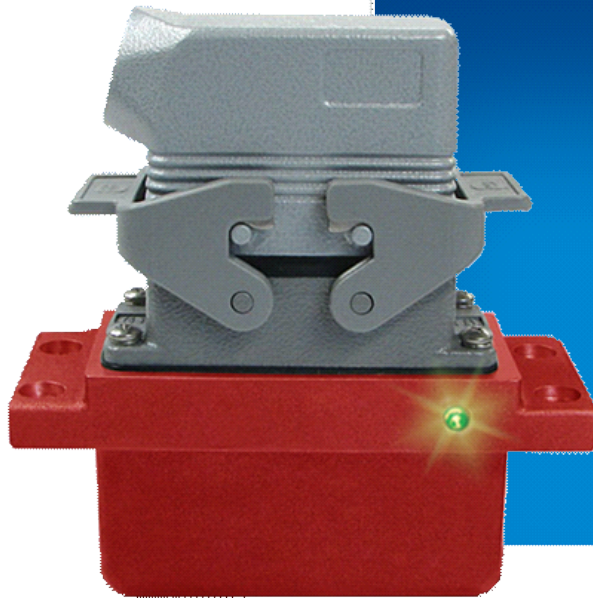


# Avtron SV5 SAFETach™ Sensor



**SIL 2 Evaluated  
Magnetoresistive Sensor for  
SV850 Encoder**

## Avtron SV5 SAFETach™ Functional Safety Sensor Module for SV850

- | Meets IEC 61508 SIL 2 at HFT 0
- | Wide-Gap Technology Eliminates  
Gapping and Shimming
- | Mounts in the SV850 Encoder
  - | Installation in Minutes!
  - | No Optics
- | Self-Diagnostic LED & Alarm Output
  - | Fully Potted Electronics
  - | 3 Year No-Hassle Warranty

## SV5

The Avtron SV5 SAFETach™ sensor is the first safety rated magnetoresistive sensor for SIL 2 applications. Often, optical encoders fail because of dust or water contamination that prevents the sensor from seeing the optical disk. The SV5 advanced magnetic technology sees through contamination and the fully sealed circuit design ensures your machine keeps working, even in mill environments. The SV5 offers magnetic performance and moisture resistance!

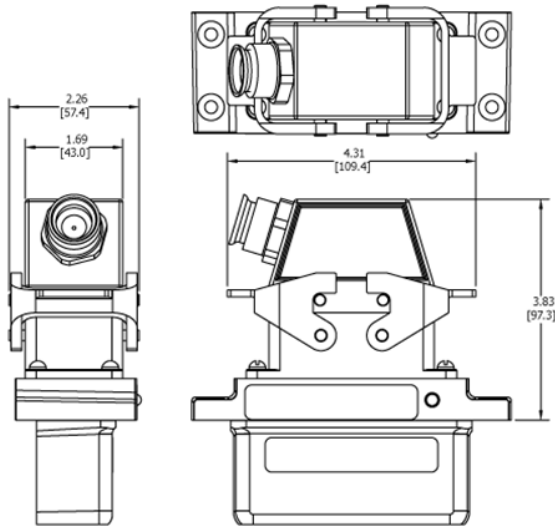
Avtron SV5 SAFETach III™ sensors are magnetoresistive, safety rated incremental quadrature sensors for the SV850 rotary encoder. The SV5 is also usable in applications where an encoder housing is not needed – simply mount the SV5 with your bracket, and use an SV850 rotor. All SV5 electronics are fully 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 SV5 has full output short circuit and reverse voltage protection, plus surge protection. SV5 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 SV5 sensor for safety and reliability!

## OUTLINE DRAWING



## MORE SV5 ADVANTAGES

- Direct Machine-Mount Option
- High Resolution up to 5000 PPR
- Full protection against short circuits, reverse voltage, phase-to-phase shorts
- Sensor PPR can be factory reprogrammed

## SV5 SPECIFICATIONS

Operating Power: 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\*\*\*\*  
 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](http://www.avtronencoders.com)

## SELECTION GUIDE

SV5 Selection Guide														
<table><tr><td>S</td><td>V</td><td>5</td><td>-</td></tr></table>	S	V	5	-	<table><tr><td></td></tr></table>		<table><tr><td></td></tr></table>		<table><tr><td></td></tr></table>		<table><tr><td></td><td></td><td></td></tr></table>			
S	V	5	-											
Model	Line Driver	PPR		Connector Options	Modifications									
SV5-	6- 5-24V in/out (7272) 9- 5-24V in, 5V out (7272)	X- None F- 60 C- 64 G- 100 H- 120 A- 128 L- 240 N- 256 P- 300 E- 360 B- 480 Q- 500 R- 512 S- 600 U- 720	V- 900 J- 960 W- 1000 Y- 1024 Z- 1200 2- 1500 6- 1800 3- 2000 4- 2048 5- 2500 D- 4096 8- 4800 9- 5000 0- Special	G- Large EPIC (Northstar™ Pinout) with Plug P- Large EPIC with Plug T- Terminal box	000- None 004- Super magnetic shielding 007- Mechanically sealed housing & super magnetic shielding 4xx- Special PPR (see chart)									



Nidec Industrial Solutions  
 243 Tuxedo Avenue - Cleveland, Ohio 44131

encoderhelpdesk@nidec-industrial.com  
 +1 216-642-1230 - [www.avtronencoders.com](http://www.avtronencoders.com)



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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.