

PD705/PD705G

DMR handheld radio



Superior performance

With its compact chassis, degree of protection IP67, the superlative voice quality and the support for digital and analog radio, the PD705/PD705G will put fresh wind into the sails of your radio communication.

Ergonomic design

Hytera's PD705 and PD705G (variant with GPS) handheld radios offer ease of operation and reliability, which is indispensable in critical situations. The ingeniously devised and intelligent industry antenna design assures comfortable operation and remarkable GPS properties.

Reliability

The PD705/PD705G meets all the requirements of the open ETSI standard DMR as well as MIL810-C/D/E/F/G and degree of protection IP67. The device series thus offers excellent features even under harsh operating conditions.

Technical Data PD705/PD705G

General data	
Frequency range	VHF: 66 – 88 MHz / 136 – 174 MHz UHF: 400 – 470 MHz
Supported operating modes	<ul style="list-style-type: none"> ▪ DMR Tier II (conventional DMR) ▪ Simulcast ▪ XPT Digital Trunking ▪ DMR Tier III (DMR trunked radio) ▪ Analog, MPT 1327 DMR Tier II according to ETSI TS 102 361-1/2/3 DMR Tier III according to ETSI TS 102 361-1/2/3/4
Number of channels	1024
Number of zones	16
Channel spacing	12.5 / 20 / 25 kHz (analog) 12.5 kHz (digital)
Operating voltage	7.4 V (nominal)
Standard battery	2000 mAh (Lithium-Ionen-Akku)
Battery service life, analog (5-5-90 duty cycle, high transmitting power, standard battery)	VHF: approx. 14.5 hours / 13 hours (GPS mode) UHF: approx. 15.5 hours / 13.5 hours (GPS mode)
Battery service life, digital (5-5-90 duty cycle, high transmitting power, standard battery)	VHF: approx. 19 hours / 16.5 hours (GPS mode) UHF: approx. 20 hours / 17 hours (GPS mode)
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (H × W × D, without antenna)	125 x 55 x 35 mm
Weight (with antenna and standard battery)	approx. 335 g

Environmental conditions	
Operating temperature range	- 30 °C bis + 60 °C
Storage temperature range	- 40 °C bis + 85 °C
ESD	IEC 61000-4-2 (Level 4), ± 8 kV (Kontakt), ± 15 kV (Luft)
Protection against dust and moisture	IP67
Shock and vibration resistance	MIL-STD-810 C / D / E / F / G
Relative humidity	MIL-STD-810 C / D / E / F / G

GPS (PD705G only)	
Time to first fix (TTFF)	< 1 minute (cold start) < 10 seconds (warm start)
Horizontal accuracy	< 10 meter

Transmitter	
Transmitting power	VHF: 1 / 5 W UHF: 1 / 4 W
Modulation	11 K0F3E at 12.5 kHz 14 K0F3E at 20 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 ±4.0 kHz at 20 kHz ±5.0 kHz at 25 kHz
Noise cancellation	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Adjacent channel selectivity	60 dB at 12.5 kHz 70 dB at 20 / 25 KHz
Audio response (TIA-603D)	+ 1 dB bis - 3 dB
Nominal audio distortion	≤ 3 %
Digital vocoder type	AMBE +2™

Receiver	
Sensitivity (analog)	0.22 µV (12 dB SINAD) 0.18 µV (typical) (12 dB SINAD)
Sensitivity (digital)	0.22 µV / BER 5 %
Adjacent channel selectivity TIA-603	60 dB at 12.5 kHz / 70 dB at 20 and 25 kHz
ETSI	60 dB at 12.5 kHz / 70 dB at 20 and 25 kHz
Intermodulation TIA-603	70 dB at 12.5 / 20 / 25 kHz
ETSI	65 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603	70 dB at 12.5 / 20 / 25 kHz
ETSI	70 dB at 12.5 / 20 / 25 kHz
Signal-noise ratio (S/N)	40 dB at 12.5 kHz 43 dB at 20 kHz 45 dB at 25 kHz
Nominal audio power output	0.5 W
Nominal 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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