IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION
IEC Certification System for Explosive Atmospheres
for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.: **IECEx BVS 12.0070X**

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Status: **Current**

Issue No: 5

Date of Issue: 2020-06-05

Certificate history:
Issue 4 (2020-05-04)
Issue 3 (2017-05-29)
Issue 2 (2013-11-29)
Issue 1 (2013-07-10)
Issue 0 (2012-11-30)

Applicant: **Motorola Solutions Systems Polska S.p.z.o.o.**
Ul. Czerwone Maki 81
30-392 Krakau
Polen
Poland

Equipment: **Radio telephone type XPR ****Ex, XiR P**** Ex, DP**** Ex and DGP**** Ex**

Optional accessory:

Type of Protection: **Intrinsic Safety "i"**

Marking: Ex ib IIC T4 Gb
Ex ib IIIC T130°C Db
Ex ib I Mb

Approved for issue on behalf of the IECEx Certification Body: **Jörg Koch**

Position: **Head of Certification Body**

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.

Certificate issued by:

DEKRA Testing and Certification GmbH
Certification Body
Dinnendahlstrasse 9
44809 Bochum
Germany

DEKRA
On the safe side.

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Manufacturer: **Motorola Solutions Systems Polska S.p.z.o.o.**
Ul. Czerwone Maki 81
30-392 Krakau
Polen
Poland

Manufacturing locations: **MOTOROLA SOLUTIONS Malaysia Sdn. Bhd.**
Plot2, Bayan Lepas
Technoplex Industrial Park
Mukim 12, SWD, 11900
Bayan Lepas, Penang
Malaysia

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements.This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :
The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

IEC 60079-0:2017 Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

IEC 60079-11:2011 Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"
Edition:6.0

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:
A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Report:

DE/BVS/ExTR12.0099/05

Quality Assessment Report:

DE/BVS/QAR20.0004/00

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EQUIPMENT:
Equipment and systems covered by this Certificate are as follows:

Subject and Type

See Annex

Description

See Annex

SPECIFIC CONDITIONS OF USE: YES as shown below:
See Annex

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Equipment (continued):

Parameters

1.	Electrical Data	
1.1	Frequency range	
	VHF-versions	136 - 174 MHz
	UHF-versions	403 - 470 MHz
1.2	Output power	2 W max. (ib)
1.3	Supply voltage	
	The radio is supplied by the battery type NNTN8359A, NNTN8359B, NNTN8359C or NNTN8359CR with the following supply voltage:	
	Nominal voltage	7.6 V DC
	Peak open voltage	8.4 V DC
1.4	When the Audio Adapter PMLN6047A (IECEx BVS 12.0049X) is used with the radios and the battery type NNTN8359A, NNTN8359B, NNTN8359C or NNTN8359CR the following interface parameters have to be considered for secondary audio devices connected to the audio adapter:	
	Max. output voltage	U_o= 8.4 V
	Max. output current	I_o= 75 mA
	Max. output power	P_o= 314 mW (linear characteristic)
	Effective internal capacitance	C_i = negligible
	Effective internal inductance	L_i = negligible
	Connectable values for the Group IIC and IIIC in combination:	
	Max. external capacitance	C_o= 0.1 µF
	Max. external inductance	L_o= 2 mH
2.	Ambient temperature range	-20 °C ≤ T_a ≤ +55 °C
3.	Ingress protection for the radio telephone and the batteries	IP64

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DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

-	Mechanical drawing updates for front housing assembly (add screw torque spec and revise manufacturer's name)
-	Add battery variant
-	Mechanical drawing update for Assembly Housing for battery
-	Mechanical drawing update for battery latch
-	Mechanical drawing update for cover for battery
-	Documentation updates

Annex:

BVS_12_0070X_Motorola_Annex_issue5.pdf

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Certificate No.: **IECEx BVS 12.0070X issue No.: 5**
Annex

