





# ORION BTE Dijital programlanabilir işitme cihazı

ORION BTE S	ORION BTE M	ORION P
		
55 dB/124 dB SPL 16 kanal 32bant (8 frekans bandı, 24 kompresyon bandı)	60 dB/130 dB SPL, 16 kanal 32 bant (8 frekans bandı, 24 kompresyon bandı)	70 dB/130 dB SPL, 16 kanal 32 bant (8 frekans bandı, 24 kompresyon bandı)
PC Yüksek frekansta maksimum çıkış	PC Yüksek frekansta maksimum çıkış	PC Yüksek frekansta maksimum çıkış
MPO Düşük frekansta maksimum çıkış	MPO Düşük frekansta maksimum çıkış	MPO Düşük frekansta maksimum çıkış
TC Tını kontrol	TC Tını kontrol	TC Tını kontrol
AGC Otomatik kazanç kontrol	AGC Otomatik kazanç kontrol	AGC Otomatik kazanç kontrol
Otomatik yönsel mikrofon(çift mikrofon)	Otomatik yönsel mikrofon(çift mikrofon)	Otomatik yönsel mikrofon (çift mikrofon)
Frekans baskılama	Frekans baskılama	Frekans baskılama
Feedback yönetimi	Feedback yönetimi	Feedback yönetimi
Gürültü azaltma	Gürültü azaltma	Gürültü azaltma
RüzgarKalkanı	RüzgarKalkanı	Rüzgar kalkanı
Tinnitus noiser	Tinnitus noiser	Tinnitus noiser
Veri kaydı	Veri kaydı	Veri kaydı
Ses kontrol (manuel)	Ses kontrol (manuel)	Ses kontrol (manuel)
IP 67 sertifikası (toz geçirmez, suya dayanıklı)	IP 67 sertifikası (toz geçirmez, suya dayanıklı)	IP 67 sertifikası (toz geçirmez, suya dayanıklı)
-	Telecoil	Telecoil

ORION BTE S	ORION BTE M	ORION P
		
55 dB/124 dB SPL 16 kanal 32bant (8 frekans bandı, 24 kompresyon bandı)	60 dB/130 dB SPL, 16 kanal 32 bant (8 frekans bandı, 24 kompresyon bandı)	70 dB/130 dB SPL, 16 kanal 32 bant (8 frekans bandı, 24 kompresyon bandı)
312 numara pil	13 numara pil	13 numara pil
Pil kapağı ile açma kapama fonksiyonu	Pil kapağı ile açma kapama fonksiyonu	Pil kapağı ile açma kapama fonksiyonu
-	Pil kapağı kiliti	Pil kapağı kiliti
Nano kaplama kabin	Nano kaplama kabin	Nano kaplama kabin
e2e kablosuz iletişim	e2e kablosuz iletişim	e2e kablosuz iletişim
ConnexxLink ile kablosuz ayar	ConnexxLink ile kablosuz ayar	ConnexxLink ile kablosuz ayar
Ses değişimi	Ses değişimi (isteğe bağlı)	Ses değişimi (isteğe bağlı)
Program değişimi	Program değişimi (isteğe bağlı)	Program değişimi (isteğe bağlı)
Uyarı tonları	Uyarı tonları	Uyarı tonları
4 program	4 program	4 program
-	FM Uyumlu	FM Uyumlu
Aksesuarlar		
ProPocket kumanda	ProPocket kumanda	ProPocket kumanda
EasyPocket kumanda	EasyPocket kumanda	EasyPocket kumanda
ePen kumanda	ePen kumanda	ePen kumanda
ConnexxLink	ConnexxLink	ConnexxLink
-	Gözlük adaptörü	Gözlük

# Technical Data

## Orion™



S

M

P

### Orion S

#### Earhook damped

- 62 dB / 132 dB SPL (ear simulator)
- 55 dB / 124 dB SPL (2 ccm coupler)

#### LifeTube

- 53 dB / 125 dB SPL (ear simulator)
- 45 dB / 124 dB SPL (2 ccm coupler)

### Orion M

#### Earhook damped

- 68 dB / 136 dB SPL (ear simulator)
- 60 dB / 130 dB SPL (2 ccm coupler)

#### LifeTube

- 62 dB / 128 dB SPL (ear simulator)
- 53 dB / 125 dB SPL (2 ccm coupler)

### Orion P

#### Earhook damped

- 76 dB / 136 dB SPL (ear simulator)
- 70 dB / 130 dB SPL (2 ccm coupler)

#### Earhook undamped

- 78 dB / 139 dB SPL (ear simulator)
- 75 dB / 136 dB SPL (2 ccm coupler)

