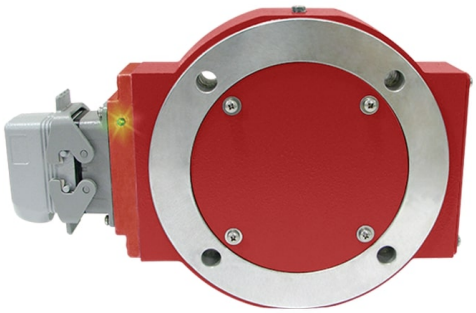
Avtron SV850 SAFETach™ Encoder



SIL 2 Evaluated Modular Magnetic Encoder, 8.5" FC-Face Mount

Magnetic Durability in a Compact Encoder

- Installation in Minutes!
- Up to 5000 PPR
- Removable Sensors
- Mounts Securely to Motor
- No Rotating Seals
- No Optics
- 3 Year No-Hassle Warranty
- Sealed Electronics
- Self-Diagnostic LED & Alarm Output
- Meets IEC 61508 SIL 2 at HFT 0

SV850

The SV850 is the world's first safety rated no-bearing encoder for SIL 2 applications. Often, optical encoders fail because of dust or water contamination that prevents the sensor from seeing the optical disk. The SV850 advanced magnetic technology sees through contamination and the fully sealed circuit design ensures your machine keeps working, even in mill environments. The SV850 offers magnetic performance and moisture resistance!

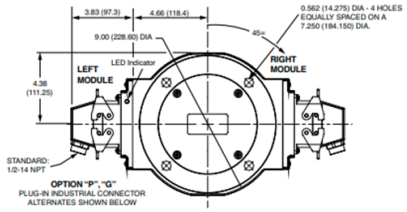
SV850 SAFETach™ III safety modular magnetic encoders fit standard 8.5" FC-Face motors. Quite simply, the SV850 is designed to eliminate encoder failures. All SV850 electronics are fully encapsulated. There are no moving wearing parts.

Miswiring an encoder is common– and it shouldn't cost you time or money. Wiring errors and short circuits that cause an over-temp situation will be detected and indicated by changing the LED to orange. The SV850 has full output short circuit and reverse voltage protection, plus surge protection. SV850 SAFETach III sensors digitally self-tune the outputs to eliminate drive trips caused by poor encoder signals. The universal 5-24V design drives longer cables and is protected against wiring errors and surges.

Adaptive Electronics: At power-up you know you installed it right! The green LED tells you your SV5 Sensor is aligned with the rotor and reading signal. If at any time, the SV5 cannot produce consistent signals, the LED changes to red and the optional remote alarm contact activates. However, the encoder keeps working to give you time to schedule service.

What good is a competitors "safety" encoder if it's optical and fails? Pick the SV850 for safety and reliability!

OUTLINE DRAWING



MORE SV850 ADVANTAGES

- Resists motor and brake interference noise
- Full protection against short circuits, reverse voltage, phase-to-phase shorts
- PPR can be factory reprogrammed
- High resolution up to 5000 PPR

MORE SV850 SPECIFICATIONS

Operating Power (Each Sensor): 5-24V
Current: 100mA
Output Format: A Quad B with marker (A,/A, B,/B, Z,/Z)
Maximum Cable Length: 1000' @ 5V, 500' @ 12V, 200' @ 24V
PPR: 4 - 50000**
Speed: 6000 RPM Max***
Rotor Positioning: Up to +/-0.100" movement/misalignment
Sensor-Rotor Gap: 0.045", +0.015/-0.040" [1.14mm+0.38/-1.0]
Temperature: -40° to 100°C (rotor -40° to 150°C peak)
Electronics: Fully Encapsulated, IP67*
Vibration: 18G
Shock: 1 meter drop test
Weight: 9lbs. [4kg]; 11lbs. [5kg] dual
Safety Level: Evaluated for IEC 61508 SIL 2 metrics at HFT 0

* Certain connector options may reduce IP rating.
**(PPR) Standard maximum PPR is 5000. Consult Factory with your application for PPRs up to 50,000.
***(Speed) Maximum RPM may be limited for PPR > 2,500. Consult Factory with your application.

