

EU-Type Examination Certificate

Directive 2014/34/EU of the European Parliament and of the Council of 26 February 2014

EU-Type Examination Certificate Number: **BVS 15 ATEX E 130 X** Issue: **02**

Equipment: **Radiotelephone type MTP85**Ex**

Manufacturer: **Motorola Solutions Systems Polska Sp.z.o.o.**

Address: **Ul. Czerwone Maki 82, 30-392 Krakow, Poland**

This product and any acceptable variations thereto are specified in the appendix to this certificate and the documents referred to therein.

DEKRA Testing and Certification GmbH, Notified Body number 0158, 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 the confidential Report No. BVS PP 15.2259 EU. This issue of the EU-Type Examination Certificate replaces the previous issue of the EU-Type Examination Certificate BVS 15 ATEX E 130 X including supplements 1 to 2.

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

EN IEC 60079-0:2018
EN 60079-11:2012

General requirements
Intrinsic Safety "i"

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

This EU-Type Examination Certificate relates only to the technical design of the specified product in accordance with the Directive 2014/34/EU. Further requirements of the Directive apply to the manufacturing process and supply of this product. These are not covered by this certificate.

The marking of the product shall include the following:

 **II 2G Ex ib IIC T4 Gb**
II 2D Ex ib IIIC T90°C Db
I M2 Ex ib I Mb
IP66/67

DEKRA Testing and Certification GmbH
Bochum, 2024-11-22


Managing Director

13 **Appendix**
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15 **Product description**

15.1 **Subject and type**

Radio telephone type MTP85**Ex

Instead of the ** in the complete denomination numerals will be inserted which characterize the following modifications:

UHF versions 350 to 470 MHz

Name	Model Number	Description
MTP8500Ex	PMUE4803A-PMUE4880A	MTP8500Ex UHF LKP Portable Radio
MTP8500Ex	PMUE4803B-PMUE5082B	MTP8500Ex UHF LKP Portable Radio
MTP8500Ex	GMUE4805B-GMUE4849B	MTP8500Ex UHF LKP Portable Radio
MTP8550Ex	PMUE4803A-PMUE4880A	MTP8550Ex UHF FKP Portable Radio
MTP8550Ex	PMUE4803B-PMUE5082B	MTP8550Ex UHF FKP Portable Radio
MTP8550Ex	GMUE4805B-GMUE4849B	MTP8550Ex UHF FKP Portable Radio

800 MHz versions 806 to 870 MHz

Name	Model Number	Description
MTP8500Ex	PMUF1812A-PMUF1859A	MTP8500Ex 800MHz LKP Portable Radio
MTP8500Ex	PMUF1812B-PMUF1820B	MTP8500Ex 800MHz LKP Portable Radio
MTP8550Ex	PMUF1812A-PMUF1859A	MTP8550Ex 800MHz FKP Portable Radio
MTP8550Ex	PMUF1821B-PMUF1853B	MTP8550Ex 800MHz FKP Portable Radio

15.2 **Description**

The radio telephones type MTP85**Ex are portable 2-way radios that serve communication in the UHF (350 MHz - 470 MHz) and 800 MHz (806 MHz - 870 MHz) band.

The radio telephones are only used with the battery types NNTN8570A, NNTN8570B, NNTN8570C or type NNTN8570CC and the dust cover with the part number 0104063J98 or one of the approved accessories.

The antennas listed below can be connected to the radio telephones.

For use with the UHF (350 MHz – 470 MHz) versions

Part No	Description
PMAE4097A	Whip 120 mm (350 MHz - 470 MHz)
PMAE4096A	Stubby 80 mm (380 MHz - 430 MHz)

For use with the 800MHz (806 MHz – 870 MHz) versions

Part No	Description
PMAF4019A	Whip 80 mm (806 MHz - 870 MHz)

Optionally one of the color rings PMLN6285A, PMLN6286A, PMLN6287A, PMLN6288A or PMLN6289A can be attached to all the antennas listed above.

The following SD cards are allowed for use with the radio telephones:

SD Card

MM000228A01	2GB Industrial Grade MicroSD/MicroSDHC Card
DLN6985A	TETRA CRYPTR Micro AES128
DLN9885A	TETRA MICRO HSM AES128
DLN6986A	TETRA CRYPTR Micro AES256
DLN9886A	TETRA MICRO HSM AES256

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

Part No	Description
PMLN7195A	HARD LEATHER CASE W 2.5" BELT LOOP
PMLN7268A	HARD LEATHER CASE W 3" BELT LOOP
PMLN6086A	ATEX BELT CLIP 2.5 INCH
PMLN5004B	SHOULDER WEARING DEVICE
PMLN5610A	2.5 INCH SWIVEL BELT LOOP
PMLN5611A	3.0 INCH SWIVEL BELT LOOP

