

MOTOTRBO DP4000 Ex SERIES ATEX AND MED PORTABLE RADIOS

KEEPING YOU SAFER IN THE TOUGHEST ENVIRONMENTS

MOTOROLA SOLUTIONS

MOTOTRBO™ ATEX AND MED SOLUTIONS: THE PROFESSIONAL CHOICE FOR HAZARDOUS AREAS

In environments like production facilities and oil rigs your workers are confronted with explosive gases, combustable dust, and chemical vapours. Safe, reliable communication is absolutely critical in such dangerous environments. That's where the power and performance of MOTOTRBO digital radios stand out.

The MOTOTRBO DP4000 Ex Series combines the best of two-way radio functionality with the latest digital technology. It integrates voice and data seamlessly, offers enhanced features that are easy to use, and delivers increased capacity to efficiently connect all your crews. With exceptional voice quality, long battery life and ATEX-rated for safety, the radios keep your workers connected and productive, wherever the job takes them.

COMMUNICATE CLEARLY IN DIFFICULT CONDITIONS

DP4000 Ex SERIES

These high-performing portables have the highest ATEX gas explosion group rating. Ideal for hazardous work with loud noise, long shifts, rough weather and dangerous conditions including combustible dust, explosive chemicals, gas leaks, flammable hydrocarbons and more.

DP4401 Ex - Rugged, easy to use, non-display model for hazardous open environments

DP4801 Ex - Adds a full keypad and large colour display for access to advanced features like texting and caller ID



DP4401 Ex (Non-Display) **DP4801 Ex (Display)**

ATEX DUST PROTECTION:

- **II** Group II, other environments, (chemical industries, refineries, etc.)
- **2D** High protection, Category 2 equipment for Zone 21 and 22. D = Dust
- **Ex** Explosion-proof equipment, certified to European ATEX Directive and IECEx
- **IIIC** Enclosure certified for dust Zone 21 by IP rating
- **T130°C** Maximum enclosure surface temperature

ATEX GAS PROTECTION:

- **II** Group II 'other' environments
- **2** High Protection, Category 2 for Zone 1 and 2
- **G** Gas
- **Ex** Explosion-proof equipment, certified to European ATEX Directive and IECEx
- **ib** Type of ignition protection (Zones 1 and 2)
- **IIC** Protection in the most explosive gas environment (hydrogen)
- **T4** Device surface temperature will not exceed 135°C

ATEX MINING PROTECTION:

- **I** Group I
- **M2** Category Equipment is intended for use in underground mines as well as surface installation of such mines likely to be endangered by firedamp and/or combustible dust
- **Ex** Explosion-proof equipment
- **ib** Type of ignition protection (Zones 1 and 2)
- **I** Explosion Group, I = Methane



SO RUGGED, IT WITHSTANDS THE WORST

The DP4000 Ex Series is so rugged and durable, it meets the most stringent standards and has the highest ATEX rating. Whether working in an oil refinery, or chemicals factory, dust and water can damage radios, but the DP4000 Ex Series is designed to withstand the worst. It meets or exceeds MIL-STD-810 for exceptional durability and is IP67 rated[1] to keep out damaging water and dust. The design has also been subjected to Motorola Solutions unique Accelerated Life Test to simulate five years of hard use.

EASY TO OPERATE

The DP4000 Ex Series features large PTT, volume, channel knobs and programmable buttons that are easy to use, even when wearing gloves. The large, colour display (DP4801 Ex only) and bright LED show radio status information at a glance. Plus the prominent orange emergency button enables workers to quickly call for assistance when it is required.

KEEP CREWS COMMUNICATING, EVERYWHERE

MOTOTRBO has the ability to scale to meet your team's needs. Our IP Site Connect system uses the Internet to extend coverage to workers on up to 15 sites anywhere in the world, meaning remote teams can communicate like never before. Capacity Plus expands the capacity of your sites to over 1,500 users. Capacity Max can be implemented on networks up to 250 sites and can handle up 3,000 users per site, while offering DMR Tier III compatibility.

