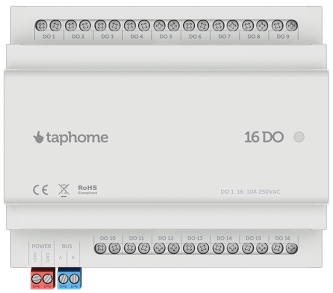
16 DO

TapHome 16 DO relay module with 16 potential-free outputs (16 A). 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

16-channel potential-free relay module (16 A) with thermal protection. Each output is universal – switching, shutter control, or low-frequency PWM. Robust terminals and durable design ensure reliability even in demanding installations.

Order Code	TH-16DO-DIN-1.0
EAN	8586022930515

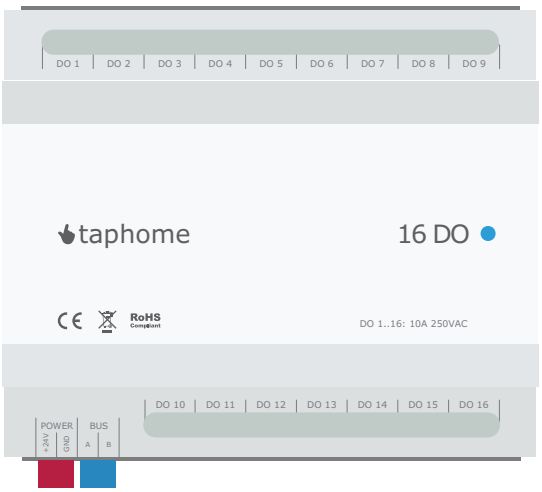
Technical Specifications

ELECTRICAL	
Power supply	24 VDC ±10%
Power consumption (idle)	22 W (all relays on)
Bus	TapHome Bus
OUTPUTS	
Relay outputs	16× 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, DO13, DO14, DO15, DO16	0.34–4.0 mm² (26–10 AWG)	7.2 mm
Power	+24V, GND	0.2–4 mm² (30–12 AWG)	6.5–7.5 mm
Bus	Bus A, Bus B	0.2–4 mm² (30–12 AWG)	6.5–7.5 mm

Wiring Diagram



Features

- 16x potential-free relay outputs, 16A.
- For continuous load above 10A, or for inductive/capacitive loads, we recommend using an auxiliary relay.
- Relay lifetime: typically 1×10^5 electrical cycles at 16 A resistive (1 s ON / 9 s OFF), 1×10^6 mechanical cycles.
- Maximum total load 50A.
- Recommended values apply for resistive load. Contact material $AgSnO_2$. Isolation 4 kV between coil and contacts, 1 kV between open contacts. Times: tON ≤ 10 ms, tOFF ≤ 5 ms.
- Output configurations:
- Independent switching output
- AC shutter with internal interlock of both outputs
- PWM only at low frequency (mechanical relay – recommended ≤ 0.5 Hz, otherwise lifetime decreases significantly).
- Power consumption:

- Standby mode: 1 W
- 0.2 W per closed relay (coil 24 V “C” ≈ 2 800 Ω → ~8.6 mA → ~0.2 W)
- Power loss per 1 A load current: ~0.16 W
- Max. power loss at full load 50 A and all 16 relays closed: 1 W + 0.2 W×16 + 0.16 W×50 ≈ 12.2 W
- Power supply 24 VDC ±10%
- Protection: IP20, operating temperature: -20 °C to 40 °C
- DIN rail, 6 modules. Width 107 mm, height 59 mm

Wiring information

Each relay is potential-free.

- Wire cross-section: 0.2–2.5 mm² (AWG 24–12)
- Terminal screw torque: 0.4 Nm
- Strip length: 6 mm

Connect outputs as follows:

- Connect the **phase (Lx)** supply from the distribution board to the first screw terminal of the first output.
- Prepare short jumper cables (“bridges”) and connect them from the same terminal to the common screw of the next output, and continue this way for all outputs sharing the same phase.
- Connect the second screw terminal of each relay output to the respective **device** (light, socket, motor, etc.).
- Connect the **neutral (N)** of each device directly to the neutral busbar, not through the module.
- If necessary, multiple phases can be used for different output groups.

Product page
https://hardware.taphome.com/16do/

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