relaydroid-3D-S

Datasheet

Please note: Connecting this device to a LAN network needs knowledge about Ethernet network configurations. If your are unfamiliar with setting up Ethernet networks please consult a network specialist!

DANGER! If you want to switch high voltages with your relays (like 230V AC) only a qualified electrician should connect the wires to avoid the risk of electric shock!

This datasheet contains only the highlights of the feautres and parameters.
For more info download the full relaydroid user manual from https://relaydroid.com

Contents

1. Parameters

- Dimensions (W,H,D):
  - **17.5mm narrow case:** 17.5x90x56.4 mm
- Holding: DIN-rail
- Recommended input voltage: 12V$_{DC}$ - 24V$_{DC}$
- Operational input voltage ranges: min. 8V$_{DC}$, (typ. 12V$_{DC}$), max. 28V$_{DC}$
- Input current requirements:
  - recommended min. 500mA
- Power consumption: max. 1W (@12V$_{DC}$) with all outputs off
- Open collector outputs can drain max. 500mA to GND
- Ethernet: 10/100/1000 Mbit compatible, RJ-45 port, 10Mbit
- Implemented network protocols: TCP/IP, UDP, HTTP, NTP, NetBios, DHCP, DNS, ICMP (PING), SMTP (email)
- 4 LED: 1 power status + 2 Ethernet status + 1 OC1 output status LED
- 1 button, used to: switch outputs on/off, reboot, reset to factory settings
- Temperature rating min/max: -25/+60 Celsius
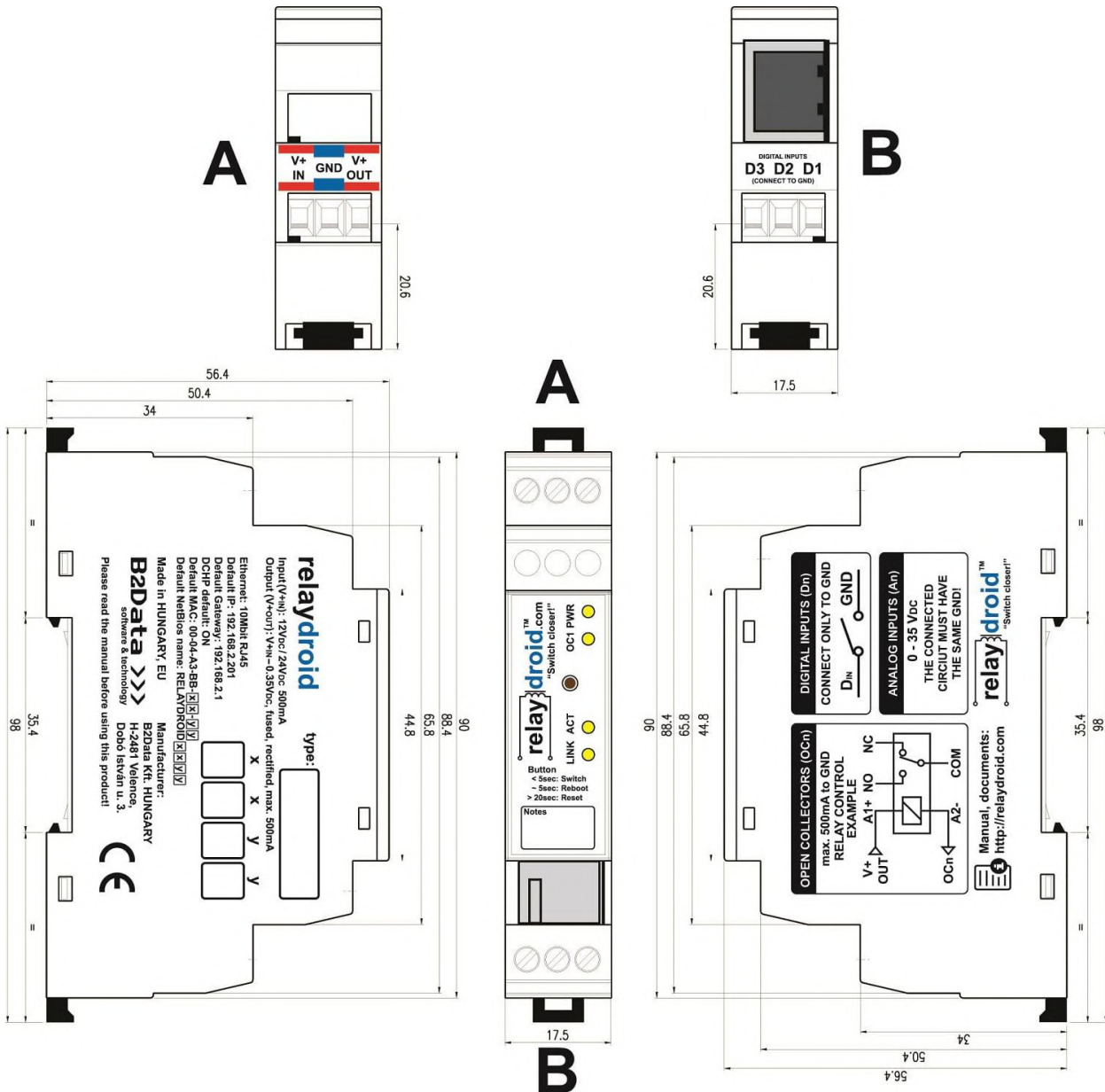
2. Layout and dimensions

