



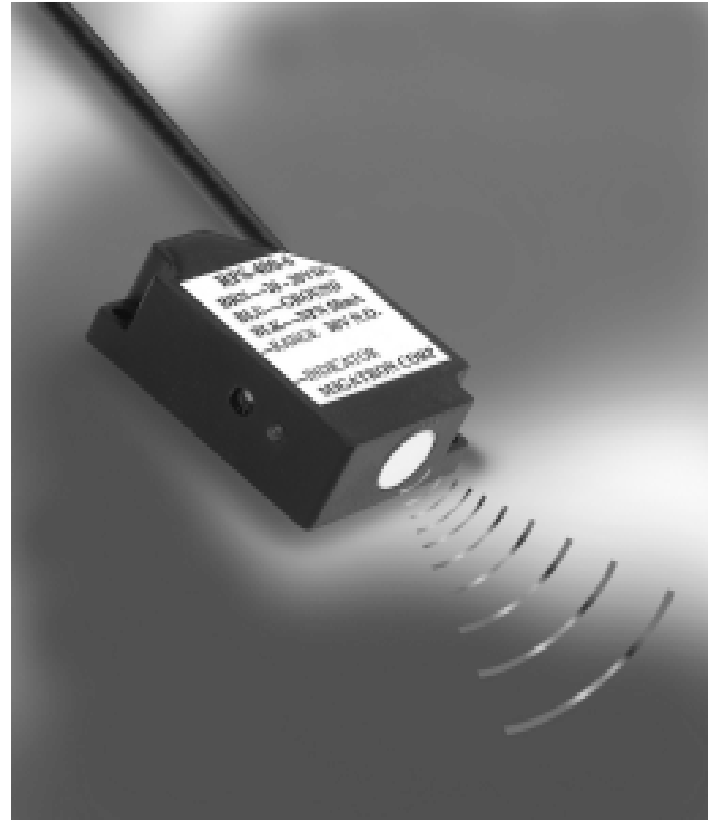
# RPS-400-6

## Features

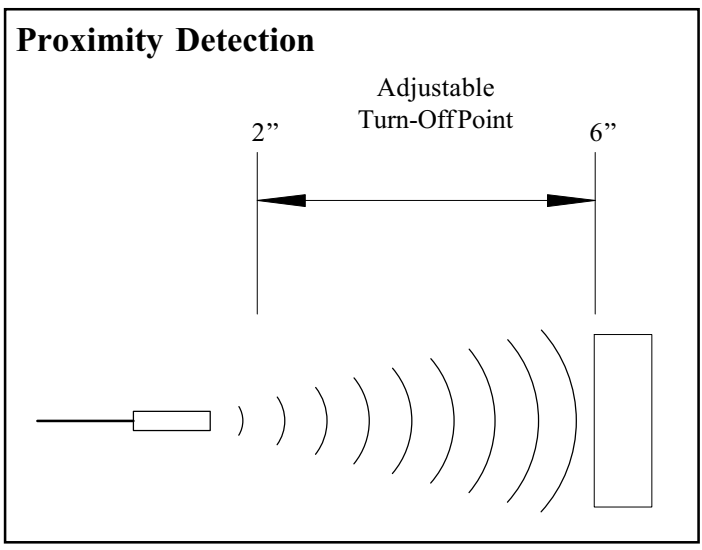
- Background Suppression
- Compact Size
- 20 to 30 VDC Power Input
- LED Indicator
- 2 to 6 inch Sensing Range
- NPN Output
- Adjustable Sensing Range
- Narrow Sensing Beam
- Detects translucent or opaque objects independent of color.
- Quick Response Time

The RPS-400-6 is a compact, high frequency sensor. It was introduced to the Migatron family of ultrasonic sensors to better meet the needs of the machine manufacturing industry.

This sensor has a wide array of application solutions not found in other proximity sensor technologies. The RPS-400-6 has an adjustable two to six inch sensing range with *background suppression* (meaning any object within the desired range is detected, while objects out of the desired range are ignored). It cannot be affected by changes in target color or material. The RPS-400-6 is capable of detecting vibrating and/or tilting targets. A response time of no more than 2.1 ms and an operating frequency of 300kHz makes the RPS-400-6 a repeatable and accurate high-speed sensor.



The RPS-400-6 is a three wire NPN transistor output device. The transistor can switch 30VDC at 50mA continuously. It has a molded VALOX case that is filled with epoxy potting material. The transducer face is made of white silicone. A six-foot cable comes standard with the RPS-400-6. Special cable lengths or connectors are also available for OEM applications. Like all Migatron ultrasonic sensors, the RPS-400-6 is ideal for detecting clear objects. Its ability to operate in dusty environments makes it ideal for rugged conveyors, PC board handling equipment, and fillers.



## Proximity Detection

Proximity detection is the detection of an object in a given range. The detection range of the RPS-400-6 is controlled by the "Range Control" potentiometer located on the side of the sensor. Any object within the desired range is detected, while objects out of range are ignored (background suppression). The detect point is independent of size, material, and reflectivity.



