

3M™ PELTOR™ Earmuffs X Series

Technical datasheet



Product description

The 3M™ PELTOR™ X Series Earmuffs are available in headband, neckband and helmet mounted designs with P5E attachments. When correctly selected and worn these products help reduce exposure to hazardous levels of noise and loud sounds.

Offering a unique colour coding system to visually identify the level of protection being worn. The attenuation values offered range from SNR 26 dB to SNR 37 dB to meet the needs of a wide range of environments and applications.

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 metal wire of the headband version is covered in a non-conductive material
- ▶ The headband versions 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

NOTE: The neckband versions of the X Series are not electrically insulated and replicate the well known 3M™ PELTOR™ Optime™ steel design.

Key features

- ▶ Lightweight design (lightest version 149g)
- ▶ Twin headband designed to optimise weight distribution and comfort with reduced heat build up
- ▶ Protected wire headband for constant headband force during extended use providing reliable protection
- ▶ Neckband version available in all five base models
- ▶ Electrically insulated headband with no exposed wires helps protect against electrical voltage hazards
- ▶ 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
- ▶ 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
- ▶ Modern sleek design to encourage wear whilst ABS plastic cups provide rigid strength and high impact resistance



X1P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted



X2P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted



X3P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted



X4P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted



X5P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted

Colour code and attenuation values

Model	Cup colour band	SNR (dB)		
		Headband version	Helmet mounted version	Neckband version
3M™ PELTOR™ Earmuff X1 (X1A, X1B, X1P5)	Green	27	26	26
3M™ PELTOR™ Earmuff X1 (X1P5-OR)	Orange		26	
3M™ PELTOR™ Earmuff X2 (X2A, X2B, X2P5)	Yellow	31	30	30
3M™ PELTOR™ Earmuff X3 (X3A, X3B, X3P5)	Red	33	32	32
3M™ PELTOR™ Earmuff X4 (X4A, X4B, X4P5)	Bright Green	33	32	33
3M™ PELTOR™ Earmuff X4 (X4A-OR, X4P5-OR)	Orange	33	32	
3M™ PELTOR™ Earmuff X5 (X5A, X5B, X5P5)	Black	37	36	37

Helmet mounted version approved combination

Helmet brand	Model number	P5 Adapter	3M™ PELTOR™ Earmuff				
			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	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
Aubouïex	Iris 2	E	L	L	L	L	L
Aubouïex/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

Key: *Adapter to be ordered separately.

Mass

Model	Mass (grams)
3M™ PELTOR™ Earmuff X1 (X1A)	184
3M™ PELTOR™ Earmuff X1 (X1P5, X1P5-OR)	187
3M™ PELTOR™ Earmuff X2 (X2A)	220
3M™ PELTOR™ Earmuff X2 (X2P5)	226
3M™ PELTOR™ Earmuff X3 (X3A)	245
3M™ PELTOR™ Earmuff X3 (X3P5)	256
3M™ PELTOR™ Earmuff X4 (X4A, X4A-OR)	234
3M™ PELTOR™ Earmuff X4 (X4P5, X4P5-OR)	241
3M™ PELTOR™ Earmuff X5 (X5A)	351
3M™ PELTOR™ Earmuff X5 (X5P5)	355
3M™ PELTOR™ Earmuff X1 (X1B)	149
3M™ PELTOR™ Earmuff X2 (X2B)	186
3M™ PELTOR™ Earmuff X3 (X3B)	223
3M™ PELTOR™ Earmuff X4 (X4B)	203
3M™ PELTOR™ Earmuff X5 (X5B)	319



X3P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted



X4P5E – 3M™ PELTOR™
X Series Earmuff
Helmet Mounted

Standards and approvals:

The 3M™ PELTOR™ X Series Earmuffs are type approved against the European Regulation (EU) 2016/425 by Finnish Institute of Occupational Health (FIOH), Topeliuksenkatu 41aA, FIN-00250 Helsinki, Finland (Notified Body number 0403). These products meet the requirement of the Harmonised European Standard EN 352-1:2002 (for headband and neckband version) and EN 352-3:2002 (for helmet mounted version). The applicable Certificate(s) and Declaration(s) of Conformity are available at www.3M.com/Hearing/certs.

