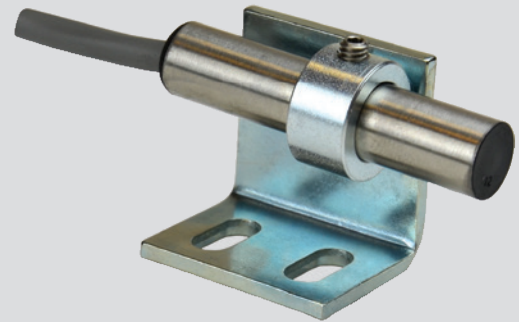


## Key Features

- 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
- Works with Electro-Sensors magnetic pulser discs / wraps



## Description

The 1101 sensor has a non-threaded stainless steel body, is supplied with a mounting bracket and standard 10 feet of 3-conductor shielded cable. It is commonly used with pulser discs or 60 pulse/revolution magnet wheels.

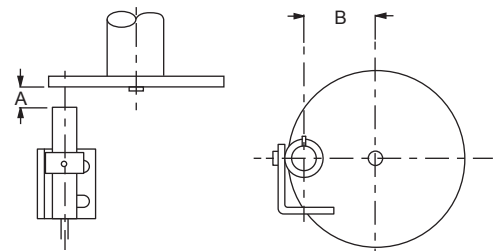
## Principle of Operation

1101 Hall Effect 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.

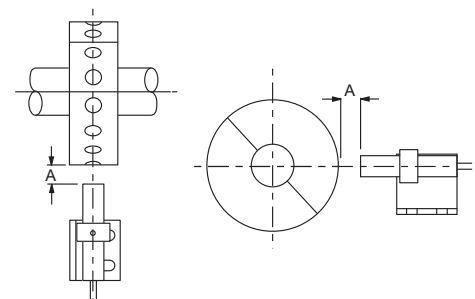
A pulser disc or split collar pulser wrap with embedded magnets is mounted on the monitored shaft. As the shaft rotates, the magnets pass in front of the sensor causing the sensor to switch high and low, thus producing a digital pulse output. The sensors provide a digital square wave signal with a 50/50 duty cycle when used with pulse generators that have evenly spaced magnets of alternating polarity, such as Electro-Sensors Model 255 Pulser Disc.

## Large Gap Sensor Installation

The 1101 sensor is supplied with a mounting bracket, collar, and set screw for gap distance adjustment. Sensors should be installed allowing the center of the magnets to pass in front of the center of the sensing head during rotation. The gap distance (A) is dependent on the pulse generator being used (See Sensor Compatibility Chart). When using a standard 4" Pulser Disc, the center of the magnetized area of the disc (B) is 1-3/4" from the center hole of the disc.



1101 Sensor and Pulser Disc



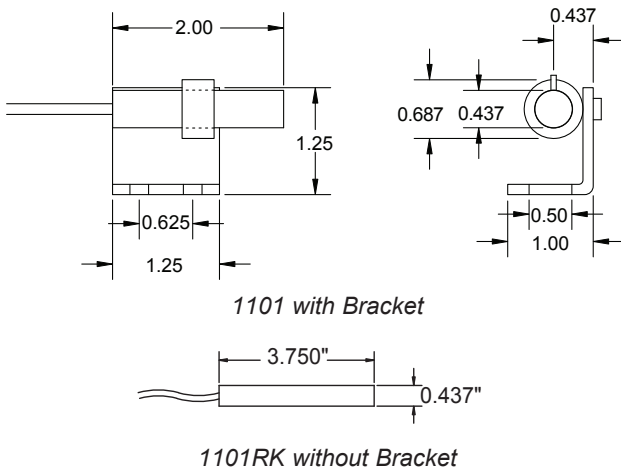
1101 Sensor and Pulser Wrap

## 1101 Hall Effect Specifications

| Product                  |  |
|--------------------------|--|
| Supply                   | 6-24 VDC @ 10 mA                                 |
| Output Type              | NPN Open Collector                               |
| Operating Frequency      | 0 Hz to 20 KHz                                   |
| Operating Temperature    | -40 °F to +140 °F (-40 °C to +60 °C)             |
| Gap Distance             | See Sensor Compatibility Chart                   |
| Distance to Input Device | 1,500 feet maximum                               |
| Cable                    | 3-conductor shielded, 22 AWG                     |
| Standard Cable Length    | 10 ft  |
| Wiring Code              | Red = Supply<br>Clear = Signal<br>Black = Common |
| Material                 | Stainless Steel                                  |

Specifications subject to change without notice.

## Dimensions



## Sensor Compatibility Chart

|                       | Pulse Generators       |                       |                       |                    |
|-----------------------|------------------------|-----------------------|-----------------------|--------------------|
|                       | 60 PPMW (Magnet Wheel) | Pulser Wrap           | Pulser Disc           | Ring Kit           |
| Pulses Per Revolution | 60                     | 1 Pulse Per 2 Magnets | 1 Pulse Per 2 Magnets | 60                 |
| Output Type           | NPN Open Collector     | NPN Open Collector    | NPN Open Collector    | NPN Open Collector |
| Duty Cycle            | 50/50                  | 50/50                 | 50/50                 | 50/50              |
| Max. Gap              | 0.04"                  | 0.5"                  | 0.5"                  | 0.04"              |
| Recommended Gap       | 0.02"                  | 1/4 ± 1/16            | 1/4 ± 1/16            | 0.02"              |

## Ordering

| Model   | Part Number |
|---|-------------|
| 1101, 18-36 V, Hi Temp, 10' PVC Cable, w/ Bracket             | 775-110001  |
| 1101RK, 3.75", 10' PVC Cable, w/o Bracket (Used on Ring Kits) | 775-110003  |
| 1101, 2.0", 10' PVC Cable, w/o Bracket                        | 775-110100  |
| 1101, 2.0", 10' PVC Cable, w/ Bracket                         | 775-110101  |
| 1101, 2.0", 50' PVC Cable, w/o Bracket                        | 775-110105  |
| 1101, 2.0", 50' PVC Cable, w/ Bracket                         | 775-110106  |
| 1101, 2.0", 100' PVC Cable, w/o Bracket                       | 775-110110  |
| 1101, 2.0", 100' PVC Cable, w/Bracket                         | 775-110111  |
| 1101, 2.0", 10' Teflon Cable w/o Bracket                      | 775-110114  |
| 1101, 2.0", 10' Teflon Cable w/ Bracket                       | 775-110121  |

## 1101 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) |

| Other Options                       | Part Number |
|-------------------------------------|-------------|
| 1100 Sensor Series Mounting Bracket | 725-004000  |

## 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

See the 1101 / 931 XP Hall Effect Sensors Installation and Operating Manual for complete details, specifications, and programming instructions.