

# Pure<sup>®</sup> 312 X

## Technical Data

Made for  
 iPhone | iPad | iPod

7X

5X

3X

DX



### S-Receiver

- 56 dB / 119 dB SPL (ear simulator)
- 45 dB / 108 dB SPL (2 ccm coupler)

### M-Receiver

- 70 dB / 129 dB SPL (ear simulator)
- 60 dB / 119 dB SPL (2 ccm coupler)

### P-Receiver

- 80 dB / 134 dB SPL (ear simulator)
- 70 dB / 124 dB SPL (2 ccm coupler)

### HP-Receiver

- 82 dB / 138 dB SPL (ear simulator)
- 75 dB / 130 dB SPL (2 ccm coupler)

# Pure 312 X | Technical Data

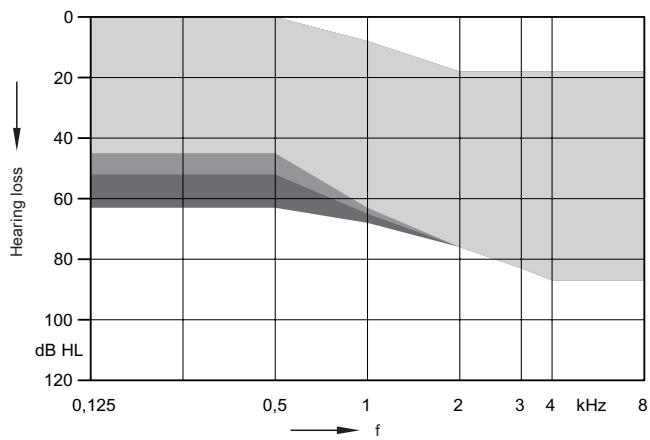
Type	S-Receiver		M-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
<b>Output sound pressure level</b>				
at 1.6 kHz	–	109 dB SPL	–	123 dB SPL
Peak	108 dB SPL	119 dB SPL	119 dB SPL	129 dB SPL
HFA-OSPL 90	101 dB SPL	–	113 dB SPL	–
<b>Gain</b>				
Full on gain (FOG) at 1.6 kHz	–	43 dB	–	55 dB
Full on gain (Peak)	45 dB	56 dB	60 dB	70 dB
HFA-FOG	37 dB	–	50 dB	–
Reference test gain	24 dB	34 dB	36 dB	48 dB
<b>Frequency, noise and directivity</b>				
Frequency range 7X 5X / 3X	100 - 10000 Hz 100 - 8200 Hz	100 - 10000 Hz 100 - 8300 Hz	100 - 9400 Hz 100 - 8200 Hz	100 - 10000 Hz 100 - 8300 Hz
Equivalent input noise	17 dB SPL	21 dB SPL	17 dB SPL	22 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 1 / 1 / 1 %	1 / 1 / 2 / - %	1 / 2 / 1 / 1 %	2 / 3 / 2 / - %
Tinnitus therapy broadband	65 dB SPL	–	70 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
<b>Inductive coil sensitivity</b>				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
HFA SPLIV	–	–	–	–
<b>Battery</b>				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.7 mA	1.7 mA	1.9 mA	1.9 mA
Battery life (cell zinc air)	~78 h		~76 h	
Battery life (rechargeable)	–		–	
<b>IRIL IEC 60118-13:2016 Ed. 4.0</b>				
700-960 MHz (rating)	user		user	
1400-2000 MHz (rating)	user		user	
2000-2700 MHz (rating)	user		user	
<b>ANSI C63.19-2011</b>				
800-950 MHz (rating)	M4		M4	
1600-2500 MHz (rating)	M4		M4	

