

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

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 G0B, No GPS, Analogue Conventional	16 hrs	16 hrs
Typical battery life with IMPRES Li-Ion (5/5/90 duty cycle) Note: No G0B, No GPS, Digital Conventional	19 hrs	19 hrs

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

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

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](http://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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MOTOTRBO
DIGITAL
REMASTERED.