

# INSIO ITC TEKNİK DATA Dijital Programlanabilir İşitme Cihazı

INSIO 7 MI	INSIO 5 MI	INSIO 3 MI
		
48 KANAL 80 BANT (20 Frekans Bantı, 60 Kompresyon Bantı) 55 dB/118 dB SPL	32 KANAL 64 BANT (16 Frekans Bantı, 48 Kompresyon Bantı) 55 dB/118 dB SPL	24 KANAL 48 BANT (12 Frekans Bantı, 36 Kompresyon Bantı) 55 dB/118 dB SPL
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 Kazanç Kontrol	AGC Kazanç Kontrol	AGC Kazanç Kontrol
VC Otomatik ses kontrol	VC Otomatik ses kontrol	VC Otomatik ses kontrol
Gürültü Azaltma	Gürültü Azaltma	Gürültü Azaltma
Micon Ses Yumuşatma 3 adım	Micon Ses Yumuşatma 3adım	Micon Ses Yumuşatma 1 adım
Micon rüzgar kalkanı 3 adım	Micon rüzgar kalkanı 3 adım	Micon rüzgar kalkanı 1 adım
Tinnitus maskeleme 20 kanal	Tinnitus maskeleme 16 kanal	Tinnitus maskeleme 12 kanal
Micon öğrenme 6 konum	Micon öğrenme 3 konum	Micon öğrenme 1 konum
Feedback Yönetimi	Feedback Yönetimi	Feedback Yönetimi
Uyum sağlama yöneticisi	Uyum sağlama yöneticisi	-
Pil kapağı ile açma kapama fonksiyonu	Pil kapağı ile açma kapama fonksiyonu	Pil kapağı ile açma kapama fonksiyonu
Frekans baskılama	Frekans baskılama	Frekans baskılama
Tek Mikrofon	Tek Mikrofon	Tek Mikrofon
Yönsel konuşma geliştirici	-	-
Konuşmaya odaklanma	Konuşmaya odaklanma	-

INSIO 7 MI	INSIO 5 MI	INSIO 3 MI
		
48 KANAL 80 BANT (20 Frekans Bantı, 60 Kompresyon Bantı) 55 dB/118 dB SPL	32 KANAL 64 BANT (16 Frekans Bantı, 48 Kompresyon Bantı) 55 dB/118 dB SPL	24 KANAL, 48 BANT (12 Frekans Bantı, 36 Kompresyon Bantı) 55 dB/118 dB SPL
<b>Opsiyonel özellikler</b>		
e2e kablosuz iletişim		
Ses aktarımı		
Telecoil		
Otomatik telefon		
Kablosuz programlama		
<b>OPSİYONEL AKSESUARLAR</b>		
Minitel kumanda		
Tek kumanda		
Propocket kumanda		
Easypocket kumanda		
ePen kumanda		
ConnexxLink		

# Technical Data

## Insio micon™



7mi

5mi

3mi

### CIC

113 / 40

- 51 dB / 124 dB SPL (ear simulator)
- 40 dB / 113 dB SPL (2 ccm coupler)

113 / 50

- 61 dB / 124 dB SPL (ear simulator)
- 50 dB / 113 dB SPL (2 ccm coupler)

### ITC - HS

113 / 40

- 50 dB / 124 dB SPL (ear simulator)
- 40 dB / 113 dB SPL (2 ccm coupler)

118 / 45

- 55 dB / 128 dB SPL (ear simulator)
- 45 dB / 118 dB SPL (2 ccm coupler)

118 / 55

- 65 dB / 128 dB SPL (ear simulator)
- 55 dB / 118 dB SPL (2 ccm coupler)

### ITE

118 / 55

- 66 dB / 129 dB SPL (ear simulator)
- 55 dB / 118 dB SPL (2 ccm coupler)

123 / 55

- 64 dB / 132 dB SPL (ear simulator)
- 55 dB / 123 dB SPL (2 ccm coupler)

123 / 60

- 69 dB / 132 dB SPL (ear simulator)
- 60 dB / 123 dB SPL (2 ccm coupler)

### Key Features

- Superior wearing and listening comfort by Optivent
- Discreet and small design
- micon BestSound™ Technology

