

PD715IS

DMR handheld radio (ATEX)



Highest intrinsic safety class

The PD715IS DMR handheld radio from Hytera fulfills the European ATEX directives, FM standards and IEC standards. With an ignition protection class of „ia“ – the highest ATEX intrinsic safety rating – the radio ensures reliable communication in hazardous explosive atmospheres of Zone 0.

Robust & reliable

The PD715IS handheld radio has been developed for use in tough working environments. Besides meeting the requirements of the European ATEX and IEC Directives, as well as the North-American FM standard, the radio is also compliant with the MIL-STD-810C/D/E/F/G standard and is dust and water-resistant to protection class IP67.

Failsafe design and battery latch

The PD715IS is protected from misuse by its physical design. Using batteries or accessory components with an insufficient level of protection automatically triggers an alarm so that malfunctions of this type cannot occur.



Technical Data PD715IS

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 XPT Digital Trunking DMR Tier III (ETSI TS 102 361-1/2/3/4) Analog, MPT 1327
Number of channels	1024
Number of zones	16 (with up to 16 channels each)
Channel spacing	12,5/20/25 kHz (analog), 12,5 kHz (digital)
Operating voltage	7.4 V (nominal)
Standard battery	1800 mAh (lithium-ion battery)
Battery service life (5-5-90 duty cycle, high transmitting power, standard battery)	approx. 14.5 hours / 13 hours (GPS) (analog) approx. 17 hours / 15 hours (digital)
Frequency stability	± 1.5 ppm
Antenna impedance	50 Ω
Dimensions (H x W x D, without antenna)	141 x 55 x 37 mm
Weight (with antenna and standard battery)	485 g

Environmental conditions	
Environmental conditions	<ul style="list-style-type: none"> -30 °C to +60 °C (safe environment) -20 °C to +50 °C (hazardous environment) -20 °C to +55 °C (hazardous environment, T3 gas only)
Storage temperature range	-40 °C to +85 °C
ESD	IEC 61000-4-2 (Level 4), ± 8 kV (contact), ± 15 kV (air)
Protection against dust and moisture	IP67 (non-explosion-proof)
Shock and vibration resistance	MIL-STD-810 C / D / E / F / G
Relative humidity	MIL-STD-810 C / D / E / F / G
ATEX explosion protection	<p>ATEX:</p> <ul style="list-style-type: none"> I M1 Ex ia I II 1 G Ex ia IIC T3 II 1 D Ex ia IIIC T160°C II 2 G Ex ib IIC T4 II 2 D Ex ib IIIC T120°C <p>IECEX:</p> <ul style="list-style-type: none"> Ex ia I Ma Ex ia I Mb Ex ia IIC T3 Ga Ex ia IIIC T160°C Da Ex ib IIC T4 Gb Ex ib IIIC T120°C Db <p>FM/CSA:</p> <ul style="list-style-type: none"> Class I, Division 1, Groups A,B,C,D T3B Class I,II, III, Division 1, Groups A,B,C,D,E,F,G T3 C Class I, Division 2, Groups A,B,C,D T4 Class II,III Division 2, Groups E,F,G T4A Class I, Zone 0, AEx ia IIC T3 Class II, Zone 0, AEx ia IIIC T160°C Class I, Zone 1, AEx ib IIC T4 Class II, Zone 1, Ex ib IIIC T120°C

Transmitter	
Transmitting power	1 W (nominal)
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 to -3 dB
Nominal audio distortion	≤ 3 %
Digital vocoder type	AMBE +2™

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	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

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

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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