#### LifeTube

- 66 dB / 127 dB SPL (ear simulator)
- 65 dB / 125 dB SPL (2 ccm coupler)

#### Key features



- Audiological performance
- Wireless
- Broad range of styles

## Data Sheet



[www.siemens.com/hearing](http://www.siemens.com/hearing)

**SIEMENS**



# Orion S · Technical Data

Type	Earhook damped		LifeTube	
				
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
at 1.6 kHz	–	129 dB SPL	–	116 dB SPL
Peak	124 dB SPL	132 dB SPL	124 dB SPL	125 dB SPL
HFA-OSPL 90	121 dB SPL	–	113 dB SPL	–
Gain				
Full-on gain (FOG) at 1.6 kHz	–	49 dB	–	48 dB
Full-on gain (Peak)	55 dB	62 dB	45 dB	53 dB
HFA-FOG	42 dB	–	41 dB	–
Reference test gain	42 dB	42 dB	36 dB	41 dB
Frequency, noise and directivity				
Frequency range	100 - 7100 Hz	1000 - 7100 Hz	100 - 7100 Hz	280 - 7100 Hz
Equivalent input noise	18 dB	21 dB	15 dB	15 dB
Total harmonic distortion at 500 / 800 / 1600 Hz	2 / 1 / 1 %	2 / 1 / 1 %	1 / 1 / 2 %	1 / 1 / 2 %
AI-DI	3.5 dB		3.5 dB	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	–	–	–
HFA MASL (1 mA/m)	–	–	–	–
HFA SPLITS (left/right)	–	–	–	–
RSETS (left/right)	–	–	–	–
AGC-O (fully activated)				
Attack / release Time	3 / 90 ms	–	3 / 90 ms	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	0.8 mA		0.8 mA	
Battery life (cell zinc air)	~ 150 h		~ 150 h	
IRIL IEC 118-13:2011 (bystander)				
800 - 960 MHz	< - 10 dB SPL		< - 10 dB SPL	
1400 - 2000 MHz	< - 10 dB SPL		< - 10 dB SPL	
ANSI C63.19	M4		M4	

# Orion M · Technical Data

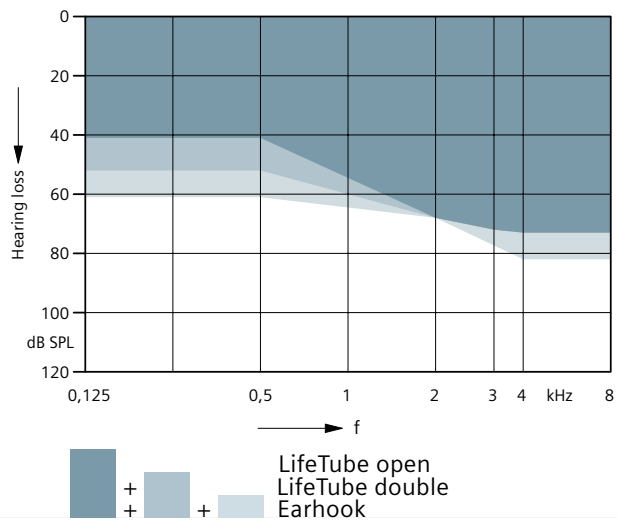
Type	Earhook damped		LifeTube	
				
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
at 1.6 kHz	–	133 dB SPL	–	121 dB SPL
Peak	130 dB SPL	136 dB SPL	125 dB SPL	128 dB SPL
HFA-OSPL 90	126 dB SPL	–	116 dB SPL	–
Gain				
Full-on gain (FOG) at 1.6 kHz	–	61 dB	–	54 dB
Full-on gain (Peak)	60 dB	68 dB	53 dB	62 dB
HFA-FOG	53 dB	–	46 dB	–
Reference test gain	49 dB	54 dB	39 dB	46 dB
Frequency, noise and directivity				
Frequency range	100 - 7000 Hz	320 - 7200 Hz	100 - 7000 Hz	120 - 7200 Hz
Equivalent input noise	19 dB	19 dB	19 dB	19 dB
Total harmonic distortion at 500 / 800 / 1600 Hz	2 / 2 / 1 %	2 / 2 / 1 %	1 / 1 / 2 %	1 / 1 / 3 %
AI-DI	3.5 dB		3.5 dB	
Inductive coil sensitivity				
MASL (1 mA/m) at 1.6 kHz	–	89 dB	–	82 dB
HFA MASL (1 mA/m)	82 dB	–	74 dB	–
HFA SPLITS (left/right)	102 / 105 dB	–	93 / 95 dB	–
RSETS (left/right)	-7 / -4 dB	–	-6 / -4 dB	–
AGC-O (fully activated)				
Attack / release Time	3 / 90 ms	–	3 / 90 ms	–
Battery				
Battery voltage	1.3 V		1.3 V	
Battery current drain	1.0 mA		1.0 mA	
Battery life (cell zinc air)	~ 220 h		~ 220 h	
IRIL IEC 118-13:2011 (bystander)				
800 - 960 MHz	< - 20 dB SPL		< - 20 dB SPL	
1400 - 2000 MHz	< - 15 dB SPL		< - 15 dB SPL	
ANSI C63.19	M4 / T2		M4 / T2	

