Pure 312 AX

Technical Data

Made for iPhone | iPad | iPod

7AX 5AX 3AX 2AX 1AX DAX

S-Receiver

- 46 dB / 109 dB SPL (2 ccm coupler)
- 56 dB / 119 dB SPL (Ear simulator)

M-Receiver

- 58 dB / 117 dB SPL (2 ccm coupler)
- 68 dB / 127 dB SPL (Ear simulator)

P-Receiver

- 63 dB / 120 dB SPL (2 ccm coupler)
- 73 dB / 130 dB SPL (Ear simulator)

HP-Receiver

- 74 dB / 128 dB SPL (2 ccm coupler)
- 82 dB / 137 dB SPL (Ear simulator)

Data sheet also applicable for Pure 312 sDemo DAX

Pure 312 AX | Technical Data

Type	S-Receiver		M-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	110 dB SPL	–	121 dB SPL
OSPL 90 (Peak)	109 dB SPL	119 dB SPL	117 dB SPL	127 dB SPL
HFA-OSPL 90	102 dB SPL	–	114 dB SPL	–
Gain				
FOG at 1.6 kHz	–	44 dB	–	57 dB
FOG (peak)	46 dB	56 dB	58 dB	68 dB
HFA-FOG	38 dB	–	51 dB	–
Reference test gain	25 dB	35 dB	37 dB	47 dB
Frequency, noise and directivity				
Frequency range 7AX 5AX / 3AX / 2AX / 1AX	100 – 10000 Hz 100 – 8200 Hz	100 – 10000 Hz 100 – 8300 Hz	100 – 9500 Hz 100 – 8200 Hz	100 – 10000 Hz 100 – 8300 Hz
Equivalent input noise	14 dB SPL	19 dB SPL	18 dB SPL	21 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 1 / 1 / 1 %	1 / 2 / 1 / – %	1 / 1 / 1 / 1 %	2 / 2 / 3 / – %
Tinnitus Function broadband	65 dB SPL	–	70 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
HFA SPLIV	–	–	–	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.5 mA	1.5 mA	1.7 mA	1.7 mA
Battery runtime (without streaming)	up to 89 h		up to 84 h	
Battery runtime (incl. 20 h streaming)	up to 72 h		up to 69 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	–		–	

Please find additional information to the values on page “Further information”.

