AVTRON ENCODERS
A Nidec BRAND

Avtron HS6A Absolute Encoder

HS6A Optical Rotary Absolute Encoders, Hollow Shaft, 0.3"-0.6" [8-15mm]

Magnetic Durability in a Compact Encoder

Fits Shafts 0.3-0.6" [8-15mm]

Up to 30 Bit Resolution

Unbreakable Optical Disk

Singleturn or Multiturn

IP66 Rating

Superior Bearings and Seals

No Batteries

-40°C to +85°C Operation

2 Year No-Hassle Warranty

HS6A

HS6A absolute rotary hollow shaft encoders fit shafts from 0.3" to 0.6" [8-15mm], and offer superior durability compared to ordinary optical absolute encoders. Also available: AV6A solid shaft flange-mounted models, HS6M magnetic absolute encoders, HS40 severe-duty absolute magnetic encoders that fit shafts 5/8 - 1 1/8" [16-30mm].
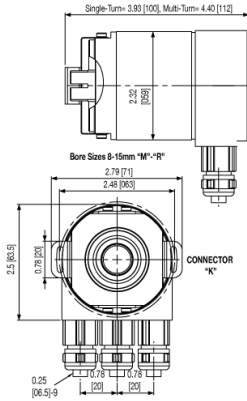
HS6A encoders have superior shaft seals and bearings that stay sealed to keep contaminants out, despite temperature cycles or liquid sprays. Our encoder seals are protected by mechanical barriers to prevent flexing or failure. Avtron's superior bearings outlast the competition, even when mounting stub shafts have increased runout.

Many competitive optical encoder designs risk sensor damage from any vibration or shock. Some designs even use thin glass disks in "industrial" products! Avtron uses only unbreakable disks.

The HS6A offers a broad range of communication options, from parallel output and SSI to the latest Profibus and Ethernet standards.

Our optical HS6A encoders use superior sensor, disk, bearing, and seal technology to give top performance in industrial conditions. Select an Avtron HS6A today!

OUTLINE DRAWING

Single-Turn= 3.93 [100], Multi-Turn= 4.40 [112]

2.32 [059]

Bore Sizes 8-15mm "M"-"R"

2.79 [71]
2.48 [063]

2.5 [63.5]
0.78 [20]

CONNECTOR "K"

0.25 [06.5]-9   0.78 [20]   0.78 [20]

MORE HS6A ADVANTAGES

- Optional all-stainless construction
- Larger bearings for longer life
- Ultra-long-life internal gearbox
- Software-settable zero point for SSI and parallel output
- Optional factory-programmable cam limits
- Optional 5V operation
- Protected against reverse power wiring
- Profibus DP & ProfiNet Support for Class 1 & 2 & DPV2 Isochronous (ProfiDrive)

MORE HS6A SPECIFICATIONS

Operating Power:
　Volts: 10 - 30 VDC
　Current: 230mA at 10V, 100mA at 24V maximum*
Output Formats: Ethernet/IP*, Modbus TCP*, Profinet*, Powerlink, Profibus, CANOpen, DeviceNet, SSI, Parallel
Accuracy: +/-0.02° (+/-1 arc-min)
Shaft Loading: axial 9lbs [40N], radial 25lbs [110N]
Temperature: -40° to 85°C
Environment: IP66**
Vibration: 10G, 10-1000Hz
Shock: 30G, 11mS duration
Weight: 1.21lb [550g]; stainless option 2.7lb [1200g]

*(Ethernet versions require 400mA @ 10V or 160mA @ 24V)
**with standard recommended seals

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

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SELECTION GUIDE

MODEL	COMMUNICATION BUS	STYLE	HOLLOW SHAFT BORE SIZE	TURNS/BITS/MT	PPR/BITS PER TURN/ST	CONNECTOR	MOUNTING	OUTPUT CODING	IP RATING	MODIFICATIONS
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐
HS6A	C - CANOpen Communication D - DeviceNet (Slave) Communication K - Powerlink Ethernet Communication L - Parallel Output M - Modbus Ethernet Communication N - Profinet IO Communication P - Profibus DP (slave) Communication R - Ethernet IP Communication S - SSI Communication T - EtherCAT Communication	1 - 58mm / 2.25 in. Housing Diameter A - 58mm / 2.25 in. Housing Diameter with Protective Basket	D - 1/4 in. Shaft Fit via Sizing Insert A - 3/8 in. Shaft Fit via Sizing Insert B - 1/2 in. Shaft Fit via Sizing Insert L - 6mm Shaft Fit via Sizing Insert M - 8mm Shaft Fit via Sizing Insert N - 10mm Shaft Fit via Sizing Insert P - 12mm Shaft Fit via Sizing Insert Q - 14mm Shaft Fit via Sizing Insert R - 15mm Shaft Fit Y - All US Hollow Shaft Sizes 1/4"-1/2" Z - All metric hollow shaft inserts, 6-14mm (15mm native bore)	X - 0 Turns/0 bits- Single Turn A - 16 Turns/4 bits D - 128 Turns/7 bits E - 256 Turns/8 bits 2 - 4096 Turns/12 bits 4 - 16384 Turns/14 bits	E - 256 Counts per Revolution/8 bits F - 512 Counts per Revolution/9 bits 0 - 1024 Counts per Revolution/10 bits 2 - 4096 Counts per Revolution/12 bits 3 - 8192 Counts per Revolution/13 bits 6 - 65536 Counts per Revolution/16 bits	A - 1xM12 5 pin no Plug B - 2xM12/5 pin w/o Plugs C - 3xM12 (4/4/5 or 4/4/4) pin w/o Plugs D - 2xM12/4/5 pin w/o Plugs E - M12/8 pin w/o Plug F - M23/12 pin w/o Plug G - M27/26 pin w/o Plug J - 2x Cable Entry (rear terminal box w/grommets) K - 3x Cable Entry (rear terminal box w/grommets) W - Cable, 1m (or special length) M - M23/8 pin Hengstler w/o Plug N - M23/8 pin Stegmann w/o Plug Q - M23/8 pin Kubler w/o Plug R - M23/16 pin w/o Plug	E - End of Shaft (EOS) Mounting; Axial Connector Exit A - End of Shaft (EOS) Mounting; Radial Connector Exit U - Universal (end of shaft or thru-shaft) Mounting Radial Connector Exit	1 - Binary Bit Coding 2 - Gray Coding	X - IP54 No Seals (not recommended), aluminum housing A - IP65 Shaft Seals, aluminum housing S - IP66 Seals, stainless housing	000 - No Special Features 901 - 1 ft. 0.3m Cable Built into Encoder 902 - 2 ft. 0.6m Cable Built into Encoder 903 - 3 ft. 0.9m Cable Built into Encoder 905 - 5 ft. 1.5m Cable Built into Encoder 910 - 10 ft. 3m Cable Built into Encoder 915 - 15 ft. 4.5m Cable Built into Encoder 920 - 20 ft. 6m Cable Built into Encoder 925 - 25 ft. 7.5m Cable Built into Encoder 930 - 30 ft. 9m Cable Built into Encoder 933 - 33 ft. 10m Cable Built into Encoder

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

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