

# RPS-150

## Features

- Adjustable Sensing Range
- Adjustable Hysteresis
- Broad Sensing Beam
- 105 - 130VAC or 20 - 30VDC Power
- Range 2 - 40" or 5 - 80"
- Isolated N.O. & N.C. Solid State Relays
- LED Indicator
- Limit Switch Style Housing

The RPS-150 is a self-contained, wide beam angle ultrasonic sensor. The advantage of this sensor is that the target does not have to be at right angles with the sensor in order to be detected. A flat target can tilt up to 35 degrees and still be detected. For setup purposes an LED indicator is provided. When in the non-detect state the LED is Green and when in the detect state the LED is Red. The RPS-150 can be operated in two modes: a proximity and a hysteresis mode, described below. The frequency of operation is 38.5kHz. There are two ranges available in this model: 2 - 40" or 5 - 80". The sensor is available with a 120VAC power input or a 20 - 30VDC input. It also features a quick



disconnect (QD) cable receptacle. The housing is constructed of PBT plastic and has standard 30mm x 60mm limit switch mounting dimensions, as well as side holes for mounting the sensor on its side. The output consists of two solid state relays N.O. and N.C., that can switch 2 - 130VAC or VDC up to 50mAAC or 100mADC continuous. The relay outputs are short circuit protected and isolated up to 1500VRMS.

40" Range 80" Range	2" 5"	Adjustable Detect Point	40" 80"
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**Proximity Detection**

Proximity detection is the detection of an object at a given distance. The detection range of the RPS-150 is controlled by the Range Control potentiometer. Any object within the desired range is detected, while objects out of range are ignored. Sensors with a 40" range have an adjustable range of 2 - 40" and sensors with an 80" range have an adjustable range of 5 - 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 2" or 5". The Hysteresis Control needs to be off by turning the potentiometer full counterclockwise.

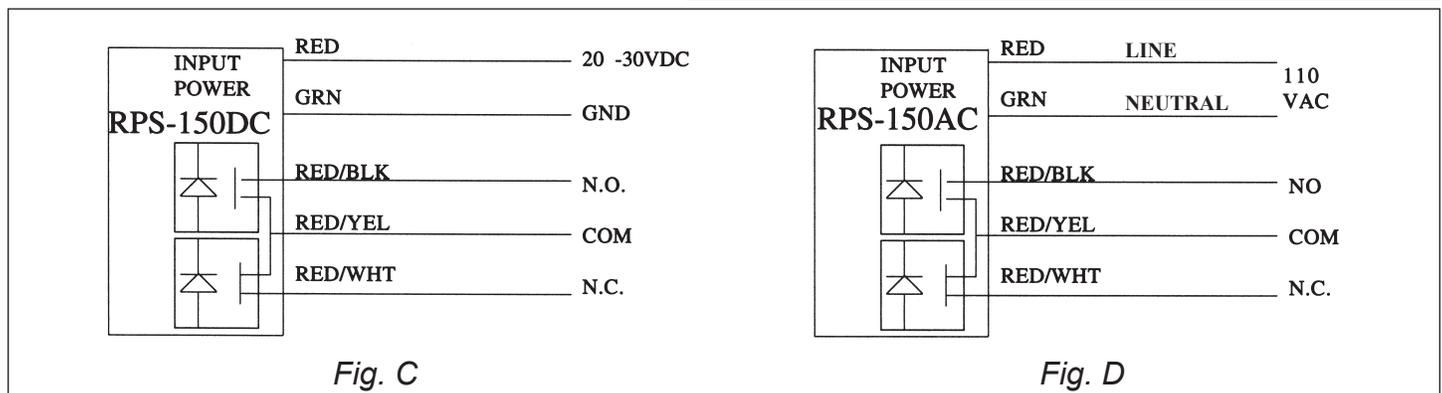
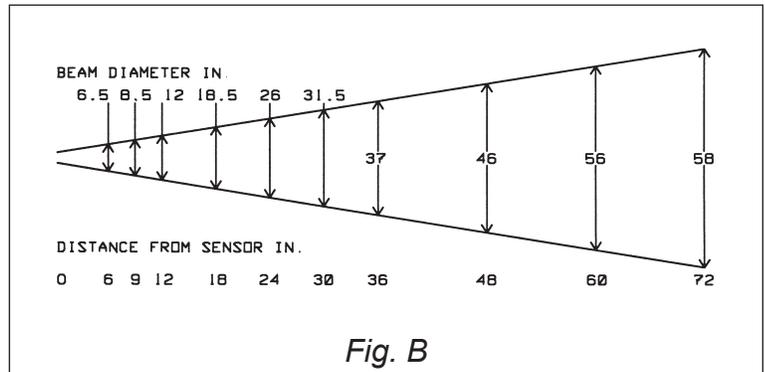
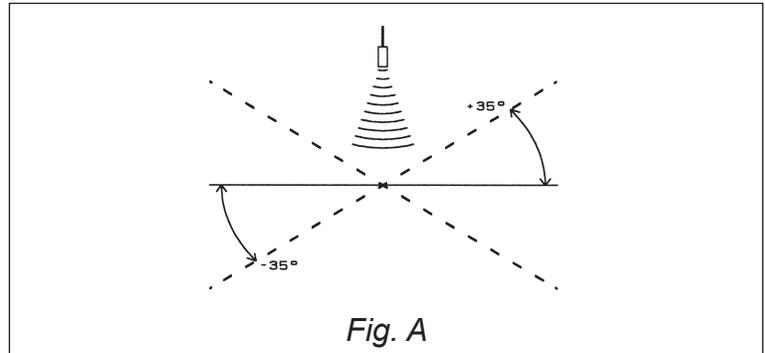
	Adjustable Turn On Point	Adjustable Turn Off Point	
40" Range 80" Range	2 - 40" 5 - 80"	0.5 - 40" 1 - 80"	

