

[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 03ATEX1351** Issue 7

[4] Product: **Headsets and Offshore Ear Plug**

[5] Manufacturer: **A-Kabel AS**

[6] Address: **Nedre Hagavei 15C
2150 Årnes, Norway**

[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.

D0003891

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

EN 60079-0:2012/A11:2013, EN 60079-11: 2012

[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:



II 2 G

Ex ib IIC T4 Gb, -40°C ≤ ta ≤ +60°C

Oslo, 2019-04-10



Geir Hørthe
Certification Manager

[13] Schedule

[14] **EU-TYPE EXAMINATION CERTIFICATE No** **Nemko 03ATEX1351** **Issue 7**

[15] **Description of Product**

The covered equipment, headsets and ear Plug are intended to be used for radio communication. Connection may be direct to radio units or may go via PTT (Push-To-Talk) units. The offshore ear plug may be used as stand-alone unit to be connected to PTT units, or as accessory to the headset models AK5850S/-HS. However, certificates of radios or PTT units must allow intrinsic safe connections with the covered equipment. In other words matching of safety parameters is important for intrinsic safe connection in the end use. The below simplified comparison conditions may be used.

$U_o \leq U_i$, $I_o \leq I_i$, $C_o \geq C_i + C_c$, $L_o \geq L_i + L_c$ (C_c & L_c is cable's capacitance & inductance)

(Note. L_i and L_i/R_i values are listed for reference, but end-configuration of intrinsic safe connections may need further consideration)

Model	Description
AK5850	Headset. Standard version.
AK6631	Headset with slim cup
AK5850S	Headset with helmet attachment. Built-in connector for optional ear plug input.
AK5850HS	Headset with headband. Built-in connector for optional ear plug input.
AK5850T	Headset with 32Ω speaker and ODU connector as an option
EM2140DC-S	Offshore ear plug which exists in two versions. Version A: Plug is 3.5mm molded jack. Version B: plug is military jack type Nexus TP-120

(The ear plug is also formerly covered by certificate Nemko 12 ATEX 1277).

Type Designations

Headsets: AK5850, AK5850S, AK5850HS, AK5850T, AK6631

Ear plug: EM2140DC-S (version A & B)

Electrical Data

Intrinsic safety parameters

Headsets: U_i : 9Vdc, I_i : 291mA, P_i : 1.2W, C_i : Negligible. L_i : 0.9mH or L_i/R_i : 6μH/Ω

For AK5850T: U_i : 9Vdc, I_i : 291mA, P_i : 1.2W, C_i : Negligible. L_i : 380μH or L_i/R_i : 15.5μH/Ω

Ear Plug: U_i : 9Vdc, I_i : 300mA, P_i : 0.6W, C_i : Negligible. L_i : 3.497mH or L_i/R_i : 4.22μH/Ω.

Degrees of protection (IP Code)

(IP20 checked)

Ambient temperature:

-40°C to +60°C

Routine tests

None

[16] **Report No.** D0003891-00

Descriptive Documents

Name/Title	Number	Rev	Date
Offshore earplug drawing	EM2140DC-S	1	2015-10-21
Marking label of ear plug	Label EM2140DC-S	2	2015-10-21
Marking label of headsets	Marking headsets	A	2015-10-21
*) Marking label of headset AK5850T	Marking AK5850T	A	2019-04-01
AK5850, AK5850S/HS, AK6631 schematic	AK5850sch	A	2015-10-21
*) AK5850T schematic	AK5850Tsch	A	2019-03-26
AK5850S/-HS Lineup	AK5850S/HS Lineup	C	2015-10-21
*) AK5850T Lineup	AK5850T Lineup	A	2019-03-29
Wiring diagram B007D	S007D	D	2015-10-21
PCB B007D	B007D	D	2012-05-04
*) Assembly drawing headsets	DRWG AK5850/S/HS/T, AK6631	B	2019-03-26

Note: An * is included before the title of documents that are new or revised.

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2004-01-20	10065 *)	Prime certificate issued
1	2005-07-19	47966 *)	Adding new speaker Promover type 27A512S-300W
2	2006-09-06	72667 *)	Adding new variant with model name AK 6631, this new variant is identical to main model AK 5850
3	2009-10-28	137630 *)	- The certificate is extended to include changes of the input parameters. Compliance with the Essential Health and Safety Requirements has been assured by compliance with: CENELEC EN 60079-0 :2006, CENELEC EN 60079-11: 2007 - Safety Parameters for the headsets Ui: 9,0V, Ii: 291mA, Pi: 1,3W Ci: Negligible, Li=32,5mH, Li/Ri: 135µH/Ω
4	2012-12-07	225269 *)	The certificate is extended to include new variant of headset (AK5850S & AK5850HS) with inlet for offshore earplugs connection.
5	2013-12-19	D0000920-00 a)	- Fischer connector used as alternative to the Nexus connector (connection to PTT-units). - Extended ambient range to $-40^{\circ}\text{C} \leq T_a \leq +60^{\circ}\text{C}$ and reduction of Pi value to 1.2W. - Reduced Li value of headsets due to spark ignition re-testing. - Updated list of Descriptive documents.
6	2015-11-06	D0000920-01 a)	- Include Offshore Ear Plug model EM2140DC-S in this certification. The ear plug EM2140DC-S is also covered by certificate Nemko 12 ATEX 1277. - Update to the standards EN 60079-0: 2012 & EN 60079-11: 2012. - IECEx certification applied.
7	2019-04-10	D0003891-00 a)	Introducing the new model AK5850T which use different type of speaker element (Promover Industrial Co., Ltd, type X(27-11)NL-C-PF) and plug (ODU K11YAR-P16XDD0-R000)

Supplementary information:
*) Nemko project
a) Presafe project



[17] **Specific Conditions of Use**
None

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