# Orion P · Technical Data

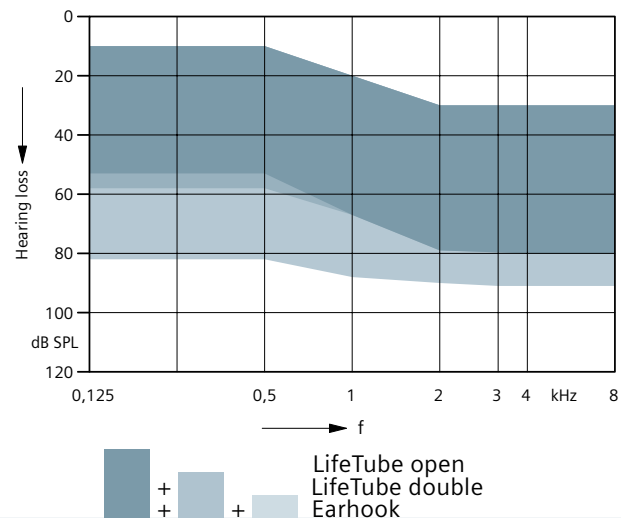
Type	Earhook damped		Earhook undamped		LifeTube	
						
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level						
at 1.6 kHz	–	130 dB SPL	–	132 dB SPL	–	118 dB SPL
Peak	130 dB SPL	136 dB SPL	136 dB SPL	139 dB SPL	125 dB SPL	127 dB SPL
HFA-OSPL 90	123 dB SPL	–	127 dB SPL	–	114 dB SPL	–
Gain						
Full-on gain (FOG) at 1.6 kHz	–	69 dB	–	70 dB	–	53 dB
Full-on gain (Peak)	70 dB	76 dB	75 dB	78 dB	65 dB	66 dB
HFA-FOG	63 dB	–	66 dB	–	49 dB	–
Reference test gain	46 dB	55 dB	50 dB	57 dB	37 dB	43 dB
Frequency, noise and directivity						
Frequency range	100 - 6900 Hz	100 - 7000 Hz	100 - 5800 Hz	150 - 6500 Hz	100 - 5800 Hz	100 - 6000 Hz
Equivalent input noise	19 dB	19 dB	19 dB	19 dB	28 dB	28 dB
Total harmonic distortion at 500 / 800 / 1600 Hz	2 / 1 / 1 %	2 / 1 / 1 %	3 / 2 / 1 %	4 / 2 / 1 %	1 / 1 / 2 %	1 / 2 / 2 %
AI-DI	3.5 dB		3.5 dB		3.5 dB	
Inductive coil sensitivity						
MASL (1 mA/m) at 1.6 kHz	–	99 dB	–	99 dB	–	83 dB
HFA MASL (1 mA/m)	93 dB	–	96 dB	–	79 dB	–
HFA SPLITS (left/right)	105 / 105 dB	–	109 / 109 dB	–	95 / 95 dB	–
RSETS (left/right)	-1 / -1 dB	–	-1 / -1 dB	–	-2 / -2 dB	–
AGC-O (fully activated)						
Attack / release Time	3 / 90 ms	–	3 / 90 ms	–	3 / 90 ms	–
Battery						
Battery voltage	1.3 V		1.3 V		1.3 V	
Battery current drain	1.0 mA		1.3 mA		1.3 mA	
Battery life (cell zinc air)	~ 220 h		~ 170 h		~ 170 h	
IRIL IEC 118-13:2011 (bystander)						
800 - 960 MHz	< - 23 dB SPL		< - 23 dB SPL		< - 23 dB SPL	
1400 - 2000 MHz	< - 15 dB SPL		< - 15 dB SPL		< - 15 dB SPL	
ANSI C63.19	M4 / T2		M4 / T2		M4 / T2	

