

## RPS-150A Self Contained Ultrasonic Sensor



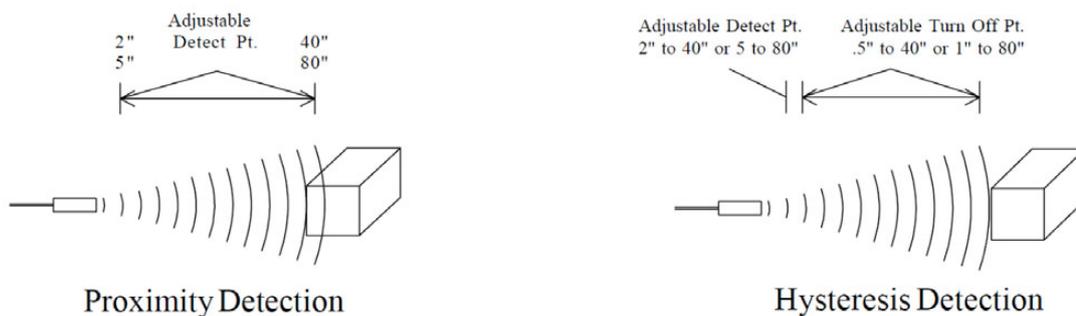
### Features

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

## RPS-150A Self Contained Ultrasonic Sensor

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" to 40" or 5" to 80". The sensor is available with a 120VAC power input or a 20 - 30VDC input. It also features a quick disconnect receptacle. The housing is constructed of plastic valox 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. N.C., and can switch 2 - 130VAC or VDC up to 100mA DC or 50mA AC continuous. The relay outputs are short circuit protected and isolated up to 1500 volts rms.



### 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. The range of the RPS-150 is either 2" to 40" or 5" to 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 potentiometer needs to be off by turning the pot counter-clockwise.

### Hysteresis Detection

The RPS-150 is furnished with Hysteresis Control by means of a second potentiometer. This control allows you 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 come on when the target reaches 10" and stays on as the target moves away to 20".) This Hysteresis can be adjusted to start from the detect point over a range of .5" to 40" with the 40" sensor and 1" to 80" with the 80" sensor.

## RPS-150A Self Contained Ultrasonic Sensor

### Specifications:

Operational Range	Adjustable 2" to 40" Adjustable 5" to 80"
Hysteresis	Adjustable .5" to 40" Adjustable 1" to 80"
Power Input	105 - 130VAC or 20 - 30VDC
Input Current	15 mA VAC or 35 mA VDC
Ambient Temperature	0°C to 60°C or 32°F to 140°F
Humidity	0% - 95% Non-Condensing
Transducer Housing	Plastic Valox Limit Switch Style
Outputs	2 Solid State Relays N.O. N.C. Isolated 1500Vrms 2 to 130VAC or VDC 100mA DC or 50mA AC Continuous Short Circuit Protected
Transducer Frequency	38.5kHz
Response Time	2" - 40"    5" - 80"
On	60mS    120mS
Off	60mS    120mS
Weight	9.5 ounces
Accuracy	.187" or .5% (.005) of the range, whichever is greater at 70 degrees F.

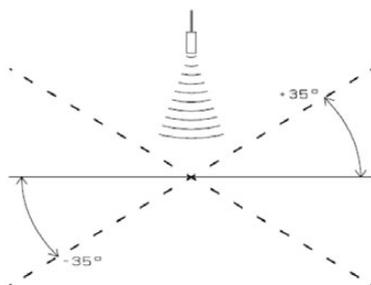


Fig. A

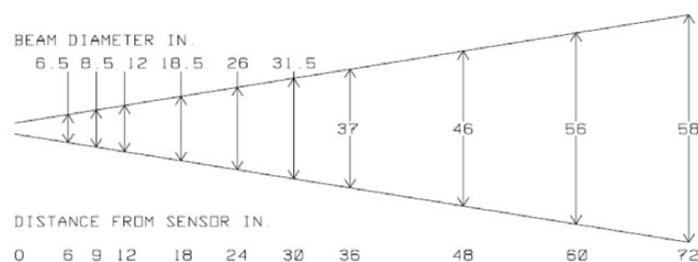


Fig. B

## RPS-150A Self Contained Ultrasonic Sensor

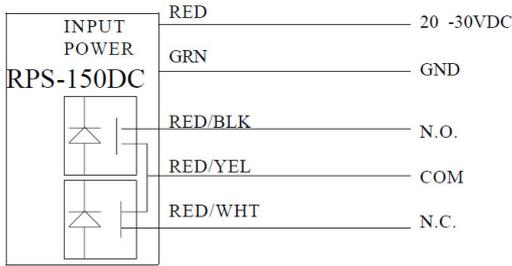


Fig. C

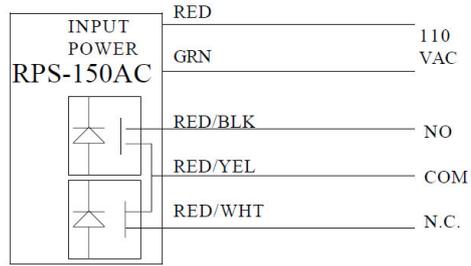


Fig. D

### Figure:

A - Angle of Tilt

B - Beam Spread

C - Wiring Diag. For RPS-150DC

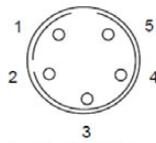
D - Wiring Diag. For RPS-150AC

E - Connector Diagram (Male View)

F - Mounting Dimensions

For Optional On / Off Delays Consult

"QD" cables are sold separately.



1. Red-Wt. Tr
2. Red
3. Green
4. Red-Yl. Tr
5. Red-Bk. Tr

Fig. E

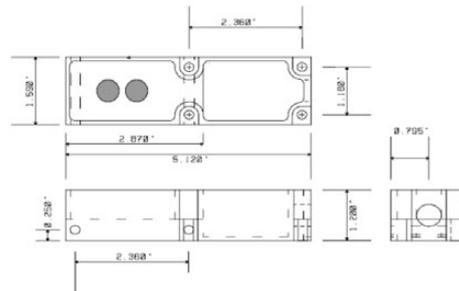


Fig. F

Factory.

### Ordering Code

Part Number	Range	Output
RPS-150AC-40	2" - 40"	Isolated Form C Relay - Quick Disconnect
RPS-150AC-80	5" - 80"	
RPS-150DC-40	2" - 40"	Isolated Form C Relay - Quick Disconnect
RPS-150DC-80	5" - 80"	
5000116-2		6' Cable for Quick Disconnect
5000116-4		20' Cable for Quick Disconnect

**All electrical equipment should be installed by a qualified/certified electrician.**

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