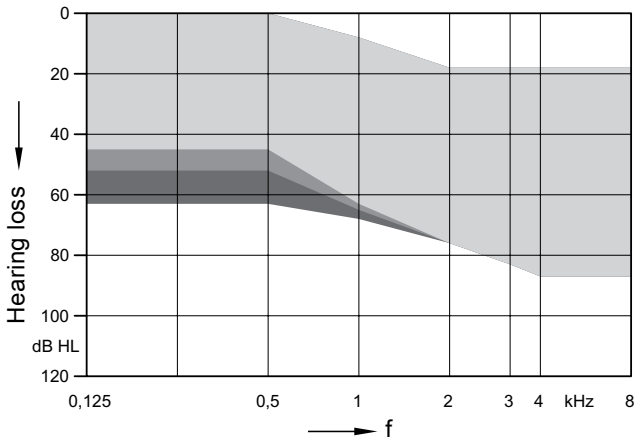
Pure 312 AX | Technical Data

Type	P-Receiver		HP-Receiver	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
OSPL 90 at 1.6 kHz	–	127 dB SPL	–	135 dB SPL
OSPL 90 (Peak)	120 dB SPL	130 dB SPL	128 dB SPL	137 dB SPL
HFA-OSPL 90	118 dB SPL	–	122 dB SPL	–
Gain				
FOG at 1.6 kHz	–	66 dB	–	81 dB
FOG (peak)	63 dB	73 dB	74 dB	82 dB
HFA-FOG	59 dB	–	67 dB	–
Reference test gain	41 dB	53 dB	46 dB	60 dB
Frequency, noise and directivity				
Frequency range 7AX 5AX / 3AX / 2AX / 1AX	100 – 7400 Hz 100 – 7400 Hz	100 – 8000 Hz 100 – 8000 Hz	100 – 7700 Hz 100 – 7700 Hz	200 – 7500 Hz 200 – 7500 Hz
Equivalent input noise	14 dB SPL	16 dB SPL	14 dB SPL	8 dB SPL
Total harmonic distortion at 500 / 800 / 1600 / 3200 Hz	1 / 2 / 1 / 1 %	2 / 4 / 2 / – %	1 / 2 / 1 / 1 %	2 / 2 / 1 / – %
Tinnitus Function broadband	75 dB SPL	–	85 dB SPL	–
AI-DI	4.0 dB		4.0 dB	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
HFA SPLIV	–	–	–	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.7 mA	1.6 mA	1.7 mA	1.6 mA
Battery runtime (without streaming)	up to 87 h		up to 87 h	
Battery runtime (incl. 20 h streaming)	up to 71 h		up to 71 h	
Cellphone Compatibility				
Microphone mode	0.65 – 0.96 GHz 1.4 – 2.7 GHz		0.65 – 0.96 GHz 1.4 – 2.7 GHz	
Telecoil mode	–		–	

Please find additional information to the values on page “Further information”.

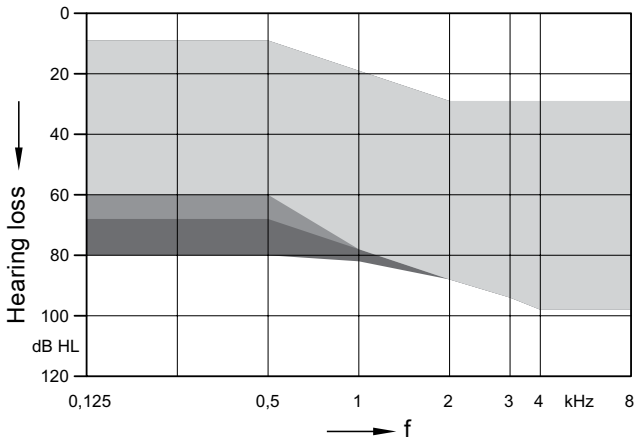
Pure 312 AX | Fitting Range

S-Receiver



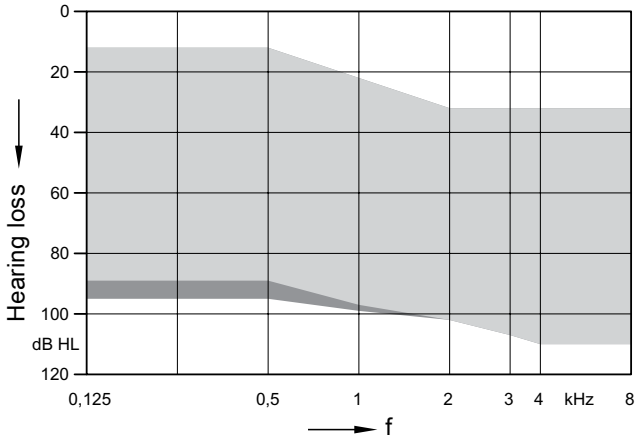
Eartip 3.0 Open
\+ Sleeve 3.0 Power
\+ + Earmold 3.0

M-Receiver



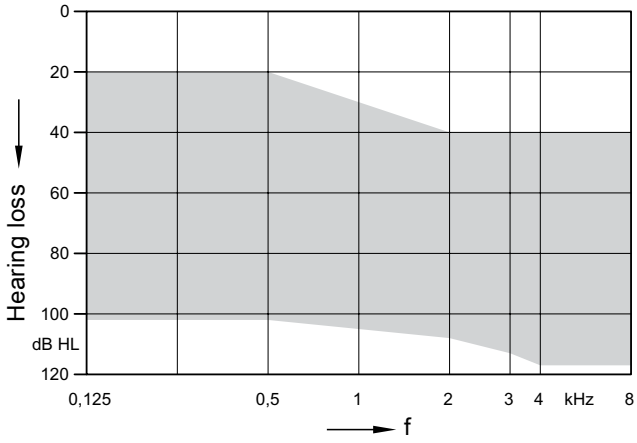
Eartip 3.0 Open
\+ Sleeve 3.0 Power
\+ + Earmold 3.0

