

## Description

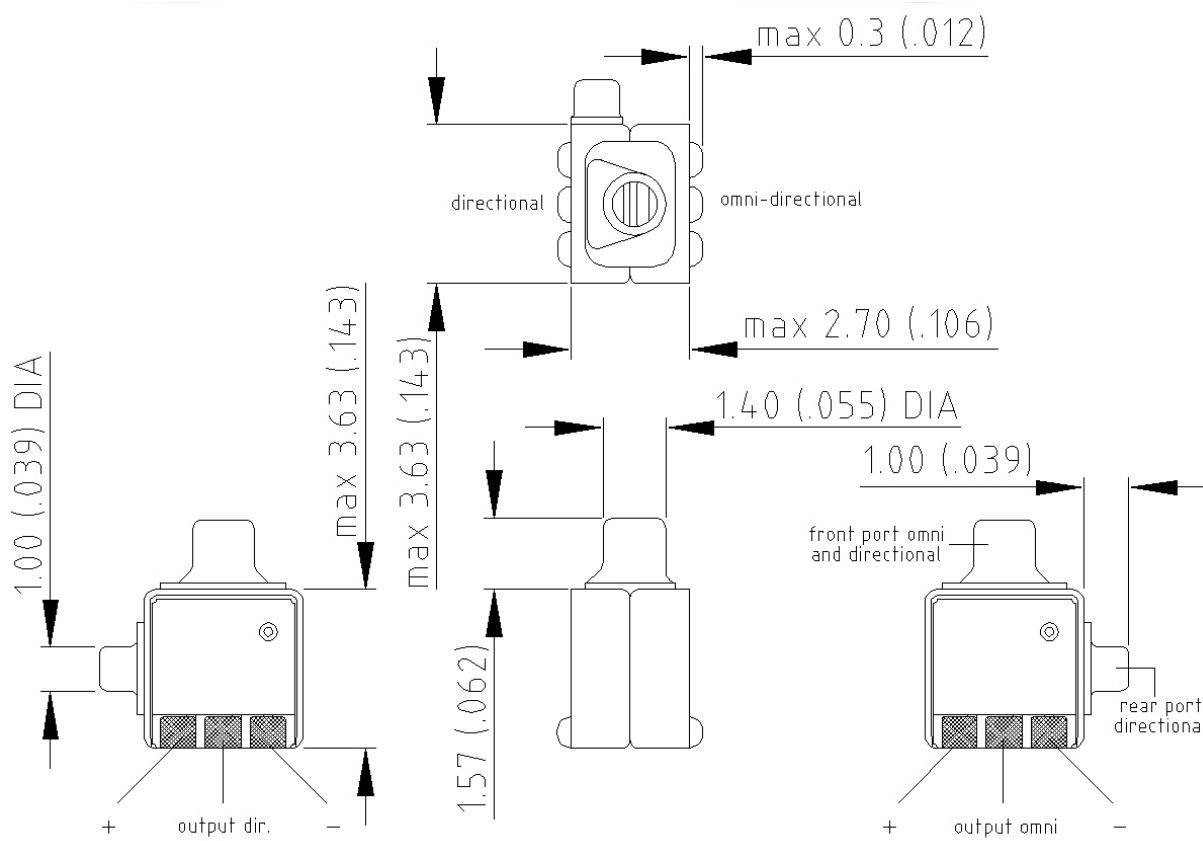
The 6903 is a unit consisting of a directional and an omni-directional microphone for hearing instruments. Due to the compact size, this unit is excellent for use in a BTE, ITE and ITC configuration. For the directional mode, no gain switching is needed since the sensitivity at 1 kHz is equal to the omni-directional mode. The unit is equipped with special integrated amplifiers to increase the sensitivity. It has a decreased sensitivity for high frequency spurious signals and an improved ESD protection.



## Features

- Superior Performance
- Great For Any Hearing Instrument Size
- Two Microphone Module: Directional and Omni Modes
- Different Size Spouts Available

## Product drawing - Dimensions in mm [inch]



Sonion reserves the right to make changes at any time to improve reliability, function or design, in order to provide the best product possible.