# Specifications

- Operational Range:** Adjustable 2" to 6"
- Power Input:** 20-30VDC  
Reverse Polarity Protected
- Input Current:** 10mA - 15mA
- Ambient Temperature:** 16°C to 41°C (60°F to 105°F)
- Humidity:** 0 - 95% Non-Condensing
- RPS-400-6 Housing:** VALOX case filled with epoxy potting. Silicon rubber face.
- Output:** NPN Open collector transistor  
30V max. / 50mA continuous
- Transducer Frequency:** 300kHz
- Response Time:** 0.2ms min. / 2.1ms max.
- Weight of Controller:** 2 ounces

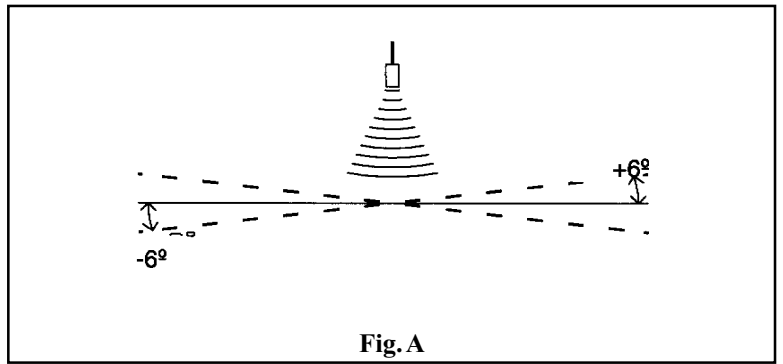


Fig. A

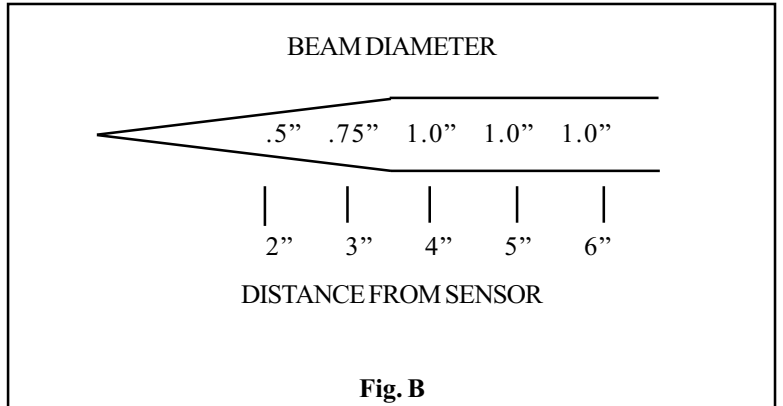


Fig. B

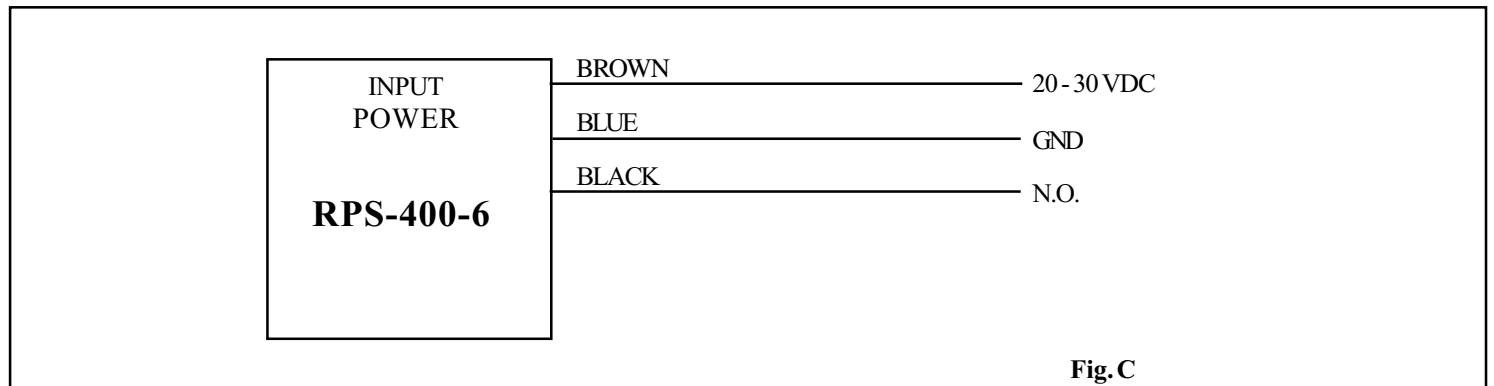


Fig. C

## Figure:

- A- Angle of Tilt
- B- Beam Spread
- C- Wiring Diagram
- D- Mounting Dimensions

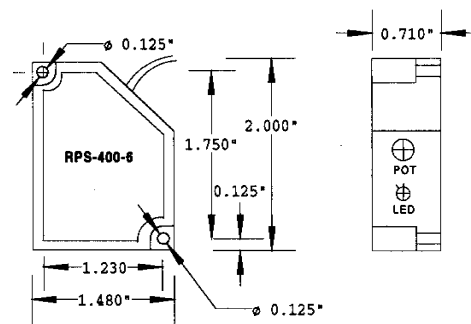


Fig. D

| PART NUMBER | RANGE    | OUTPUT   |
|-------------|----------|--|
| RPS-400-6   | 2" to 6" | NPN Open Collector Transistor (30V max. / 50mA continuous) |



**Gordy's Sensors**

5772 Smaller Rd, Johnstown, OH 43031 Phone: (740) 967-2283 Fax: (740) 967-2855  
Website: [www.gordyssensors.com](http://www.gordyssensors.com) or Email: [sales@gordyssensors.com](mailto:sales@gordyssensors.com)