zenitel

DATASHEET

1000641

MOTOTRBO R7Ex UHF NKP

R7 ATEX-certified UHF Radio without Keypad



- ATEX and IECEx certified
- No-keypad design with glove-friendly controls
- AI-trained noise cancellation
- Loud audio up to 108 phons with Volume Boost
- Dedicated emergency button, Lone Worker and Fall Alert
- Built-in GNSS and Bluetooth
- IP66 and IP68 dust and water protection

MED Certification Radio UHF/VHF IP66 Atex HD Voice

Active Noise Cancelling

Description

The MOTOTRBO R7 Ex UHF NKP is an intrinsically safe digital portable two-way radio without a keypad. ATEX and IECEx certification supports communication in potentially explosive environments, while advanced noise cancellation and powerful audio help users hear and be heard in demanding maritime and offshore operations.

MOTOTRBO R7Ex UHF NKP

The MOTOTRBO R7 Ex UHF NKP provides straightforward push-to-talk communication for personnel working in challenging conditions. Rotary controls, large push-to-talk and emergency buttons, and programmable shortcuts make essential functions accessible when wearing gloves.

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AI-trained noise cancellation reduces background noise, and a 2.5 W speaker delivers audio up to 108 phons with Volume Boost. Intelligent Audio adjusts the speaker output to surrounding noise levels, while automatic acoustic feedback suppression helps prevent feedback between nearby radios.

A dedicated emergency button, Lone Worker and Fall Alert functions support personnel safety. Built-in GNSS and Bluetooth support location applications to help locate personnel when assistance is needed.

Rated IP66 and IP68 and tested to MIL-STD-810, the R7 Ex is built to withstand dust, water and demanding daily use. Over-the-air programming through DMR or Wi-Fi simplifies radio management, and a range of compatible ATEX-certified accessories allows the radio to be configured for different working environments.

Model note: This is the no-keypad version of the MOTOTRBO R7 Ex, with physical controls for voice communication and access to programmed functions.

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Specifications

General Specifications

GENERAL SPECIFICATIONS	
Frequency Range	400–470 MHz
Display	No Display
Channel Spacing	12.5 / 20 / 25 kHz
Channel Capacity	64
Dimensions (H × W × D)	140 × 57 × 38 mm
Weight	419g including battery, excluding antenna
Battery	2150 mAh Li-ion, IP68 (PMNN4848)
Digital / Analogue Battery Life	23.5 / 20.5 hours*
Location Tracking	GNSS: GPS, GLONASS, BeiDou, Galileo

Transmitter Specifications

TRANSMITTER SPECIFICATIONS	
RF Power Output	2 W / 1 W
Digital Protocol	ETSI TS 102 361-1, -2, -3, -4; DMR Tier II and Tier III
Frequency Stability	±0.5 ppm

Receiver Specifications

RECEIVER SPECIFICATIONS	
Analogue Sensitivity (12 dB SINAD)	0.16 µV typical; 0.21 µV maximum
Digital Sensitivity (5% BER)	0.14 µV typical; 0.18 µV maximum
Spurious Rejection (TIA603E)	>70 dB

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Audio Specifications

AUDIO SPECIFICATIONS

Audio Output Power (Rated / Maximum)	0.5 W / 2.5 W
Audio Distortion at Rated Audio	≤1.5%
Maximum Speech Loudness by Default	101 phons at 30 cm
Maximum Programmable Speech Loudness	108 phons at 30 cm
Noise Suppression	AI-trained noise suppression and single microphone noise cancellation (SINC+)

Environmental Specifications

ENVIRONMENTAL SPECIFICATIONS

Operating Temperature	–30 °C to +60 °C
Storage Temperature	-40 °C to 85 °C
Thermal Shock	Per MIL-STD-810C/D/E/F/G/H
Humidity	Per MIL-STD-810C/D/E/F/G/H
Electrostatic Discharge	IEC 61000-4-2 Level 4
Dust and Water Intrusion	IP66 and IP68; submersion to 2 m for 2 hours
Salt Fog	5% NaCl for 8 hours at 35 °C, followed by 16 hours standing

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CERTIFICATIONS

ATEX Gas Rating	II 2G Ex ib IIC T4 Gb
IECEx Gas Rating	Ex ib IIC T4 Gb
ATEX Dust Rating	II 2D Ex ib IIIC T130°C Db
IECEx Dust Rating	Ex ib IIIC T130°C Db
Maritime Certification	EU MED/5.20; UK/5.20

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