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

Part No	Description	Certificate
PMLN6047A	Audio Adapter	IECEEx BVS 12.0049X BVS12 ATEX E 074 X
PMMN4067B	REMOTE SPEAKER MICROPHONE	IECEEx BVS 12.0016X BVS 12 ATEX E 027 X
FL4063-50-34 (PMLN6803A)	PTT Adapter for use with headset and radio	IECEEx NEM 13.0001X Nemko13ATEX1521X
PMMN4093A	ANC Remote speaker microphone	IECEEx BVS 15.0047 X BVS 15 ATEX E 054 X
PMMN4101A	ANC RSM Ex 16 ohm Long Cbl	IECEEx BVS 15.0047X BVS 15 ATEX E 054 X
PMMN4112A	IMPRES EX OMNI RSM LONG CBL/NEX/16OHM	IECEEx BVS 15.0047X BVS 15 ATEX E 054 X
C-C440Ex (PMLN7257A)	Com-Control Unit	IECEEx VTT 15.0019X VTT 15 ATEX 061X

The accessory kits listed below can be connected to C-C440Ex (PMLN7257A)

HC-1Ex	Helmet-Com Unit	VTT 15 ATEX 061X
HC-2Ex	Helmet-Com Unit	VTT 15 ATEX 061X

The accessory kits listed below can be connected to PMLN6803A, PMMN4093A, PMMN4101A, PMMN4109A or PMMN4112A.

MT7H79F-50 (PMLN6087A)	Standard Headset, with Microphone and Speaker	IECEEx NEM 09.0004X Nemko 09 ATEX1114X
MT7H79P3E-50 (PMLN6092A)	Standard Headset, with Microphone and Speaker	IECEEx NEM 09.0004X Nemko 09 ATEX1114X
MT72H540P3E-50 (PMLN6333A)	Headset with Microphone and Speaker, Twin cup	IECEEx NEM 09.0005X Nemko 09 ATEX1119X

MT1H7F2-07-51 (PMLN6090A)	Headset Series, Tactical XP	IECEX NEM 11.0010X Nemko 10 ATEX1029X
MT1H7P3E2-07-51 (PMLN6089A)	Headset Series, Tactical XP	IECEX NEM 11.0010X Nemko 10 ATEX1029X
MT1H7B2-07-51 (PMLN7535A)	Tactical XP Headset Neckband	Nemko 10 ATEX1029X IECEX NEM11.0010X

The accessories, the antennas, and the battery type NNTN8570A or type NNTN8570B or type NNTN8570C or type NNTN8570CC can only be connected or disconnected outside the potentially hazardous environment.

The ambient temperature range for the radio telephones and the battery types NNTN8570A, NNTN8570B, NNTN8570C or type NNTN8570CC is $-20\text{ °C} \leq T_a \leq +55\text{ °C}$.

Only chargers listed in the Motorola safety instruction MN002135A01 can be used with the battery types NNTN8570A, NNTN8570B, NNTN8570C or type NNTN8570CC outside the potentially hazardous environment.

The SD cards can only be changed outside the potentially hazardous environment.

Reason for this issue

- Minor changes on the electrical parts list and PCB layout.
- Minor change to mechanical parts.
- Addition of new Model Numbers for MTP8500Ex (800 MHz LKP Portable Radio) and MTP8550Ex (800 MHz FKP Portable Radio).

Listing of all components used referring to older standards

None

15.3 Parameters

15.3.1 Electrical data

15.3.1.1 Frequency range

MTP8500Ex/MTP8550Ex	UHF	350 - 470	MHz
MTP8500Ex/MTP8550Ex	800	806 - 870	MHz

15.3.1.2 Radio output power

2 W maximal (1b)

15.3.1.3 Supply Voltage (NNTN8570A, NNTN8570B, NNTN8570C and NNTN8570CC)

Nominal	U_n	7.6	V
Peak open voltage	U_o	8.4	V

15.3.1.4 Audio Adapter PMMLN6047A

Connected to the radio telephone of type MTP85**Ex the following output parameters are realized (Pin R1-R8, Ex 1b)

Peak Value	U_o	8.4	V
Max output current	I_o	75	mA DC
Max output power (linear characteristic)	P_o	0.314	W
Max effective capacitance	C_o	0.1	µF
Max effective inductance	L_o	2	mH

15.3.2 Ambient temperature range

$-20\text{ °C} \leq T_a \leq +55\text{ °C}$

15.3.3 Ingress protection

IP66/67

16 **Report Number**

BVS PP 15.2259 EU, as of 2024-11-22

17 **Specific Conditions of Use**

The radio telephone, the battery and the accessories are only protected against low risk of mechanical danger for Group I applications.

Changing, detaching, or charging of the battery is only allowed outside the hazardous area.

Only accessories and chargers listed in the document MN002135A01 shall be used.

It is only allowed to disconnect or change accessories outside the hazardous area.

If the charging indicator lights on the charger continuously indicate a defective battery or conditions other than those listed in the manual of the chargers, the equipment is not allowed to be used in a hazardous area any longer.

The SD card shall only be changed outside the hazardous area.

In the hazardous environment either the dust cover 0104063J98 or one of the accessories listed in the document MN002135A01.

Inside hazardous areas, the battery must always be connected to a radio.

18 **Essential Health and Safety Requirements**

Met by compliance with the requirements mentioned in item 9.

19 **Remarks and additional information**

Drawings and documents are listed in the confidential report.