

RPS-300-14-T, RPS-300-36-T Ultrasonic Sensor Controller with Remote Sensing Head

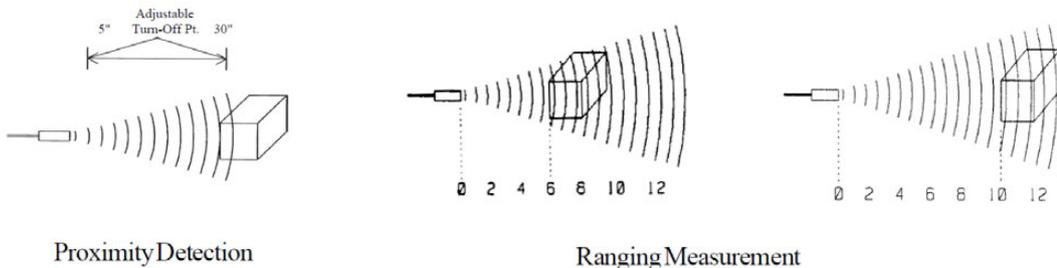


Features

- Various Sensing Ranges
- Narrow Sensing Beam
- High Frequency
- LED Indicator
- Sealed Transducer
- RPS-500 Compatible
- 3-Way Power Operation
- Isolated Form C Relay Output
- Small Electronic Controller
- Small Remote Transducer

The RPS-300-T is a high frequency, sealed transducer unit best suited for environments where chemicals or weld splatter is a problem. The transducer head is constructed of a seamless Teflon body and sensing face. 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-300-T sensor operates at a frequency of 180kHz for the 14" and 36" ranges. This sensor has a narrow sensing beam. Sensing ranges available for the RPS-300-T include 4" to 14", 5" to 36". Mounting flanges, LED indicator, ranging potentiometer and 6-ft. transducer cable are included. Optional cable lengths are available.

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Proximity Detection

Proximity detection is the detection of an object in a given range. The detection range of the RPS-300-T 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. The Proximity Option is denoted by the part number RPS-300-14-T.

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-300-36-T-500)

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Specifications:

Operational Range	Adjustable 4" to 14"
	Adjustable 5" to 36"
Power Input <i>* Only 120VAC or 24VDC with 500 Analog card.</i>	120VAC 15 - 24VDC 12VDC Regulated 12 - 17VAC
Input Current	30 Milliamps
Input with 500 card	50 Milliamps
Ambient Temperature	0°C to 60°C or 32°F to 140°F
Controller	Metal Enclosed
Transducer Housing	Teflon
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	180kHz for 14" and 36"
Response Time	4" to 14" 5" to 36" 30mS - On 50mS - On 30mS - Off 50mS - Off
Weight of Controller	34.2 ounces
Weight of Transducer	4.5 ounces

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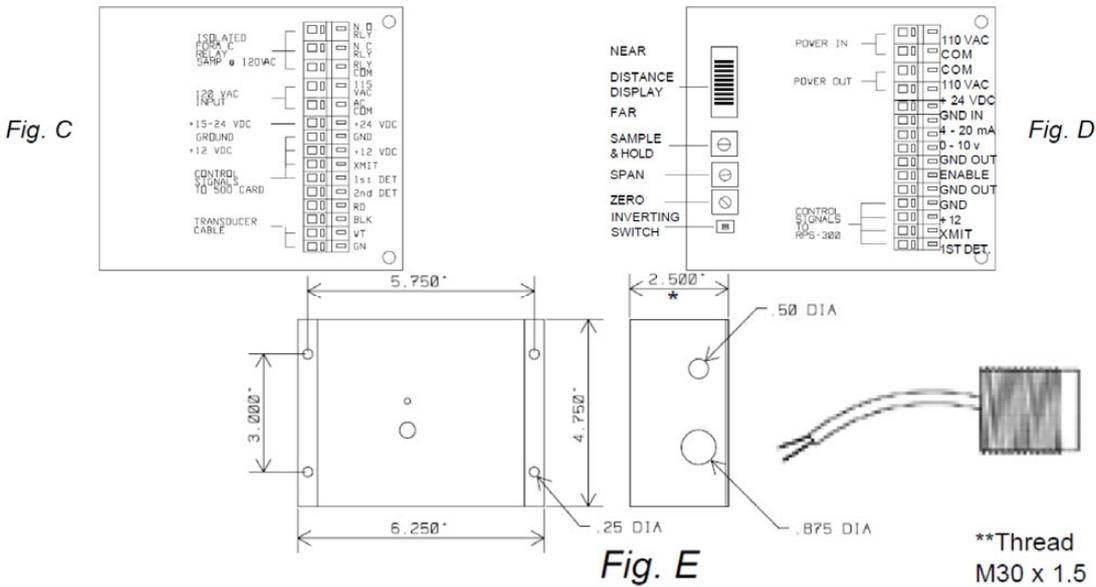
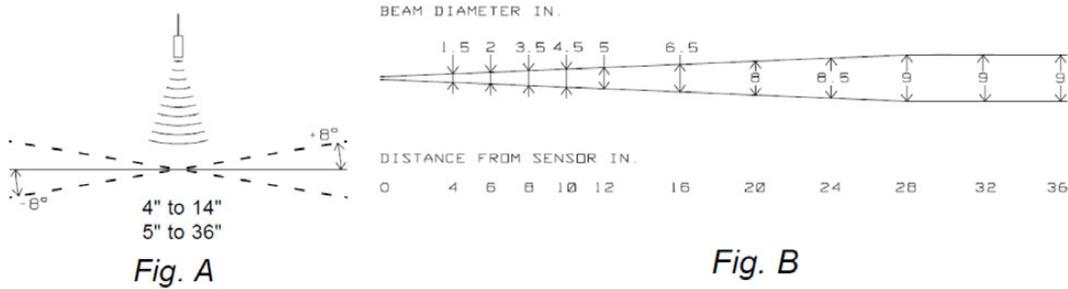


Figure:

- A - Angle of Tilt
 - B - Beam Spread
 - C - Wiring Diag.- For RPS-300
 - D - Wiring Diag.- For RPS-500
 - E - Mounting Dimensions
- * Dimension changes from 2.5" to 3.75" when ordered with 500 Analog Ranging card.

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Ordering Code

Part Number	Range	Output
RPS-300-14-T RPS-300-36-T	4" - 14" 5" - 36"	Isolated form C Relay
RPS-300-14-T-500 RPS-300-36-T-500	4" - 14" 5" - 36"	0 - 10VDC and 4 - 20mA Analog

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

Deeter Electronics Ltd follows a policy of continual development of its products and reserves the right to change specifications and/or features without notice