Subject and Type

Radio telephone type XPR ****Ex, XiR P**** Ex, DP**** Ex and DGP**** Ex

The asterisk (*) in the type designation is replaced by numbers per the list below

Name	Model number	Type description
VHF versions 136 to 174MHz		
XPR 7550 Ex	PMUD3214ABCNAA	North American Full Keypad Model (NAG FKP)
DP4801 Ex	PMUD3214ABCEAA	Europe, the Middle East, Africa, Australia and New Zealand Full Keypad Model (EMEA FKP)
DP4801 Ex	PMUD3214APCEAA	Europe, the Middle East, Africa, Australia and New Zealand Full Keypad Model (EMEA FKP)
DP4801 Ex	PMUD3214ACCEAA	Europe, the Middle East, Africa, Australia and New Zealand Full Keypad Model (EMEA FKP)
XiR P8668 Ex	PMUD3214ABCAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUD3214ABFAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUD3214ABEAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUD3214ABDAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUD3214ACCAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUD3214ACDAAA	Asia Pacific Full Keypad Model (APAC FKP)
DGP 8550EX	PMUD3214ABCLAA	Latin American Caribbean Region Full Keypad (LACR FKP)
DGP 8050EX	PMUD3212ABALAA	Latin American Caribbean Region Non Keypad (LACR NKP)
XiR P8608 Ex	PMUD3212ABAAAA	Asia Pacific Non Keypad Model (APAC NKP)
XiR P8608 Ex	PMUD3212ACAAAA	Asia Pacific Non Keypad Model (APAC NKP)
DP4401 Ex	PMUD3211AAAEAA	Europe, the Middle East, Africa, Australia and New Zealand Non Keypad Model (EMEA NKP)
UHF versions 403 to 470MHz		
XPR 7550 Ex	PMUE3750ABCNAA	North American Full Keypad Model (NAG FKP)
DP4801 Ex	PMUE3750ABCEAA	Europe, the Middle East, Africa, Australia and New Zealand Full Keypad Model (EMEA FKP)
DP4801 Ex	PMUE3750APCEAA	Europe, the Middle East, Africa, Australia and New Zealand Full Keypad Model (EMEA FKP)
DP4801 Ex	PMUE3750ACCEAA	Europe, the Middle East, Africa, Australia and New Zealand Full Keypad Model (EMEA FKP)
XiR P8668 Ex	PMUE3750ABCAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUE3750ABFAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUE3750ABEAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUE3750ABDAAA	Asia Pacific Full Keypad Model (APAC FKP)

XiR P8668 Ex	PMUE3750ACCAAA	Asia Pacific Full Keypad Model (APAC FKP)
XiR P8668 Ex	PMUE3750ACDAAA	Asia Pacific Full Keypad Model (APAC FKP)
DGP 8550EX	PMUE3750ABCLAA	Latin American Caribbean Region Full Keypad (LACR FKP)
DGP 8050EX	PMUE3754ABALAA	Latin American Caribbean Region Non Keypad (LACR NKP)
XiR P8608 Ex	PMUE3754ABAAAA	Asia Pacific Non Keypad Model (APAC NKP)
XiR P8608 Ex	PMUE3754ACAAAA	Asia Pacific Non Keypad Model (APAC NKP)
DP4401 Ex	PMUE3755AAAEAA	Europe, the Middle East, Africa, Australia and New Zealand Non Keypad Model (EMEA NKP)

The radio telephones types XPR **** Ex, XiR P**** Ex, DP**** Ex and DGP ****EX are portable radios that serve communication in the VHF (136 to 174 MHz) and UHF (403 to 470 MHz) band.

The radios telephones are only used with the battery type NNTN8359A or type NNTN8359B or type NNTN8359C or type NNTN8359CR and the Dust Cover with the part number 15012157001 or one of the approved accessories listed in this certificate.