## Specifications

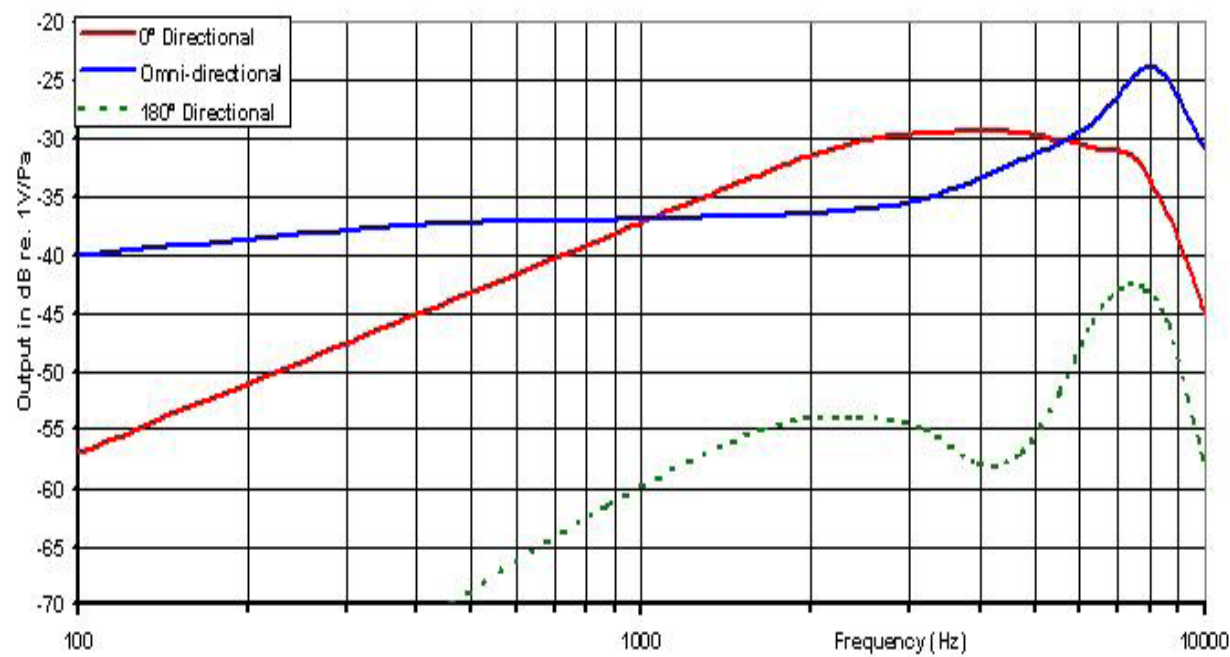
Measuring conditions unless otherwise stated: Supply 1,3V, open sound ports without tubing and with the front port in the direction of the sound source. Environmental conditions: 23°C (73.4F), 50% RH.

Parameters directional		Min	Typ	Max	Unit	Comments
Sensitivity *	@ 300 Hz	-14	-11	-8	dB	re. 1 kHz value
	@ 1 kHz	-40	-37	-34	dB	re. 1V per Pascal
	@ 3 kHz	2	5	8	dB	re. 1 kHz value
Peak frequency			3		kHz	Approx.
Equivalent noise (A-weighted)			34	37	dB SPL	
Battery voltage range		0.9	1.3	5	VDC	
Battery drain		20	40	50	µA	
Output impedance **		2	3	5.5	kOhm	
Delay time		6.5	7.5	8.5	µs	
Null angle		132	142	152	Degrees	
AI-DI			5.4		dB	
ESD protection level		5			kV	

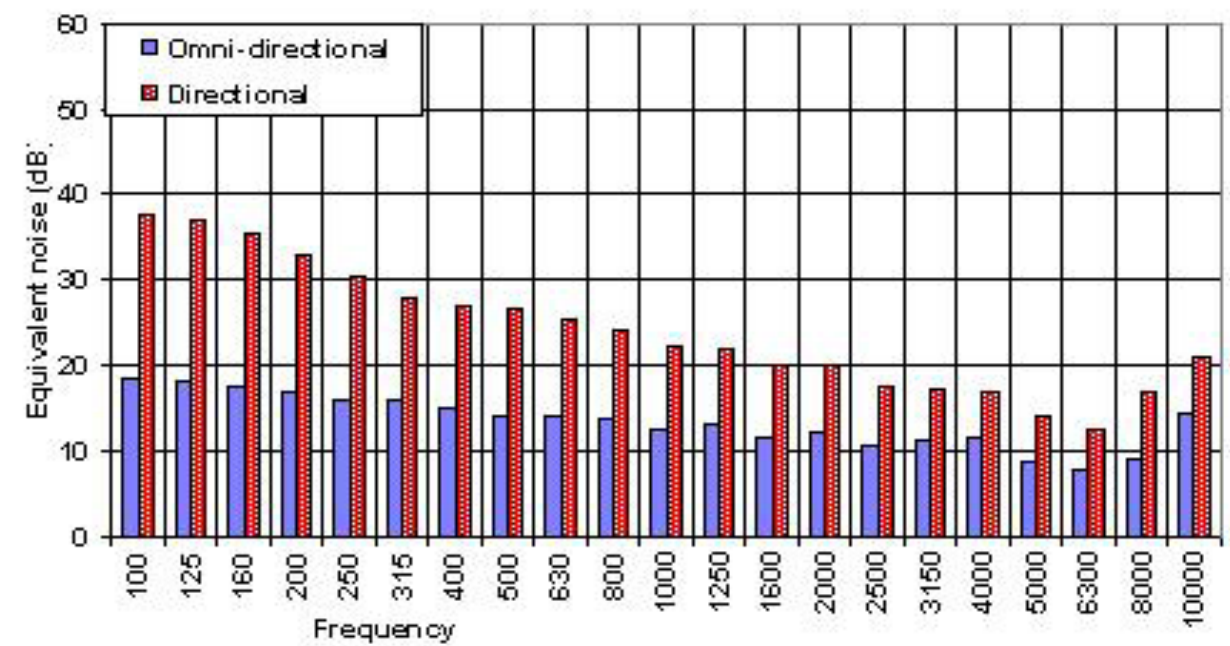
Parameters omni-directional		Min	Typ	Max	Unit	Comments
Sensitivity *	@ 300 Hz	-8	-6	-4	dB	re. 1 kHz value
	@ 1 kHz	-40	-37	-34	dB	re. 1V per Pascal
	@ 7 kHz	9	12	15	dB	re. 1 kHz value
Peak frequency			7.5		kHz	Approx.
Equivalent noise (A-weighted)			27	30	dB SPL	
Battery voltage range		0.9	1.3	5	VDC	
Battery drain		20	40	50	µA	
Output impedance **		2	3	5.5	kOhm	
ESD protection level		5			kV	
Humidity coefficient of sensitivity			0.03		dB/%RH	
Operating temperature range		-17	23	63	°C	
Storage temperature range		-40		63	°C	
ESD protection level: Class 3 according to MIL-STD-750D, test method 1020,2.						
Apply protection in accordance with IEC 61340-5-1 and 61340-5-2.						
* Sensitivity change on reducing supply to 0.9 VDC: 3 dB max.						
** Output impedance at 0.9 VDC supply: 7.5 kOhm max.						