P-Receiver



Sleeve 3.0 Power
\+ Earmold 3.0

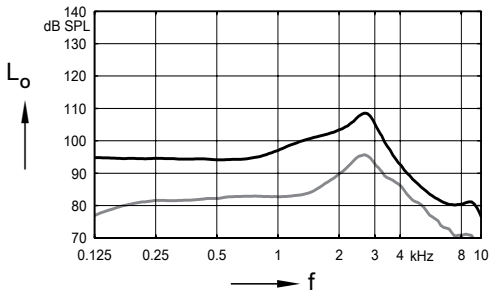
HP-Receiver



Custom Shell (no vent)

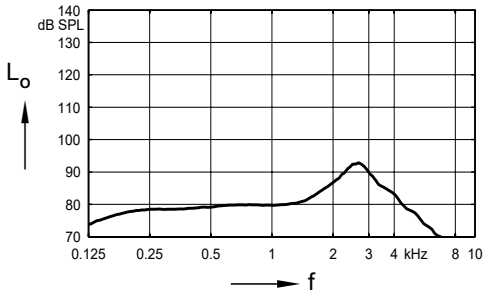
S-Receiver (Sleeve 3.0 Power) | Basic Data

2 ccm coupler



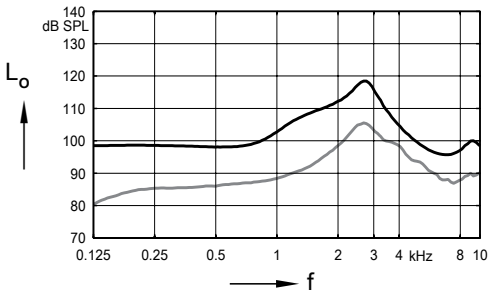
Max. Output sound pressure level (L_I = 90 dB)

Full on gain (L_I = 50 dB)



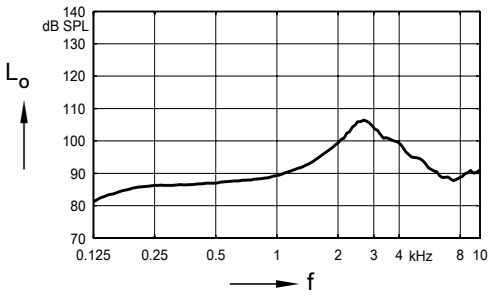
Frequency response (L_I = 60 dB)

Ear simulator



Max. Output sound pressure level (L_I = 90 dB)

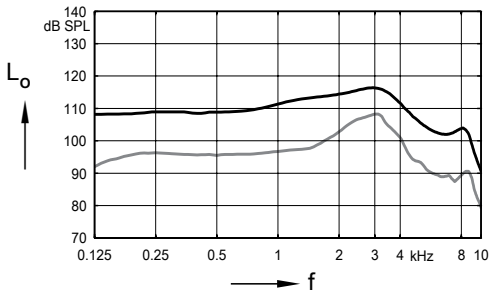
Full on gain (L_I = 50 dB)



Basic acoustic response (L_I = 60 dB)

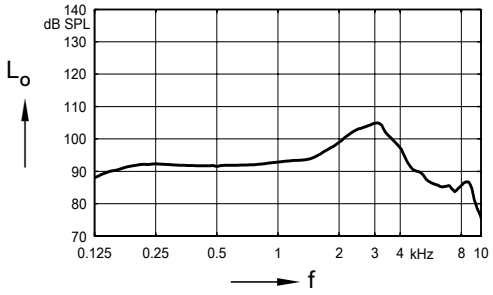
M-Receiver (Sleeve 3.0 Power) | Basic Data

