MOTOTRBO™ DP4000 Ex SERIES ATEX RADIO

KEEPING YOU SAFER IN THE TOUGHEST ENVIRONMENTS





MOTOTRBO ATEX SOLUTIONS: THE PROFESSIONAL CHOICE FOR DANGEROUS AREAS

Threats from explosive gas, combustible dust or chemical vapours, from an oil rig to an open mine, your workers confront them daily. 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 DP4000 Ex Series keeps your workers connected safely and productively, wherever the job takes them.



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

TALK AND HEAR CLEARLY OVER EXCESSIVE NOISE

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.

Get all the benefits of MOTOTRBO digital technology, including greater capacity, clearer audio and long battery life. Plus radios and accessories that are ATEX-certified intrinsically safe.

DP4401 Ex - Rugged, easy to use, non-display model

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



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&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&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, chemicals factory or mine, 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* to keep out damaging water and dust. The DP4000 Ex Series has also been subjected to Motorola's 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 needed.



KEEP CREWS COMMUNICATING, EVERYWHERE

MOTOTRBO's IP Site Connect uses the Internet to extend coverage to workers anywhere in the world and scalable, single-site Capacity Plus expands capacity to over 1,000 users. Linked Capacity Plus combines the high user-density call management of Capacity Plus with the wide area coverage of IP Site Connect to connect crews at various locations affordably.

Use Motorola's 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. When you want to share information or pinpoint crew locations, access all the right applications on one device.

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's 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 THE DP4000 Ex SERIES TO WORK

DIGITAL PERFORMANCE
DP4000 Ex meets the ETSI DMR Standard to deliver integrated voice and data, clearer voice communications, and up to 40% longer battery life than analogue.

BUILT TO LAST
Meets IP67 specifications* to withstand dust and immersion in 1 meter of water for 30 minutes.

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.



PMLN6089



PMLN6090



PMMN4067



PMLN6368

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
These heavy duty headsets are ATEX-certified for extreme conditions and comfortable for long shifts. Choose from the standard headset to the Tactical XP headset that allows you to control the volume to accommodate the level of ambient noise you must be alert to. These headsets are available as over-the-head or attach-to-hardhat models.

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.

DP4000 Ex SERIES
MOTOTRBO™ ATEX DIGITAL RADIO

GENERAL SPECIFICATIONS

	DP4801 Ex DISPLAY PORTABLE	DP4401 Ex NON-DISPLAY PORTABLE
Frequency Band	UHF B1 (403-470MHz) and VHF (136-174MHz)	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	7.4 V Nominal
FCC Description	UHF B1: ABZ99FT4091 VHF: ABZ99FT3089	UHF B1: ABZ99FT4091 VHF: ABZ99FT3089
Programmable Buttons	5	3
IC Description	UHF: 109AB-99FT4091 VHF: 109AB-99FT3089	UHF: 109AB-99FT4091 VHF: 109AB-99FT3089
Gas Rating	ATEX: Class II 2G Ex ib IIC T4 Gb IECEx: Ex ib IIC T4 Gb	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	ATEX: Class II 2D Ex ib IIIC T130 °C Db IECEx: Ex ib IIIC T130°C Db
Mining Rating	ATEX: Class I M2 Ex ib I Mb IECEx: Ex ib I Mb	ATEX: Class I M2 Ex ib I Mb IECEx: Ex ib I Mb
Ingress Protection (IP) Rating	IP67*	
Typical battery life with IMPRES Li-Ion (5/5/90 duty cycle) Note: No GOB, No GPS, Analogue Conventional	16 hrs	16 hrs
Typical battery life with IMPRES Li-Ion (5/5/90 duty cycle) Note: No GOB, No GPS, Digital Conventional	19 hrs	19 hrs

TRANSMITTER

	DP4801 Ex DISPLAY PORTABLE	DP4401 Ex NON-DISPLAY PORTABLE
Channel Spacing	12.5/20/25KHz	12.5/20/25KHz
Frequency Stability (-30° C, +60° C)	±0.5ppm	±0.5ppm
Power Output	1W	1W
Modulation Limiting	±2.5kHz @ 12.5kHz ±4.0kHz @ 20kHz ±5.0kHz @ 25kHz	±2.5kHz @ 12.5kHz ±4.0kHz @ 20kHz ±5.0kHz @ 25kHz
FM Hum and Noise	-40dB @ 12.5kHz / -45dB @ 20/25kHz	-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	TIA603C
Audio Distortion (per EIA)	3%	3%
FM Modulation	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E	12.5 kHz: 11K0F3E 25 kHz: 16K0F3E

ENVIRONMENTAL SPECIFICATIONS

	DP4801 Ex DISPLAY PORTABLE	DP4401 Ex NON-DISPLAY PORTABLE
Operating Temperature	-20°C to +55°C	-20°C to +55°C
Storage Temperature	-40°C to +85°C	-40°C to +85°C
Thermal Shock	MIL STD 810D, E, F, G	MIL STD 810D, E, F, G
Humidity	MIL STD 810D, E, F, G	MIL STD 810D, E, F, G
ESD	IEC-801-2KV	IEC-801-2KV
Water Intrusion	IEC-60529 IP67	IEC-60529 IP67
Packaging Test	MIL STD 810D, E, F, G	MIL STD 810D, E, F, G

RECEIVER

	DP4801 Ex DISPLAY PORTABLE	DP4401 Ex NON-DISPLAY PORTABLE
Channel Spacing	12.5/20/25KHz	12.5/20/25KHz
Frequency Stability (-30° C, +60° C, +25° C)	±0.5ppm	±0.5ppm
Analogue Sensitivity (12 dB SINAD) Typical	0.25uV	0.25uV
Intermodulation (TIA603C)	70dB	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	70dB
Rated Audio	0.5W	0.5W
Audio Distortion @ Rated Audio	5%, 3% (typical)	
Hum and Noise	-40dB @ 12.5kHz -45dB @ 20/25kHz	-40dB @ 12.5kHz -45dB @ 20/25kHz
Audio Response	TIA603C	TIA603C
Conducted Spurious Emission (ETSI)	-57dBm	-57dBm

For more information on how to communicate safely in unsafe places, visit motorolasolutions.com/mototrbo. Or find your closest Motorola representative or authorised Partner motorola.com/Business/XU-EN/Contact_Us.

Specifications subject to change without notice. All specifications shown are typical. Radio meets applicable regulatory requirements

*DP4000 Ex Series is rated IP67 and is also certified to the highest ingress protection available under ATEX/IECEx test conditions - IP64

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