

CMN-HDM-44 is an industrial high-voltage TRIAC dimmer, handling 220 V AC loads and featuring RS-485 interface and Modbus RTU protocol support. The device is designed for stepless dimming and on/off control of lighting loads in automation systems, BMS, smart home installations and industrial lighting control systems.



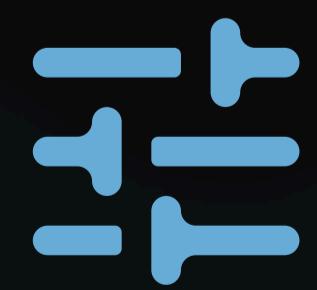
reliable TRIAC
dimming 220 V



support for lighting
scenarios



simple installation and
setting



autonomous control of
4 channels



support for local and
remote control



integration with BMS
and smart home
installations

FEATURES

4x4 Dimmer is equipped with four low-voltage inputs for connecting press-button switches and four autonomous high-voltage dimmable outputs. This configuration enables the possibility to control multiple lighting groups with individual brightness levels and operating scenarios.

The module provides for reliable TRIAC control of compatible light fixtures, supports remote control and Modbus RTU monitoring, and is easily integrated into distributed lighting control systems.

AREAS OF APPLICATION

- ✓ Smart Home systems
- ✓ Building management systems (BMS)
- ✓ Architectural and commercial lighting
- ✓ Lighting control in offices and shopping centers
- ✓ Hotels and public buildings
- ✓ Industrial lighting automation
- ✓ SCADA and centralized control systems

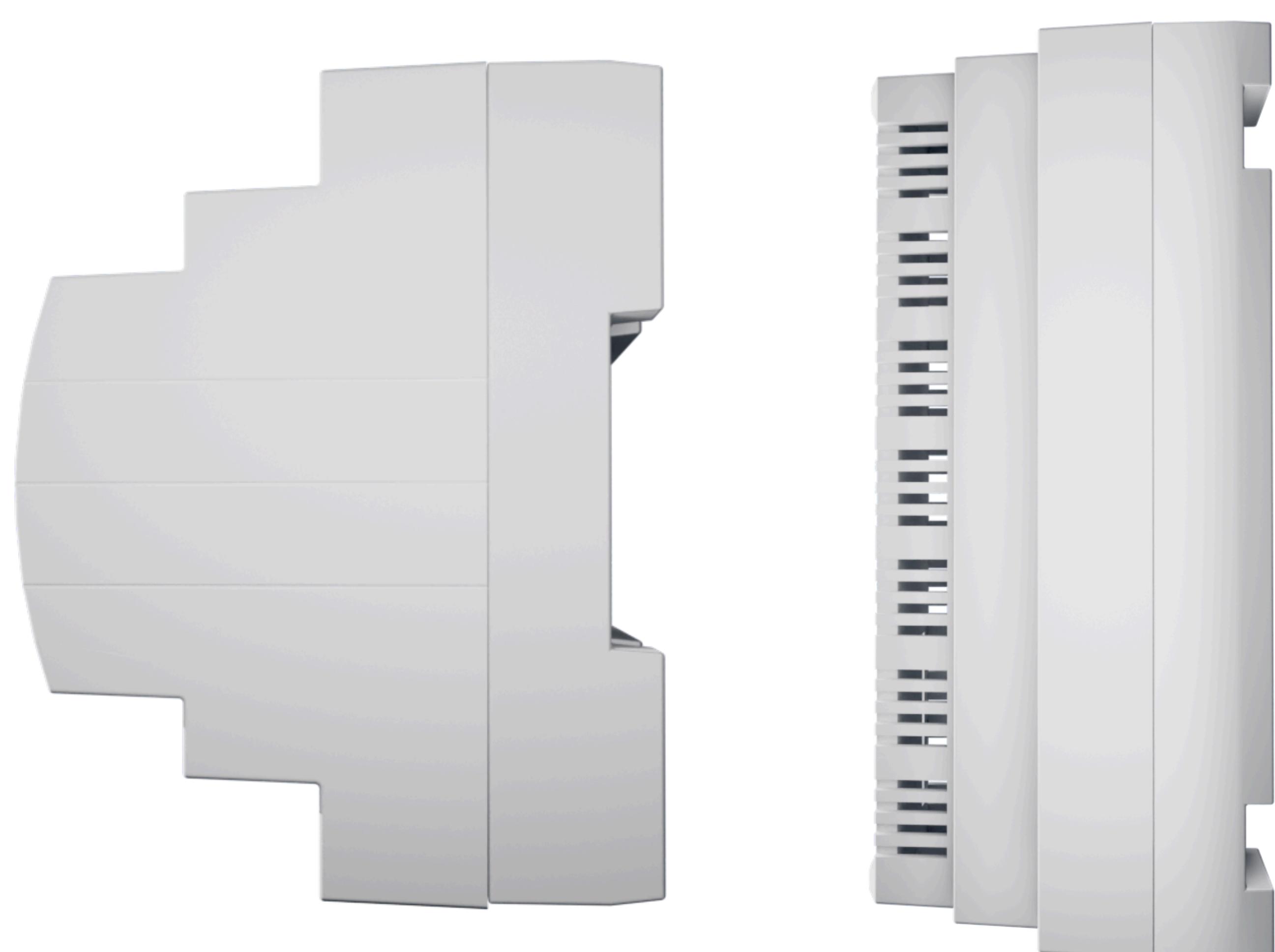


FUNCTIONAL CHARACTERISTICS

Number of inputs	4
Input type	impulse press-button (NO)
Number of outputs	4
Output type	TRIAC, dimmable
Channel control	autonomous

