

RPS-100

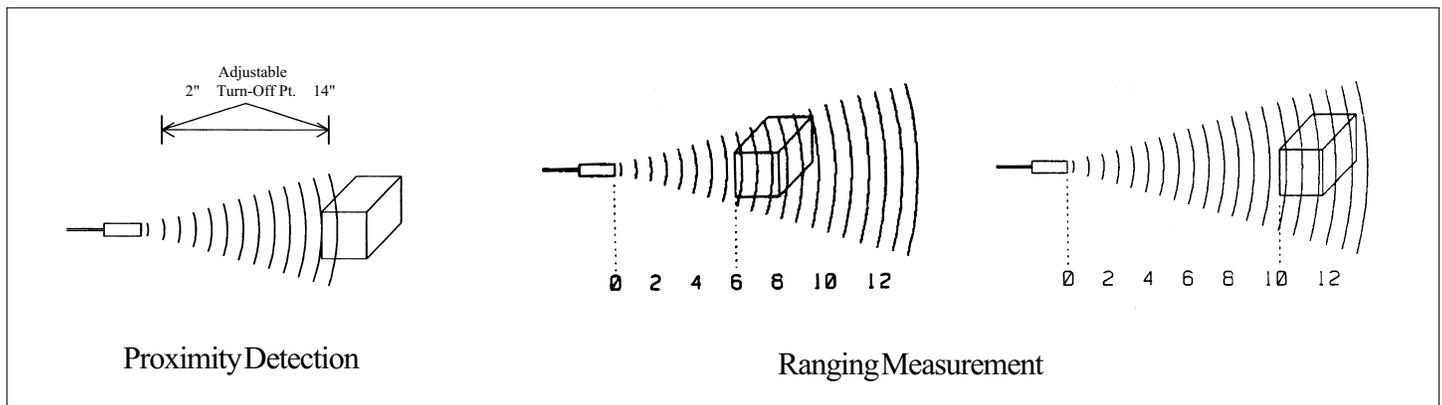
Features

- Various Sensing Ranges
- Remote Transducer
- Broad Sensing Beam
- RPS-500 Compatible
- Low Frequency - 38.5kHz
- 3-Way Power Operation
- LED Indicator
- Isolated Form C Relay Output
- Small Transducer Head
- Small Electronic Controller

The RPS-100 is the first of the RPS series and has a proven track record of reliability. Since its introduction in 1979, the RPS-100 has proven itself in versatility and ease of operation. The remote transducer allows for mounting of the sensor head in cramped spaces while the controller is out of the way. The ranging and proximity modes provide the versatility of simple detection, or actual distance measuring. The isolated form C relay furnishes N.O. and N.C. outputs, and with the addition of the RPS-500 card various analog outputs are supplied. The RPS-100 sensor, which operates at a frequency of 38.5kHz,



has a broad sensing beam which allows for detection of an object at greater angles of tilt. Sensing ranges available for the RPS-100 include 2" to 14", 5" to 72", and 10" to 240". Mounting flanges, LED indicator, ranging potentiometer, and 6-ft. transducer cable are included. Optional cable lengths are available.



Proximity Detection

Proximity detection is the detection of an object in a given range. The detection range of the RPS-100 is controlled by the "Range Control" potentiometer located on the front cover of the controller. Any object within the desired range is detected, while objects out of range are ignored. The detect point is independent of size, material, and reflectivity.

Ranging Measurement

With the addition of the RPS-500 card, Analog outputs of 0-10 VDC and 4-20 mA are provided. Precise distances of an object moving to and from the transducer are measured via time intervals between transmitted and reflected bursts of ultrasonic sound. The example shows a target detected at 6 inches from the transducer and moving to 10 inches. The distance change is continuously calculated and outputted. Ranging Option is indicated by following the part number with (-500). (Example: RPS-100-14-500)

Specifications:

| | |
|------------------------------|--|
| Operational Range: | Adjustable 2" to 14" Adjustable 5" to 72" Adjustable 10" to 240" |
| Power Input: | 120VAC * Only 120VAC or 24VDC with 500 Analog card. 15 - 24VDC 12VDC Regulated 12 - 17VAC |
| Input Current: | 30 Milliamps |
| Input Current with 500 card: | 50 Milliamps |
| Ambient Temperature: | 0°C to 60°C or 32°F to 140°F |
| Controller: | Metal Enclosed |
| Transducer: | Aluminum |
| Transducer Housing: | Plastic |
| Output: N.O., N.C. | Isolated Form C Relay .5 Amp Maximum at 120VAC 12VDC Logic Signal |
| Output with 500 card: | 0 - 10VDC, 4 - 20 mA Analog Outputs with Zero, Span, Sample, and Hold controls. |
| Transducer Frequency: | 38.5kHz |
| Response Time: | 2" to 14" 5" to 72" 10" to 240" 30mS - On 100mS - On 250mS - On 30mS - Off 100mS - Off 250mS - Off |
| Weight of Transducer: | 2.2 ounces |
| Weight of Controller: | 34.2 ounces |

