

## Series 600 Instrument Grade Transducer

SensComp's Series 600 Instrument Grade Electrostatic Ultrasonic Sensor is specifically intended for operation in air at ultrasonic frequencies. The assembly comes complete with a perforated protective cover.

### Features

50 kHz Electrostatic Ultrasonic Sensor  
Beam Angle of 15° at -6 dB  
Ranges from 6" to 35'  
Excellent Receive Sensitivity  
Integral Perforated Protective Cover.  
Specifically Intended for Operation in Air at Ultrasonic Frequencies

### Part No.

\*PID# 604142 – Series 600 Instrument Grade Ultrasonic Sensor

\*RoHS Compliant

### Benefits

Able to Range from 6" to 35'  
Excellent Receive Sensitivity

### Applications

Level Measurement, Proximity Detection, Presence Detection, Robotics, Educational Products

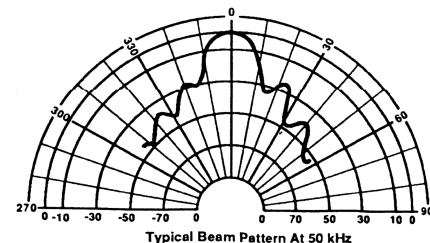
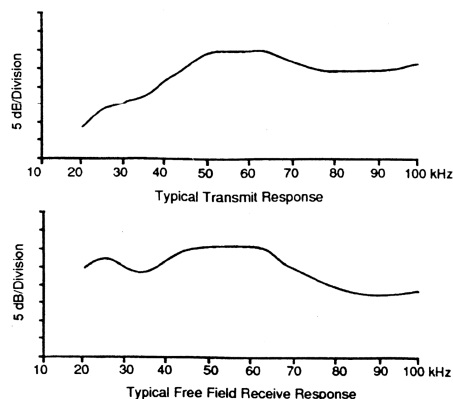
## Specifications



### Description

The Series 600 ultra-sensitive ultrasonic sensors feature ranging capability from 2.5 cm to 15.2 m when used with SensComp drive electronics. They are ideally suited for demanding applications where the most sensitivity possible is the highest priority. These ultrasonic sensors are among the best available when detecting soft targets. They have a broad band frequency response.

### Transmit/Receive Response & Beam Pattern



Note: dB normalized to on-axis response.  
Note: Curves are representative only. Individual responses may differ.

## Series 600 Instrument Grade Specifications

### Usable Frequency Range

Transmitting..... See Graph

Receiving ..... See Graph

Beam Pattern ..... See Graph

Typical: 15° at -6dB

Transmitting Sensitivity ..... 110 dB min

at 50.0 kHz; 0dB re 20  $\mu$ Pa at 1 meter

(300 VAC<sub>PP</sub>; 150 VDC bias)

Receiving Sensitivity ..... -42 dB min

at 50.0 kHz; 0dB = 1 volt/ Pa

(150 VDC bias)

Distance Range ..... 0.15 to 10.7 M

(0.5 to 35 feet)

Resolution ( $\pm$  1% over entire range) .....  $\pm$  3mm to 3m

( $\pm$  0.12 to 10 ft)

Weight..... 8.2 gm (0.29 oz)

Suggested DC Bias Voltage ..... 200V

Suggested AC Driving Voltage..... 200V peak

Combined Voltage ..... 400V max

Capacitance at 1 kHz (typical) ..... 400–500 pf  
(at 150 VDC bias)

Operating Temperature..... -40 to +85° C  
(-40 to 185° F)

Relative Humidity (non-condensing) ..... 5% - 95%

### Dimension

Thickness..... 0.46 inch

Diameter ..... 1.69 inch

### Standard Finish

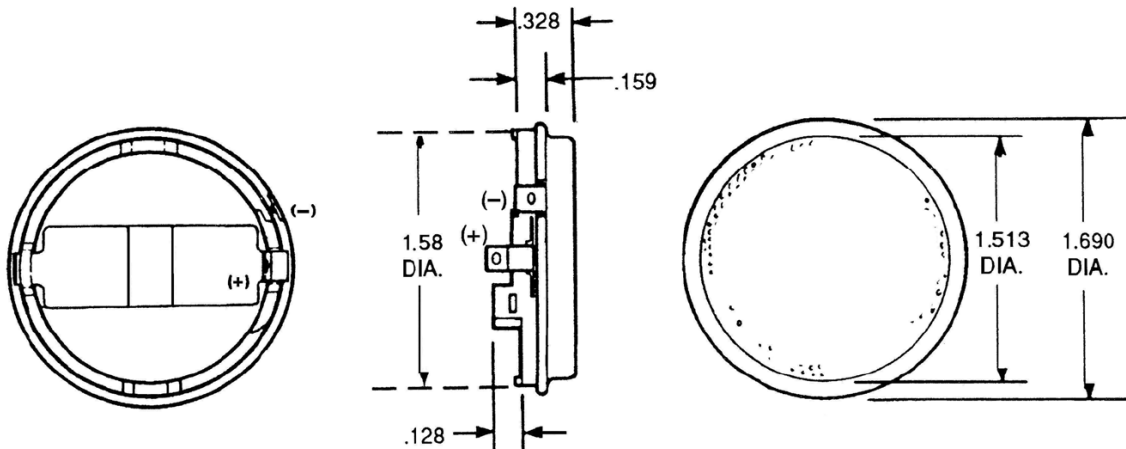
Foil ..... Gold

Housing ..... Satin Black  
Painted 304  
Stainless Steel

### Notes:

[1] Lines which may occasionally appear in foil have no effect on product functionality or performance.

[2] Variations in die depth may result in minor variations of tolerances.



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