# Fitting Range

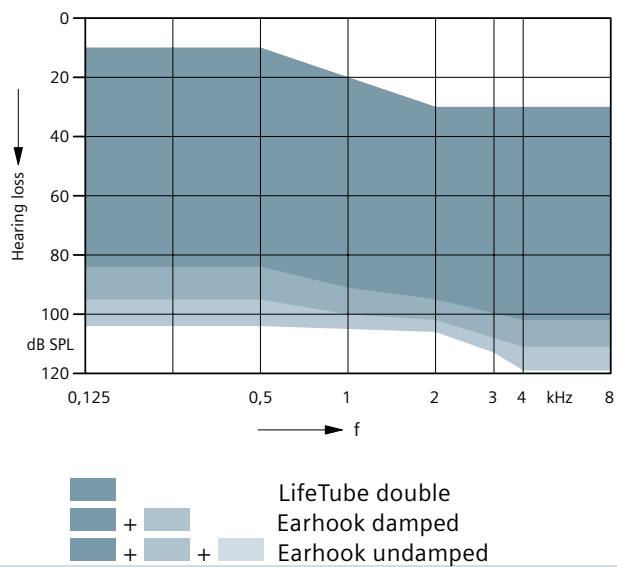
Orion S



Orion M

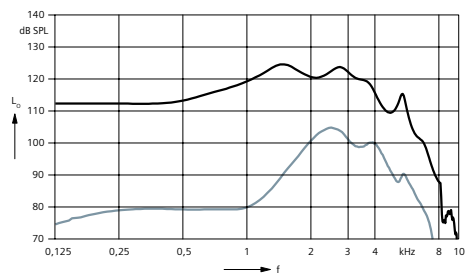


Orion P



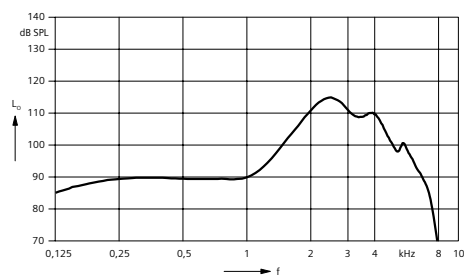
# Orion S (Earhook damped) · Basic Data

## 2 ccm coupler



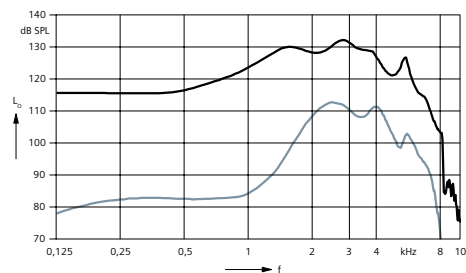
Output sound  
pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



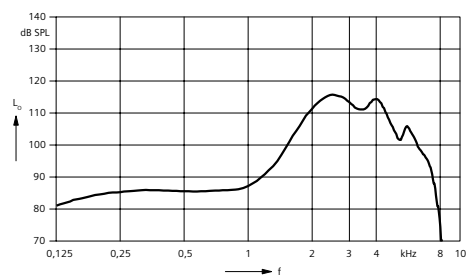
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



Output sound  
pressure level  
( $L_1 = 90$  dB)

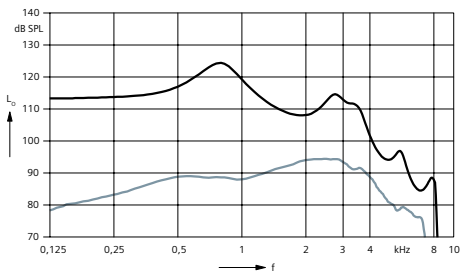
Full on gain  
( $L_1 = 50$  dB)



Basic acoustic  
response  
( $L_1 = 60$  dB)

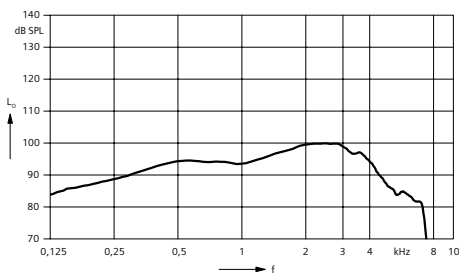
# Orion S (LifeTube) · Basic Data

## 2 ccm coupler



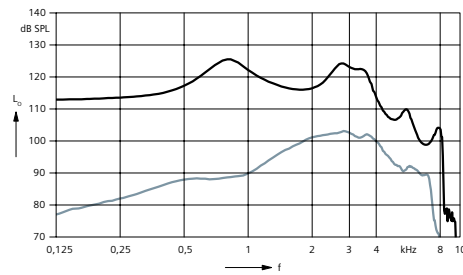
Output sound  
pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



