

D5 SERIES | MODBUS RTU



Our D5 Series (HPDL) radiomodems with RTU function, feature 4 digital inputs, 2 digital relay outputs, 2 analog inputs, 2 analog outputs, an RS-485 serial interface, and a counter input; all of which are software configurable. The embedded inputs and outputs allow the D5 Series radiomodem to be used in data acquisition and remote control applications.

OPERATING BAND

Our D5 Series radiomodems operate in the European free-use bands. The D510 model operates at 169MHz, and the D540 model operates at 868MHz, both outputting up to 500mW. High-sensitivity receiving, higher-power output and the dynamics of programmability, allows us to reach great distances

OPERATING FUNCTION

Our D5 Series has 4 operating modes that are software programmable: radiomodem, mirror point to point, Modbus slave, or Modbus master, allowing greater flexibility in the field.

The D5 Series uses routing tables to obtain fewer collisions in complex networks.

The D5 can also be used as a Modbus hub, allowing 8 Modbus modules (inputs and/or outputs) to be connected through the RS-485 port. The D5 will power these modules.

DATA ENCRYPTION

128bit AES (Advanced Encryption Standard) ensures transmitted data security.

LOW POWER

A power-saving function is built in, to activate inputs only when required, allowing for extended battery life.

CONSTRUCTION

Robust construction with surface mounted components, ensure highly-stable electronics. Enclosure options allow the D5 Series to be located indoors or outdoors.



ERE
WIRELESS

SERIE D5 | MODBUS RTU

NOMENCLATURE & ACCESSORIES D5 4 0 - 6 1 1 E 00

ā b c d

a Frequency

- 1 VHF 169 MHz
- 4 UHF 868 MHz

b Interface

- 6 4 digital input, 2 digital output, 2 analog input, 2 analog output, 1 counter input, serial port RS485

c Enclosure

- 1 Alluminum IP44
- 2 Alluminum IP44 suitable for DIN rail
- A Alluminum IP66/68, 3 cable entries M20x1.5
- B Alluminum IP66/68, 3 cable entries M25x1.5

d Antenna

- 00 without antenna
- 01 λ/4 169MHz (BNC)
- 02 λ/4 short 169MHz (BNC)
- 04 λ/4 868MHz (BNC)
- 20 λ/2 (dipole, vertical) 169MHz (5 mt, BNC)
- 22 λ/2 (dipole, vertical) 868MHz (5 mt, BNC)
- 40 Yagi 3 elements 169MHz (10 mt, BNC)
- 42 Yagi 6 elements 868MHz (10 mt, BNC)

FEATURES

GENERAL

Operating band
Channel number

Canalization

Modulation

Frequency stability

Radio data rate (Tx/Rx)

Supply voltage

Consumption (@12VDC)

Consumption SLEEP mode

Digital outputs ratings (n°2)

Digital input (n°4)

Digital counter (n°1)

Analog Inputs (n°2)

Analog Outputs (n°2)

Memory buffer

TRANSMITTER

Output power

Frequency deviations

Output power stability

RECEIVER

Sensibility @ BER < 10⁻²

INTERFACE

Data rate

Operating temperature

Overall dimension

Weight

D510 series

169.400 - 169.475

1 @ CH50 kHz

3 @ CH25 kHz

6 @ CH12.5 kHz

12.5 - 25 - 50 kHz

9K00F1D or 18K0F1D

± 2 ppm

4800 bps @ 12.5 kHz - 9600 bps @ 25 kHz - 19200 bps @ 50 kHz

9-32 VDC

3.3-4.8VDC battery operated

Rx ≈ 30 mA | Tx ≈ 200 mA

battery operated < 10 μA | 12VDC operated < 150 μA

1A@24V AC/DC resistive load (normaly open)

PNP

PNP (max frequency counter input 10 Hz)

4-20 mA (passive)

4-20 mA (passive)

1024 bytes

25 - 150 - 500 mW

± 1.8 kHz @ 12.5 kHz

± 3.6 kHz @ 25 kHz

± 4.8 kHz @ 50 kHz

± 1.5 dB

CLASS 1 - LBT and AGILITY

< -105 dBm @ 50 kHz

< -107 dBm @ 25 kHz

< -110 dBm @ 12.5 kHz

RS485

from 1200 to 57600 bps

-30°C +70°C

140x110x50 mm

330 gr

D540 Series

868-868.6 | 868.7-869.2 | 869.4-869.65

26 @ CH50 kHz

54 @ CH25 kHz

25 - 50 kHz

± 1 ppm

4800 bps @ 12.5 kHz - 9600 bps @ 25 kHz - 19200 bps @ 50 kHz

9-32 VDC

3.3-4.8VDC battery operated

Rx ≈ 30 mA | Tx ≈ 200 mA

battery operated < 10 μA | 12VDC operated < 150 μA

1A@24V AC/DC resistive load (normaly open)

PNP

PNP (max frequency counter input 10 Hz)

4-20 mA (passive)

4-20 mA (passive)

1024 bytes

25 - 150 - 500 mW

CLASS 2 - LBT and AGILITY

< -105 dBm @ 50 kHz

< -107 dBm @ 25 kHz



ERE
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