

3M™ Peltor™ X Series Passive Earmuffs

Technical Data Sheet



Product Description

Products Included:

Headband version:- X1A, X2A, X3A, X4A, X4A-OR and X5A

Helmet mounted version:- X1P5, X1P5-OR, X2P5, X3P5, X4P5, X4P5-OR and X5P5

The 3M™ Peltor™ X Series range of passive ear muffs are available in headband and helmet mounted version. When correctly selected and worn these products help reduce exposure to hazardous levels of noise and loud sounds.

These products provide attenuation values ranging from SNR 27dB to SNR 37dB thus meeting the needs of a wide range of noise environments.

The helmet mounted version is designed to fit a broad range of industrial safety helmets and rigid head tops featured in the 3M Powered and Supplied Air Respirator Systems (see table for approved combination listing).

Electrically insulated (dielectric) properties:

The bracket arms of helmet attachment earmuffs are made of non-conductive (sometimes referred to as 'dielectric') material whilst the metal components of the attachment mechanisms are covered in non-conductive material. The metal wire of the headband earmuffs are covered in a non-conductive material. These products were found to be electrically insulated, withstanding a voltage up to 1,2 kV, at an external laboratory against a modified test method based on EN 397:2012 under dry conditions. The user must determine the overall suitability of this product for the intended application taking into account any hazards other than noise for which this product is tested and approved.

Key Features:

- Light-weight design (lightest version 184g)
- Twin headband design for greater balance and increased comfort
- Protected wire headband for constant headband force during extended use providing reliable protection
- P5 electrically insulated helmet attachment system for easy snapping in and out of 'working position'
- Helmet attachment version fits directly to many safety helmets without the need of an adapter
- Compatible with the 3M E-A-Rfit™ Dual-Ear Validation System



- Soft wide cushions helps reduce pressure around the ears and improves comfort and wearability
- Innovative damping pads and spacer that helps improve attenuation
- Patented sealing ring foam technology for effective seal and protection
- Replaceable cushions and inserts
- Easy to understand different colour coding for attenuation values to help select appropriate product for specific application

Colour code and attenuation values

Model	Cup colour band	SNR (dB)	
		Headband Version	Helmet Mounted Version
X1A, X1P5,	Green	27	26
X1P5-OR	Orange		26
X2A, X2P5	Yellow	31	30
X3A, X3P5	Red	33	32
X4A, X4P5	Bright Green	33	32
X4A-OR, X4P5-OR	Orange	33	32
X5A, X5P5	Black	37	36

Helmet Mounted Version Approved Combination:

Helmet Brand	Model Number	P5 Adapter	X1P5, X1P5-OR	X2P5	X3P5	X4P5, X4P5-OR	X5P5
3M	G500 Headgear	E	SML	SML	SML	SML	SML
3M	G22	E	SML	SML	ML	SML	L
3M	G2000	K	SML	SML	SML	SML	ML
3M	G3000 (Basic Set)	E	SML	SML	SML	SML	ML
3M	G3501	E	SML	SML	ML	SML	L
3M	H700	E	SML	L	L	SML	L
3M	Speedglas Welding Helmet 9100 MP	AF*	SML	ML	ML	SML	L
3M	Versaflo M-106 and M-107	AF*	ML	ML	ML	ML	ML
3M	Versaflo M-306 and M-307	AF*	SML	ML	ML	SML	L
Arco	Arco Champion	H*	L	L	L	L	L
Arco	Arco Champion Plus	H*	L	L	L	L	L
Aubouieux	Iris 2	E	L	L	L	L	L
Aubouieux/Seybol	Kara	E	SML	SML	SML	SML	ML
Centurion	1100 (H fitting)	H*	L	L	L	L	L
Centurion	1125 (H fitting)	H*	L	L	L	L	L
Centurion	Concept (E fitting)	E	L	L	L	L	L
Centurion	Concept (H fitting)	H*	L	L	L	L	L
Centurion	Vulcan	H*	L	L	L	L	L
Delta Plus	Zircon	E	SML	L	L	SML	L
Grolls	Balance AC	E	L	L	L	L	L
MSA	V-Gard 500	E	SML	SML	SML	SML	SML
PETZL	Vertex Best, Vent and ST	E	ML	ML	ML	ML	L
Protector/Scott	Style 300	E	ML	ML	ML	ML	ML
Protector/Scott	Style 600	E	SML	SML	SML	SML	ML
Shuberth	EuroGuard	E	SML	L	L	SML	L

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Key: *Adapter to be ordered separately.