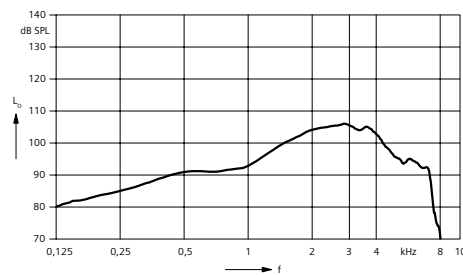
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



Output sound  
pressure level  
( $L_1 = 90$  dB)

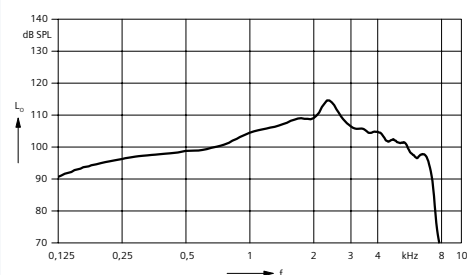
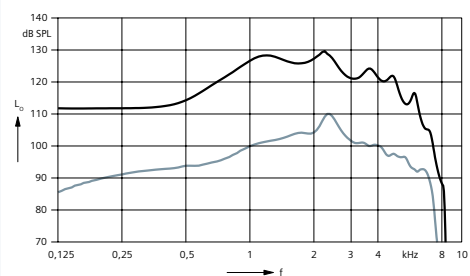
Full on gain  
( $L_1 = 50$  dB)



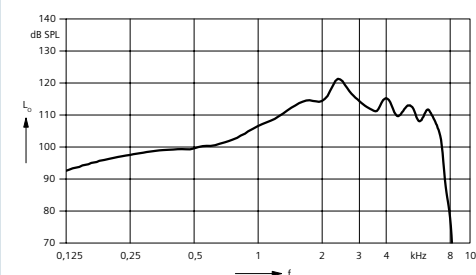
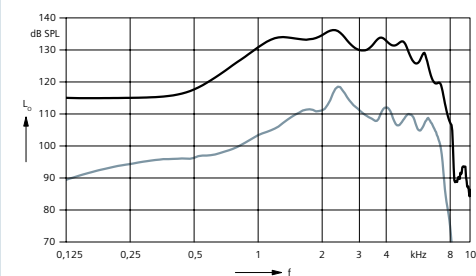
Basic acoustic  
response  
( $L_1 = 60$  dB)

# Orion M (Earhook damped) · Basic Data

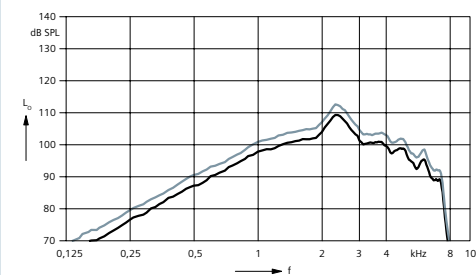
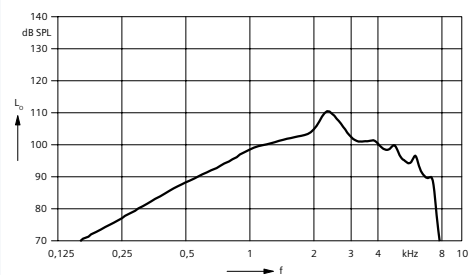
## 2 ccm coupler



## Ear simulator

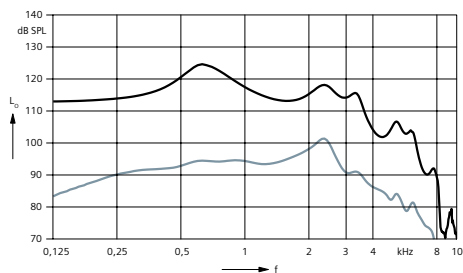


## Inductive response



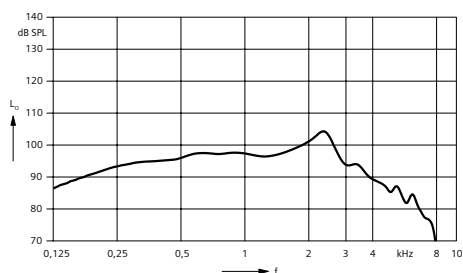
# Orion M (LifeTube) · Basic Data

## 2 ccm coupler



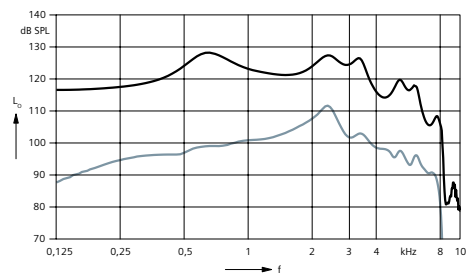
Output sound pressure level ( $L_1 = 90$  dB)