## Data Sheet

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

**SIEMENS**

# Insio micon CIC · Technical Data

Type	113 / 40		113 / 50	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level				
at 1.6 kHz	–	116 dB SPL	–	116 dB SPL
Peak	113 dB SPL	124 dB SPL	113 dB SPL	124 dB SPL
HFA-OSPL 90	107 dB SPL	–	107 dB SPL	–
Gain				
Full-on gain (FOG) at 1.6 kHz	–	43 dB	–	53 dB
Full-on gain (Peak)	40 dB	51 dB	50 dB	61 dB
HFA-FOG	35 dB	–	45 dB	–
Reference test gain	31 dB	36 dB	31 dB	40 dB
Frequency, noise and directivity				
Frequency range 7mi 3mi / 5mi	100 - 9100 Hz 100 - 8100 Hz	120 - 9400 Hz 120 - 8100 Hz	100 - 9100 Hz 100 - 8100 Hz	120 - 9400 Hz 120 - 8100 Hz
Equivalent input noise	21 dB	21 dB	21 dB	21 dB
Total harmonic distortion at 500 / 800 / 1600 Hz	3 / 3 / 2 %	4 / 4 / 3 %	3 / 3 / 2 %	4 / 4 / 3 %
AI-DI	–		–	
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	0.9 mA		0.9 mA	
Battery life (cell zinc air) Type 10	~ 75 h		~ 75 h	
IRIL IEC 118-13:2011 (bystander)				
800 - 960 MHz	< - 39 dB SPL		< - 39 dB SPL	
1400 - 2000 MHz	< - 26 dB SPL		< - 26 dB SPL	
ANSI C63.19	M4 / –		M4 / –	

# Insio micon ITC - HS · Technical Data

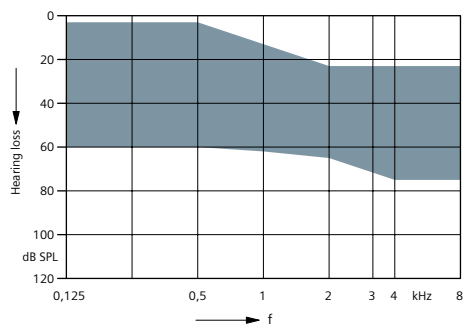
Type	113 / 40		118 / 45		118 / 55	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level						
at 1.6 kHz	–	115 dB SPL	–	119 dB SPL	–	119 dB SPL
Peak	113 dB SPL	124 dB SPL	118 dB SPL	128 dB SPL	118 dB SPL	128 dB SPL
HFA-OSPL 90	107 dB SPL	–	111 dB SPL	–	111 dB SPL	–
Gain						
Full-on gain (FOG) at 1.6 kHz	–	39 dB	–	43 dB	–	53 dB
Full-on gain (Peak)	40 dB	50 dB	45 dB	55 dB	55 dB	65 dB
HFA-FOG	31 dB	–	36 dB	–	46 dB	–
Reference test gain	30 dB	32 dB	34 dB	36 dB	34 dB	44 dB
Frequency, noise and directivity						
Frequency range 7mi 3mi / 5mi	100 - 7500 Hz 100 - 7500 Hz	130 - 7800 Hz 130 - 7800 Hz	100 - 7800 Hz 100 - 7800 Hz	120 - 7800 Hz 120 - 7800 Hz	100 - 7800 Hz 100 - 7800 Hz	120 - 7800 Hz 120 - 7800 Hz
Equivalent input noise	20 dB	20 dB	20 dB	20 dB	20 dB	20 dB
Total harmonic distortion at 500 / 800 / 1600 Hz	2 / 2 / 2 %	2 / 2 / 2 %	2 / 2 / 2 %	2 / 3 / 2 %	2 / 2 / 2 %	2 / 3 / 2 %
AI-DI	4.8 dB		4.8 dB		4.8 dB	
Inductive coil sensitivity						
MASL (1 mA/m) at 1.6 kHz	–	68 dB	–	72 dB	–	82 dB
HFA MASL (1 mA/m)	59 dB	–	65 dB	–	75 dB	–
HFA SPLITS (left/right)	89 / 89 dB	–	93 / 93 dB	–	93 / 93 dB	–
RSETS (left/right)	-2 / -2 dB	–	-1 / -1 dB	–	-1 / -1 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		1.0 mA		1.0 mA	
Battery life (cell zinc air) Type 10 / 312	~ 70 h / ~ 120 h		~ 70 h / ~ 120 h		~ 70 h / ~ 120 h	
IRIL IEC 118-13:2011 (bystander)						
800 - 960 MHz	< - 37 dB SPL		< - 37 dB SPL		< - 37 dB SPL	
1400 - 2000 MHz	< - 18 dB SPL		< - 18 dB SPL		< - 18 dB SPL	
ANSI C63.19	M4 / T2		M4 / T2		M4 / T2	