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Typical response curve

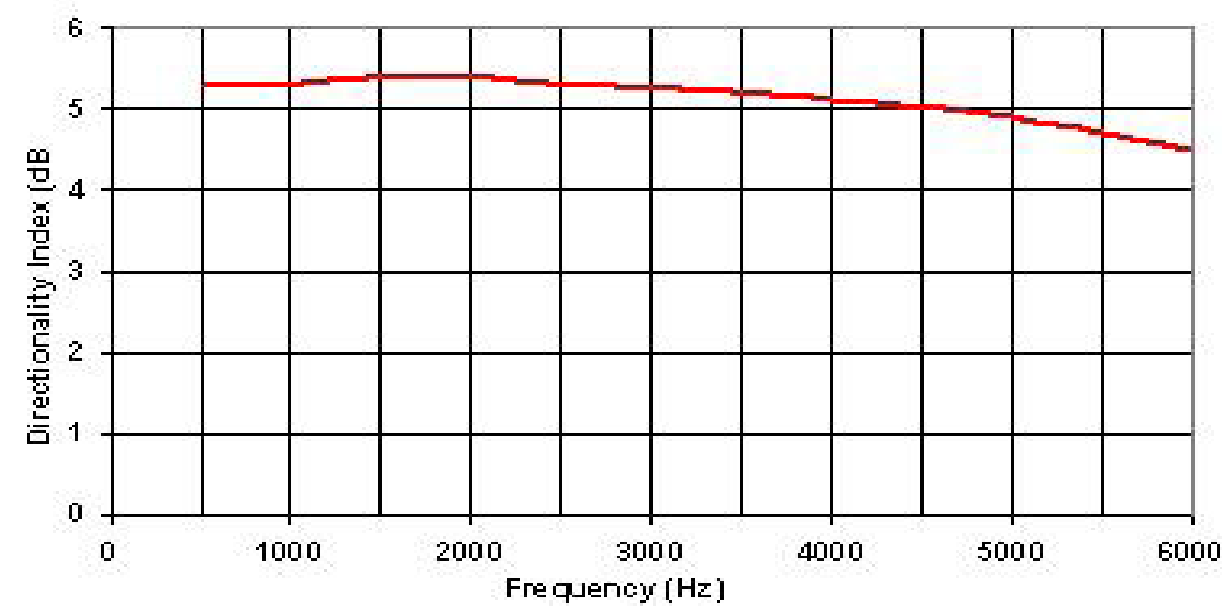


Typical 1/3 octave equivalent noise

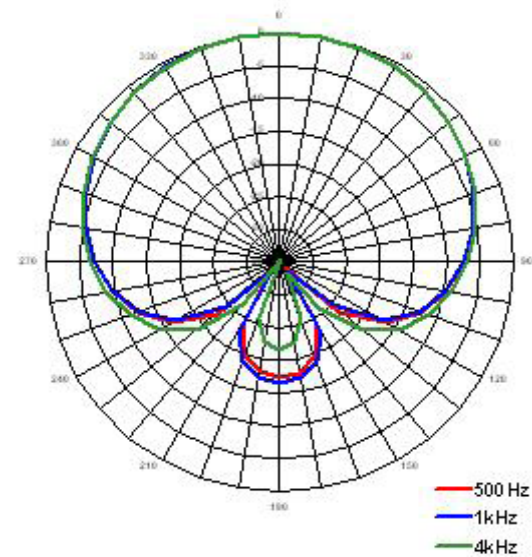


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Typical response curve



Polar plot



Note: when tubing is applied the polar responses and sensitivity of the directional microphone will change according to the new port spacing

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