Material listing

	Headband, neckband version	Helmet mounted version
Headband/neckband and 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™ Earmuff X1 (X1A headband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	15.6	11.9	15.4	24.5	34.3	32.8	37.4	37.4
Sf (dB)	3.6	2.0	2.6	2.6	2.3	3.3	2.5	3.8
APVf (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

Attenuation values

3M™ PELTOR™ Earmuff X2 (X2A headband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	19.0	14.1	22.2	31.1	39.7	36.6	37.0	37.0
Sf (dB)	4.5	2.2	2.1	2.7	3.2	3.2	3.7	3.4
APVf (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™ Earmuff X3 (X3A headband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	21.5	22.8	25.1	27.0	40.0	35.8	38.5	38.9
Sf (dB)	3.0	2.1	3.1	1.7	2.8	2.2	2.7	2.9
APVf (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™ Earmuff X4 (X4A, X4A-OR headband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	19.6	17.8	22.1	30.6	39.5	37.3	43.8	42.1
Sf (dB)	4.1	2.3	2.5	1.8	2.9	4.1	2.8	4.0
APVf (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™ Earmuff X5 (X5A headband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	23.0	22.3	28.8	39.7	44.2	39.8	43.0	40.2
Sf (dB)	3.1	2.4	2.4	2.7	3.4	4.6	2.8	2.9
APVf (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™ Earmuff X1 (X1B neckband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	14.9	12.4	15.3	25.3	31.4	34.1	38.2	33.9
Sf (dB)	5.3	4.7	2.2	2.2	3.2	4.4	3.4	5.4
APVf (dB)	9.6	7.6	13.1	23.2	28.3	29.6	34.9	28.5

SNR = 26dB H = 31dB M = 23dB L = 15dB

Attenuation values

3M™ PELTOR™ Earmuff X2 (X2B neckband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)		13.6	19.7	32.5	39.5	35.8	35.2	35.7
Sf (dB)		3.5	2.3	2.3	3.3	2.2	1.9	2.7
APVf (dB)		10.1	17.4	30.2	36.2	33.6	33.3	33.0

SNR = 30dB H = 34dB M = 28dB L = 18dB

3M™ PELTOR™ Earmuff X3 (X3B neckband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)		19.5	24.5	29.7	40.0	37.6	38.3	36.7
Sf (dB)		5.0	3.7	2.6	3.2	3.5	2.3	4.3
APVf (dB)		14.5	20.8	27.1	36.8	34.1	36.0	32.4

SNR = 32dB H = 35dB M = 30dB L = 22dB

3M™ PELTOR™ Earmuff X4 (X4B neckband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)		18.0	20.7	32.9	40.8	38.5	45.9	40.4
Sf (dB)		3.2	1.6	3.1	2.7	3.1	2.2	3.8
APVf (dB)		14.8	19.1	29.8	38.1	35.4	43.7	36.6

SNR = 33dB H = 38dB M = 30dB L = 21dB

3M™ PELTOR™ Earmuff X5 (X5B neckband)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)		21.5	29.0	42.4	44.6	40.3	40.9	38.1
Sf (dB)		3.3	1.9	3.7	3.5	2.7	2.5	3.9
APVf (dB)		18.2	27.1	38.7	41.1	37.6	38.4	34.2

SNR = 37dB H = 38dB M = 36dB L = 27dB

3M™ PELTOR™ Earmuff X1 (X1P5, X1P5-OR helmet mounted)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	14.7	11.4	15.8	24.5	32.5	32.0	35.6	35.1
Sf (dB)	3.3	3.7	2.4	2.9	2.9	3.7	2.5	4.9
APVf (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

Attenuation values

3M™ PELTOR™ Earmuff X2 (X2P5 helmet mounted)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	15.9	13.8	20.2	30.0	37.7	35.4	34.9	35.8
Sf (dB)	4.6	2.8	2.1	3.2	2.6	3.0	3.0	4.7
APVf (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™ Earmuff X3 (X3P5 helmet mounted)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	18.9	20.0	24.2	27.4	40.1	36.0	39.7	37.0
Sf (dB)	3.3	2.8	1.7	2.1	3.0	3.0	3.5	3.7
APVf (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™ Earmuff X4 (X4P5, X4P5-OR helmet mounted)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	16.6	16.8	21.8	30.6	40.1	36.7	43.1	41.9
Sf (dB)	3.6	2.5	2.1	1.9	2.3	3.7	2.7	4.7
APVf (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™ Earmuff X5 (X5P5 helmet mounted)

Frequency (Hz)	63	125	250	500	1000	2000	4000	8000
Mf (dB)	20.4	22.0	26.9	38.2	43.5	38.7	41.0	40.4
Sf (dB)	3.3	3.1	2.2	2.8	3.4	4.5	2.5	3.3
APVf (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:

Mf (dB) = Mean attenuation

Sf (dB) = Standard deviation

APVf (dB) = Assumed Protection Value

Accessories/replacement

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

Hygiene kits:

Earmuff model	Hygiene kit
3M™ PELTOR™ Earmuff X1A / X1P5, X1P5-OR	HYX1
3M™ PELTOR™ Earmuff X2A / X2P5	HYX2
3M™ PELTOR™ Earmuff X3A / X3P5	HYX3
3M™ PELTOR™ Earmuff X4A / X4A-OR, X4P5, X4P5-OR	HYX4
3M™ PELTOR™ Earmuff X5A / X5P5	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.

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