# Insio micon ITE · Technical Data

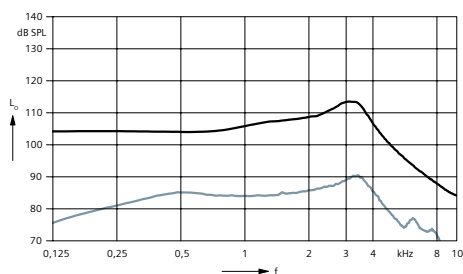
Type	118 / 55		123 / 55		123 / 60	
	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator	2 ccm coupler	Ear simulator
Output sound pressure level						
at 1.6 kHz	–	120 dB SPL	–	127 dB SPL	–	127 dB SPL
Peak	118 dB SPL	129 dB SPL	123 dB SPL	132 dB SPL	123 dB SPL	132 dB SPL
HFA-OSPL 90	112 dB SPL	–	118 dB SPL	–	118 dB SPL	–
Gain						
Full-on gain (FOG) at 1.6 kHz	–	55 dB	–	57 dB	–	62 dB
Full-on gain (Peak)	55 dB	66 dB	55 dB	64 dB	60 dB	69 dB
HFA-FOG	47 dB	–	49 dB	–	54 dB	–
Reference test gain	35 dB	45 dB	41 dB	50 dB	41 dB	52 dB
Frequency, noise and directivity						
Frequency range 7mi 3mi / 5mi	100 - 7800 Hz 100 - 7800 Hz	120 - 7800 Hz 120 - 7800 Hz	100 - 6000 Hz 100 - 6000 Hz	120 - 6000 Hz 120 - 6000 Hz	100 - 6000 Hz 100 - 6000 Hz	120 - 6000 Hz 120 - 6000 Hz
Equivalent input noise	20 dB	20 dB	19 dB	19 dB	19 dB	19 dB
Total harmonic distortion at 500 / 800 / 1600 Hz	2 / 2 / 2 %	2 / 3 / 2 %	2 / 2 / 2 %	3 / 4 / 3 %	2 / 2 / 2 %	3 / 4 / 3 %
AI-DI	5.2 dB		5.2 dB		5.2 dB	
Inductive coil sensitivity						
MASL (1 mA/m) at 1.6 kHz	–	85 dB	–	87 dB	–	92 dB
HFA MASL (1 mA/m)	77 dB	–	79 dB	–	84 dB	–
HFA SPLITS (left/right)	94 / 94 dB	–	100 / 100 dB	–	100 / 100 dB	–
RSETS (left/right)	-1 / -1 dB	–	-1 / -1 dB	–	-1 / -1 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		1.0 mA		1.0 mA	
Battery life (cell zinc air) Type 13 / 312	~ 220 h / ~ 120 h		~ 220 h / ~ 120 h		~ 220 h / ~ 120 h	
IRIL IEC 118-13:2011 (bystander)						
800 - 960 MHz	< - 34 dB SPL		< - 34 dB SPL		< - 34 dB SPL	
1400 - 2000 MHz	< - 24 dB SPL		< - 24 dB SPL		< - 24 dB SPL	
ANSI C63.19	M4 / T2		M4 / T2		M4 / T2	

# Insio micon CIC · Basic Data

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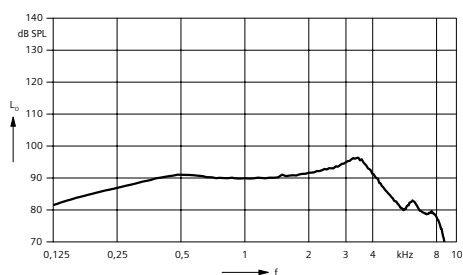


## 2 ccm coupler



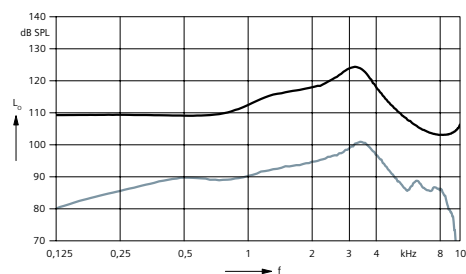
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



