EU Intrinsic Safety Guide
3M™ PELTOR™ Adapter FL4030-50, FL40103-50, FL40107-50

Doc name: FP3747REVB
Date: 2017-11-13

The Sound Solution

PELTOR™

INTRINSICALLY SAFE APPROVED MODELS

This safety guide handles special conditions for the ATEX and IECEx intrinsically safe approved adapters: FL4030-50, FL40103-50 and FL40107-50.

GENERAL PRODUCT INFORMATION

Adapters with integrated Push-To-Talk (PTT) button for connecting 3M™ PELTOR™ head-sets to communication radios.

PROPER USE

The 3M™ PELTOR™ Adapters FL4030-50, FL40103-50 and FL40107-50 have been certified to be intrinsically safe for use in potentially explosive atmospheres. Read these instructions carefully before use and save for future reference. For instructions on general use and operation of the product, please refer to main user instruction manual.

APPROVALS

Approved Area Classifications:

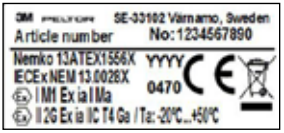
• Nemko 13ATEX1556X
Certified by Nemko as Intrinsically Safe for Use in Hazardous Locations:
I M1 Ex ia I Ma
II 2G Ex ia IIC T4 Ga -20ºC ≤ Ta ≤ +50 ºC

• IECEx NEM 13.0028X
Certified by Nemko as Intrinsically Safe for Use in Hazardous Locations:
Ex ia I Ma
Ex ia IIC T4 Ga -20ºC ≤ Ta ≤ +50 ºC
The products have been examined by: Nemko, Gaustadalléen 30, N-0373 Oslo, Norway (Notified Body #0470) for the ATEX and IECEx certifications.

The production quality inspection is carried out by: Nemko, Gaustadalléen 30, N-0373 Oslo, Norway (Notified Body #0470)

PRODUCT MARKING - ATEX AND IECEx

The following label is a template for FL4030-50, FL40103-50 and FL40107-50.



SAFETY INFORMATION

⚠ WARNING

To reduce the risk of igniting an explosion which, if not avoided, could result in serious injury or death:

- Ensure that the 3M™ PELTOR™ Adapters (FL4030-50, FL40103-50, FL40107-50) are only used and stored in the classified areas consistent with the marked equipment ratings.
- Do not use adapter if it is damaged or malfunctioning in any way.
- Never connect electronic components or devices to the adapter in a potentially explosive atmosphere.
- Only use 3M™ PELTOR™ Authorized Service Centers for service and repair. SUBSTITUTION OF COMPONENTS MAY IMPAIR INTRINSIC SAFETY.

SAFETY PARAMETERS

The “Input” parameters are related to the connection with the radio. The “Output” parameters are related to the connection with the headset. The safety parameter values stated assume that the power supply of the radio has a linear resistive output.

FL4030-50:

Maximum Input Parameters	Maximum Output Parameters
U_i = 9.0V	$U_o = U_i$
I_i = 450mA	$I_o = I_i$
P_i = 1.3W	$P_o = P_i$
C_i = 3.3µF	$C_o = C_o$ radio - 3.3µF
L_i = 42.22µH	$L_o = L_o$ radio - 42.22µH

FL40103-50:

Maximum Input Parameters	Maximum Output Parameters
U_i = 4.2V	U_o = Ui
I_i = 2.7A	I_o = 112mA
P_i = 11.34W	P_o = 118mW
C_i = 1.0µF	C_o = 418µF
L_i = negligible	L_o = 2.96mH

FL40107-50:

Maximum Input Parameters	Maximum Output Parameters
U_i = 8.4V	U_o = Ui
I_i = 364mA	I_o = 166mA
P_i = 3.0W	P_o = 350mW
C_i = 0.9µF	C_o = 4.6µF
L_i = negligible	L_o = 1.46mH

Nemko

[1] EU-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use in Potentially explosive atmospheres Directive 2014/34/EU

[3] EU-Type Examination Certificate Number: Nemko 13ATEX1556X Issue 1

[4] Product: Adapter for use with headset

[5] Manufacturer: 3M Svenska AB

[6] Address: Box 2341
SE-331 02 Värnamo
SWEDEN

[7] This product and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8] **Nemko AS, notified body number 0470, in accordance with Article 17 of Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014, certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to the Directive.**

The examination and test results are recorded in confidential report no. D0002447

[9] Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN 60079-0:2012/A11:2013, EN 60079-11: 2011, EN 50303: 2000

[10] If the sign "X" is placed after the certificate number, it indicates that the product is subject to the Specific Conditions of Use specified in the schedule to this certificate.

[11] This EU - TYPE EXAMINATION CERTIFICATE relates only to the design and construction of the specified product. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate

[12] **The marking of the product shall include the following:**

Ex I M1 Ex ia I Ma, Ta : -20°C to +50°C

Ex II 2G Ex ia IIC T4 Ga, -20°C to +50°C

Oslo, 2017-11-14

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Certification Manager

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ENTERPRISE NUMBER NO974442532

[13] Schedule

[14] EU-TYPE EXAMINATION CERTIFICATE No Nemko 13ATEX1556X Issue 1

[15] **Description of Product**
This certificate covers 3M Svenska AB adapters with integrated push-button (PTT) for connecting 3M Peltor headsets to communication radios and mobile telephones. The enclosure provides a degree of protection of IP65 and each adapter is attached with individual safety parameters.