# Pure 312 X | Technical Data

Type	P-Receiver		HP-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
<b>Output sound pressure level</b>				
at 1.6 kHz	–	128 dB SPL	–	137 dB SPL
Peak	124 dB SPL	134 dB SPL	130 dB SPL	138 dB SPL
HFA-OSPL 90	119 dB SPL	–	123 dB SPL	–
<b>Gain</b>				
Full on gain (FOG) at 1.6 kHz	–	70 dB	–	82 dB
Full on gain (Peak)	70 dB	80 dB	75 dB	82 dB
HFA-FOG	63 dB	–	68 dB	–
Reference test gain	42 dB	53 dB	46 dB	62 dB
<b>Frequency, noise and directivity</b>				
Frequency range 7X 5X / 3X	100 - 7500 Hz 100 - 7500 Hz	100 - 8100 Hz 100 - 8100 Hz	100 - 7300 Hz 100 - 7300 Hz	250 - 6100 Hz 250 - 6100 Hz
Equivalent input noise	16 dB SPL	20 dB SPL	14 dB SPL	10 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 2 / 1 / 1 %	3 / 4 / 2 / - %	1 / 2 / 1 / 1 %	2 / 2 / 1 / - %
Tinnitus therapy broadband	75 dB SPL	–	85 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
<b>Inductive coil sensitivity</b>				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
HFA SPLIV	–	–	–	–
<b>Battery</b>				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.8 mA	1.8 mA	1.8 mA	1.8 mA
Battery life (cell zinc air)	~76 h		~76 h	
Battery life (rechargeable)	–		–	
<b>IRIL IEC 60118-13:2016 Ed. 4.0</b>				
700-960 MHz (rating)	user		user	
1400-2000 MHz (rating)	user		user	
2000-2700 MHz (rating)	user		user	
<b>ANSI C63.19-2011</b>				
800-950 MHz (rating)	M4		M4	
1600-2500 MHz (rating)	M4		M4	

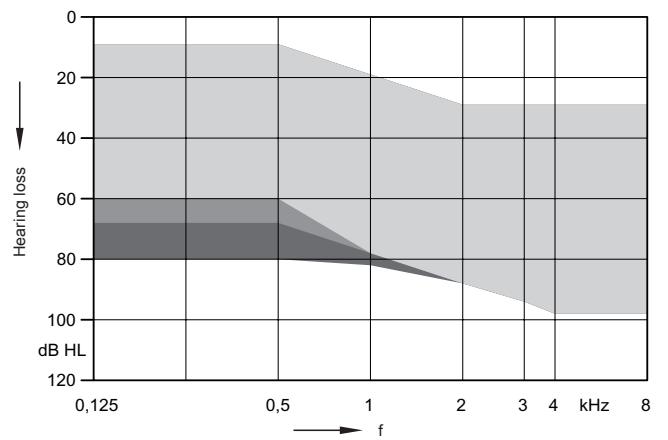
# Pure 312 X | Fitting Range

## S-Receiver



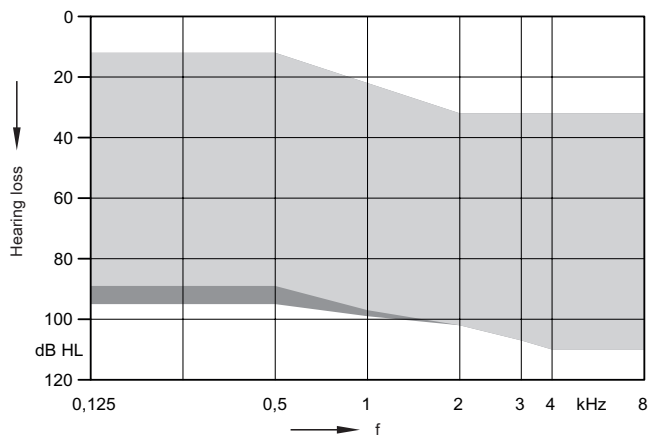
Open Click Domes  
 +  Double Click Domes  
 +  +  Click Mold (no vent)

## M-Receiver



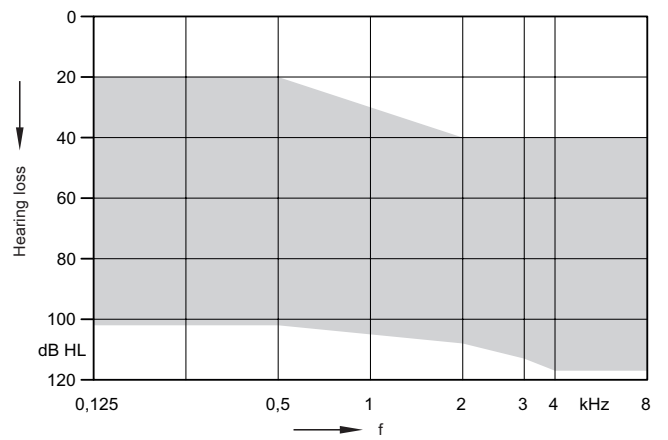
Open Click Domes  
 +  Double Click Domes  
 +  +  Click Mold (no vent)

## P-Receiver



Double Click Domes  
 +  Click Mold (no vent)

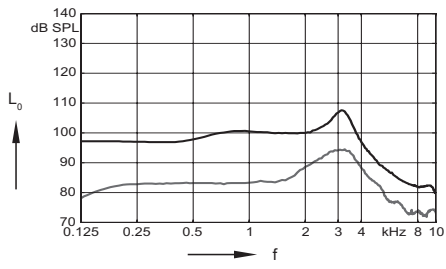
## HP-Receiver



Custom Shell (no vent)