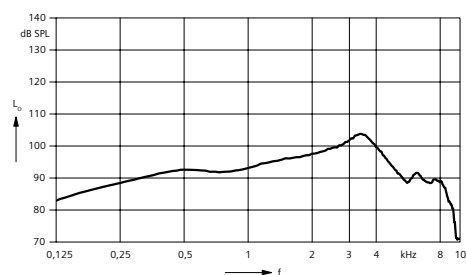
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



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

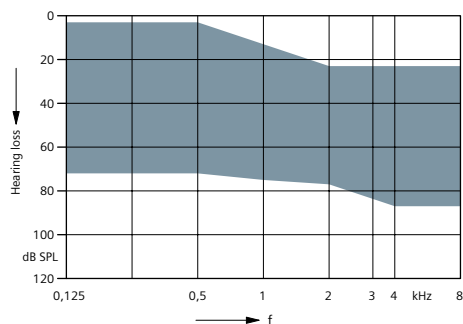
Full on gain  
( $L_1 = 50$  dB)



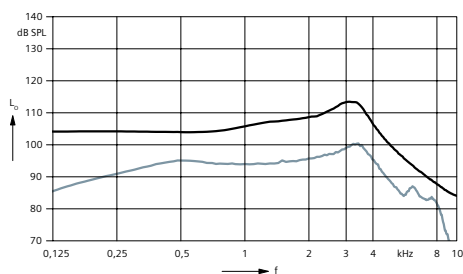
Basic acoustic response  
( $L_1 = 60$  dB)

# Insio micon CIC · Basic Data

113 / 50

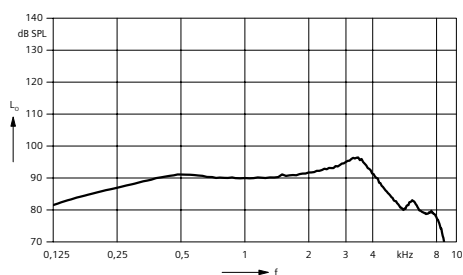


## 2 ccm coupler



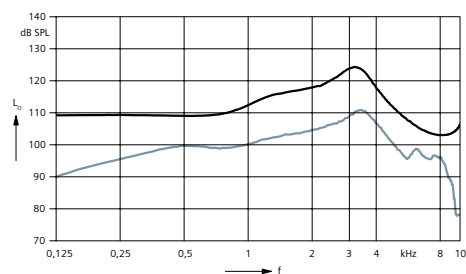
Output sound pressure level  
( $L_p = 90$  dB)

Full on gain  
( $L_p = 50$  dB)



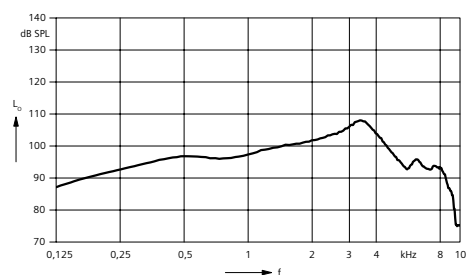
Frequency response  
( $L_p = 60$  dB)

## Ear simulator



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

Full on gain  
( $L_p = 50$  dB)

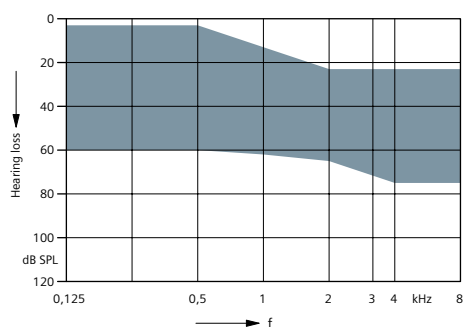


Basic acoustic response  
( $L_p = 60$  dB)

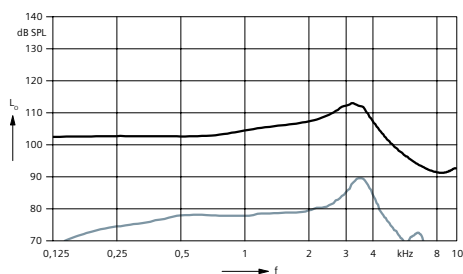


# Insio micon ITC - HS · Basic Data

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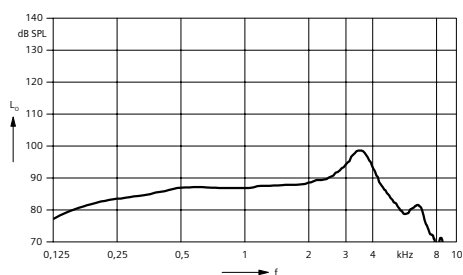


