

Key Features

- · Square-wave pulse frequency output, NPN open-collector
- · Zero speed operation with no signal loss
- 5-24 VDC powered
- Non-contact, large gap distance sensing
- · Simple to install and set up
- · Bidirectional (quadrature) options
- · Works with Electro-Sensors magnetic pulser discs / wraps
- Optional Mounting Bracket Assembly and Mounting Magnet



Model 906 Hall Effect sensors are water resistant and suitable for industrial applications, including environments where dirt, dust, grease, or moisture are present.

The quadrature (bidirectional) option has two sensors and is designed for applications requiring both speed and direction information.

Principle of Operation

These speed sensors use magnet-sensing Hall Effect IC's to produce a digital pulse signal to interface with speed switches, tachometers, counters, signal conditioners, or PLC's. Hall Effect sensors provide true zero speed operation with square-wave output and immunity to electrical noise.

A pulser disc or split collar pulser wrap with embedded magnets is mounted on the monitored shaft. As the shaft rotates, the magnets pass in front of the sensor causing the sensor to switch high and low, thus producing a digital pulse output. The sensors provide a digital square wave signal with a 50/50 duty cycle when used with pulse generators that have evenly spaced magnets of alternating polarity, such as the Electro-Sensors Model 255 Pulser Disc. The recommended gap distance between the sensor and pulse generator is 1/4 inch +/- 1/8 inch (Represented by () in the figures below). The gap flexibility makes the sensors tolerant of vibration, shaft run-out, misalignment, and industrial environments.

906 with Pulser Disc





906 with Pulser Wrap









906 Hall Effect

| Product | |
|--------------------------|--|
| Supply | 5-24 VDC @ 10 mA |
| Output Type | NPN Open Collector |
| Operating Frequency | 0 Hz to 20 KHz |
| Current Sink | 25 mA maximum |
| Operating Temperature | -40° F to +140° F -40° C to +60° C |
| Gap Distance | 1/4" ± 1/8" |
| Distance to Input Device | 1,500 feet maximum |
| Cable (22AWG) | 906: 3-conductor shielded 906 Quadrature: 4-conductor shielded |
| Wiring Code | 906: Red = Supply, Clear = Common, Black = Signal 906 Quadrature: Red = Supply, White = Common, Black = Signal A, Green = Signal B |
| Threads | 3/4"–16 UNF threads |

Specifications subject to change without notice.

Ordering

906 sensors come with a standard bracket for mounting

| Model | Part Number |
|--|-------------|
| 906 AL ¹ Body, 10' PVC Cable - Standard | 775-000500 |
| 906 SS ² Body, 10' PVC Cable | 775-000400 |
| 906 Quadrature, AL Body, 10' PVC Cable | 775-000504 |
| 906 AL Body, 10' Teflon ³ Cable | 775-000502 |
| 906 SS Body, 50' PVC Cable | 775-000405 |
| 906 AL Body, 50' PVC Cable | 775-000511 |
| 906 Quadrature, SS Body, 10' PVC Cable | 775-000404 |
| 906 Quadrature, AL Body, 50' PVC Cable | 775-000509 |
| 906 AL Body, 50' Teflon Cable | 775-000514 |
| 906 Quadrature, SS Body, 50' PVC Cable | 775-000409 |
| 906 SS Body, 100' PVC Cable | 775-000410 |
| 906 Quadrature, SS Body, 100' PVC Cable | 775-000414 |
| 906 SS Body, 10' Teflon Cable | 775-000503 |
| 906 AL Body, 100' PVC Cable | 775-000505 |
| 906 PVC Body, 10' PVC Cable | 775-000506 |
| 906 Quadrature, AL Body, 10' Teflon Cable | 775-000507 |

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| 906 Quadrature, AL Body, 50' Teflon Cable | 775-000508 |
|--|------------|
| 906 Quadrature, AL Body, 100' PVC Cable | 775-000510 |
| 906 SS Body, 50' Teflon Cable | 775-000515 |
| 906 Quadrature, AL Body, 100' Teflon Cable | 775-000516 |
| 906 AL Body, 100' Teflon Cable | 775-000518 |
| 906 SS Body, 100' Teflon Cable | 775-000519 |

1 Aluminum

2 Stainless Steel

3 Teflon is a High Temperature Cable

906 Hall Effect Standard System

Shaft Speed Pulse Generator

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

| System Options | Part Number |
|--|-------------------------|
| Standard 255 Nylon Pulser Disc, 4" Diameter, 16 Magnets | 700-000200 |
| Split Collar Pulser Wrap (PVC, Aluminum, Stainless Steel) | Custom (See Website) |

| Easy Mounting Options | Part Number |
|---|-------------|
| EZ-3/4in Bracket Assembly | 810-000040 |
| MM-1.25 Mounting Magnet (must use with EZ-3/4in Bracket Assembly) | 810-000060 |





EZ-3/4in Option (includes 8 PPR Pulser Disc in housing)

Customization

MM-1.25 Mounting Magnet Option (must be used with EZ-3/4in)

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

See the 906 / 907 XP Hall Effect Sensors Installation and Operating Manual for complete details, specifications, and programming instructions.