2 ccm coupler



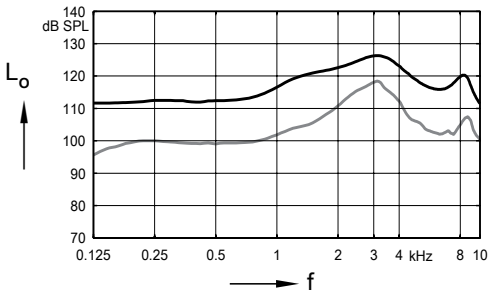
Max. Output sound pressure level (L_I = 90 dB)

Full on gain (L_I = 50 dB)



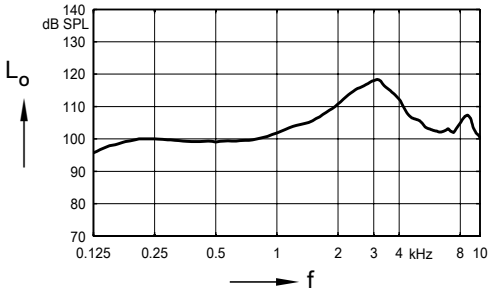
Frequency response (L_I = 60 dB)

Ear simulator



Max. Output sound pressure level (L_I = 90 dB)

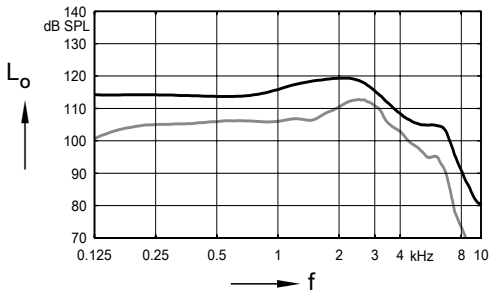
Full on gain (L_I = 50 dB)



Basic acoustic response (L_I = 60 dB)

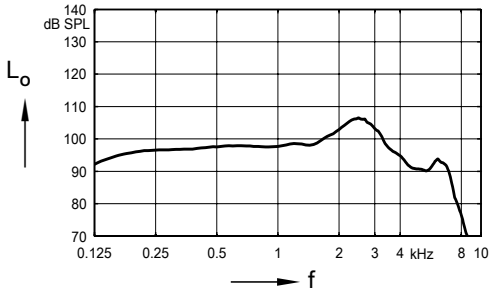
P-Receiver (Earmold 3.0) | Basic Data

2 ccm coupler



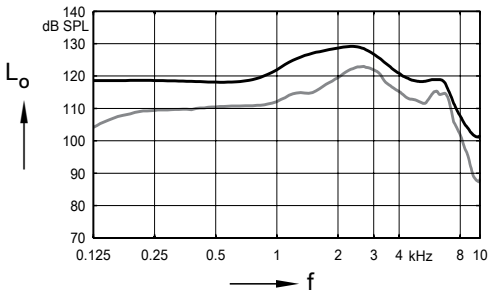
Max. Output sound pressure level (L_I = 90 dB)

Full on gain (L_I = 50 dB)



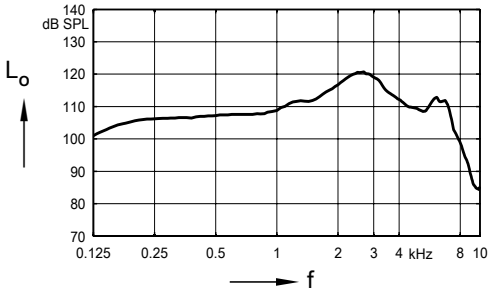
Frequency response (L_I = 60 dB)

Ear simulator



Max. Output sound pressure level (L_I = 90 dB)

