

MD615

DMR mobile radio

Versatile DMR mobile radio

The MD615 is the perfect radio for getting started with DMR communication. With its robust design and clear voice transmission, this compact mobile radio can be used in any application scenario. A variety of interfaces and Bluetooth connectivity guarantee optimum usability.

Analog and digital mobile radio (dual mode)

Both analog and digital channels can be configured with the MD615. You can easily switch your choice of channel between analog and digital. With the „A&D Auto Detect“ feature, your radio monitors analog and digital modes simultaneously and automatically reacts in the correct mode. This enables an extremely smooth and simple migration from analog to digital.

High and adjustable transmitting power

You can program the MD615, adjusting the transmitting power to between 1 W and 25 W. Variants of the MD615 with a higher output rating can expand their communication range by a considerable amount.

GPS module & Bluetooth functionality (optional)

Localization by GPS via the optional external GPS module permits position checks and real time position determination in AVL application. With the Bluetooth option, the radio can establish a wireless connection with various Bluetooth accessories.



Technical Data MD615

General data

Frequency range	VHF: 136 – 174 MHz UHF: 400 – 470 MHz
Supported operating modes	<ul style="list-style-type: none"> ▪ DMR Tier II (ETSI TS 102 361-1/2/3) ▪ Simulcast ▪ Analog
Number of channels	48 (16 channels per zone)
Number of zones	3
Channel spacing (analog)	12.5 / 25 kHz
Channel spacing (digital)	12.5 kHz
Operating voltage	13.6 ± 15% V _{DC}
Max. power consumption (in stand by)	Approx. 0.3 A
Max. power consumption (during reception)	≤ 1 A
Max. power consumption (during transmission)	1 W: ≤ 3 A 5 W: ≤ 5 A 25 W: ≤ 8 A 45 W: ≤ 12 A
Frequency stability	±0.5 ppm
Antenna impedance	50 Ω
Dimensions (L x W x H)	164 x 43 x 150 mm
Weight	1100 g

Environmental conditions

Operating temperature range	-30 °C to +60 °C
Storage temperature range	-40 °C to +85 °C
ESD	IEC 61000-4-2 (level 4) ± 8 kV (contact discharge) ± 15 kV (air discharge)
Protection against dust and moisture	IP54
Shock and vibration resistance	MIL-STD-810 C/D/E/F/G
Relative humidity	MIL-STD-810 C/D/E/F/G

Transmitter

Transmitting power (adjustable)	VHF: 1 – 25 W / 5 – 50 W UHF: 1 – 25 W / 5 – 45 W
Modulation	11 K0F3E at 12.5 kHz 16 K0F3E at 25 kHz
4FSK digital modulation	12.5 kHz (data only): 7K60FXD 12.5 kHz (data and voice): 7K60FXW
Interfering signals and harmonics	- 36 dBm (< 1 GHz) - 30 dBm (> 1 GHz)
Modulation limiting	±2.5 kHz at 12.5 kHz ±5.0 kHz at 25 kHz
Noise cancellation	40 dB at 12.5 kHz 45 dB at 25 kHz
Adjacent channel selectivity	60 dB at 12.5 kHz 70 dB at 25 kHz
Audio response (TIA-603D)	+ 1 dB to - 3 dB
Audio distortion	≤ 3 %
Digital vocoder type	AMBE++

Receiver

Sensitivity (analog)	0.3 μV (12 dB SINAD) 0.22 μV (typical) (12 dB SINAD) 0.4 μV (20 dB SINAD)
Sensitivity (digital)	0.3 μV / BER 5 %
Adjacent channel selectivity TIA-603 ETSI	60 dB at 12.5 KHz / 70 dB at 25 KHz 60 dB at 12.5 KHz / 70 dB at 25 KHz
Spurious response rejection TIA-603 ETSI	70 dB at 12.5/25 kHz 70 dB at 12.5/25 kHz
Blocking TIA-603 ETSI	90 dB 84 dB
Noise cancellation	40 dB at 12.5 kHz 45 dB at 25 kHz
Nominal audio power output	4 W at 16 Ω (internal) 8 W at 8 Ω (external)
Max. audio power output	6 W at 16 Ω (internal) 12 W at 8 Ω (external)
Audio distortion	≤ 3 %
Audio response (TIA-603D)	+ 1 dB to - 3 dB
Conducted spurious emission	< - 57 dBm

All technical information was determined at the factory and in accordance with the corresponding standards. Subject to change on the basis of continuous development.



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SGS Certificate DE11/81829313

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