Full on gain ( $L_1 = 50$  dB)



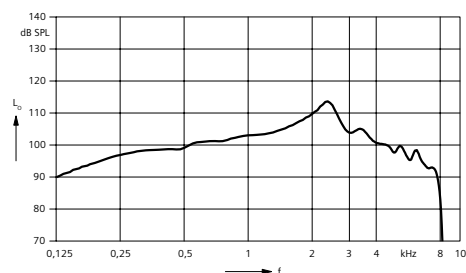
Frequency response ( $L_1 = 60$  dB)

## Ear simulator



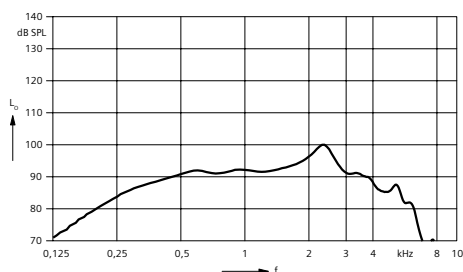
Output sound pressure level ( $L_1 = 90$  dB)

Full on gain ( $L_1 = 50$  dB)

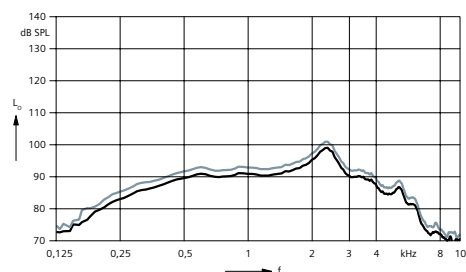


Basic acoustic response ( $L_1 = 60$  dB)

## Inductive response



Inductive response ( $H = 10$  mA/m)

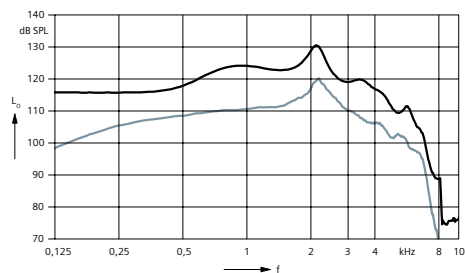


SPLITS curve left ( $H = 31.6$  mA/m)

SPLITS curve right ( $H = 31.6$  mA/m)

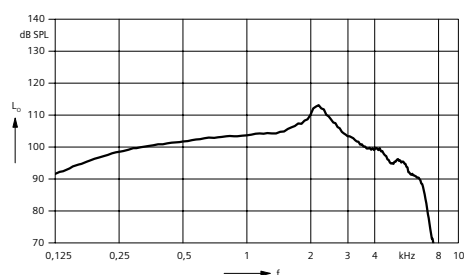
# Orion P (Earhook damped) · Basic Data

## 2 ccm coupler



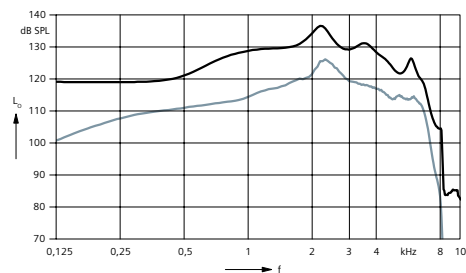
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



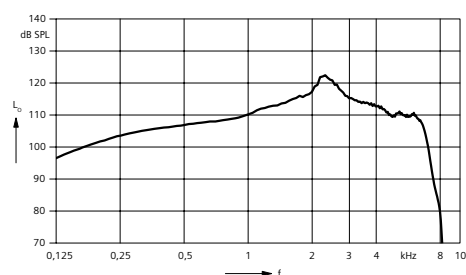
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



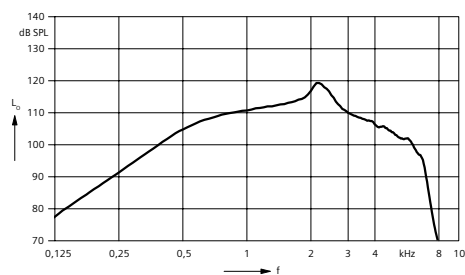
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)

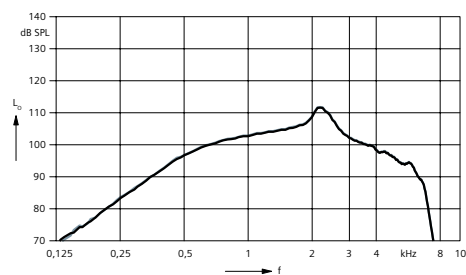


Basic acoustic response  
( $L_1 = 60$  dB)