**Hysteresis Detection**

The RPS-150 is furnished with Hysteresis Control by means of a second potentiometer. This control allows the user to adjust the turn off point while the Range Control adjusts the turn on point. (Example: Range Control set for 10", Hysteresis Control set for 20". With these settings the sensor will come on when the target reaches 10" and stays on as the target moves away to 20".) The Hysteresis can be adjusted from 0.5" to 40" from the turn on point for sensors with a 40" range and 1 - 80" from the turn on point for sensors with an 80" range.

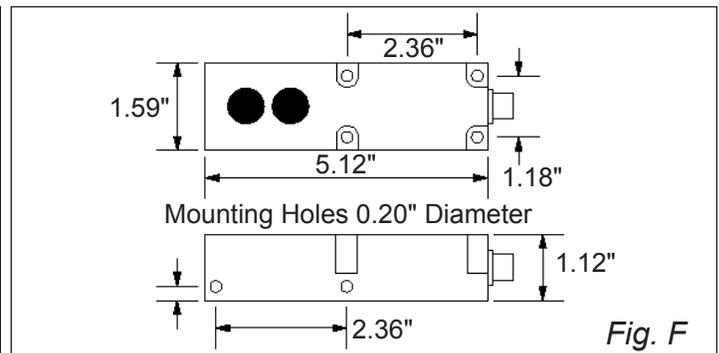
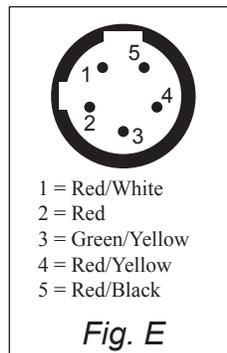
# Specifications:

Operational Range:	Adjustable 2 - 40" Adjustable 5 - 80"
Hysteresis:	Adjustable 0.5 - 40" Adjustable 1 - 80"
Power Input:	105 - 130VAC (AC Version) 20 - 30VDC (DC Version)
Input Current:	15mA VAC or 35mA VDC
Ambient Temperature:	0 - 60°C or 32 - 140°F
Humidity:	0 - 95% Non-Condensing
Housing:	PBT Plastic, Limit Switch Style
Outputs:	2 Solid State Relays N.O. & N.C. Isolated 1500VRMS 2 - 130VAC or VDC 50mAAC or 100mADC Continuous Short Circuit Protected
Transducer Frequency:	38.5kHz
Response Time:	2 - 40"    5 - 80" On        60ms    120ms Off        60ms    120ms
Weight:	9.5 ounces



**Figure:**

- A - Angle of Tilt
- B - Beam Spread
- C - Wiring Diag. For RPS-150DC
- D - Wiring Diag. For RPS-150AC
- E - Connector Diagram (Male View)
- F - Mounting Dimensions



PART NUMBER	RANGE	OUTPUT / DESCRIPTION
RPS-150AC-40	2 - 40"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
RPS-150AC-80	5 - 80"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
RPS-150DC-40	2 - 40"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
RPS-150DC-80	5 - 80"	2 Solid State Relays N.O. & N.C. - Cable Sold Separately
F32-5001162		2 meter QD Cable, 1/2"-20 5-Pin 22 AWG
F32-5001164		6 meter QD Cable, 1/2"-20 5-Pin 22 AWG