## 2 ccm coupler



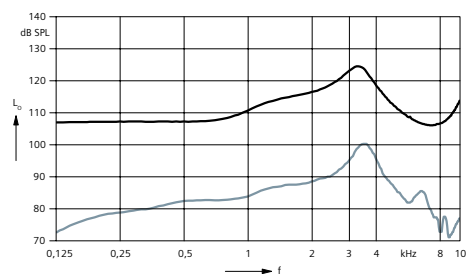
**Output sound pressure level**  
( $L_p = 90$  dB)

**Full on gain**  
( $L_p = 50$  dB)



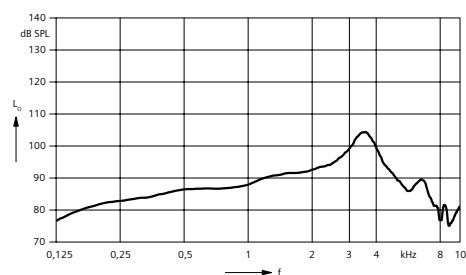
**Frequency response**  
( $L_p = 60$  dB)

## Ear simulator



**Output sound pressure level**  
( $L_p = 90$  dB)

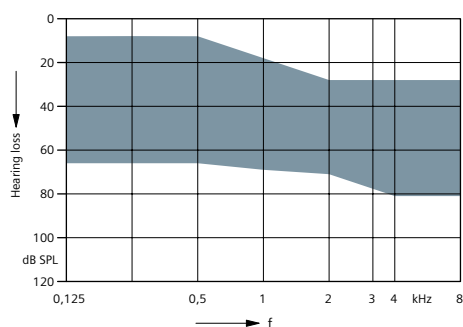
**Full on gain**  
( $L_p = 50$  dB)



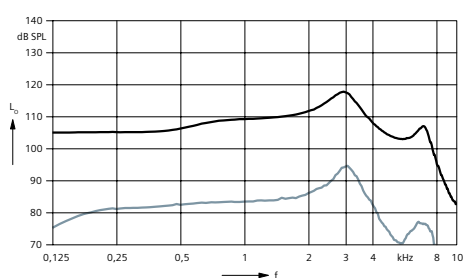
**Basic acoustic response**  
( $L_p = 60$  dB)

# Insio micon ITC - HS · Basic Data

118 / 45

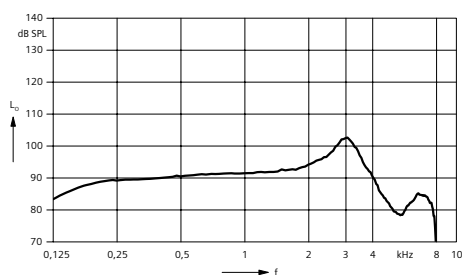


## 2 ccm coupler



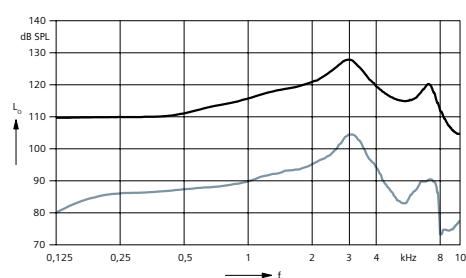
Output sound pressure level  
( $L_i = 90$  dB)

Full on gain  
( $L_i = 50$  dB)



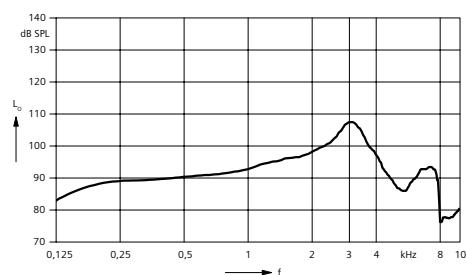
Frequency response  
( $L_i = 60$  dB)

## Ear simulator



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

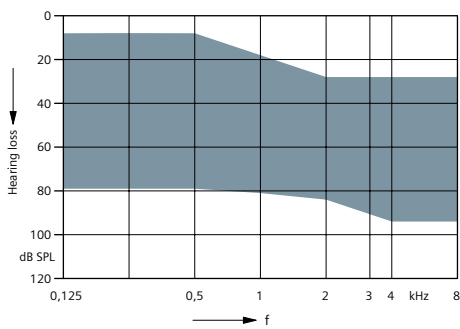
Full on gain  
( $L_i = 50$  dB)