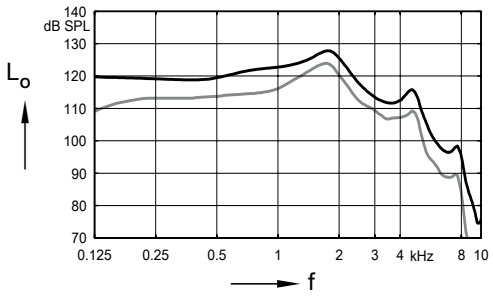
Full on gain (L_I = 50 dB)



Basic acoustic response (L_I = 60 dB)

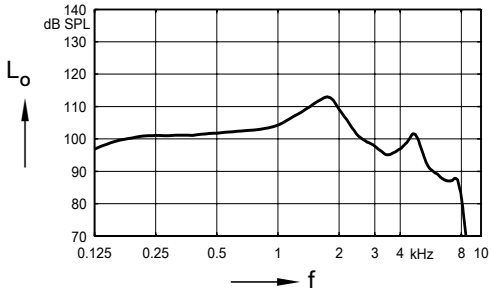
HP-Receiver (Custom Shell) | Basic Data

2 ccm coupler



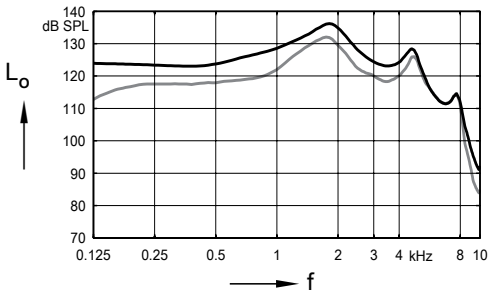
Max. Output sound pressure level (L_I = 90 dB)

Full on gain (L_I = 50 dB)



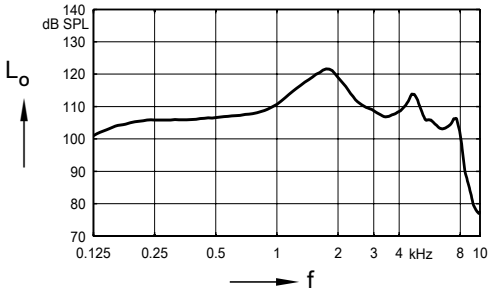
Frequency response (L_I = 60 dB)

Ear simulator



Max. Output sound pressure level (L_I = 90 dB)

Full on gain (L_I = 50 dB)



Basic acoustic response (L_I = 60 dB)

Pure 312 AX | Features and Accessories

	7AX	5AX	3AX	2AX	1AX
Dynamic Soundscape Processing 2.0	■■■■■	■■■■■	■■■■■	■■■	■■■
Augmented Focus	✓	✓	✓	✓	✓
Acoustic Sensor	✓	✓	✓	✓	✓
Motion Sensor	✓	✓	✓	—	—
OVP (Own Voice Processing) [1)]	✓	✓	✓	—	—
Sound Clarity	■■■■■	■■■■	■■■	■■■	■■
Signal processing (channels) / Gain&MPO (handles)	48 / 20	32 / 16	24 / 12	16 / 8	16 / 8
Hearing programs	6	6	6	4	4
Extended dynamic range	✓	✓	✓	✓	✓
Speech and noise management	✓	✓	✓	✓	✓
SoundSmoothing	✓	✓	✓	✓	—
Feedback cancellation	✓	✓	✓	✓	✓
HD Music (presets)	3	3	1	1	—
eWindScreen	✓	✓	✓	✓	—
Extended bandwidth	✓	—	—	—	—
EchoShield	✓	✓	—	—	—
Speech Quality	■■■■■	■■■■	■■■	■■	■■
Binaural Directionality	✓	✓	✓	—	—
Wireless CROS / BICROS	✓	✓	✓	✓	✓
Frequency compression	✓	✓	✓	✓	✓
Spatial SpeechFocus [1) 2)]	✓	✓	—	—	—
Wearer Interaction	■■■■■	■■■■■	■■■■	■■■■	■■■■
Signia Assistant	✓	✓	✓	✓	✓
Signia App (iOS and Android)	✓	✓	✓	✓	✓
Adaptive Streaming Volume [3)]	✓	✓	✓	✓	✓
Spatial Configurator	✓	✓	—	—	—
Direct Streaming	✓	✓	✓	✓	✓
Android devices (ASHA)	✓	✓	✓	✓	✓
Made for iPhone | iPad | iPod	✓	✓	✓	✓	✓
Tinnitus	✓	✓	✓	✓	—
Notched Amplification Therapy	✓	✓	✓	✓	—
Tinnitus noise therapy signal	✓	✓	✓	✓	—
Fitting	✓	✓	✓	✓	✓
Smart Optimizer and Data Logging	✓	✓	✓	✓	✓
Acclimatization manager	✓	✓	✓	✓	✓
InSituGram	✓	✓	✓	✓	✓
AutoFit	✓	✓	✓	✓	✓
TeleCare	✓	✓	✓	✓	✓
Remote Services	✓	✓	✓	✓	✓
Signia App	✓	✓	✓	✓	✓

