SS110 Shaft Speed Switch

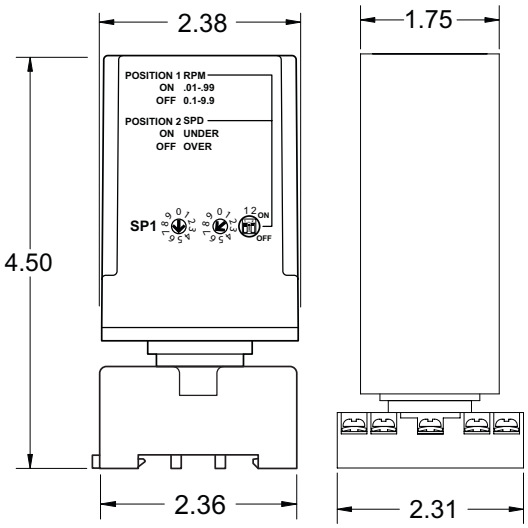
- Slow Speed Detection 0.01 - 0.99 and 0.1 - 9.9 RPM Ranges
- UL recognized to UL508 and CSA-C22.2 standards
- Works with remote/external pulse frequency output Sensor
- 1 SPDT relay output (SS110)
- Visual setpoint adjustment with digital accuracy
- Dial-in calibration does not require power
- Built-in start delay
- DIN rail mounting simplifies installation
- 115, 230 VAC (50-60 Hz) and 12, 24 VDC power options
- NEMA 1 and UL 508 enclosure ratings
- Optional NEMA 4, NEMA 4X, NEMA 12, or explosion proof enclosure



Description

The SS110 (single relay, 1 setpoint) shaft speed switch is a efficient way to continuously monitor slow speed applications where the shaft speed does not exceed 10 RPM. The SS110 and is completely field adjustable while the machinery is at rest; there is no need to run the shaft. The SS110 features visual setpoint adjustment for dial-in ease and the precise digital circuitry provides high accuracy, repeatability, and reliability. An example of a standard SS110 system includes the SS110 DIN rail mount module, a 906 Hall Effect Shaft Speed Sensor, and a 255 Pulser Disc. Other shaft speed sensor and pulser target options are available.

Dimensions



Principle of Operation

A shaft-mounted pulser disc or pulser wrap generates an alternating magnetic field that is picked up by the sensing head. The sensor transmits this speed signal as a digital pulse (frequency) to the speed switch via a 3-conductor shielded cable. The SS110 decodes this frequency signal to determine shaft speed and compares this to the pre-adjusted setpoint(s). The relay output(s) can then be used for equipment shutdown or to provide an alarm, assuring machine protection and process integrity. SS110 Speed Switches are failsafe; A loss of supply power during operation will de-energize the control circuit.



Standard System with: SS110 Speed Switch, 906 Speed Sensor, 255 Pulser Disc

Product Specifications

Input Power	Input Current	Fuse Type (F2)
SS110		
115 VAC, 230 VAC	2.5 VA	Sloblo 0.032A 5X20
SS110		
12 VDC, 24 VDC	45 mA	Sloblo 80 mA 5X20
SS110		
12 VDC, 24 VDC	75 mA	Sloblo 125 mA 5X20

Input Signal	
Sensor Supply	12 VDC @ 50 mA Max.
Type	Open Collector/Logic
Amplitude	5 V Pull-Up
Pull-Up	2200 Ohms to 5 V
Frequency Input	990 Hz* Max
Min. Pulse Width	1 mS
Setpoint Data	
Number of Setpoints	One (SS110)
Actuation State	Under-speed or Over-speed
Setpoint RPM Range	0.01 - 0.99 and 0.1 - 9.9 RPM
Adjustment	Rotary Switches: 1 (10x), 1 (1x)
Setpoint Accuracy	0.005% @ Low Range 0.25% @ Mid Range 0.5% @ Top Range
Hysteresis	6.6%*
Contact Arrangement	One Form C, S.P.D.T.
Relay Contact Rating	5 Amp @ 30 VDC, or 250 VAC Resistive
Start Delay	10 Seconds*
Physical Environment	
Mounting	DIN Rail or Stand Alone
Operating Temperature	-40 °C → +60 °C (-40 °F → +140 °F)
Storage Temperature	-65 °C → +125 °C (-85°F → +257 °F)
Electrical Connections	11 Position DIN Rail Terminal Block
Enclosure Rating	NEMA 1, UL 508

** Other settings available, contact Electro-Sensors.*
For higher temperature ranges, contact Electro-Sensors.
Specifications subject to change without notice.

Ordering

Model Description	Part Number
SS110 115 VAC	800-077000
SS110 230 VAC	800-077001
SS110 24 VDC	800-077002
SS110 12 VDC	800-077003

SS110 Standard System

- Shaft Speed Sensor
- Speed Switch
- Shaft Speed Pulse Generator

These are the most popular system components. Many other options are available.

System Options	Part Number
906 Hall Effect Speed Sensor 907 XP Hall Effect Speed Sensor (Explosion Proof)	775-000500 775-000600
Standard 255 Nylon Pulser Disc, 4" Diameter, 16 Magnets	700-000200
Split Collar Pulser Wrap (PVC, Aluminum, Stainless Steel)	Custom (See Website)

Enclosure Options	Part Number
Explosion Proof Enclosure	305-001601
NEMA 4X Enclosure Kit	725-000006
NEMA 4 Enclosure Kit	725-000005
NEMA 12 Enclosure Kit	725-000004

Customization

If one of our standard products does not meet your specifications, please call one of our applications specialists. Many of our products can be customized to fit specific needs.

Additional Information

For more information about product, please refer to the SS110 Installation and Operating Manual.
Email: sales@electro-sensors.com
Tel: (800)328-6170
Fax: (952)930-0130
We also have more information online at:
www.electro-sensors.com

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