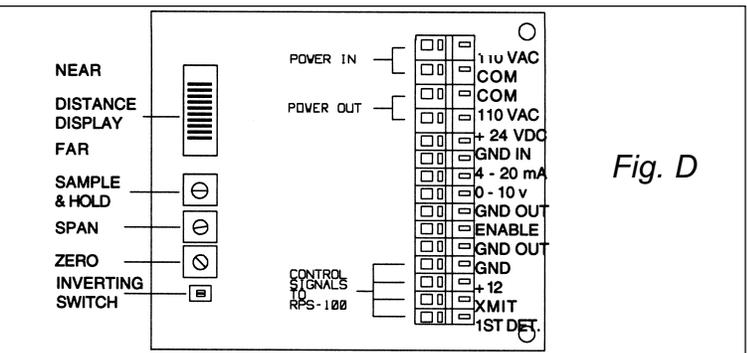
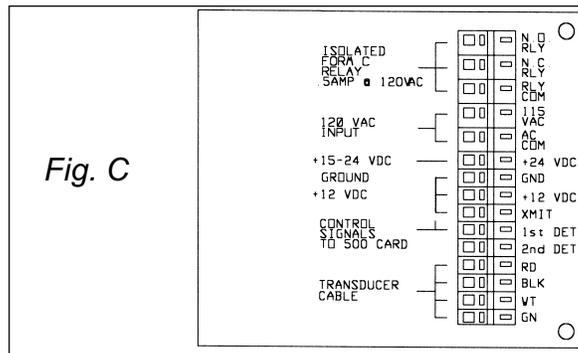
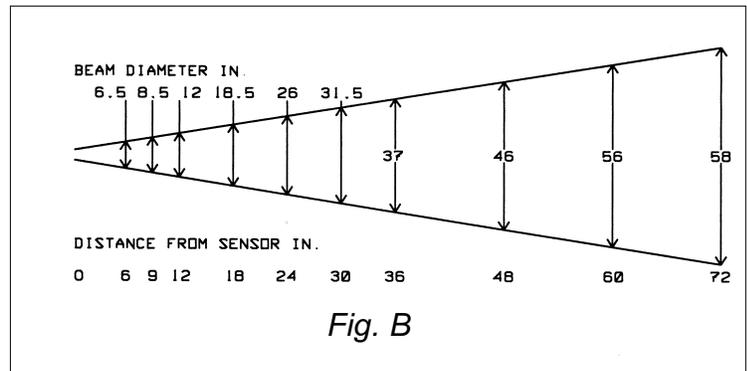
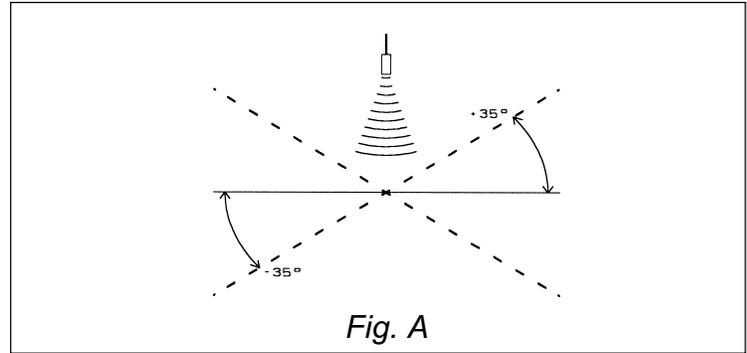
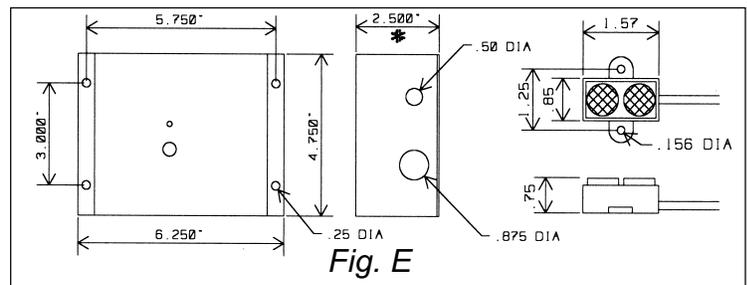


Figure:

- A - Angle of Tilt
- B - Beam Spread
- C - Wiring Diag.- For RPS-100
- D - Wiring Diag.- For RPS-500
- E - Mounting Dimensions * Dimension changes from 2.5" to 3.75" when ordered with the 500 Analog Ranging card.



| PART NUMBER | RANGE | OUTPUT |
|-----------------|------------|-------------------------------|
| RPS-100-14 | 2" - 14" | Isolated form C Relay |
| RPS-100-72 | 5" - 72" | Isolated form C Relay |
| RPS-100-240 | 10" - 240" | Isolated form C Relay |
| RPS-100-14-500 | 2" - 14" | 0 - 10VDC and 4 - 20mA Analog |
| RPS-100-72-500 | 5" - 72" | 0 - 10VDC and 4 - 20mA Analog |
| RPS-100-240-500 | 10" - 240" | 0 - 10VDC and 4 - 20mA Analog |