

RD625

DMR repeater

Compact DMR repeater for wall mounting

The RD625 is a digital repeater designed specifically to provide reliable radio coverage in buildings and tunnels. The RD625 has been developed in accordance with the Digital Mobile Radio (DMR) open ETSI standard and can be operated with either digital or analog signals.

Flexible IP networking

Hytera's DMR repeater can be connected to an IP-based communication network with multiple sites. The roaming function is used to provide radios in this radio network with voice and data services across cells.

Analog and digital mode

The RD625 repeater can be operated both in analog and in digital mode and is completely compatible with analog systems currently in use.

Easy installation

The RD625's well-engineered design makes wall mounting easy using the optionally available wall bracket. This makes it possible to install the repeater flexibly and conveniently in buildings.



Technical Data RD625

General data

Frequency range	VHF: 136 – 174 MHz UHF: 400 – 470 MHz / 450 – 527 MHz
Supported operating modes	<ul style="list-style-type: none"> ▪ DMR Tier II ▪ Analog DMR Tier II according to ETSI TS 102 361-1/2/3
Number of channels	1024
Number of zones	1
Channel spacing	12.5 / 20 / 25 kHz
Operating voltage	13.6 ± 15% V _{DC} 90 V - 264 V _{AC}
Max. power consumption (in stand by)	≤ 0.5 A at 13.6 V _{DC}
Max. current consumption (during transmission)	≤ 0.5 A at 13.6 V _{DC}
Frequency stability	± 0.5 ppm
Antenna impedance	50 Ω
Dimensions (H × B × T)	210 x 348 x 108 mm
Weight	2870 g

Environmental conditions

Operating temperature range	- 30 °C to + 60 °C
Storage temperature range	- 40 °C to + 85 °C

Transmitter

Transmitting power	1 – 25 W (continuous)
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
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	65 dB at 12.5 kHz / 75 dB at 20 / 25 kHz
ETSI	60 dB at 12.5 kHz / 70 dB at 20 / 25 kHz
Intermodulation TIA-603	75 dB at 12.5 / 20 / 25 kHz
ETSI	70 dB at 12.5 / 20 / 25 kHz
Spurious response rejection TIA-603	75 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
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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