

# AVTRON™ ENCODERS



# Why Avtron Encoders?



Avtron Encoders are the world's largest-selling brand of heavy and harsh duty encoders. We sell to a wide range of industries from paper mills to metals, mining, wind power and oil & gas drilling. Anywhere an encoder failure would cost money and downtime, you need an Avtron Encoder.

## Why Avtron Encoders are Superior:

- More durable than competitive units
- Cast aluminum housings
- Potted electronics
- Oversized bearings
- Modular models have no bearings
- Wide-Gap technology
- LED Diagnostics

Avtron magnetic sensors increase reliability by being impervious to the dirt, dust, oil and liquids that disable optical encoders.

Every Avtron Encoder is 100% tested - not sampled or randomly selected. Some Avtron models have experienced over 4,500,000 hours Mean-Time-Between-Failure in outdoor applications!

## Benefits:

- Your production line and machinery will work longer
- Resistance to impacts, liquids and dust ensures reliability
- Slash mean-time-to-diagnose and repair
- 24/7/365 no-charge engineering technical support
- 24-hour rush shipping available

Please visit [www.avtronencoders.com](http://www.avtronencoders.com) to configure your encoder model today.

## Couplings:

Avtron Encoders offers a wide range of different couplings to pair with your shafted encoder.

## Cables and Connectors:

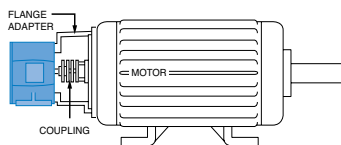
To ensure your encoder can produce the best signal possible in any application, we offer high quality cables and connectors in a number of different variations and options.

Scan the QR code to select the correct couplings, cables and connectors for your encoder model today.



## MOUNTING:

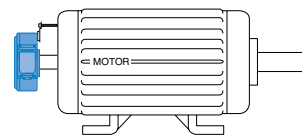
### SHAFTED



#### Flange Mounting

(Solid Shaft Coupled) Requires flange adapter with coupling.

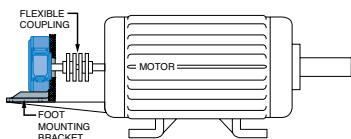
### HOLLOW SHAFT



#### Hollow Shaft/Tether Mounting

Stub shaft required. Shaft requirements depend on the encoder selected.

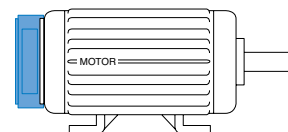
### SHAFTED



#### Foot Mounting

Used when encoders are coupled directly to rolls, gear boxes, or motors without C-Faces.

### MODULAR



#### C/FC Face Mounting

Requires motor stub shaft & one of the following: 115mm, 4.5", 6.75", 8.5" 12.5" C/FC-Face.

