12 Euro 8 Pin w/ Plug, Dynapar Pin Out Z - 10 Pin Industrial Base Mount on 18 in. Cable with Plug Q - 10 Pin Mini-Epic Style on Base on 18 in. Cable with Plug, for Blower Cooled Motors 2 - M23 12 Pin Euro w/o plug, L&L/Hubner Pin Out W - 18 in. Sealed Cable (or Special Length) 9 - 18 in. Sealed Cable (or Special Length), Hubner Pin Out				414 - 1500 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 415 - 3000 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 416 - 3600 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 417 - 1250 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 418 - 2400 (Special) Left Output PPR, 2400 (Special) Right Output (Set Left and Right PPR Codes = 0) 419 - 160 (Special) Left Output PPR, 160 (Special) Right Output (Set Left and Right PPR Codes = 0) 420 - 450 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 421 - No Left Output PPR, 30 (Special) Right Output PPR (Set Right PPR Code = 0) 422 - 96 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 423 - 10000 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 424 - 4096 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 425 - 2880 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 426 - 1935 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 427 - 25000 (Special) Left Output PPR, 25000 (Special) Right Output (Set Left and Right PPR Codes = 0) 428 - 50000 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 429 - 320 (Special) Left Output PPR, 320 (Special) Right Output PPR (Set Left and Right PPR Codes = 0) 430 - 25000 (Special) Left Output PPR, No Right Output (Set Left PPR Code = 0) 431 - 8192 (Special) Left Output PPR, 8192 (Special) Right Output (Set Left and Right PPR Codes = 0) 901 - 1' / 0.3m Cable, All channels (A, A), B, B), Z, Z) 902 - 2' / 0.6m Cable, All channels (A, A), B, B), Z, Z)



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



Features and specifications are subject to change without notice. EU-SMART™, SMARTSafe™, SMARTTach™, THIN-LINE™, WIDE-GAP™, SAFETach™, and BULLSEYE32™ are trademarks of Nidec Industrial Solution. All other trademarks and registered trademarks are the property of their respective owners. Nidec Industrial Solutions' standard warranty applies. All dimensions approximate.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
MODEL	LEFT OUTPUT PPR	RIGHT OUTPUT PPR	LINE DRIVER	HOLLOW SHAFT BORE SIZE	CONNECTOR OPTIONS	MOUNTING	PROTECTION	ANTI-ROTATIONAL TETHER	CHANNELS AND MODIFICATIONS
									903 - 3' / 0.9m Cable, All channels (A, A', B, B', Z, Z') 905 - 5' / 1.5m Cable, All channels (A, A', B, B', Z, Z') 906 - 6' / 2.0m Cable, All channels (A, A', B, B', Z, Z') 910 - 10' / 3m Cable, All channels (A, A', B, B', Z, Z') 915 - 15' / 4.5m Cable, All channels (A, A', B, B', Z, Z') 920 - 20' / 6m Cable, All channels (A, A', B, B', Z, Z') 925 - 25' / 7.5m Cable, All channels (A, A', B, B', Z, Z') 930 - 30' / 9m Cable, All channels (A, A', B, B', Z, Z') 933 - 33' / 10m Cable, All channels (A, A', B, B', Z, Z')



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



Features and specifications are subject to change without notice. EU-SMART™, SMARTSafe™, SMARTTach™, THIN-LINE™, WIDE-GAP™, SAFETach™, and BULLSEYE32™ are trademarks of Nidec Industrial Solution. All other trademarks and registered trademarks are the property of their respective owners. Nidec Industrial Solutions' standard warranty applies. All dimensions approximate.