

# RELAISMODULE REL02

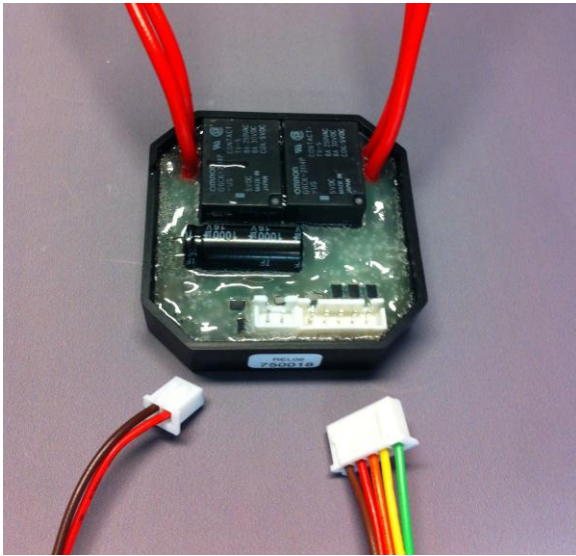


Figure 1 : Relay-module REL02

## 1. Product Description

The REL02 is a decentral module, suitable for switching 2 circuits and contains a connector to which two potential free inputs (e.g. pushbuttons) can be connected. The module fits in a standard flush-mounted socket which guarantees easy connection with potential push-buttons and the outputs.

The relay module has 2 potential-free, normally open contacts which can each connect max 8A at 230V ( $\cos\phi=1$ ) / 30 Vdc. These are 2 independently working contacts that can each be allocated an individual function by means of the Qbus software.

The relay module does not have any specific function. It can handle all switching functions : mono-stable (bell), bi-stable (on/off), timer, interval, thermostat output, etc.

For motor (shutter/blind/curtain...) control, the decentral shutter module ROL01 or the DIN-rail shutter modules ROL02(P) or the REL08 must be used. For heavy inductive loads (many fluorescent lights) with a high capacity or bipolar applications, contactors need to be added. The relay module contact will then activate the coil of the contactor.

Each module has a unique serial number enabling programming anywhere and anytime. All programming remains internally stored in a nonvolatile memory. After a voltage cut-off, the outputs return to their latest position.

The maximum length of the conductor between the REL02 and the potential free input is 20 meters. The

cable type or its section is irrelevant. The input contacts can be selected and set using the Qbus configuration software:

- Push button = button that is open when inactive – only active when pushed shortly (e.g. doorbell).
- Normal open = contact that is open when inactive.
- Normal closed = contact that is closed when inactive.
- Switch = when a single-pole conventional switch is connected to the input.

Each module has a unique serial number enabling programming anywhere and anytime. All programming remains internally stored in a nonvolatile memory. After a voltage cut-off, the outputs return to their latest position.

A bipolar automatic fuse of maximum 8A must be placed on the mains power.

## 2. Safety Instructions

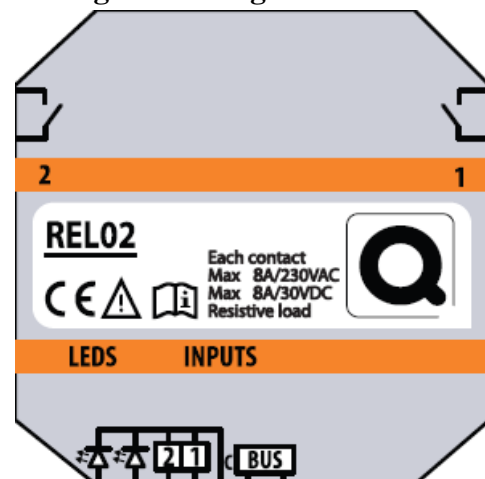
Read the complete manual before carrying out the installation and activating the system.



### WARNING

- The device must be mounted, commissioned and serviced by an authorized electrician in accordance with the country-specific regulations.
- Never connect an AC or DC voltage to an input for a potential-free contact. This will damage the input module.
- The device must not be opened. The guarantee provisions will be void when the module has been opened.
- Electrical shock when live parts are touched.