## Inductive response



Inductive response  
( $H = 10$  mA/m)

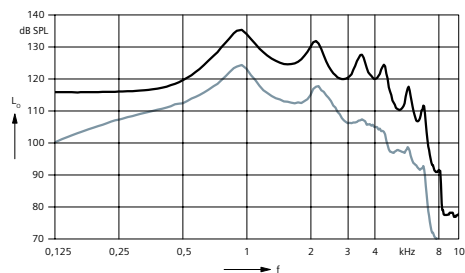


SPLITS curve left  
( $H = 31.6$  mA/m)

SPLITS curve right  
( $H = 31.6$  mA/m)

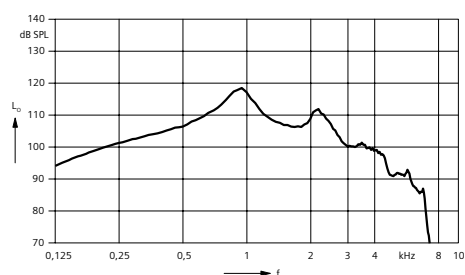
# Orion P (Earhook undamped) · Basic Data

## 2 ccm coupler



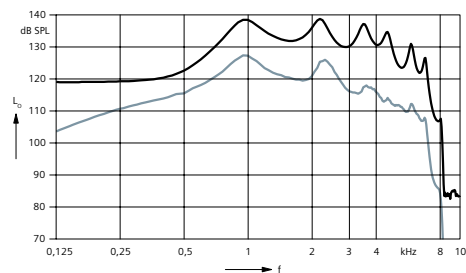
Output sound  
pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



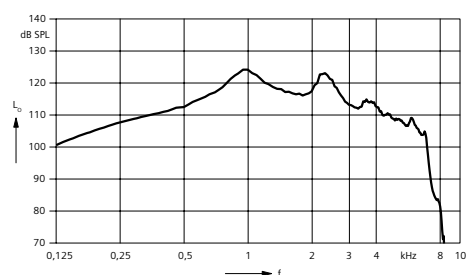
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



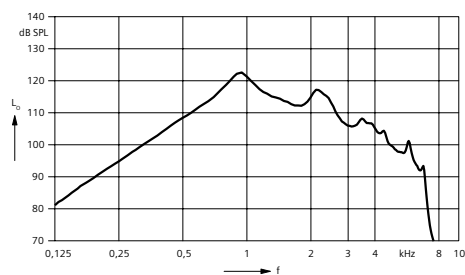
Output sound  
pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)

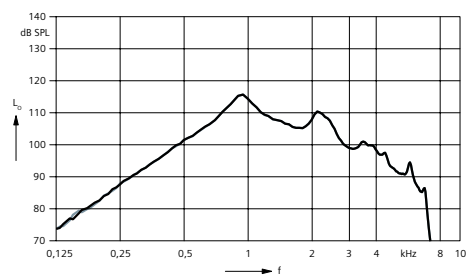


Basic acoustic  
response  
( $L_1 = 60$  dB)

## Inductive response



Inductive response  
( $H = 10$  mA/m)

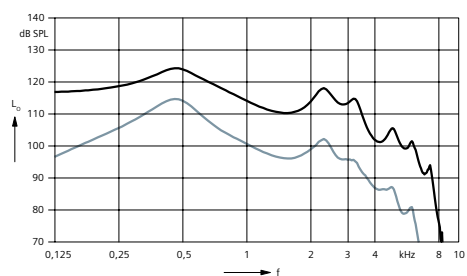


SPLITS curve left  
( $H = 31.6$  mA/m)

SPLITS curve right  
( $H = 31.6$  mA/m)

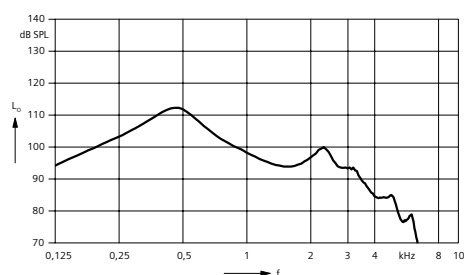
# Orion P (LifeTube) · Basic Data

## 2 ccm coupler



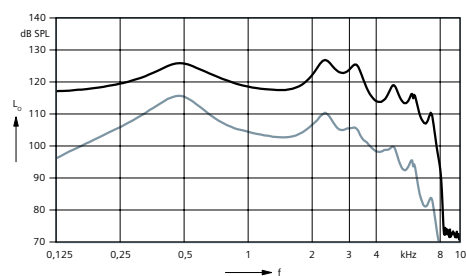
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