Use Motorola Solutions Application Developer Program to adapt the DP4000 Ex Series to your unique needs in the future – from location tracking using the built-in GPS receiver to text messaging or call logging and recording.

WORK SAFELY, FROM PIPELINE TO POWER PLANT

Everything about the DP4000 Ex Series is designed for worker safety. Loud, clear performance and innovative features like Intelligent Audio and Transmit Interrupt help ensure messages get through in the noisiest environments. And like the radio, Motorola Solutions audio and energy accessories meet the most stringent ATEX standards.

An integrated man-down and lone worker feature sends an instant alert if a mishap occurs. And the bright blue colour helps ensure workers can easily identify and carry only ATEX-approved radios into hazardous environments.

PUT YOUR RADIOS TO WORK

DIGITAL PERFORMANCE

The DP4000 Ex Series meets the ETSI DMR Standard to deliver integrated voice and data, clearer voice communications, with a longer battery life than analogue.

EXCEPTIONAL AUDIO

Hear and speak clearly in loud environments, negate background noise from heavy equipment, engines and trucks.

EASY TO USE

Ergonomically designed for ease of use, with customisable buttons and an intuitive user interface.

COMPLETE ATEX-CERTIFIED SOLUTION

IMPRES™ smart audio and energy accessories meet the same tough specs, for a complete system you can rely on.



PMLN6333



PMMN4094



PMMN4067



PMLN6803

EXTEND SAFETY TO LONG SHIFTS AND NOISY AREAS WITH ATEX-CERTIFIED ACCESSORIES

From the drilling platform to the oil refinery, you deal with extremes - that's why it is critical to use the only ATEX accessories designed to withstand the perils and work with these MOTOTRBO ATEX portables.

BE IN THE CLEAR WITH AN IMPRES RSM

The IMPRES Remote Speaker Microphone (RSM) ensures hassle free communication. Along with IMPRES audio, this microphone features Windporting which makes it easy to use in all weather conditions.

PELTOR™ HEADSETS HANDLE TOUGH SHIFTS, HEAD ON

This twin cup heavy-duty headset with helmet attachment offers two layers of hearing protection with extra high-attenuating twin shells, preventing you from having to wear both earplugs and hearing protection, while still receiving critical radio communication. ATEX certified for extreme conditions and comfortable for long shifts.

IMPRES™ BATTERIES AND CHARGERS

Our high-capacity IMPRES battery maximizes talk time and optimizes battery cycle life automatically.

Only IMPRES batteries can be charged 150 additional times as compared to a standard battery – a 43% increase in charge cycles. This means if you charge your radios two to three times a week, you'll get more than an extra year out of every IMPRES battery.

DURABLE CARRY CASES

High quality leather carry cases are designed to withstand harsh conditions in hazardous environments. Swivel belt loop cases keep the case secure while allowing the radio to swing freely as you move.

GENERAL SPECIFICATIONS

	DP4801 Ex DISPLAY	DP4401 Ex NON-DISPLAY
Frequency Band	UHF B1 (403-470MHz) and VHF (136-174MHz)	
Zone Capacity	250	2
Max. No. of Conv. Channels or Personality Capacity	1000	32
Dimensions (H x W x L) with Li-Ion battery	138.5 x 56.7 x 39.8mm	138.5 x 56.7 x 37.8mm
Weight with Li-Ion battery	482.5g	455.5g
Power Supply	7.4 V Nominal	
FCC Description	UHF B1: ABZ99FT4091 VHF: ABZ99FT3089	
Programmable Buttons	5	3
Integrated GPS Receiver	Yes	
IC Description	UHF: 109AB-99FT4091 VHF: 109AB-99FT3089	
Gas Rating	ATEX: Class II 2G Ex ib IIC T4 Gb IECEx: Ex ib IIC T4 Gb	
Dust Rating	ATEX: Class II 2D Ex ib IIIC T130 °C Db IECEx: Ex ib IIIC T130°C Db	
Mining Rating	ATEX: I M2 Ex ib I Mb IECEx: Ex ib I Mb	
SOLAS / MED (UHF Models Only)	Marine Equipment Directive 2014/90/EU MED/5.20 Merchant Shipping (Marine Equipment) Regulations 2016 UK/5.20	
Battery Part Number	NNTN8359	
Typical[2] battery life Analogue	16 hrs	
Typical[2] battery life Digital	19 hrs	