The antennas listed below can be connected to the radios

For use with the 136 to 174 MHz versions

Part No	Description
PMAD4126A	GPS helical antenna (136 – 147 MHz) Ex
PMAD4127A	GPS helical antenna (147 – 160 MHz) Ex
PMAD4128A	GPS helical antenna (160 – 174 MHz) Ex
PMAD4129A	Stubby antenna 11 cm (136 – 147 MHz) Ex
PMAD4130A	Stubby antenna 11 cm (147 – 160 MHz) Ex
PMAD4131A	Stubby antenna 11 cm (160 – 174 MHz) Ex
PMAD4132A	Wideband antenna (136 – 174 MHz) Ex

For use with the 403 to 470 MHz versions

Part No	Description
PMAE4081A	DMR folded monopole (403 – 433 MHz) Ex
PMAE4082A	DMR folded monopole (430 – 470 MHz) Ex
PMAE4083A	DMR stubby antenna (403 – 433 MHz) Ex
PMAE4084A	DMR stubby antenna (430 – 470 MHz) Ex
PMAE4085A	DMR whip antenna (403 – 470 MHz) Ex

The following carry devises can be used with the radio telephones:

Part No	Description
PMLN6086A	ATEX Belt Clip 2.5-Inch Belt Width
PMLN6096A	Hard Leather Carry Case 2.5-Inch Swivel Belt Loop for Non-Keypad Radio
PMLN6097A	Hard Leather Carry Case 2.5-Inch Swivel Belt Loop for Full-Keypad Radio
PMLN6098A	Soft Leather Carry Case 2.5-Inch Swivel Belt Loop for Non-Keypad Radio
PMLN6099A	Soft Leather Carry Case 2.5-Inch Swivel Belt Loop for Full-Keypad Radio

PMLN5610A	2.5-Inch Replacement Swivel Belt Loop

The following separately certified audio accessories can be used with the radio telephone:

Part No	Description	Certificate
PMMN4067B	ATEX CSA Remote Speaker Microphone	IECEx BVS 12.0016X
PMLN6047A	Audio Adapter with Molex jack	IECEx BVS 12.0049X

The Audio Adapter with Molex jack is only approved for use in gas hazardous (Group II) and dust hazardous (Group III) environments.

Furthermore the following audio accessories with a secondary audio interface to allow the connection of headsets can be connected to the radio telephones:

PMMN4094A	ANC RSM ATEX 20 Ohm Standard Cable	IECEx BVS15.0047 X
PMNN4100A	ANC RSM ATEX 20 Ohm Long Cable	IECEx BVS15.0047 X
PMMN4110A	OMNI RSM 20 Ohm Standard Cable	IECEx BVS15.0047 X
PMMN4111A	OMNI RSM 20 Ohm Long Cable	IECEx BVS15.0047 X
FL5263-34	PTT Adapter for use with Headset	IECEx NEM 13.0001 X

(Motorola Part Number PMLN6368A)

Approved for use in mining (Group I) and gas hazardous (Group II) environments

Ambient temperature range: -20 °C ≤ T_a ≤ +50 °C

FL4063-50-34	Small PTT adaptor	IECEx NEM 13.0001 X

(Motorola Part Number PMLN6803A)

Approved for use in mining (Group I) and gas hazardous (Group II) environments

Ambient temperature range: -20 °C ≤ T_a ≤ +50 °C

AK6760T	Key Switch (PTT unit)	IECEx PRE 15.0062

(Motorola Part Number PMLN7310ASP01)

Approved for use in gas hazardous (Group II) environments.
The headsets listed below can be connected to these audio accessories.

Other accessories that have certified compatible interface parameters may also be connected

MT7H79F-50	Standard Headset with microphone	IECEx NEM 09.0004X

(Motorola Part Number PMLN6087A)

Approved for use in gas hazardous (Group II) environments.