**AVTRON ENCODERS ARE THE MOST RELIABLE ENCODERS IN THE WORLD.**



**AV850** - Paper Mill



**HS35A** - Packaging



SEVERE  
DUTY



HS40



AV485



AV685



M6C



XPH8



HEAVY  
DUTY



SV850



AV56A



AV45



AV850



HS45



M4



MILL  
DUTY



HS35X



HS44



AV6M



AV32



HS6M



M3



LIGHT  
MILL DUTY



AV6A



AV20



HS35A



AV4



HS4



# Encoder Product Comparison



M4 - Marine Hoist



HS45 - Steel Mill



M6C - Draw Works



AV32 - Conveyor

	Non-Hazardous Application Models and Options						Hazardous Duty Applications							All Application Options (Hazardous and Non-Hazardous)											
Enclosure	Mounting Style	Model	Temperature Range	Grounding Brush	Overspeed Switch	SIL2	Intrinsically Safe Model	Temperature Range	Explosion Proof Model	Temperature Range	Certifications			Sensing	Shaft or Bore Size		Pulses Per Revolution (PPR)	Max Turn Count	Max Speed RPM	Max Freq kHz	Max Outputs	Thru Shaft	Replaceable Sensors	Diagnostics	
											UL CI /Div	UL CI /Zone	ATEX		US	Metric									
Severe Mill Duty	Modular Sensor	AV5	-40C...+120C	-	✓	-	XR5	-40C...+80C	XP5	-50C...+80C	✓	✓	✓	Ⓒ	5/8" - 4 1/2"	16mm-115mm	4-100000	1	6000	250kHz	1	✓	✓	✓	
	Modular Sensor	AV12	-40C...+120C	-	✓	-	XR12	-40C...+80C	-	-	✓	✓	✓	Ⓒ	1 3/8" - 7 7/8"	25-200mm	4-50000	1	6000	250kHz	1	✓	✓	✓	
	Face or Foot	AV30	-30C...+85C	-	-	-	-	-	-	-	-	-	-	Ⓒ	3/8", 5/8"	6-18mm	8192	1-32768	5000	NA	1	-	-	✓	
	56C Face or Foot	AV485	-40C...+120C	✓	✓	-	XR485	-40C...+80C	-	-	✓	✓	✓	Ⓒ	5/8"	15.88mm	4-50000	1	5000	250kHz	2	✓	✓	✓	
	Hollow Shaft	HS40	-30C...+85C	-	-	-	-	-	-	-	-	-	-	Ⓒ	5/8"- 1 1/8"	16-30mm	8192	1-32768	5000	NA	1	-	-	✓	
	Hollow Shaft	AV685	-40C...+120C	✓	✓	-	XR685	-40C...+80C	-	-	✓	✓	✓	Ⓒ	1 1/8"	28.58mm	4-50000	1	5400	250kHz	2	✓	✓	✓	
Heavy Mill Duty	B10 Face or Foot	AV45	-40C...+100C	-	✓	-	XR4F	-40C...+80C	-	-	✓	✓	✓	Ⓒ	5/16" - 11/16"	9-18mm	8-5000	1	5000	165kHz	2	-	-	✓	
	Modular 4.5"	AV56	-40C...+100C	-	✓	-	XR56	-40C...+80C	-	-	✓	✓	✓	Ⓒ	1/2" - 3 3/16"	10-85mm	4-5000	1	5400	250kHz	2	✓	-	✓	
	Modular 4.5"	AV56S	-40C...+100C	-	✓	-	-	-	-	-	-	-	-	Ⓒ	1/2" - 3 3/16"	10-85mm	4-5000	1	5400	250kHz	1	✓	-	✓	
	Modular 6.75"	AV67	-40C...+100C	-	✓	-	-	-	-	-	-	-	-	Ⓒ	1/2" - 3 3/16"	10-85mm	4-5000	1	5400	250kHz	1	✓	-	✓	
	Modular 8.5"	AV85	-40C...+100C	-	✓	-	XR85	-40C...+80C	-	-	✓	✓	✓	Ⓒ	1/2" - 3 3/16"	10-85mm	4-5000	1	5400	250kHz	2	✓	-	✓	
	Modular 115mm	AV115	-40C...+100C	-	✓	-	XR115	-40C...+80C	-	-	✓	✓	✓	Ⓒ	1/2" - 3 3/16"	10-85mm	4-5000	1	5400	250kHz	2	✓	-	✓	
	Modular 12.5"	AV125	-40C...+100C	-	✓	-	XR125	-40C...+80C	-	-	✓	✓	✓	Ⓒ	1 3/8" - 7 7/8"	25-200mm	4-5000	1	5000	250kHz	2	✓	✓	✓	
	Modular 8.5"	AV850	-40C...+100C	-	✓	-	XR850	-40C...+80C	XPH8	-50C...+85C	✓	✓	✓	Ⓒ	5/8" - 4 1/2"	16mm-115mm	4-5000	1	6000	250kHz	2	✓	✓	✓	
	Modular 8.5"	SV850	-40C...+100C	-	✓	✓	-	-	-	-	✓	✓	✓	Ⓒ	5/8" - 4 1/2"	16mm-115mm	4-5000	1	6000	250kHz	2	✓	✓	✓	
