

[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 03ATEX162X** Issue 5

[4] Product: **Key Switch and Microphone**

[5] Manufacturer: **Jatronic A/S**

[6] Address: **Borgeskogen 5
3160 Stokke
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.

D0001248/2

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

EN 60079-0:2012/A11:2013 and 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 2G

Ex ib IIB T4 Gb

Oslo, 2019-04-05



Gei Hørthe
Certification Manager

[13] Schedule

[14] **EU-TYPE EXAMINATION CERTIFICATE No** **Nemko 03ATEX162X** **Issue 5**

[15] **Description of Product**

Key switch device (foot pedal) for connection to certified intrinsically safe radio transceivers and certified intrinsically safe accessories for instance the microphone AB40. The key switch device is incorporated in a footswitch.

Microphone enclosed in a microphone holder on top of a flexi arm with foot for mounting, without the foot, without the foot but with XLR plug or without foot and flexi arm, and the connection with a plug shall be to a key switch mounted in a separate box.

The key switches AB40-II GP340, AB40-II GP900, AB40-II MTP850Ex and AB40-II STP8X are certified to use together with the microphone AB40. The assembly is designated gas group IIB as an entity.

Type Designations

Key Switch: AB40-II GP340, AB40-II GP900, AB40-II MTP850Ex and AB40-II STP8X.

Microphone: AB40, AB40 without gooseneck, AB40 with gooseneck, AB40 with gooseneck XLR plug, AB40 gooseneck with extended cable.

Electrical Safety Parameters

Key switch AB40-II GP340, AB40-II GP900:

$U_i=U_o$: 9V, $P_i=P_o$: 1,3W, C_i : 433nF, L_i : 0 (Maximum internal inductance L_i :Neg. + (Li of the Microphone))

Output voltage, current and power are equal to input voltage, current and power.

Key switch AB40-II MTP850Ex:

$U_i=U_o$: 9V, $P_i=P_o$: 1,3W, C_i : 90nF, L_i : 0 (Maximum internal inductance L_i :Neg + (Li of the Microphone))

Output voltage, current and power are equal to input voltage, current and power.

Key switch AB40-II STP8X:

U_o : 6,51V, I_o : 169mA, P_o : 274mW, C_o : 300nF, L_o : 1,2mH - (80 μ H from the microphone)

The key switch can only be used together with Sepura STP8X series TETRA Radio certified in Baseefa12ATEX0002X and in accordance to document SPR-DOC-04100 rev. 1, date 02/04/15.

Microphone AB-40 (AB40, AB40 without gooseneck, AB40 with gooseneck and AB40 with gooseneck XLR plug):

U_i : 10V, P_i : 1,3W, C_i : negligible, L_i : 80 μ H, L_i/R_i : 0,42 μ H/ Ω

Microphone AB40 gooseneck with extended cable:

U_i : 10V, P_i : 1,3W, C_i : 1,2nF, L_i : 93 μ H, L_i/R_i : 0,48 μ H/ Ω

Ambient temperature:

-20°C to +40°C

[16] **Report No. D0001248/2**

Descriptive Documents

Name/Number	Rev.	Date	Title/Description	Sheets
AB40				
85016	E	23.06.2016	Svanehalsmikrofon kompl.	1
85016	E	23.06.2016	AB40 Svanehalsmikrofon stykkliste	2



75010	C	22.06.2016	Fot for svanehals AB40NX	1
75009	A	28.04.2011	Adapter	1
75012	B	20.03.2014	Mikrofon-kit + gummi	1
75012	B	25.03.2014	Mikrofon + gummi til mc stykke	1
75115	D	17.08.2016	Unit label AB 40	1
75129	B	07.09.2012	Serial Number label	1
75180	A	06.08.2012	Jordingslabel	1

