

# RPS-401, RPS-426

## Features

- Self Contained
- Sensing Range 4-40", 8-80"
- Narrow Sensing Beam
- High Frequency
- Range & Hysteresis Controls
- Reverse Polarity Protected
- Short Circuit Protected
- Operates in Hostile Environments
- Operating Voltage 20 - 30VDC
- Isolated N.O. N.C. Solid State Relays
- RPS-401 in Plastic Housing
- RPS-426 in Stainless Steel Housing

The RPS-401 and RPS-426 ultrasonic proximity sensors are enclosed in a barrel housing and are completely self-contained. They are powered by 20-30VDC and have reverse polarity protection. A sealed transducer provides protection in hostile environments. The sensor can be operated in two modes, proximity mode or hysteresis mode, as described below. The transducer frequency is 175kHz for the 4 to 40" range and 135kHz for the 8 to 80" range. The outputs consist of two solid state relays configured as N.O. and N.C. which can switch 2-130VAC or VDC up to 50mAAC or 100mADC continuous. The relay outputs are short circuit protected and isolated up to 1500 Volts RMS.



The RPS-401 housing is constructed of PVC plastic and the RPS-426 is Stainless Steel. The housing is 30mm in diameter by 100mm in length. For set up purposes an LED indicator is provided. The LED will illuminate green when nothing is detected and will illuminate red when a target is detected. A standard 6' cable is provided or a quick disconnect (QD) version is also available.

40" Range	4"	Adjustable	40"
80" Range	8"	Detect Point	80"

**Proximity Detection**

Proximity detection is the detection of an object at a given distance. The detection range of the RPS-401 and RPS-426 sensors is controlled by the Range Control potentiometer P1. Any object within the desired range is detected, while objects outside the desired range are ignored. Sensors with a 40" range have an adjustable range of 4 - 40" and sensors with an 80" range have an adjustable range of 8 - 80". This means that in the proximity mode the object will be detected from whatever detect point is set to the minimum sensing range of the sensor either 4" or 8". The Hysteresis Control needs to be off by turning potentiometer P2 fully counterclockwise.

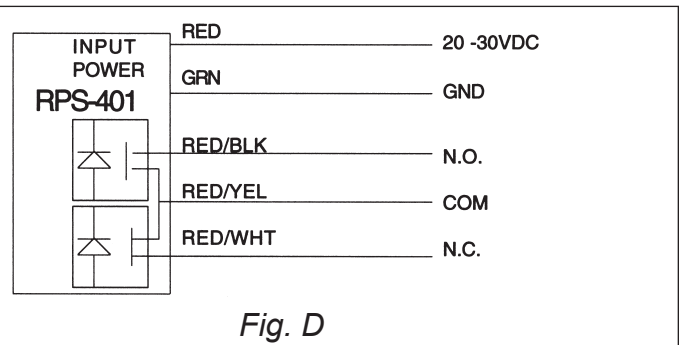
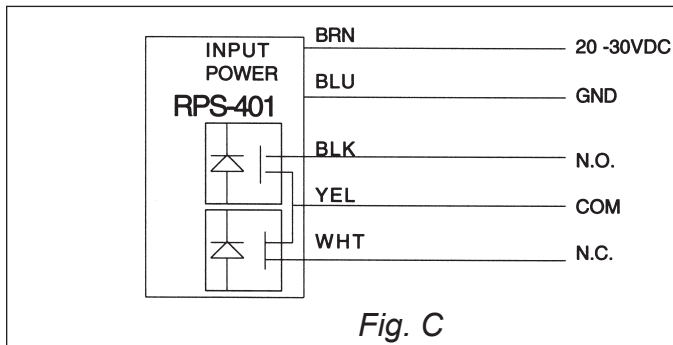
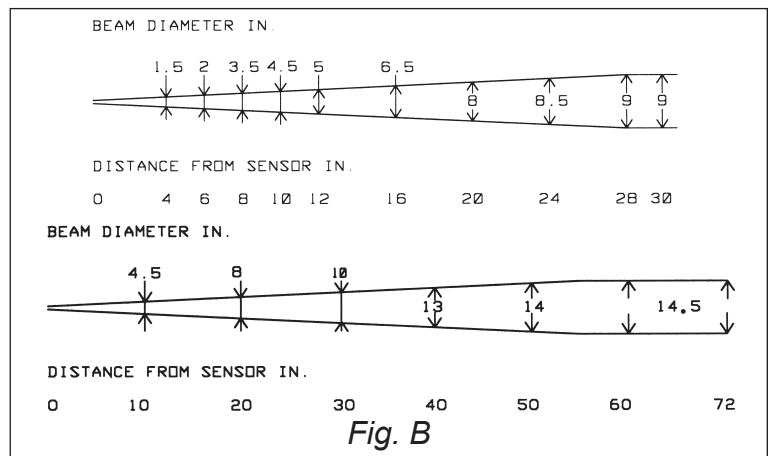
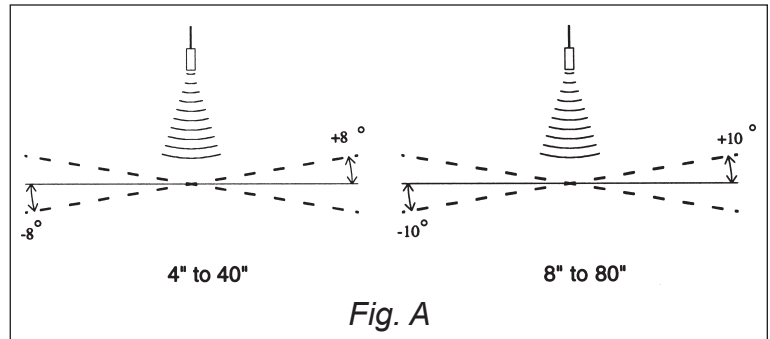
	Adjustable	Adjustable
	Turn On Point	Turn Off Point
40" Range	4 - 40"	0.5 - 40"
80" Range	8 - 80"	1 - 80"