DIMENSIONS

Width	~140 mm
Height	~90 mm
Depth	~67 mm
Weight	380 g



COMPATIBLE LOAD TYPES

- Incandescent lamps
- 220 V halogen lamps
- Dimmable LED drivers
(Trailing Edge / Leading Edge)
- Dimmable LED lamps
(Compatibility depends on the characteristics of the specific fixture)

POWER SUPPLY

- Nominal supply voltage:
12–24 V DC
- Power consumption: ≤ 5 W

POWER OUTPUTS (per channel)

- Nominal load: 220–240 V AC
- Maximum load: up to 1000 W
- Maximum current: up to 5 A
- Control type: phase-cut (TRIAC)
- Protection: overheat and short-circuit

LOW-VOLTAGE INPUTS

- Type: dry contact (press-button)
- Operating modes:
short press / long press
- Function: local channel control

INDICATION

- Power LED
- RS-485 activity LED
- Channel status indicators

PACKAGE CONTENTS

- CMN-HDM-44 dimmer
- Datasheet / user manual
- Packaging

Model designation CMN-HDM-44

HDM High-voltage Dimmer Module

4x4 4 inputs / 4 dimmable outputs

CONTROL FUNCTIONS

- Channel on / off switching
- Smooth brightness adjustment
- Brightness level setting via Modbus
- Local control via press-buttons
- Last status memory
- Group and scene-based control

COMMUNICATION INTERFACE

- Interface: RS-485
- Protocol: Modbus RTU
- Transmission speed:
9 600 - 115 200 bps
- Device address: 1-250
- Line protection: built-in (TVS / ESD)
- Network topology: daisy chain

MODBUS FUNCTIONS

- Channel status control
- Brightness level control
- Reading current levels
- Device diagnostics and status

Supported Modbus Functions

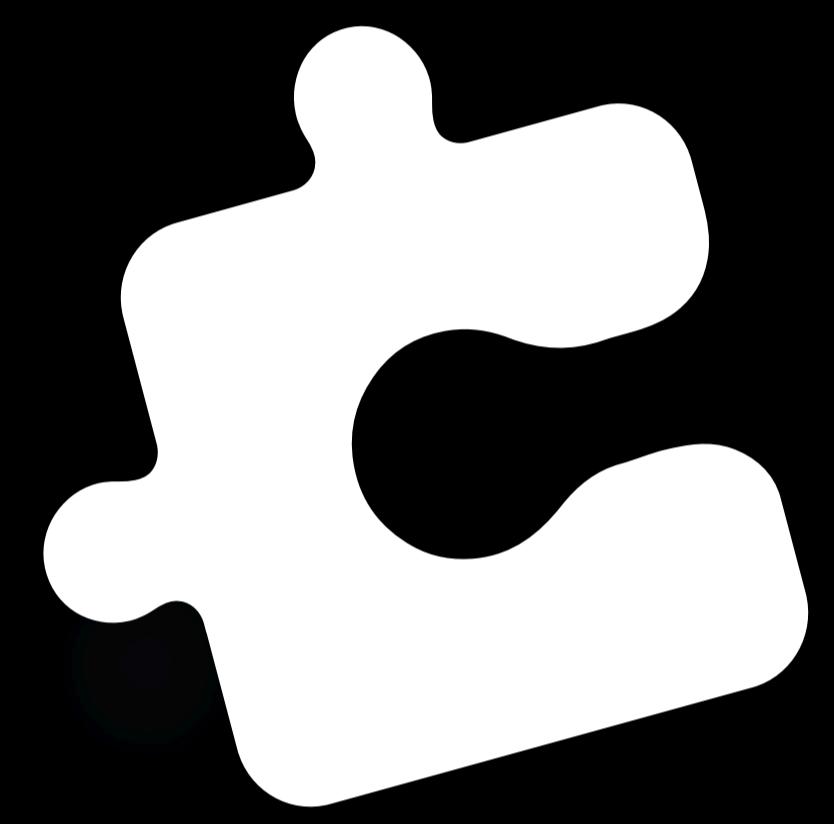
- 03 – Read Holding Registers
- 06 – Write Single Register
- 16 – Write Multiple Registers

FORM FACTOR

- Enclosure: PC/ABS self-extinguishing
- Mounting: 35 mm DIN rail
- Terminals: screw-type (power and signal)
- Protection rating: IP20

OPERATIONAL CONDITIONS

- Operating temperature: $-20\ldots+60$ °C
- Storage temperature: $-40\ldots+85$ °C
- Humidity:
up to 92%, without condensation



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