AB40-II GP340

85040	B	06.08.2012	Connection drawing AB 40 –II GP 340	1
85040	B	04.07.2013	AB40-II Fotpedal GP340 stykke	1
75148	A	07.07.2011	Connection drawing AB 40-II GP 340	1
75152	A	16.05.2012	Kabel komplett AB-40-II, GP 340	1
75070	B	11.11.2013	Pluggkort for 33NX	1
75070	B	19.01.2015	Pluggkort for 33NX stykke	1
75149	B	14.01.2015	Fotpedal maskinert	1
75130	C	04.12.2014	PCB	1
75113	01	03.08.2011	8NX-J forsterkerkort Forsterkerkort AB12/AB40	1
75130	C	19.01.2015	8NX-J FORSTERKERKORT COMBI	1
75127	C	27.01.2014	Nexus komplett TJT Plugg	1
75131	A	03.05.2011	Gummitetning for Nexus	1
75109	C	17.08.2016	Unit label AB 40-II General	1
75129	B	07.09.2012	Serial Number label	1
75139	A	20.12.2011	MIC label	1
75180	A	06.08.2012	Jordingslabel	1
75013	B	15.12.2014	Spesialskruer for GP340 Plugg	1

AB40-II GP900

85018	B	06.08.2012	Connection drawing AB40–II GP 900	1
85018	B	04.07.2013	AB40-II GP900 stykke	1
75147	A	07.07.2011	Fotpedal komplett GP 900	1
75151	A	21.12.2011	Kabel komplett AB-40-II, GP 900	1
75151	A	04.05.2012	Kabel komplett GP900 stykke	1



75076	A	11.04.2012	Sammenstilling GP900 plugghus	1
75076	A	04.05.2011	Sammenstilling GP900 plugghus stykke	1
75150	A	11.04.2012	Plugghus GP900 maskinert	1
75041	A	18.07.2011	Pluggkort 16NX-J AB12-16NXX-2/L Jatronic as	1
75001	A	07.11.2011	PCB 16NX-J Pluggkort delvis stykke	1
75001	A	18.04.2011	Pluggkort 16NX-J	1
75149	B	14.01.2015	Fotpedal maskinert	1
75131	A	03.05.2011	Gummitetning for Nexus	1
75127	C	27.01.2014	Nexus komplett TJT Plugg	1
75130	C	04.12.2014	PCB	1
75113	01	03.08.2011	8NX-J forsterkerkort Forsterkerkort AB12/AB40	1
75130	C	19.01.2015	8NX-J FORSTERKERKORT COMBI	1
75109	C	17.08.2016	Unit label AB 40-II General	1
75129	B	07.09.2012	Serial Number label	1
75139	A	20.12.2011	MIC label	1
75180	A	06.08.2012	Jordingslabel	1
AB40-II MTP850Ex				
85045	A	24.01.2013	Connection drawing AB 40 –II MTP850Ex	1
85045	A	27.06.2013	AB40-II for MTP850Ex	1
75148	A	07.07.2011	Connection drawing AB 40-II GP 340	1
75152	A	16.05.2012	Kabel komplett AB-40-II, GP 340	1
75070	B	11.11.2013	Pluggkort for 33NX	1
75070	B	19.01.2015	Pluggkort for 33NX stykke	1
75149	B	14.01.2015	Fotpedal maskinert	1
75077	D	12.03.2015	PCB, DUPLEX	1
75077	C	18.12.2014	Forsterkerkort AB12-35T	1
75197	C	09.10.2014	AB12-35T	1
75130	C	19.01.2015	8NX-J FORSTERKERKORT COMBI	1
75127	C	27.01.2014	Nexus komplett TJT Plugg	1
75131	A	03.05.2011	Gummitetning for Nexus	1
75192	B	19.01.2015	Unit label AB 40-II MPT 850 Ex	1
75129	B	07.09.2012	Serial Number label	1



75139	A	20.12.2011	MIC label	1
75180	A	06.08.2012	Jordingslabel	1

AB40 without gooseneck

80339	B	09.09.2016	AB 40 without Goosneck	1
75009	A	28.04.2011	Adapter	1
75012	B	20.03.2014	Mikrofon-kit + gummi	1
75012	B	25.03.2014	Mikrofon + gummi til mc stykke	1
75312	B	16.01.2013	Unit label AB 40x	1
75129	B	07.09.2012	Serial Number label	1
75180	A	06.08.2012	Jordingslabel	1

AB40 with gooseneck

80340	B	09.09.2016	AB 40 with Goosneck	1
75009	A	28.04.2011	Adapter	1
75012	B	20.03.2014	Mikrofon-kit + gummi	1
75012	B	25.03.2014	Mikrofon + gummi til mc stykke	1
75312	B	16.01.2013	Unit label AB 40x	1
75129	B	07.09.2012	Serial Number label	1
75180	A	06.08.2012	Jordingslabel	1