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

AVTRON™ ENCODERS A Nidec BRAND

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SELECTION GUIDE

MODEL	ROTOR BORE SIZE	COVER PLATES	LEFT OUTPUT LINE DRIVER	LEFT OUTPUT PPR	RIGHT OUTPUT LINE DRIVER	RIGHT OUTPUT PPR	CONNECTOR OPTIONS	MODIFICATIONS
SV850	XX - No Rotor KB - 0.625 in. Thru-Shaft, 3/16" Keyway Width, Cam Screw Mounted Rotor KE - 1.000 in. Thru-Shaft, 1/4" Keyway Width, Cam Screw Mounted Rotor UV - GE CD4300/4400/5400/6400/6500/6600 Motor Keyed Shaft Adapter & Universal 17mm Rotor w/ Keyway UW - GE CD4500/7200/7500/7600 Motor Keyed Shaft Adapter & Universal 17mm Rotor w/ Keyway UY - GE CD4600/4700/8200/8500/8600/8700 Motor Keyed Shaft Adapter & Universal 17mm Rotor w/ Keyway U9 - GE CD 6000 series Motor Keyed Shaft Adapter & Universal 17mm Rotor w/ Keyway	X - No Cover Plates B - Both Inboard and Outboard Covers for Thru-Shaft w/ V-Ring Seals D - Domed Cover F - Flat Outboard Cover N - Inboard Seal Plate w/ V-Ring Seal, Flat Outboard Cover T - Outboard Seal Plate for Thru-Shaft w/V-Ring Seal	X - No Left Output 6 - 5-24V in, 5-24V out (7272) 9 - 5-24V, 5V fixed out (7272)	X - No Left Output F - 60 PPR C - 64 PPR G - 100 PPR H - 120 PPR A - 128 PPR L - 240 PPR N - 256 PPR P - 300 PPR E - 360 PPR B - 480 PPR Q - 500 PPR R - 512 PPR S - 600 PPR V - 900 PPR J - 960 PPR W - 1000 PPR Y - 1024 PPR Z - 1200 PPR 2 - 1500 PPR 6 - 1800 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR D - 4096 PPR 8 - 4800 PPR 9 - 5000 PPR 0 - Special PPR	X - No Right Output 6 - 5-24V in, 5-24V out (7272) 9 - 5-24V In 5V Out (7272)	X - No Right Output F - 60 PPR C - 64 PPR G - 100 PPR H - 120 PPR A - 128 PPR L - 240 PPR N - 256 PPR P - 300 PPR E - 360 PPR B - 480 PPR Q - 500 PPR R - 512 PPR S - 600 PPR V - 900 PPR J - 960 PPR W - 1000 PPR Y - 1024 PPR Z - 1200 PPR 2 - 1500 PPR 6 - 1800 PPR 3 - 2000 PPR 4 - 2048 PPR 5 - 2500 PPR D - 4096 PPR 8 - 4800 PPR 9 - 5000 PPR 0 - Special PPR	G - Industrial EPIC Style with Northstar Pinout (No alarm contact) P - Industrial EPIC Style w/Plug T - 5 ft. Flexible Conduit with Terminal Box	000 - None 004 - Super Magnetic Shielded Sensor(s) 007 - Mechanically Sealed Housing + Super Magnetic Shielding 073 - Special 3/16" Keyway Width Mod for KE Rotor 076 - Outboard Sealing 077 - Outboard Sealing and Super Magnetic Shielding, Mechanically Sealed Housing 401 - 1270 (Special) Left Output PPR, (Set Left PPR Code = 0) 402 - 150 (Special) Left Output PPR, (Set Left PPR Code(s) = 0) 403 - 50 (Special) Left Output PPR, (Set Left PPR Code(s) = 0) 404 - 16 (Special) Right PPR (Set Right PPR Code = 0) 405 - 16 (Special) Left Output PPR (Set Left PPR Code = 0) 406 - 6000 (Special) Left Output PPR (Set Left PPR Code = 0) 407 - 2800 (Special) Left Output PPR (Set Left PPR Code = 0) 408 - 1400 (Special) Left Output PPR (Set Left PPR Code = 0) 409 - 30 (Special) Left Output PPR (Set Left PPR Code = 0) 410 - 6000 (Special) Right Output PPR (Set Right PPR code = 0) 411 - 12000 (Special) Left Output PPR (Set Left PPR code = 0) 412 - 200 (Special) Left Output PPR (Set Left PPR code = 0) 413 - 30 Special Right & Left Output PPR 414 - 1500 (Special) Left Output PPR (Set Lefft PPR code = 0) 415 - 3000 (Special) Left Output PPR (Set Left PPR code = 0) 416 - 3600 (Special) Left Output PPR (Set Left PPR code = 0) 417 - 1250 (Special) Left Output PPR (Set Left PPR code = 0) 418 - 2400 (Special) Right & Left Output PPR (Set Right & Left PPR codes = 0) 419 - 160 (Special) Right & Left Output PPR (Set Right & Left PPR codes = 0) 420 - 450 (Special) Left Output PPR (Set Left PPR code = 0) 421 - 30 (Special) Right Output PPR (Set Right PPR code = 0) 422 - 96 (Special) Left Output PPR (Set Left PPR code = 0) 423 - 10000 (Special) Left Output PPR (Set Left PPR code = 0)

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