## 3. Mounting and wiring



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Figure 2 : Connection example for mains voltage and loads

## BUS WIRING:

The provided bus cable needs to be connected to the connector on the REL02 and the two separate cables need to be connected to the bus. It is recommended to use the Qbus cable or any other cable with minimum 2 x 1mm<sup>2</sup> conductors as a bus lead. The green protected EIB wire is also allowed when the conductors are guided per 2 in order to obtain a section of minimum 2 x 1mm<sup>2</sup>.

**IMPORTANT : THE BUS CABLE SHOULD BE SHIELDED AND GROUNDED! THE GROUNDING SHOULD BE CONNECTED TO THE OVERALL GROUNDING OF THE BUILDING.**

## LOAD CIRCUITS (1,2) :

Both outputs of the REL have 14cm wires. These can be connected to the to be controlled circuits with a clamp. If sockets are to be connected, this should be done with separate contactors (2P/20A contactor required).

## INPUTS :

A separate multicable (29cm) is delivered with the REL02 which can be connected to the input connector of the module. Low-current LEDs (2mA without serial resistor) can be connected to the LED outputs. Via the Qbus System Manager, it can be selected if the LEDs represent the status of the relays or the status of the inputs.

The maximum length of the conductor between the REL02 and the potential free input is 20 meters. The cable type or its section is irrelevant.

We suggest to foresee two flush-mounted sockets for the installation of the REL02: one for the REL02 and the output connections and one for the connection of the inputs. This will increase the ease of installation.

## POWER SUPPLY:

The REL02 is powered by the bus.

## 4. Technical Data

### GENERAL SPECIFICATIONS :

- Power supply : bus
- Ambient temperature :  
Working temp. range : 10°C to 50°C  
Storage temp. range : -10°C to 60°C
- Maximum humidity : 93%, no moisture condensation
- Bus load :  
At rest: 5mA without LEDs, 8mA with LEDs at nominal 13,8V  
During activation: 16mA without LEDs, 20mA with LEDs at nominal 13,8V

- Max installation altitude : 2.000 meters.

### OUTPUTS :

- OUT1 – OUT2 : 2 potential-free normally open single contacts
- Rated current : 8A
- A bipolar automatic fuse of maximum 8A must be placed on the mains power.
- Contact resistance : 30mΩ
- Endurance : min. 100,000 operations
- Rated load :  
Resistive load (cosφ = 1)  
8A at 230Vac  
8A at 30Vdc  
Inductive load (cosφ = 0,4; L/R = 7 ms)  
3,5A at 230Vac  
3,5A at 30Vdc
- Maximum switching power :  
Resistive load (cosφ = 1)  
2000VA at 230Vac  
240W at 30Vdc  
Inductive load (cosφ = 0,4; L/R = 7 ms)  
875VA at 230Vac  
170W at 30Vdc  
We strongly recommend not to exceed these values, otherwise an external contactor should be used!
- 2mA LEDs without serial resistor can be connected to the LED outputs.

### INPUTS :

- IN1 – IN2 : 2 potential-free single contacts
- Input signal delay :  
- when closing the contact : max 100ms  
- after opening the contact : max 100ms
- Input function : pushbutton, normal open, normal close, switch. To be set by Qbus Configuration Software (System Manager).

### PHYSICAL SPECIFICATIONS

- Housing
- Protection Degree : IP20
- Installation : on the bus
- Dimensions (HxWxL) : 12mm x49mm x49mm
- Weight : approx. 50 gr.

### ELECTRICAL SAFETY

- Bus : 13,8VDC safety extra low voltage.
- Non-toxic WEEE/RoHS compliant

### CE

- Complies with the EMC regulations and low voltage regulations. The device complies with EN50090-2-2 (1996) +A1(2002) +A2 (2007) en EN61000-6-3, EN61000-6-1 (2007)

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## 5. Guarantee provisions

Period of guarantee : 2 years from date of delivery.

Guarantee will not be accepted if the device has been opened!

Any faulty devices should be send postage-free with a description of the defect to our central customer service office :

**QBUS N.V.**

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