Mass

Model	Mass (g)
X1A	184
X1P5, X1P5-OR	187
X2A	220
X2P5	226
X3A	245
X3P5	256
X4A, X4A-OR	234
X4P5, X4P5-OR	241
X5A	351
X5P5	355
X5P5	355

Standard & Approval:

These products meet the Basic Safety Requirements as laid out in Annex II of the European Community Directive 89/686/EEC, and have been examined at the design stage by Finnish Institute of Occupational Health (FIOH), Topeliuksenkatu 41aA, FIN-00250 Helsinki, Finland (Notified Body number 0403).

Material Listing

	Headband version	Helmet Mounted Version
Headband and headband cover/sleeve	Stainless steel wire, TPE, Polyester, Polypropylene, Acetal	N/A
Helmet Attachment Arm	N/A	Acetal, Polyamide
Cups	ABS/TPU	ABS/TPU
Insert (Liner)	PU Foam	PU Foam
Cushions and Cushion Covers	PU Foam and PVC	PU Foam and PVC

Attenuation values:

3M Peltor X1A								
Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	15.6	11.9	15.4	24.5	34.3	32.8	37.4	37.4
S_f (dB)	3.6	2.0	2.6	2.6	2.3	3.3	2.5	3.8
APV_f (dB)	12.0	9.9	12.8	22.0	31.9	29.5	34.9	33.5

SNR = 27dB

H = 32dB

M = 24dB

L = 16dB

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3M Peltor X2A

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	19.0	14.1	22.2	31.1	39.7	36.6	37.0	37.0
S_f (dB)	4.5	2.2	2.1	2.7	3.2	3.2	3.7	3.4
APV_f (dB)	14.5	11.9	20.1	28.4	36.6	33.5	33.3	34.5

SNR = 31dB H = 34dB M = 29dB L = 20dB

3M Peltor X3A

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	21.5	22.8	25.1	27.0	40.0	35.8	38.5	38.9
S_f (dB)	3.0	2.1	3.1	1.7	2.8	2.2	2.7	2.9
APV_f (dB)	18.4	20.7	22.0	25.4	37.2	33.6	35.8	35.9

SNR = 33dB H = 35dB M = 30dB L = 25dB

3M Peltor X4A, X4A-OR

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	19.6	17.8	22.1	30.6	39.5	37.3	43.8	42.1
S_f (dB)	4.1	2.3	2.5	1.8	2.9	4.1	2.8	4.0
APV_f (dB)	15.5	15.5	19.6	28.8	36.6	33.2	41.1	38.2

SNR = 33dB H = 36dB M = 30dB L = 22dB

3M Peltor X5A

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	23.0	22.3	28.8	39.7	44.2	39.8	43.0	40.2
S_f (dB)	3.1	2.4	2.4	2.7	3.4	4.6	2.8	2.9
APV_f (dB)	19.8	19.9	26.4	37.0	40.9	35.2	40.2	37.3

SNR = 37dB H = 37dB M = 35dB L = 27dB

3M Peltor X1P5, X1P5-OR

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	14.7	11.4	15.8	24.5	32.5	32.0	35.6	35.1
S_f (dB)	3.3	3.7	2.4	2.9	2.9	3.7	2.5	4.9
APV_f (dB)	11.4	7.7	13.4	21.6	29.7	28.3	33.1	30.1