[1)] req. bilateral fitting
[2)] for 5AX, right / left directionality available only in Stroll Program and via the Spatial Configurator
[3)] streaming only

■■■■■ highest feature performance
✓ available — not available O optional

Pure 312 AX | Features and Accessories

Style specific features	
Ingress Protection Rating	IP68
Charging contacts	—
Battery size	312
Battery door on / off function	✓
Nanocoated housing	✓
e2e wireless 4.0	✓
User controls coupling via e2e	✓
Wireless programming	✓
Instrument configurations	
Flat cover	—
Rotary volume control	—
Push button	—
Rocker switch	✓
Color conversion kit	O
Color conversion kit with T-Coil	—
T-Coil	—
Battery door – child lock	—
Small earhook	—
Programming accessories	
ConnexxAir / ConnexxLink	— / —
Noahlink Wireless	Mandatory
Programming adapter / cable	—
Accessories	
miniPocket	O
StreamLine TV	O
StreamLine Mic	O
CROS Pure C&G AX	O
CROS Pure 312 AX	O
CROS Styletto AX	—

✓ available — not available O optional

Pure 312 AX | Further information

Abbreviations

The following abbreviations are used in this datasheet:

SPL	Sound Pressure Level
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
ASHA	Audio streaming for hearing aids

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.
- All Cellphone Compatibility measurements were performed according to IEC 60118-13:2019, EN IEC 60118-13:2020 and ANSI C63.19-2019.
- Cellphone Compatibility definition: It is expected that the hearing aid user can effectively use a compliant wireless device held in a talking position at the ear. Maximum achievable Cellphone Compatibility range: 0.65 – 0.96 GHz and 1.4 – 2.7 GHz.
- 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.
- Tinnitus noiser 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.
- Inductive coil sensitivity values, inductive response curves and T ratings apply for instruments with telecoil only.
- The current consumption is measured in reference test setting (RTS) according to the applicable standards. Due to the settling behaviour of hearing aids supporting RF (radio frequency), the battery current is measured 3 minutes after turning on (note: no pairing).
- The battery runtime 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 runtime is determined by battery quality, hearing loss, sound environment, usage and activated feature set. Regarding RF usage (Bluetooth streaming) two different conditions are considered.
- Extended bandwidth up to 12 kHz for 7AX devices only.
- The following acoustic connections / ear pieces were used:
  - S-Receiver Unit and M-Receiver Unit: Sleeve 3.0 Power
  - P-Receiver Unit: Earmold 3.0
  - HP-Receiver Unit: Custom Shell

Made for iPhone | iPad | iPod

“Made for iPhone”, “Made for iPad”, and “Made for iPod” mean that an electronic accessory has been designed to connect specifically to iPhone, iPad, or iPod, 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 iPhone, iPad, or iPod 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.

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Denmark

CE
0123

Order No. 04842-99T01-7600

www.signia.net

⚠ **WARNING**

Choking hazard posed by small parts.

▶ This instrument is not intended for the fitting of infants, children under 3 years or 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.