Type Designations
FL4030-50, FL40103-50 and FL40107-50.

Safety parameters for intrinsically safe connection for Group IIC:

FL4030-50:

Maximum Input parameters	Output
Ui = 9.0V	Uo = Ui
Ii = 450mA	Io = Ii
Pi = 1.3W	Po = Pi
Ci = 3.3µF	Co = Co radio – 3.3µF
Li = 42.22µH	Lo = Lo radio – 42.22µH

FL40107-50:

Maximum Input parameters	Output
Ui = 8.4V	Uo = Ui
Ii = 364mA	Io = 166mA
Pi = 3.0W	Po = 350mW
Ci = 0.9µF	Co = 4.6µF
Li = negligible	Lo = 1.46mH

FL40103-50:

Maximum Input parameters	Output
Ui = 4.2V	Uo = Ui
Ii = 2.7A	Io = 112mA
Pi = 11.34W	Po = 118mW
Ci = 1.0µF	Co = 418µF
Li = negligible	Lo = 2.96mH

The "Input" parameters are related to the connection with the radio.
The "Output" parameters are related to the connection with the headset.
The safety parameter values stated assume that the power supply of the radio has a linear resistive output.

Degrees of protection (IP Code)
IP65 according to IEC 60529 Edition 2.1.

Ambient temperature:
-20°C to +50°C

Routine tests
N / A

[16] Report No. D0002447

Descriptive Documents

Number	Title	Rev	Date
K329_PCB_EDF	Assembly Drawing K329 PCBA FOR FL40**	A	2013-09-17
K329_PCB_Spec	PCB Spesification K329 PCBA FOR FL40**	A	2013-09-17
K329_Schematic	Schematic drawing K329 PCBA FOR FL40**	A	2013-09-17
K358A_BOM	BOM list K358A PCBA FOR FL40**	A	2013-09-17
K329A_Info_File	Information file K329 PCBA FOR FL40**	A	2013-09-17
K350_PCB_EDF	Assembly Drawing K350 PCBA FOR FL40**	A	2013-10-15
K350_PCB_Spec	PCB Specification K350 PCBA FOR FL40**	A	2013-10-15
K350_Schematic	Schematic drawing K350 PCBA FOR FL40**	A	2013-10-15
K350B_BOM	BOM list K350B PCBA FOR FL40103*	A	2013-10-15
K350B_Info_File	Information file K350B PCBA FOR FL40103*	A	2013-10-15
K350C_BOM	BOM list K350C PCBA FOR FL40107*	A	2013-10-15
K350C_Info_File	Information file K350C PCBA FOR FL40107*	A	2013-10-15
P120184	Assembly Drawing FL4030-50	C	2014-10-13
P120200	Label layout TA0044 FP8120, Label for Adapter FL40*-50	A	2013-10-02
P120449	Wiring instruction FL4030-50	A	2013-10-17
P130201	Assembly Drawing AL5097 Cable incl. SR for Funkwerk IFIs	A	2013-10-17
P130219	Detail drawing DEO366 Insulation sheet for FL40*, Ex	A	2013-10-15
P130220	Wiring instruction FL45103-50	A	2013-10-17
P130221	Assembly Drawing FL40103-50	A	2013-10-18
P130222	Wiring instruction FL40107-50	A	2013-10-17
P130223	Assembly Drawing FL40103-50	A	2013-10-18
P130287	Detail drawing DEO368 Sleeve, Length 30mm, Thickness 0.7mm	A	2013-10-15
P130292	Label layout T1201 FP8335, Cable label for FL40***-50	A	2013-10-15
FP3747	Safety guide Peltor adapter / Control drawing FL45**-55	B	2017-11-13
K348_PCB-EDF	Assembly Drawing K348 PCBA FOR DEAL3CXA-02	A	2012-11-22
K348_PCB_SPEC	PCB specification K348 PCBA FOR DEAL3CXA-02	A	2012-11-22
K348_SCHEMATIC	Schematic drawing K348 PCBA FOR DEAL3CXA-02	A	2012-11-22
K348A_BOM	Bom list K348A PCBA FOR DEAL3CXA-02	B	2014-09-30
K348A_INFO_FILE	Information file K348A PCBA FOR DEAL3CXA-02	B	2014-09-30

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2013-10-30	206409	Prime Certificate released
1	2017-11-14	D0002447	Minor updates and change of Li for model FL4030-50

[17] **Specific Conditions of Use**
For electrical parameters for safe connection to other equipment, for the different type designations, see Safety parameters for intrinsically safe connection.

[18] **Essential Health and Safety Requirements**
Essential Health and Safety Requirements (EHSRs) are covered by the standards listed at item 9

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FP3747 rev. b

Patent: www.3M.com/patent

3M PSD products are occupational use only.