	Hollow Shaft	HS44	-30C...+85C	✓	✓	-	-	-	-	-	-	-	-	Ⓒ	-	12-17mm	1-10000	1	6000	250kHz	2	-	-	✓	
	Hollow Shaft	HS45	-40C...+100C	-	✓	-	XR45	-40C...+80C	-	-	✓	✓	✓	Ⓒ	5/8" - 1 1/8"	16-30mm	8-5000	1	5000	165kHz	2	✓	-	✓	
	Hollow Shaft	M4	-40C...+85C	✓	-	-	-	-	-	-	-	-	-	Ⓒ	1 1/2"- 2 3/8"	48-60mm	0-1200	1	5000	100kHz	2	✓	-	-	
	Hollow Shaft	M7	-45C...+80C	-	-	-	-	-	M6C	-40C...+80C	-	-	✓	Ⓒ	1" - 2 3/8"	25-60mm	240-1200	1	5000	150kHz	2	-	-	✓	
Mill Duty	Modular Auto-Center	AV32	-40C...+100C	-	-	-	<div><div>*</div><div>-40°C rating is optional</div></div> <div><div>**</div><div>3600 RPM maximum for bore &gt; 2" [52mm]</div></div> <div><div>^</div><div>Analog position signals of resolver are converted to digital signals by external analog-to-digital board not provided by Nidec</div></div> <div><div>+</div><div>6000 RPM multi-turn, 12000 RPM single-turn</div></div> <div><div>All values may vary, please consult factory or website.</div></div> <div><div>Ⓒ</div><div>Magnetic</div></div> <div><div>Ⓒ</div><div>Optical</div></div>							Ⓒ	1/4" - 1"	4-25mm	32-5000	1	6000	250kHz	1	✓	-	-	
	Hollow Shaft	HS35M	-20C...+85C	-	-	-								Ⓒ	1/2" - 1 1/8"	12-30mm	1-5000	1	5000	250kHz	2	✓	-	-	
	Hollow Shaft	HS35X	-40C...+85C	-	-	-								Ⓒ	1/2" - 1"	12-25mm	1-10,000	1	6000	250kHz	1	✓	-	✓	
	Hollow Shaft	M3	-40C...+85C	✓	✓	-								Ⓒ	1 1/2" - 2 3/8"	48-60mm	6000	1	5000	150kHz	2	✓	-	-	
Light Mill Duty	Face or Foot	AV4	-40C...+85C	-	-	-	<div><div>^</div><div>Analog position signals of resolver are converted to digital signals by external analog-to-digital board not provided by Nidec</div></div> <div><div>+</div><div>6000 RPM multi-turn, 12000 RPM single-turn</div></div> <div><div>All values may vary, please consult factory or website.</div></div> <div><div>Ⓒ</div><div>Magnetic</div></div> <div><div>Ⓒ</div><div>Optical</div></div>							Ⓒ	1/4", 3/8"	6-10mm	1-16384	1	6000	1000kHz	1	-	-	✓	
	Hollow Shaft	HS4	-40C...+85C	-	-	-								Ⓒ	-	6-15mm	1-16384	1	6000	1000kHz	1	-	-	✓	
	Face or Foot	AV6A	-40C...+85C	-	-	-								Ⓒ	-	6-10mm	256-65536	1-16384	6k/12k+	NA	1	-	-	✓	
	Face or Foot	AV6M	-40C...+85C	-	-	-								Ⓒ	-	6-10mm	4096-8192	1-32768	12k	NA	1	-	-	✓	
	Face or Foot	AV20	-40C...+100C	-	-	-								Ⓒ	1/4", 3/8"	10mm	1-3600	1	6000	125kHz	1	-	-	-	
	Face or Foot	AV25	-40C...+100C	-	-	-								Ⓒ	1/4", 3/8"	10mm	1-5000	1	6000	125kHz	1	-	-	-	
	Hollow Shaft	HS6A	-40C...+85C	-	-	-								Ⓒ	5/16"-9/16"	8-15mm	256-65536	1-16384	6k/12k+	NA	1	-	-	✓	
	Hollow Shaft	HS6M	-30C...+85C	-	-	-								Ⓒ	-	6-15mm	4096-8192	1-32768	12k	NA	1	-	-	✓	
	Hollow Shaft	HS25A	-20C...+100C	-	-	-								Ⓒ	3/8" - 3/4	6-16mm	1-3600	1	6000	125kHz	1	-	-	-	
	Hollow Shaft	HS35A	-20C...+100C	-	-	-								Ⓒ	1/2" - 1"	12-20mm	1-5000	1	6000	125kHz	1	✓	-	-	

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