SNR = 26dB H = 30dB M = 23dB L = 15dB

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3M Peltor X2P5

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	15.9	13.8	20.2	30.0	37.7	35.4	34.9	35.8
S_f (dB)	4.6	2.8	2.1	3.2	2.6	3.0	3.0	4.7
APV_f (dB)	11.3	11.0	18.1	26.8	35.1	32.4	31.9	31.1

SNR = 30dB H = 33dB M = 28dB L = 19dB

3M Peltor X3P5

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	18.9	20.0	24.2	27.4	40.1	36.0	39.7	37.0
S_f (dB)	3.3	2.8	1.7	2.1	3.0	3.0	3.5	3.7
APV_f (dB)	15.6	17.2	22.6	25.3	37.1	33.1	36.2	33.3

SNR = 32dB H = 34dB M = 30dB L = 24dB

3M Peltor X4P5, X4P5-OR

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	16.6	16.8	21.8	30.6	40.1	36.7	43.1	41.9
S_f (dB)	3.6	2.5	2.1	1.9	2.3	3.7	2.7	4.7
APV_f (dB)	12.9	14.3	19.7	28.7	37.8	32.9	40.4	37.2

SNR = 32dB H = 36dB M = 30dB L = 21dB

3M Peltor X5P5

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
M_f (dB)	20.4	22.0	26.9	38.2	43.5	38.7	41.0	40.4
S_f (dB)	3.3	3.1	2.2	2.8	3.4	4.5	2.5	3.3
APV_f (dB)	17.1	18.9	24.7	35.4	40.2	34.2	38.5	37.2

SNR = 36dB H = 36dB M = 34dB L = 26dB

Key:

M_f (dB) = Mean attenuation

S_f (dB) = Standard deviation

APV_f (dB) = Assumed Protection Value

The cushions and inserts on the X Series can be replaced with the Hygiene Kits listed below for improved comfort and reassured protection.

Accessories/Replacement

Hygiene Kits:

Ear Muff Model	Hygiene Kit
X1A / X1P5, X1P5-OR	HYX1
X2A / X2-P5	HYX2
X3A / X3-P5	HYX3
X4A / X4A-OR, X4-P5, X4P5-OR	HYX4
X5A / X5-P5	HYX5

In addition, HY100 sweat pads are also available that can be placed on the cushions to help absorb moisture and sweat.

Key:

APVf = Assumed Protection Value

Mf = Mean attenuation value

sf = Standard deviation

H = High-frequency attenuation value (predicted noise level reduction for noise with

LC – LA = -2dB)

M = Medium-frequency attenuation value (predicted noise level reduction for noise with

LC – LA = +2dB)

L = Low-frequency attenuation value (predicted noise level reduction for noise with

LC – LA = +10dB)

SNR = Single Number Rating (the value that is subtracted from the measured C-weighted sound pressure level, LC in order to estimate the effective A-weighted sound pressure level inside the ear).

IMPORTANT NOTICE

The use of the 3M product described within this document assumes that the user has previous experience of this type of product and that it will be used by a competent professional. Before any use of this product it is recommended to complete some trials to validate the performance of the product within its expected application.

All information and specification details contained within this document are inherent to this specific 3M product and would not be applied to other products or environment. Any action or usage of this product made in violation of this document is at the risk of the user.

Compliance to the information and specification relative to the 3M product contained within this document does not exempt the user from compliance with additional guidelines (safety rules, procedures). Compliance to operational requirements especially in respect to the environment and usage of tools with this product must be observed. The 3M group (which cannot verify or control those elements) would not be held responsible for the consequences of any violation of these rules which remain external to its decision and control.

Warranty conditions for 3M products are determined with the sales contract documents and with the mandatory and applicable clause, excluding any other warranty or compensation.

Respiratory Protection is only effective if it is correctly selected, fitted and worn throughout the time when the wearer is exposed to respiratory contaminants. 3M offers advice on the selection of products, and training in the correct fitting and usage.

For more information on 3M products and services please contact 3M.

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Version 2

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