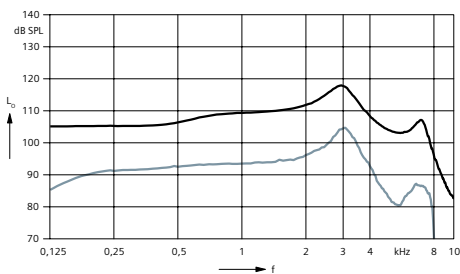
Basic acoustic response  
( $L_i = 60$  dB)

# Insio micon ITC - HS · Basic Data

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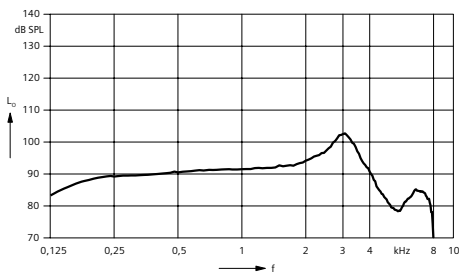


## 2 ccm coupler



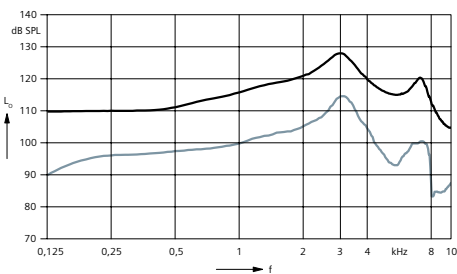
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



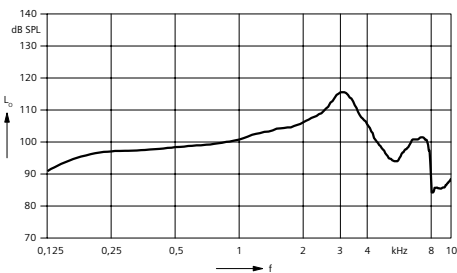
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



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

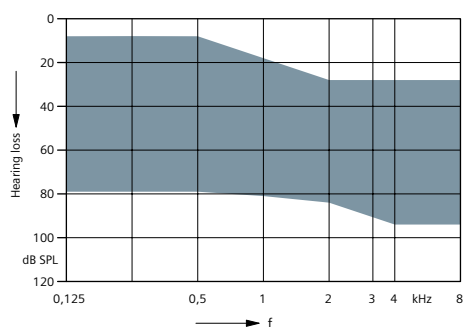
Full on gain  
( $L_1 = 50$  dB)



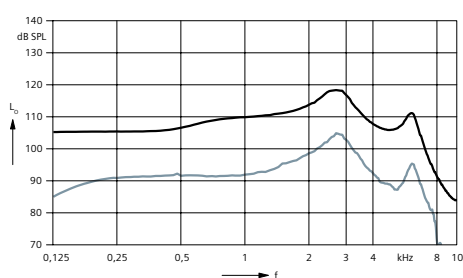
Basic acoustic response  
( $L_1 = 60$  dB)

# Insio micon ITE · Basic Data

118 / 55

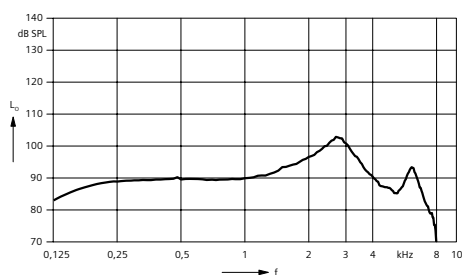


## 2 ccm coupler



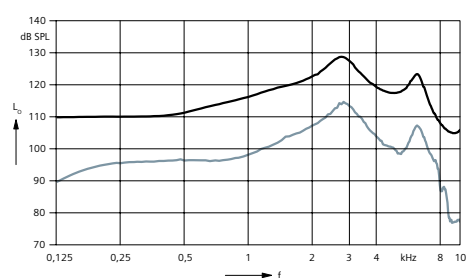
Output sound pressure level  
( $L_p = 90$  dB)

Full on gain  
( $L_p = 50$  dB)



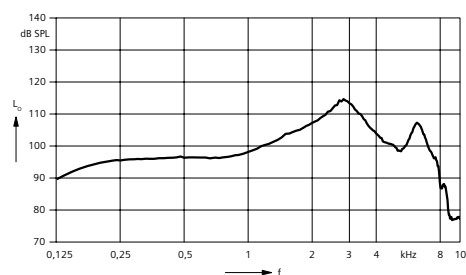
Frequency response  
( $L_p = 60$  dB)