Ambient temperature range: -20 °C ≤ T_a ≤ +50 °C

MT7H79P3E-50	Standard Headset with microphone	IECEx NEM 09.0004X

(Motorola Part Number PMLN6092A)

Approved for use in gas hazardous (Group II) environments.

Ambient temperature range: -20 °C ≤ T_a ≤ +50 °C

MT72H540P3E-50	Standard Headset with microphone	IECEx NEM 09.0005X

(Motorola Part Number PMLN6333A)

Approved for use in gas hazardous (Group II) environments.

Ambient temperature range: -20 °C ≤ T_a ≤ +50 °C

MT7H79B-50	Headset series, Tactical XP	IECEx NEM09.0004X

(Motorola Part Number PMLN7531A)

Approved for use in gas hazardous (Group II) environments.

Ambient temperature range: -20 °C ≤ T_a ≤ +50 °C

MT1H7F2-07-51	Headset series, Tactical XP	IECEx NEM 11.0010X

(Motorola Part Number PMLN6090A)

Approved for use in mining (Group I) and gas (Group II) hazardous environments.

Ambient temperature range: -10 °C ≤ T_a ≤ +40 °C

MT1H7P3E2-07-51	Headset series, Tactical XP	IECEx NEM 11.0010X

(Motorola Part Number PMLN6089A)

Approved for use in mining (Group I) and gas (Group II) hazardous environments.

Ambient temperature range: -10 °C ≤ T_a ≤ +40 °C

MT1H7B2-07- 51	Headset series, Tactical XP	IECEx NEM11.0010X

(Motorola Part Number PMLN7535A)

Approved for use in mining (Group I) and gas (Group II) hazardous environments.

Ambient temperature range: -10 °C ≤ T_a ≤ +40 °C

The accessories, the antennas and the battery can only be connected or disconnected outside the potentially hazardous environment.

The permissible ambient temperature range for the radio, the battery type NNTN8359A or type NNTN8359B or type NNTN8359C or type NNTN8359CR, the ATEX CSA Remote Speaker Microphone type PMMN4067B, the ANC RSMs type PMMN4094A and PMNN4100A, the OMNI RSM type PMMN4111A and PMMN4110A and the Audio Adapter with Molex Jack type PMLN6047A is
-20 °C ≤ T_a ≤ +55 °C.

The battery type NNTN8359A, NNTN8359B, NNTN8359C and NNTN8359CR can only be charged outside the hazardous environment with chargers listed in the safety leaflet (document 68012007083).

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Annex

"Specific Conditions of Use":

1. The antennas can only be connected / disconnected to the radios outside the hazardous environment.
2. The ATEX CSA Remote Speaker Microphone type PMMN4067B can only be connected / disconnected outside the hazardous environment
3. The Audio Adapter type PMLN6047A with Molex jack can only be connected / disconnected outside the hazardous environment
4. The ANC RSM type PMMN4094A and type PMMN4100A can only be connected / disconnected outside the hazardous environment.
5. The OMNI RSM type PMMN4110A and type PMMN4111A can only be connected / disconnected outside the hazardous environment
6. The PPT Adapter type FL5263-34 PTT and type FL4063-50-34 can only be connected / disconnected outside the hazardous.
7. The Key Switch type AK6760T and can only be connected / disconnected outside the hazardous environment.
8. For all separately certified accessories additional safety conditions listed in these certificates will apply.
9. When the Audio Adapter type PMLN6047A is connected, the radio can only be used in gas (Group II) or dust (Group III) hazardous environments
10. When the PTT Adapter type FL5263-34 or the small PPT Adapter type FL4063-50-34 with one of the approved headsets is connected, the radio can only be used in mining (Group I) or gas (Group II) hazardous environments.
11. When the Key Switch type AK6760T is connected, the radio can only be used in a gas (Group II) hazardous environments.
12. The battery type NNTN8359A or type NNTN8359B or type NNTN8359C or type NNTN8359CR can only be changed or charged outside the hazardous environment.