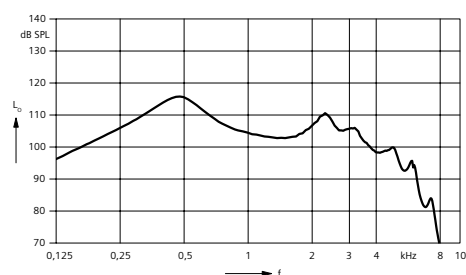
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



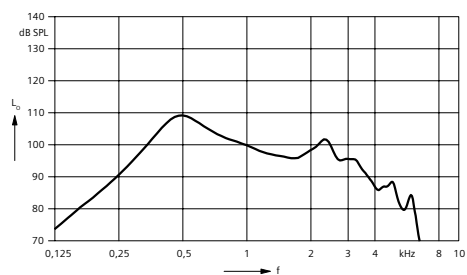
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)

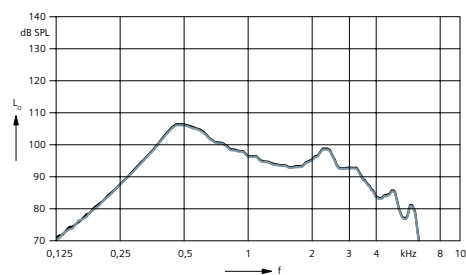


Basic acoustic response  
( $L_1 = 60$  dB)

## Inductive response



Inductive response  
( $H = 10$  mA/m)



SPLITS curve left  
( $H = 31.6$  mA/m)

SPLITS curve right  
( $H = 31.6$  mA/m)

## Features and Accessories

Audiological Features	S	M	P
<b>Better hearing</b>			
Automatic directional microphone	●	●	●
Directional speech enhancement	—	—	—
High res. SpeechFocus / automatic	— / —	— / —	— / —
Frequency compression	●	●	●
<b>Sound comfort</b>			
Feedback cancellation	●	●	●
Speech and noise management (steps)	3	3	3
SoundSmoothing™ (steps)	—	—	—
eWindScreen™ (steps)	on / off	on / off	on / off
SoundBrilliance™ (steps)	—	—	—
Tinnitus noiser (channels)	4	4	4
<b>Fitting/Individuality</b>			
Sound equalizer (classes)	—	—	—
Learning (classes)	—	—	—
Data logging	●	●	●
ConnexxFit™	●	●	●
Acclimatization manager	—	—	—
<b>Basic Features</b>			
Number of channels / handles	16 / 8	16 / 8	16 / 8
Extended bandwidth	—	—	—
Ingress Protection Rating	IP67	IP67	IP67
T-Coil	—	●	●
AutoPhone™	—	—	—
Charging contacts	—	—	—
Battery size	312	13	13
Battery door on/off function	●	●	●
Battery door lock	—	○	○
Nanocoated housing	●	●	●
e2e wireless™ 2.0	●	●	●
Audio streaming	—	—	—
User controls coupling via e2e	●	●	●
Wireless programming via ConnexxLink™	●	●	●

## Features and Accessories

User control	S	M	P
	Push button	Rocker switch	Rocker switch + Push button
Volume change	●	○	○
Program change	●	○	○
Alert tones	●	●	●
Number of programs	4	4	4

Accessories			
Color conversion kits	only top housing	only top housing	only top housing
eCharger	—	—	—
Tek™	—	—	—
miniTek™	—	—	—
ProPocket™	●	●	●
easyPocket™	●	●	●
ePen™	●	●	●
ConnexxLink™	●	●	●
Programming pill	●	●	●
LifeTube	●	●	●
Standard earhook	●	●	●
Small earhook	●	●	●
Eyeglass adapter	—	●	●
Audioshoe	—	●	●

● available   ○ optional   — not available

[illegible]

# 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
AI-DI	Articulation Index Directivity Index
MASL	Magneto Acoustical Sensitivity Level
SPLITS	Coupler SPL for an Inductive Telephone Simulator
RSETS	Relative Equivalent Telephone Sensitivity
AGC-O	Automatic Gain Control - Output controlled
IRIL	Input Related Interference Level

## Standards

- ▶ All measurements with the 2 ccm coupler were performed according to ANSI S3.22-2009 and IEC 60118-7:2005.
- ▶ All measurements with an ear simulator were performed according to IEC 118-0/A1 and to DIN 45605 (frequency range).
- ▶ The following ear pieces were used:
  - LifeTube
  - Earhook

### WARNING

Choking hazard posed by small parts.

- ▶ This instrument is not intended for the fitting of infants, small children 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.

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.

Find the current issue of this document under: <http://factsandfigures.hearing-siemens.com>