## Ear simulator



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

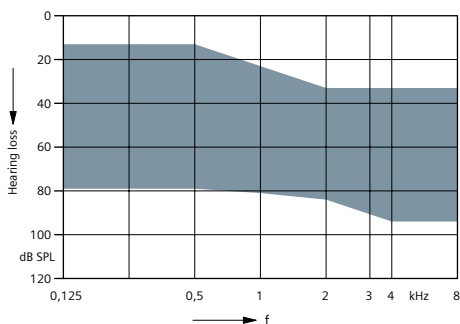
Full on gain  
( $L_p = 50$  dB)



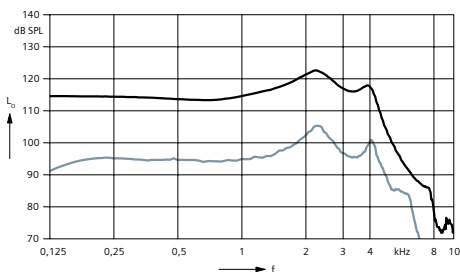
Basic acoustic response  
( $L_p = 60$  dB)

# Insio micon ITE · Basic Data

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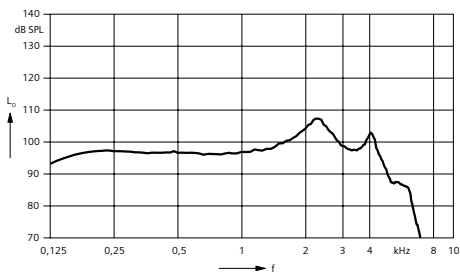


## 2 ccm coupler



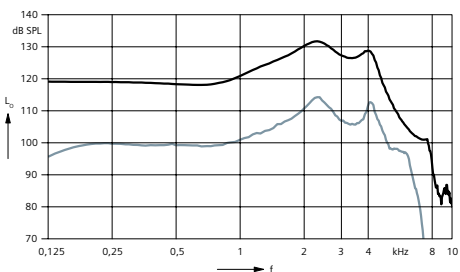
Output sound pressure level  
( $L_1 = 90$  dB)

Full on gain  
( $L_1 = 50$  dB)



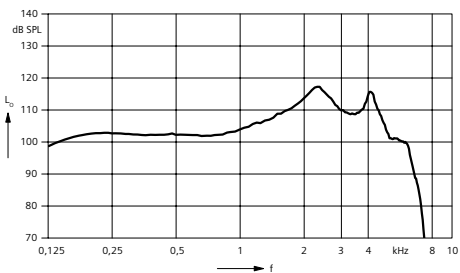
Frequency response  
( $L_1 = 60$  dB)

## Ear simulator



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

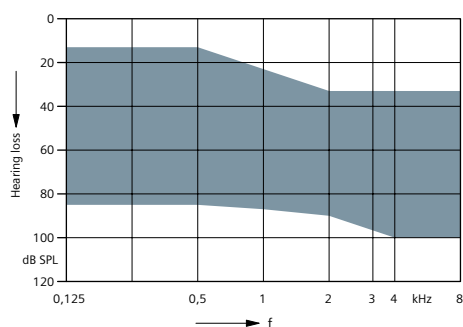
Full on gain  
( $L_1 = 50$  dB)



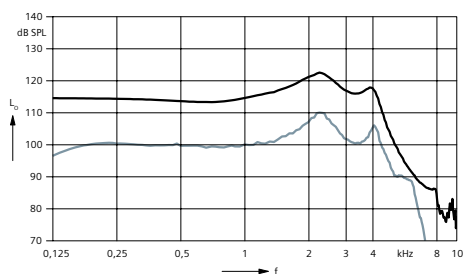
Basic acoustic response  
( $L_1 = 60$  dB)

# Insio micon ITE · Basic Data

123 / 60

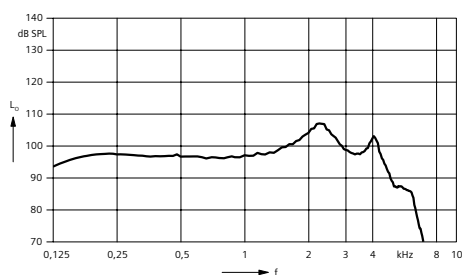


## 2 ccm coupler



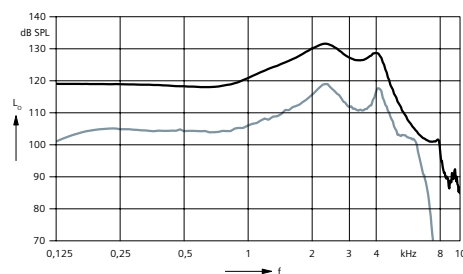
Output sound  
pressure level  
( $L_i = 90$  dB)