RECEIVER

	ALL MODELS
Channel Spacing	12.5/20/25KHz
Frequency Stability	±0.5ppm
Digital Sensitivity (5% BER)	0.25uV
Analogue Sensitivity (12 dB SINAD) Typical	0.25uV
Intermodulation (TIA603C)	70dB
Adjacent Channel Selectivity (TIA603) - 1T	60dB @ 12.5kHz / 70dB @ 20/25kHz
Adjacent Channel Selectivity (TIA603C) - 2T	45dB @ 12.5kHz / 70dB @ 20/25kHz
Spurious Rejection (TIA603C)	70dB
Rated Audio	0.5W
Audio Distortion @ Rated Audio	5%, 3% (typical)
Hum and Noise	-40dB @ 12.5kHz -45dB @ 20/25kHz
Audio Response	TIA603C
Conducted Spurious Emission (ETSI)	-57dBm

TRANSMITTER

	ALL MODELS
Channel Spacing	12.5/20/25KHz
Frequency Stability	±0.5ppm
Power Output	1W
Modulation Limiting	±2.5kHz @ 12.5kHz ±4.0kHz @ 20kHz ±5.0kHz @ 25kHz
FM Hum and Noise	-40dB @ 12.5kHz / -45dB @ 20/25kHz
Conducted / Rated Emission (ETSI)	36 dBm < 1GHz, -30 dBm > 1GHz
Adjacent Channel Power	60dB @ 12.5kHz, 70dB @ 20/25kHz
Audio Response	TIA603C
Audio Distortion (per EIA)	3%
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E
4FSK Digital Modulation	12.5kHz Data: 7K60F1D & 7K60FXD 12.5kHz Voice: 7K60F1E & 7K60FXE Combination of 12.5kHz Voice & Data: 7K60F1W

GPS

Accuracy specs are for long-term tracking (95th percentil values>5 satellites visible at nominal -130dBm signal strength)	
TTFF (Time To First Fix) - Cold Start	<60 seconds
TTFF (Time To First Fix) - Hot Start	<10 seconds
Horizontal Accuracy	<5 meters

ENVIRONMENTAL SPECIFICATIONS

	ALL MODELS
Operating Temperature	-20°C to +55°C
Storage Temperature	-40°C to +85°C
Thermal Shock	MIL STD 810D, E, F, G
Humidity	MIL STD 810D, E, F, G
ESD	IEC-801-2KV
Water Intrusion	IEC-60529 IP67
Packaging Test	MIL STD 810D, E, F, G
Ingress Protection (IP) Rating	IP67[1]

[1]DP4000 Ex Series radios are rated IP67 and are also certified to the highest ingress protection available under ATEX/IECEx test conditions - IP64

[2]Assuming 5/5/90 duty cycle, no option board, no GPS, conventional operation

For more information on how to communicate safely in hazardous locations, visit motorolasolutions.com/mototrbo or find your closest Motorola Solutions representative or authorised Partner at motorolasolutions.com/contactus.

Motorola Solutions UK Ltd. Nova South, 160 Victoria Street, London, SW1E 5LB, UK.
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VDK Telecommunications B.V.
Pieter Zeemanstraat 3
WIJCHEN
6603AV
www.vdk-tele.com
0880513213