AB40 with gooseneck XLR plug

80349	A	05.08.2013	AB 40 with Goosneck	1
75009	A	28.04.2011	Adapter	1
75012	B	20.03.2014	Mikrofon-kit + gummi	1
75012	B	25.03.2014	Mikrofon + gummi til mc stykke	1
75312	B	16.01.2013	Unit label AB 40x	1
75129	B	07.09.2012	Serial Number label	1
75180	A	06.08.2012	Jordingslabel	1

AB40-II STP8X

85056	B	29.06.2016	AB40-II for STP8X Ex stykke	2
85056	B	29.06.2016	Connection drawing AB 40 –II STP 8x	1
75332	C	04.11.2015	Spesialskruer Sepura	1
75334	B	23.06.2016	Kabel komplett AB40-II, STP 8x	1
75334	B	23.06.2016	Kabel komplett AB40-II for STP8X stykke	1
75333	A	07.05.2014	Connection drawing AB 40 –II	1



75149	B	14.01.2015	Fotpedal maskinert	1
75327	E	25.01.2016	PCB 36T	1
75327	E	21.06.2016	PCB komplett Sepura Tetra AB12-36T stykkliste	2
75328	F	10.11.2015	AB12-36T Sepura w/mute	1
75339	C	16.06.2016	AB40-II STP8x Crane version, SEPURA STP8x	1
75339	C	22.06.2016	Prod.stykklistehode PCB Complete for AB40-II Sepura STP8X	1
CAM350 V 10.5		09.08.2011	Layout Sepura STP8X plug	11
D14724_B	B	21.04.2014	Sepura RuSC	1
S14723	B	18.10.2011	Sepura RuSC	1
D14905	E	21.05.2013	RuSC cable asm EX	2
75342	B	24.06.2016	Unit label AB40-II STP 8X	1
75129	B	07.09.2012	Serial Number label	1
75139	A	20.12.2011	MIC label	1
75180	A	06.08.2012	Jordingslabel	1
75131	A	03.05.2011	Gummitetning for Nexus	1
75127	C	27.01.2014	Nexus komplett TJT Plugg	1

AB40 gooseneck microphone with extended cable

85071	A	07.02.2019	Gooseneck Microphone	1
85071	A	08.02.2019	AB40 Svanehals mikrofon 20 kabel Ex	1
75377	A	15.03.2019	Unit label AB 40	1
75010	C	22.06.2016	Fot for svanehals AB40NX	1
75009	A	28.04.2011	Adapter	1
75012	B	20.03.2014	Mikrofon-kit + gummi	1
75012	B	25.03.2014	Mikrofon + gummi til mc stykkliste	1
75129	B	07.09.2012	Serial Number label	1
75180	A	06.08.2012	Jordingslabel	1

Certificate History and Associated Nemko Reports

Issue	Date	Report	Description
0	2003.08.19	200312202	Original report
1	2012.08.13	179373	Update to new versions of the standards, new descriptive documents and the microphone AB40 is included.
2	2013.08.14	238820	New key switch, AB40-II MTP850Ex, and new variants of AB40 with or without gooseneck included, and minor changes of descriptive documents. X-marked.
3	2014.03.28	D0001248/0 – 256012	New variant of AB40 with gooseneck and XLR plug. Minor changes of descriptive documents.
4	2016.09.21	D0001248/1	New key switch, AB40-II STP 8X, and changed from gasgroup IIC to gasgroup IIB. Minor changes of descriptive documents.
5	2019.04.05	D0001248/2	Added new model variant AB40 gooseneck microphone with extended cable from 10m to 20m. Minor changes of descriptive documents.

[17] Specific Conditions of Use

AB40 without gooseneck and AB40 with gooseneck:

- The free end of the connected cable must be installed such that the terminations are afforded a degree of protection of at least IP20.
- The clearance between the intrinsically safe circuit and a non-intrinsically safe circuit shall be at least 50mm.
- The clearance shall be at least 6mm between separate intrinsically safe circuits.
- The clearance shall be at least 3mm from earthed parts.
- be according to clause 6.2.1 of IEC/EN 60079-11.

[18] Essential Health and Safety Requirements

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