Full on gain  
( $L_i = 50$  dB)



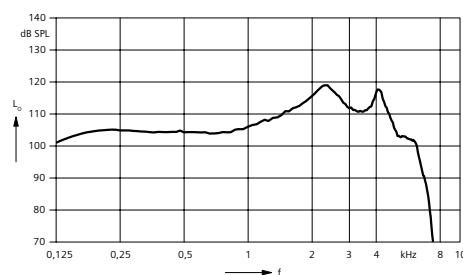
Frequency response  
( $L_i = 60$  dB)

## Ear simulator



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

Full on gain  
( $L_i = 50$  dB)



Basic acoustic  
response  
( $L_i = 60$  dB)

## Features and Accessories

Audiological Features	CIC			ITC - HS		
	7mi	5mi	3mi	7mi	5mi	3mi
<b>miFocus</b>						
High res. adaptive TwinMic System™ (availability / channels)	— / —	— / —	— / —	○ / 48	○ / 32	○ / 24
Directional speech enhancement	—	—	—	○	—	—
High res. SpeechFocus / automatic	— / —	— / —	— / —	○ / ○	○ / —	— / —
Frequency compression	●	●	●	●	●	●
<b>miSound</b>						
Feedback cancellation	●	●	●	●	●	●
micon Speech and Noise Management (steps)	7	5	3	7	5	3
micon Sound Smoothing™ (steps)	3	3	on / off	3	3	on / off
micon eWindScreen™ (steps)	3	3	on / off	3	3	on / off
micon SoundBrilliance™ (steps)	3	3	—	3	3	—
Tinnitus noiser (channels)	20	16	12	20	16	12
<b>miGuide</b>						
Sound equalizer (classes)	6	3	—	6	3	—
micon Learning (classes)	6	3	1	6	3	1
Data logging	●	●	●	●	●	●
micon fit	●	●	●	●	●	●
Acclimatization manager	●	●	—	●	●	—
<b>Basic Features</b>						
Number of channels / handles	48 / 20	32 / 16	24 / 12	48 / 20	32 / 16	24 / 12
Extended bandwidth	●	—	—	●	—	—
T-Coil	—			○		
AutoPhone™	—			○		
Charging contacts	—			—		
Battery size	10			10 / 312		
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

Audiological Features	ITE		
	7mi	5mi	3mi
<b>miFocus</b>			
High res. adaptive TwinMic System™ (availability / channels)	○ / 48	○ / 32	○ / 24
Directional speech enhancement	○	—	—
High res. SpeechFocus / automatic	○ / ○	○ / —	— / —
Frequency compression	●	●	●
<b>miSound</b>			
Feedback cancellation	●	●	●
micon Speech and Noise Management (steps)	7	5	3
micon Sound Smoothing™ (steps)	3	3	on / off
micon eWindScreen™ (steps)	3	3	on / off
micon SoundBrilliance™ (steps)	3	3	—
Tinnitus noiser (channels)	20	16	12
<b>miGuide</b>			
Sound equalizer (classes)	6	3	—
micon Learning (classes)	6	3	1
Data logging	●	●	●
micon fit	●	●	●
Acclimatization manager	●	●	—
<b>Basic Features</b>			
Number of channels / handles	48 / 20	32 / 16	24 / 12
Extended bandwidth	●	—	—
T-Coil	○		
AutoPhone™	○		
Charging contacts	—		
Battery size	13 / 312		
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	CIC	ITC - HS	ITE
	Push button	Push button + VC	Push button + VC
Volume change	○	○	○
Program change	○	○	○
Alert tones	●	●	●
Number of programs	6	6	6

Accessories			
Color conversion kits	—	—	—
Tek™	○	○	○
miniTek™	○	○	○
ProPocket™	○	○	○
easyPocket™	○	○	○
ePen™	○	○	○
ConnexxLink™	○	○	○

● 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
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).
- ▶ Extended frequency range up to 12 kHz for 7mi devices only.

### 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>