# S-Receiver (Closed Click Dome) | Basic Data

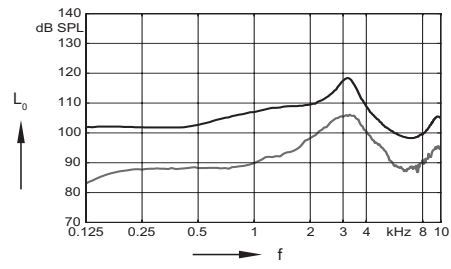
## 2 ccm coupler



**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

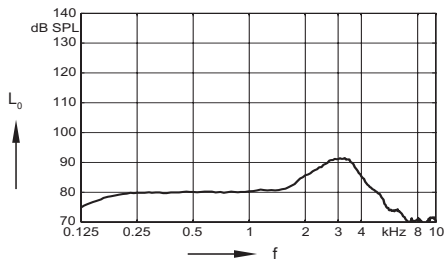
**Full on gain**  
(L<sub>1</sub> = 50 dB)

## Ear simulator

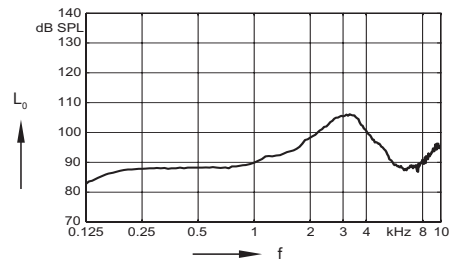


**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

**Full on gain**  
(L<sub>1</sub> = 50 dB)



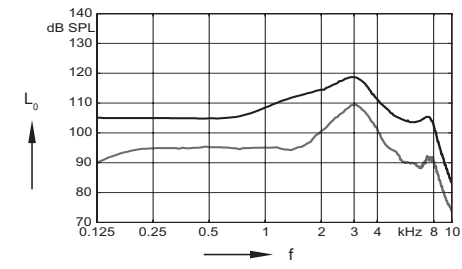
**Frequency response**  
(L<sub>1</sub> = 60 dB)



**Basic acoustic response**  
(L<sub>1</sub> = 60 dB)

# M-Receiver (Closed Click Dome) | Basic Data

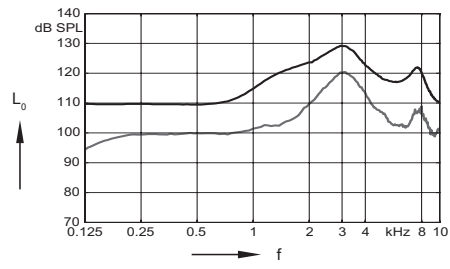
## 2 ccm coupler



**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

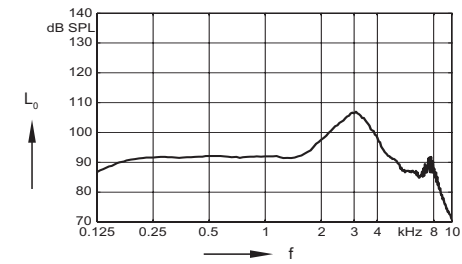
**Full on gain**  
(L<sub>1</sub> = 50 dB)

## Ear simulator

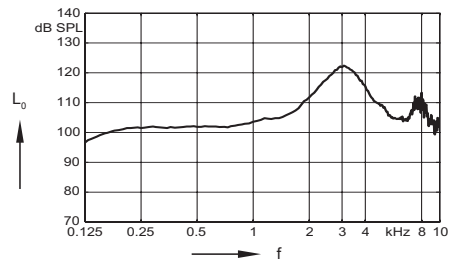


**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

**Full on gain**  
(L<sub>1</sub> = 50 dB)



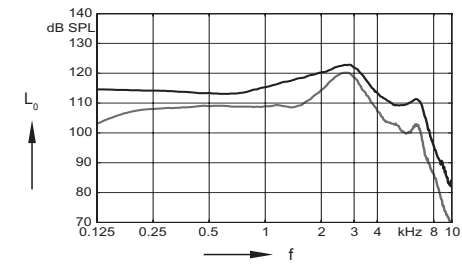
**Frequency response**  
(L<sub>1</sub> = 60 dB)