**Hysteresis Detection**

The RPS-401 and RPS-426 are furnished with Hysteresis Control potentiometer P2. This control allows the user to adjust the turn off point while the Range Control adjusts the turn on point. (Example: Range pot set for 10", Hysteresis pot set for 20". With these settings the sensor will detect when the target reaches 10" and stays on as the target moves away to 20".) The Hysteresis can be adjusted from 0.5 - 40" from the turn on point for sensors with a 40" range and 1 - 80" for sensors with an 80" range.

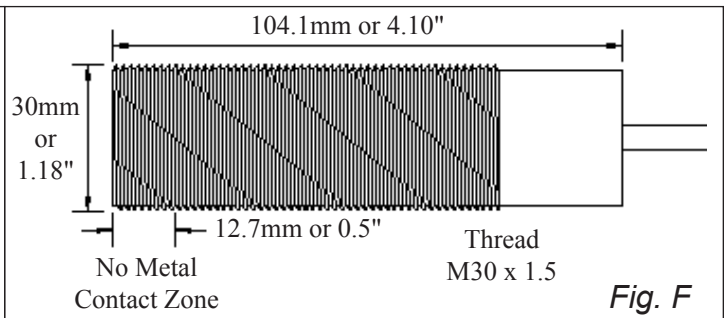
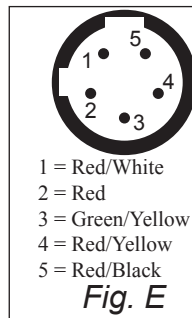
# Specifications:

Operational Range:	Adjustable 4 - 40"
RPS-401	Adjustable 8 - 80"
RPS-426	Adjustable 8 - 80"
Power Input:	20 - 30VDC Reverse Polarity Protected
Input Current:	50mA
Ambient Temperature:	0 - 60°C or 32 - 140°F
Humidity:	0 - 95% Non-Condensing
Housing:	PVC with PVC sensing face
RPS-401	303 Grade Stainless Steel with PPS and PTFE sensing face
RPS-426	
Output:	2 Solid State Relays N.O. & N.C. Isolation 1500VRMS 2 - 130VAC or VDC 50mAAC or 100mADC Continuous Short Circuit Protected
Transducer Frequency:	4 - 40"                      8 - 80" 175kHz                      135kHz
Response Time:	4 - 40"                      8 - 80" 30ms                      50ms
Weight:	11 ounces



**Figure:**

- A - Angle of Tilt
- B - Beam Spread
- C - Wiring Diag. for Hard Wired Cable
- D - Wiring Diag. for Quick Disconnect
- E - Conn. Diag. QD version Male Plug
- F - Mounting Dimensions



PART NUMBER	RANGE	OUTPUT / DESCRIPTION
RPS-401-40	4 - 40"	2 Solid State Relays N.O. & N.C.
RPS-401-80	8 - 80"	2 Solid State Relays N.O. & N.C.
RPS-401-40QD	4 - 40"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
RPS-401-80QD	8 - 80"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
RPS-426-80	8 - 80"	2 Solid State Relays N.O. & N.C.
RPS-426-80QD	8 - 80"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
F32-5001162		2 meter Cable for QD version, 1/2\"-20 5-Pin 22 AWG
F32-5001164		6 meter Cable for QD version, 1/2\"-20 5-Pin 22 AWG