

# 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 P3E 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
- ▶ 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



## Colour code and attenuation values

| Model                                    | Cup colour band | SNR (dB)         |                        |                  |
|------------------------------------------|-----------------|------------------|------------------------|------------------|
|                                          |                 | Headband version | Helmet mounted version | Neckband version |
| 3M™ PELTOR™ Earmuff X1 (X1A, X1B, X1P3)  | Green           | 27               | 26                     | 26               |
| 3M™ PELTOR™ Earmuff X1 (X1P3-OR)         | Orange          |                  | 26                     |                  |
| 3M™ PELTOR™ Earmuff X2 (X2A, X2B, X2P3)  | Yellow          | 31               | 30                     | 30               |
| 3M™ PELTOR™ Earmuff X3 (X3A, X3B, X3P3)  | Red             | 33               | 32                     | 32               |
| 3M™ PELTOR™ Earmuff X4 (X4A, X4B, X4P3)  | Bright Green    | 33               | 32                     | 33               |
| 3M™ PELTOR™ Earmuff X4 (X4A-OR, X4P3-OR) | Orange          | 33               | 32                     |                  |
| 3M™ PELTOR™ Earmuff X5 (X5A, X5B, X5P3)  | Black           | 37               | 36                     | 37               |

## Helmet mounted version approved combination

| Helmet brand    | Model number             | P3 Adapter | 3M™ PELTOR™ Earmuff |      |      |               |      |
|-----------------|--------------------------|------------|---------------------|------|------|---------------|------|
|                 |                          |            | X1P3, X1P3-OR       | X2P3 | X3P3 | X4P3, X4P3-OR | X5P3 |
| 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 (X1P3, X1P3-OR) | 187          |
| 3M™ PELTOR™ Earmuff X2 (X2A)           | 220          |
| 3M™ PELTOR™ Earmuff X2 (X2P3)          | 226          |
| 3M™ PELTOR™ Earmuff X3 (X3A)           | 245          |
| 3M™ PELTOR™ Earmuff X3 (X3P3)          | 256          |
| 3M™ PELTOR™ Earmuff X4 (X4A, X4A-OR)   | 234          |
| 3M™ PELTOR™ Earmuff X4 (X4P3, X4P3-OR) | 241          |
| 3M™ PELTOR™ Earmuff X5 (X5A)           | 351          |
| 3M™ PELTOR™ Earmuff X5 (X5P3)          | 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          |



X1P3E – 3M™ PELTOR™ X Series Earmuff Helmet Mounted



X2P3 – 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](http://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 (X1P3, X1P3-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 (X2P3 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 (X3P3 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 (X4P3, X4P3-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 (X5P3 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

X3P3E – 3M™ PELTOR™  
X Series Earmuff  
Helmet Mounted



X4P3 – 3M™ PELTOR™  
X Series Earmuff  
Helmet Mounted





## 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 / X1P3, X1P3-OR         | HYX1        |
| 3M™ PELTOR™ Earmuff X2A / X2P3                  | HYX2        |
| 3M™ PELTOR™ Earmuff X3A / X3P3                  | HYX3        |
| 3M™ PELTOR™ Earmuff X4A / X4A-OR, X4P3, X4P3-OR | HYX4        |
| 3M™ PELTOR™ Earmuff X5A / X5P3                  | HYX5        |



X5P3E – 3M™ PELTOR™  
X Series Earmuff  
Helmet Mounted

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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