Figure 2-1: device dimensions (17.5mm wide)

3. External connections, buttons, leds

NOTE: The layout, location and order of the connection PINs and LEDs can be rearranged without prior notice. Always refer to the labels on your device to determine a PIN or LED function!
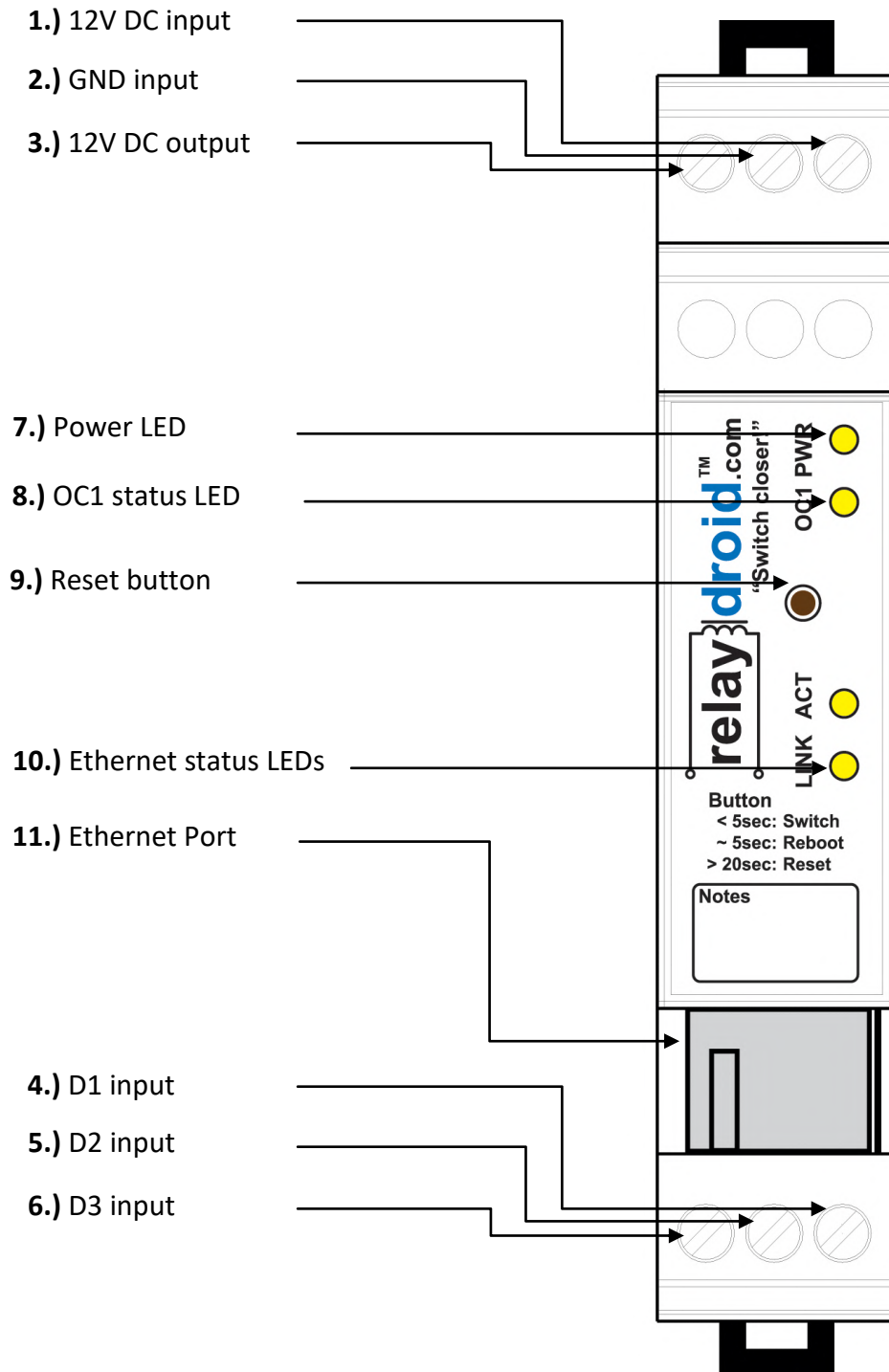
1.) 12V DC input