**Basic acoustic response**  
(L<sub>1</sub> = 60 dB)

# P-Receiver (Click mold) | Basic Data

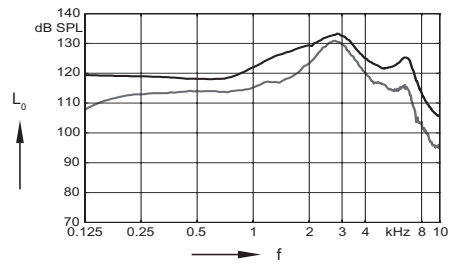
## 2 ccm coupler



**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

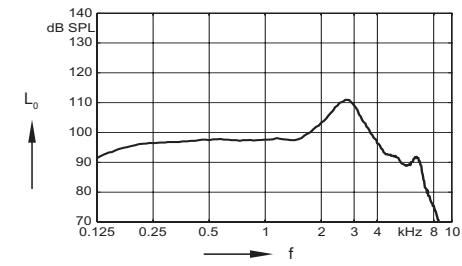
**Full on gain**  
(L<sub>1</sub> = 50 dB)

## Ear simulator

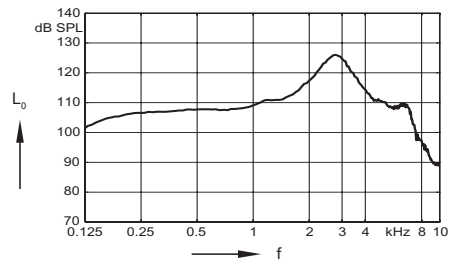


**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

**Full on gain**  
(L<sub>1</sub> = 50 dB)



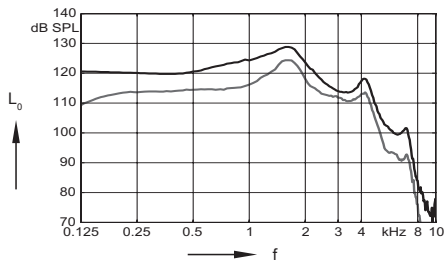
**Frequency response**  
(L<sub>1</sub> = 60 dB)



**Basic acoustic response**  
(L<sub>1</sub> = 60 dB)

# HP-Receiver (Custom Shell) | Basic Data

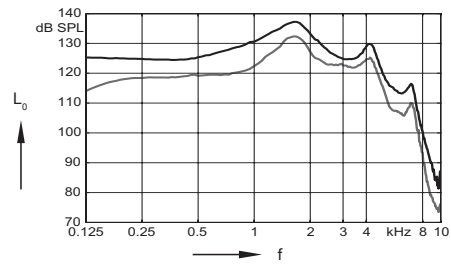
## 2 ccm coupler



**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

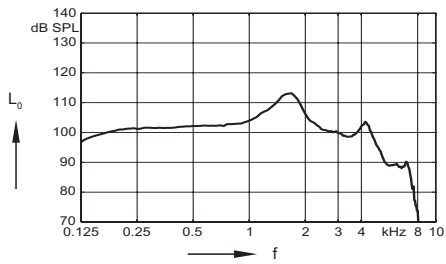
Full on gain  
(L<sub>1</sub> = 50 dB)

## Ear simulator

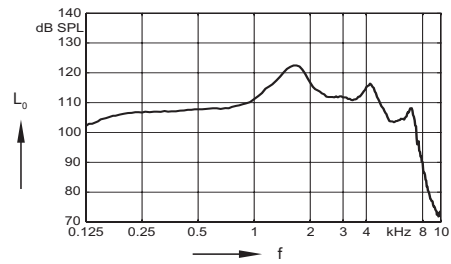


**Output sound pressure level**  
(L<sub>1</sub> = 90 dB)

Full on gain  
(L<sub>1</sub> = 50 dB)



**Frequency response**  
(L<sub>1</sub> = 60 dB)



**Basic acoustic response**  
(L<sub>1</sub> = 60 dB)



# Pure 312 X | Features and Accessories

	7X	5X	3X
<b>Audiology</b>			
YourSound Technology	■■■■■	■■■■■	■■■■■
Own Voice Processing (OVP) <sup>1)</sup>	■■■■■	■■■■■	■■■■■
Signal processing (channels) / Gain/MPO (handles)	48 / 20	32 / 16	24 / 12
Hearing programs	6	6	6
<b>Sound Clarity</b>			
Extended dynamic range	●	●	●
Extended bandwidth	●	—	—
EchoShield	●	—	—
HD Music (presets)	3	3	1
eWindScreen® binaural <sup>1) 2)</sup>	●	●	—
eWindScreen	●	●	●
Noise Management			
Speech and noise management (steps)	7	5	3
SoundSmoothing (steps)	3	3	1
Directional speech enhancement (steps)	3	1	1
Feedback cancellation	●	●	●
<b>Speech Quality</b>			
Directionality			
Narrow Directionality <sup>1)</sup>	●	●	●
Spatial SpeechFocus <sup>1) 3)</sup>	●	●	—
SpeechFocus	●	●	—
TwinPhone <sup>1)</sup>	●	●	●
Frequency compression	●	●	●
<b>Direct Streaming</b>			
Made for iPhone	●	●	●
Adaptive Streaming Volume <sup>4)</sup>	●	●	●
<b>Tinnitus</b>			
Notched Noise Therapy	●	●	●
Tinnitus therapy	●	●	●
<b>Fitting</b>			
Smart Optimizer and Data Logging	●	●	●
Acclimatization manager	●	●	●
Performance Guide	●	●	●
Insitugram	●	●	●
Learning (classes)	6	3	1
TeleCare	●	●	●

