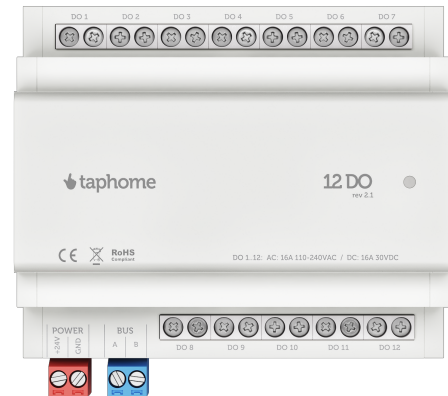


# 12 DO

TapHome 12 DO relay module with 12 potential-free outputs (16 A). Industrial thermal protection, max 50 A total, 6M DIN rail.



## Quick Facts

Dimensions	107 × 59 × 58 mm
Operating temperature	-20 ... 40 °C
IP rating	IP20
Power consumption	1 W

A powerful relay output module with industrial-grade protection. Multiple temperature sensors near the relays prevent overheating. The module’s software ensures the total switched load does not exceed main circuit breaker capacity. Multiple phases can be connected. Fixed screw terminals securely hold cables. All outputs are universal – each can be configured as a standalone switched output, AC blinds motor controller, or PWM output.

## Product Variants

Order Code	Revízia	EAN
TH-12DO-DIN-2.2	2.2	 8586022930010
TH-12DO-DIN-3.0	3.0	 8586022930409

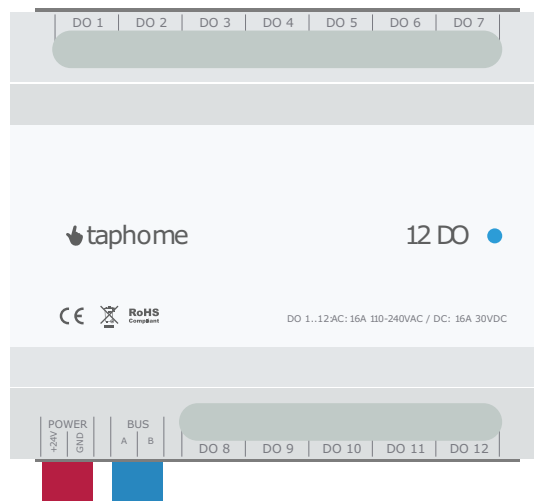
## Technical Specifications

ELECTRICAL	
Power supply	24 VDC $\pm$ 10%
Power consumption (idle)	17 W (all relays on)
Bus	TapHome Bus
OUTPUTS	
Relay outputs	12 $\times$ potential-free
Max. switching load	16 A
Max. total load	50 A

## Terminal Connectors

Connector	Pins	Wire range	Strip length
● Relay Outputs	DO1, DO2, DO3, DO4, DO5, DO6, DO7, DO8, DO9, DO10, DO11, DO12	0.34–4.0 mm <sup>2</sup> (26–10 AWG)	7.2 mm
● Power	+24V, GND	0.2–4 mm <sup>2</sup> (30–12 AWG)	6.5–7.5 mm
● Bus	Bus A, Bus B	0.2–4 mm <sup>2</sup> (30–12 AWG)	6.5–7.5 mm

## Wiring Diagram



## New Revision 3.0

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We've improved the two most common causes of complaints:

- The new TBU-RS085-300-WH protection chip provides robust protection for the bus against overvoltage and short circuits.
- Replaced the DC/DC converter with a more robust model.

## Features

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- 12x potential-free relay outputs, 16 A
- Relay lifetime: 100,000 cycles at maximum load, 2,000,000 cycles at average load
- Maximum total load: 50 A
- Output configurations:
  - Standalone switched output
  - AC blinds motor with internal interlock of both outputs
  - PWM output
- Standby power consumption: 1 W
- Power consumption per closed relay: 0.4 W
- Power dissipation per 1 A of load: 0.16 W
- Maximum power dissipation at full 70 A load with all relays closed:  $1 + 0.4 \times 12 + 0.16 \times 70 = 17$  W
- Power supply: 24 VDC  $\pm 10\%$
- Protection: IP20, operating temperature:  $-20$  °C to  $40$  °C
- DIN rail, 6 modules. Width 107 mm, height 59 mm
- Wire cross-section: 0.2–2.5 mm<sup>2</sup> (AWG 24–14)
- Terminal screw torque: 0.5–0.7 Nm
- Strip length: 6.5–7.5 mm

## Wiring information

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Each relay is potential-free. Wire outputs as follows:

1. Connect the **phase (Lx)** from the distribution board to the **first screw terminal** of the first output.
2. Prepare short jumper wires (“bridges”) and connect them from that same terminal to the **common screw terminal of the next output**. Continue for all outputs sharing the same phase.
3. Connect the **second screw terminal** of each relay output to the respective **load** (light, socket, motor, etc.).
4. Connect the **neutral (N)** of each load directly to the neutral busbar, not through the module.

**Notes:** - Multiple phases may be used on different groups of outputs if required. - The module supports standalone switching, AC blinds (with interlock), and PWM mode.



**Product page**

<https://hardware.taphome.com/12do-module/>