2.) GND input

3.) 12V DC output

7.) Power LED

8.) OC1 status LED

9.) Reset button

10.) Ethernet status LEDs

11.) Ethernet Port

4.) D1 input

5.) D2 input

6.) D3 input

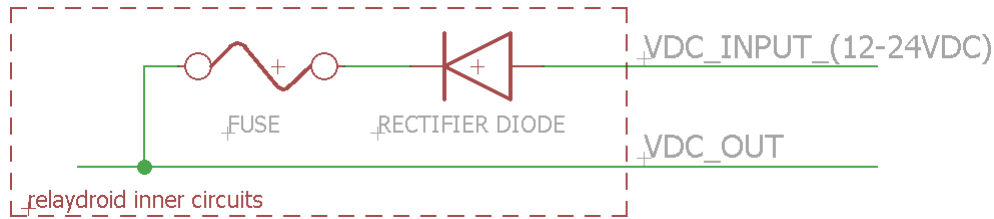Figure 3-1: **relaydroid-3D-S (SIDE-LAN)** device layout

4. Inner circuits

Figure 4-2: V_DC input and output

5. Connecting the digital inputs (Dx)

Digital inputs can only be used to detect an open or closed circuit (e.g. a switch or a door sensor).
The digital inputs have a weak pull-up of about 2.5V_DC and they can only be connected to GND or left open. They have 2 states: ON and OFF. To detect an open or closed circuit, connect one end of the circuit to the D1-9 input, and the other end of the circuit to GND (**2.**). If the circuit is closed (the input is connected directly to GND) the input state is ON. If the circuit is not closed (e.g. opened with a switch or a reed relay) the input state is OFF.
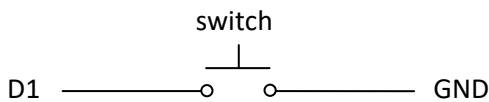

Figure 5-1: connecting **D1** to detect the state of a switch (open/closed)
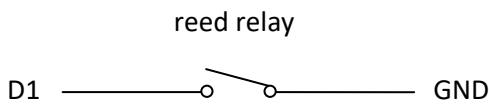

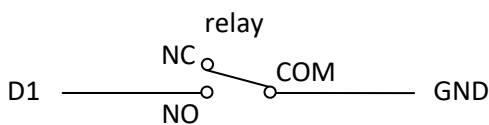Figure 5-2: connecting **D1** to detect a reed relay state (open/closed)

Figure 5-3: connecting **D1** to detect a relay state (NO/NC, default OFF)

BE ADVISED! Never EVER connect live wires with any voltage directly into the digital inputs. The digital inputs can only be connected to GND (0V_DC) directly. Any other connections over 2.5V_DC may cause the immediate destruction of the device.

6. Programmer API examples

relaydroid^{TM} devices can be controlled externally from a custom program via HTTP commands.

> **The API is disabled by default.** **To enable the API commands, you must set the** *"user#1 (web+API)"* **username and password to a non-empty value in the embedded user interface (***"SETTINGS->USERS AND PASSWORDS"* **menu)**.

HTTP examples:

In theese examples, relaydroid is located at 192.168.2.201 (port 80) and the API password is *userpass*

1) get Dx states
example request:
http://192.168.2.201/api.cgi?p=userpass
example answer:
`100`   (D1: ON, D2-3: OFF)