<sup>1)</sup> req. bilateral fitting

<sup>2)</sup> not available in the universal program on 5X

<sup>3)</sup> for 5X in Stroll Program or with Spatial Configurator only

<sup>4)</sup> streaming only

● available ■■■■■ highest feature performance — not available

## Pure 312 X | Features and Accessories

	7X / 5X / 3X
<b>Style specific features</b>	
Ingress Protection Rating	IP68
Charging contacts	—
Battery Size	312
Battery door on/off function	●
Nanocoated housing	●
e2e wireless® 3.0	●
User controls coupling via e2e	●
Wireless programming	●
<b>Instrument configurations</b>	
Flat cover	—
Rotary volume control	—
Push button	—
Rocker switch	●
Color conversion kit	○
Color conversion kit with T-Coil	○
Battery door – child lock	—
Small earhook	—
<b>Programming accessories</b>	
ConnexxAir / ConnexxLink®	— / —
NoahLink wireless	●
Programming adapter / cable	—
<b>Accessories</b>	
miniPocket®	○
StreamLine TV	○
StreamLine Mic	○
<b>Apps</b>	
Signia App	○

● available ○ optional — not available



# Abbreviations and Standards

## Abbreviations

The following abbreviations are used in this datasheet:

OSPL	Output Sound Pressure Level
HFA	High Frequency Average
FOG	Full On Gain
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Equivalent Telephone Sensitivity
SPLIV	SPL In a Vertical magnetic field
AI-DI	Articulation Index - Directivity Index
IRIL	Input Related Interference Level
RTF	Reference Test Frequency

## Standards and additional information

- ▶ All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2014 and IEC 60118-0:2015 if applicable.
- ▶ All measurements with an ear simulator were performed according to IEC 118-0/A1:1994 and to DIN 45605 (frequency range) if applicable.
- ▶ Curves and figures representing FOG are measured with 20 dB reduction and 70 dB SPL input level.
- ▶ Figures representing Equivalent Input Noise incorporate a moderate expansion.
- ▶ Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil battery door only.
- ▶ Tinnitus therapy measurement conditions: all tinnitus single frequency sliders in max position, master volume slider in default position (0 dB) and local volume control in default position.
- ▶ The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing instruments supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- ▶ The battery life is based on first fit settings using 60% of the fitting range and an ISTS (International Speech Test Signal) input signal at 65 dB SPL (note: pairing established). The actual battery life is determined by battery quality, hearing loss, sound environment, usage and activated feature set.
- ▶ The following acoustic connections / ear pieces were used:
  - S-Receiver Unit and M-Receiver Unit: Closed Click Dome
  - P-Receiver Unit: Click Mold
  - HP-Receiver Unit: Custom Shell
- ▶ Extended frequency range up to 12 kHz for 7X devices only.



“Made for iPod”, “Made for iPhone”, and “Made for iPad” mean that an electronic accessory has been designed to connect specifically to iPod, iPhone, or iPad, respectively, and has been certified by the developer to meet Apple performance standards. Apple is not responsible for the operation of this device or its compliance with safety and regulatory standards. Please note that the use of this accessory with iPod, iPhone, or iPad may affect wireless performance.

The information in this document contains general descriptions of the technical options available, which do not always have to be present in individual cases and are subject to change without prior notice. The required features should therefore be specified in each individual case at the time of conclusion of the respective contract.

### Legal Manufacturer

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Fax: (732) 562-6696  
www.sivantos.com

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### Warning

Choking hazard posed by small parts.

- ▶ This instrument is not intended for the fitting of infants, children under 3 years and persons of mental incapacity.



### Warning

Instrument has an output sound pressure level of 132 dB SPL or more.

- Risk of impairing the residual hearing of the user.
- ▶ Take special care when fitting this instrument.