

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

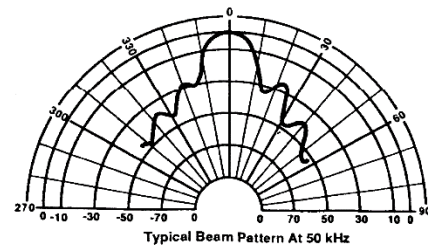
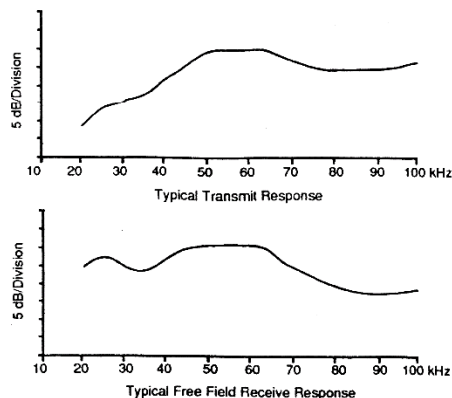
Specifications



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 μ Pa at 1 meter
(300 VAC_{PP}; 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 V

Suggested AC Driving Voltage 200V peak

Combined Voltage V 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

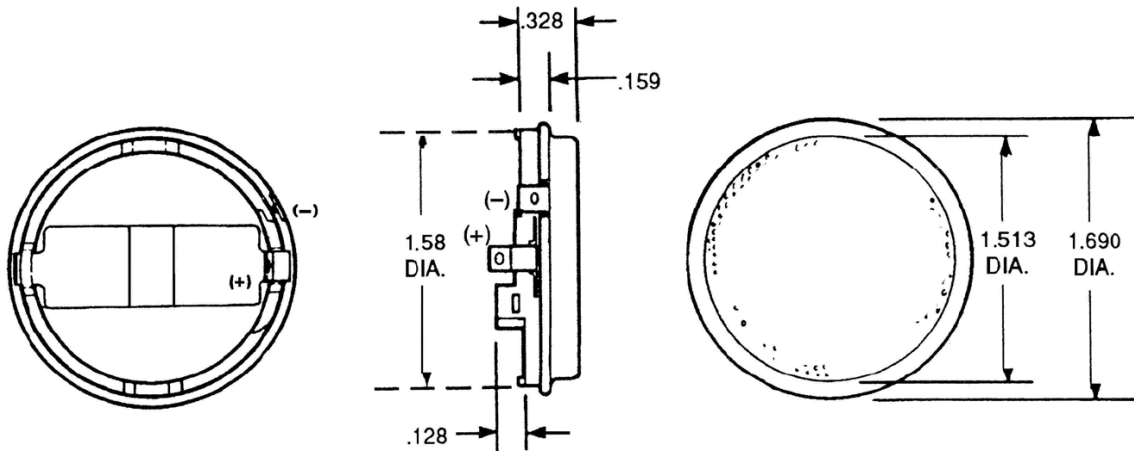
Foil Gold

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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