

# [1] EC-TYPE EXAMINATION CERTIFICATE

[2] Equipment or Protected System Intended for use  
in Potentially explosive atmospheres  
Directive 94/9/EC

[3] EC-Type Examination Certificate Number: **Nemko 03ATEX1351** Issue 6

[4] Equipment or Protective System: **Headsets and Offshore Ear Plug**

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

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

[7] This equipment or protective system 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 9 of Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety requirements relating to the design and construction of equipment and protective systems 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. **D0000920-01**

[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 equipment or protective system is subject to special conditions for safe use specified in the schedule to this certificate.

[11] This EC-TYPE EXAMINATION CERTIFICATE relates only to the design, examination and tests of the specified equipment or protective system in accordance to the directive 94/9/EC.

Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

[12] The marking of the equipment or protective system shall include the following:



**II 2 G**

**Ex ib IIC T4 Gb, -40°C ≤ ta ≤ +60°C**

Oslo, 2015-11-06



**Asle Kaastad**  
Certification Manager, Ex-products

## [13] Schedule

[14] **EC-TYPE EXAMINATION CERTIFICATE No**    **Nemko 03ATEX1351**    **Issue 6**

[15] **Description of Equipment or Protective System**

Headsets and Ear Plug used for radio communication. The covered equipment is intended to be used for radio communication. Connection to radio units or 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 dedicated certificates of radios or PTT units must give permission for such intrinsic safe connections with regards to Ex requirements. In other words matching of safety parameters is important for intrinsic safe connection where following conditions must be considered in the end use:

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

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.
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 covered by certificate Nemko 12 ATEX 1277 prior to this investigation.

**Type Designations**

Headsets: AK5850, AK5850S, AK5850HS, AK6631

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

**Technical Data**

Intrinsic safety parameters

Headsets:  $U_i$ : 9Vdc,  $I_i$ : 291mA,  $P_i$ : 1.2W,  $C_i$ : Negligible.  $L_i$ : 0.9mH or  $L_i/R_i$ : 6 $\mu$ H/ $\Omega$

Ear Plug:  $U_i$ : 9Vdc,  $I_i$ : 300mA,  $P_i$ : 0.6W,  $C_i$ : Negligible.  $L_i$ : 3.497mH or  $L_i/R_i$ : 4.22 $\mu$ H/ $\Omega$ .

**Ingress Protection Code**

IP20

[16] **Report No. D0000920-01**

**Descriptive Documents**

Name/Number	Rev.	Date	Title/Description	Sheets
EM2140DC-S	1	2015-10-21	Offshore earplug drawing	1
Label EM2140DC-S	2	2015-10-21	Marking label of ear plug	1
Marking headsets	A	2015-10-21	Marking label of headsets	1
AK5850sch	A	2015-10-21	AK5850, AK5850S/HS, AK6631 schematics	1
AK5850S/HS Lineup	C	2015-10-21	AK5850S/-HS Lineup	1
S007D	D	2015-10-21	Wiring diagram B007D	1
B007D	D	2012-05-04	PCB B007D	3
Drwg AK5850/S/HS, AK6631	A	2015-10-22	Assembly drawing headsets	2

### 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, li: 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	- 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	- 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.
Supplementary information: *) Nemko project			

**[17] Special Conditions for Safe Use**  
None

**[18] Essential Health and Safety Requirements**  
See item 9