

PD4 Series

DMR handheld radios

With longer battery life, lightweight with a long battery life and an integrated RFID reader (PD415), the PD4 series from Hytera are your optimal companion for everyday work. The PD4 series supports both analogue and digital operation, ensuring a smooth migration to digital radio for any user.



Radios

PD4 Series

PD405
PD415
DMR handheld radios



Highlights

Integrated RFID reader (PD415)

the optional Hytera RFID tags and checkpoints, transmitting this information back to the Hytera Patrol software by radio signal. The ideal solution for security and patrol requirements.

Patrol System with the PD415

The Hytera Patrol system is an application that uses the data captured via RFID (PD415 only). Upload your site map and plot your checkpoints, then once your staff have been assigned a radio tag the patrol system will monitor and log their journey in real-time when they tag any asset checkpoint.

Impressive voice quality

With embedded digital technology, the PD4 series produces outstanding voice quality, even in noisy environments, and at the outer perimeters of radio coverage.

Improved utilisation of the frequency spectrum

Thanks to the TDMA method, DMR radios make it possible to configure the available bandwidth with double the channel capacity of conventional analogue radio. This has a clear mitigating effect on increasing spectrum scarcity.

Mixed analogue and digital channel

This function ensures that the PD4 radios can detect both analogue and digital signals and change automatically to the relevant operating mode.

Robust

Both radios are dust and water-resistant according to IP55 (PD405) or IP54 (PD415) and meet the US military standard MIL-STD-810 C/D/E/F/G.

Additional Functions

- Different operating modes: analogue, DMR Tier II or mixed
- Digital or analogue channel search
- Supports pre-programmed text message transmission
- TDMA direct mode allows up to two simultaneous calls, even without repeater
- VOX (voice-controlled send keying)
- Emergency alarm
- Individual call, group call and all call
- Priority Interrupt, remote monitor, radio enable and disable (all via chargeable licence)
- Hytera Pseudo Trunking and Basic Encryption (via chargeable licence)
- Radio Registration Service (RRS), Radio Check, Alert Call



Programmable keys

Different operating modes:
analogue, DMR Tier II or mixed



Integrated RFID reader for Patrol System (PD415)

Small, slim and light, only 270 g

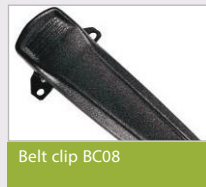
In the box



Lithium-ion battery
(1500mAh) BL1504



Hand strap RO03



Belt clip BC08



Switching power adapt-
er for charger PS1044

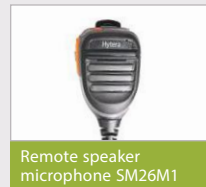


MCU Rapid-Rate
Charger CH10A07

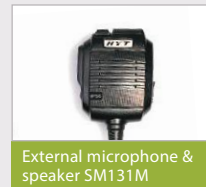


Antenna
(UHF or VHF)

Optional accessories



Remote speaker
microphone SM26M1



External microphone &
speaker SM131M



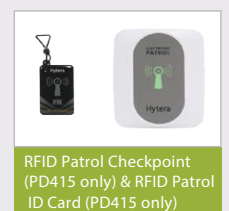
Dual charger
PS2005



Six-Unit Charger Including
Power Adapter MCA08



Lithium-ion battery
(2000 mAh) BL2010



RFID Patrol Checkpoint
(PD415 only) & RFID Patrol
ID Card (PD415 only)

Technical Data

General data	
Frequency range	VHF: 136 - 174 MHz UHF: 400 – 470 MHz
Supported operating modes	- DMR Tier II in acc. with ETSI TS 102 361-1/2/3 - Analogue
Channel capacity	256 (128 analogue + 128 digital)
Number of zones	3
Channel spacing	12.5 / 25 kHz
Operating voltage	7.4V (nominal)
Standard battery	1500 mAh (lithium-ion battery)
Battery life (5-5-90 duty cycle)	analogue / digital: approx. 12 / 16 hours (with 1500 mAh) approx. 16 / 22 hours (with 2000 mAh)
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (H x B x T) (without antenna)	112 x 54 x 28 mm (PD405) 112 x 54 x 31 mm (PD415)
Weight (with antenna and standard battery)	approx. 270 g
Programmable keys	2
Range of the RFID reader	up to 4 cm

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), ± 15 kV (air)
Protection against dust and moisture	IP55 (PD405) IP54 (PD415)
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	VHF: 1 / 5 W UHF: 1 / 4 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
Hum and noise	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 sensitivity	+ 1 dB at - 3 dB
Audio distortion	≤ 3 %
Digital vocoder type	AMBE+2™

Receiver	
Sensitivity (analogue)	0.22 µV (12 dB SINAD) 0.22 µV (typical) (12 dB SINAD) 0.4 µV (20 dB SINAD)
Sensitivity (digital)	0.22 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
Intermodulation TIA-603 ETSI	70 dB at 12.5 / 25 kHz 65 dB at 12.5 / 25 kHz
Spurious response rejection TIA-603 ETSI	70 dB at 12.5 / 25 kHz 70 dB at 12.5 / 25 kHz
Signal-noise ratio (S/N)	40 dB at 12.5 kHz 45 dB at 25 kHz
Audio power output	0.5 W
Audio distortion	≤ 3 %
Audio sensitivity	+ 1 dB at - 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.