



- has been subjected to strong magnetic fields, such as those found close to machinery or loudspeakers
- Safe operation can no longer be assumed if:
 - there are signs of damage
 - the device no longer functions
 - the device was stored for a long period of time in unfavourable conditions
 - it was exposed to heavy loads during transport

GB Important Information

Relay module 4-way 12 V

Item no. 2250322

Intended use

The relay card comprises four relays with changeover contact. This allows electrical circuits to be switched. The relay card can be controlled via special microcontrollers (Arduino, Raspberry Pi, 8051, AVR, PIC, DSP, ARM, MSP430) (TTL logic). The relay card must be installed in a suitable housing (not supplied).

For safety and approval purposes, do not rebuild and/or modify this product. Using the product for purposes other than those described above may damage the product. In addition, improper use can result in short circuits, fires, electric shocks or other hazards. Read the operating instructions and this information sheet carefully and store them in a safe place. Pass on the product to third parties only along with the product documentation.

This product complies with statutory national and European regulations. All company and product names are trademarks of their respective owners. All rights reserved.

Package contents

- Relay board
- Manufacturer's manual (English)
- Information sheet



Up-to-date operating instructions

Download the latest operating instructions at www.conrad.com/downloads or scan the QR code shown. Follow the instructions on the website.

Explanation of Symbols



The symbol with the lightning in a triangle indicates that there is a risk to your health, e.g. due to an electric shock.



An exclamation mark in a triangle indicates important instructions in this information sheet which absolutely have to be observed.



The arrow symbol indicates special information and advice on how to use the product.

Safety instructions



Read through this information sheet carefully and observe the safety instructions in particular. If you do not follow the safety instructions and information on proper handling in this information sheet, we assume no liability for any resulting personal injury or damage to property. Such cases will invalidate the warranty/guarantee.

a) General information

- The unauthorised conversion and/or modification of the product is prohibited for safety and approval reasons.
- Maintenance and repair work must be done by a technician.
- The product is not a toy and should be kept out of the reach of children.
- The product is intended for use only in dry indoor rooms; it must not get damp or wet; never touch it with damp wet hands! There is a risk of a life-threatening electric shock!
- The product should not be exposed to extreme temperatures, direct sunlight, intense vibrations or heavy mechanical stress. Keep it away from dust and dirt.
- Handle the product with care, it will be damaged by jolts, impacts or a fall from a low height.
- Never use the product immediately after it has been brought from a cold room into a warm one. The condensation that forms may destroy the product. Furthermore, it can cause a lethal electric shock!
Allow the product to reach room temperature before connecting it and putting it into use. This may take several hours.
- Do not leave packaging material carelessly lying around, because it could become a dangerous toy for children.
- For installations in industrial facilities, follow the accident prevention regulations for electrical systems and equipment issued by the national safety organisation or the corresponding national authority.
- If you have any questions that are not answered in this information sheet, please contact our technical service or another specialist.
- Avoid the following unfavourable ambient conditions at the installation location and during transport:
 - Dust or flammable gases, fumes or solvents
 - Strong vibrations, impacts or blows

b) Mains voltage/voltages dangerous to the touch

The relay card is also suitable for switching voltages dangerous to the touch or mains voltage (see chapter "Technical data"). In this case:

Caution, safety hazard!

The product should only be installed by people with relevant electrical knowledge and experience! *)

If it is not installed properly, **you** risk:

- your own life
- and the life of user of the electrical device.

If it is not installed properly, **you** risk severe damage to property, e.g., by fire.

You face the risk of personal liability for personal injury and material damage.

Always consult an electrician!

*) Technical knowledge required to perform the installation:

For the installation, the following specialist knowledge is required in particular:

- The "Five safety rules": Disconnect from the mains; protect against accidental switch-on; ensure there is no voltage; earth and short-circuit; cover or protect neighbouring live parts.
- Use suitable tools, measuring devices and personal protective equipment, where necessary.
- Analyse measurement results.
- Use electrical installation materials to ensure the turn-off criteria.
- IP protection ratings
- Install electrical installation materials
- Type of power supply (TN system, IT system, TT system) and the corresponding connection criteria (classic earthing, protective earthing, necessary additional measures etc.)

If you do not have the expertise required for connection and installation, do not connect and install it yourself but ask a qualified technician.

- If mains voltage or other voltages dangerous to the touch are switched via the relay card, the relay card must be installed and operated in a suitable housing. Care must be taken to ensure both suitable protection against accidental contact and appropriate fixing of the cables (strain relief).
- Even if only non-hazardous voltages are connected, installing the card in a housing is still recommended to avoid short circuits on the circuit board.

Connection/control

→ Observe the enclosed English operating instructions.

Disposal



Electronic devices are recyclable waste and must not be placed in household waste. At the end of its service life, dispose of the product in accordance with applicable regulatory guidelines.

Specifications

Operating voltage	12 V/DC
Power consumption	max. about 20 mA
Relay switching channels	4 (each 1x changeover contact)
Relay contact rating	30 V/DC, 10 A 250 V/AC, 10 A
Environmental conditions	Temperature 0 °C to +60 °C, Relative humidity max. 95 % (not condensing)
Dimensions	77 x 55 x 17 mm (L x W x H)
Weight	58 g