

# RELAY MODULE REL08

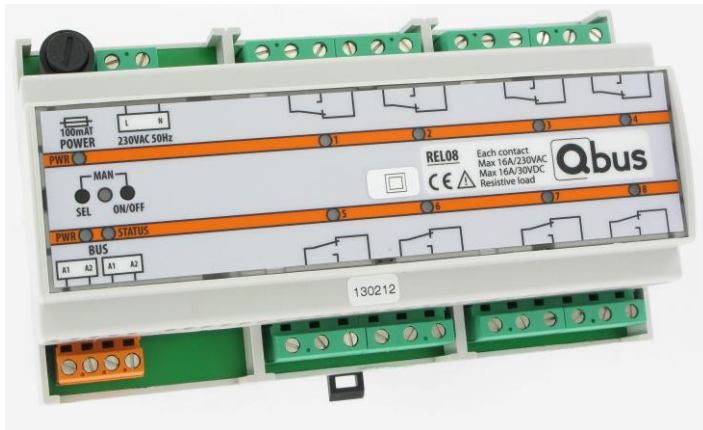


Figure 1 : Relay module REL08

## ⚠ WARNING

- The device must be mounted, serviced and commissioned by an authorized electrician in accordance with the country-specific regulations.
- This device is exclusively suitable for DIN-rail mounting EN50022. It must be mounted in a, “**fire enclosure**” closed distribution board.
- A safety disconnection of the device must be possible. Before carrying out the installation the REL08 should be de-energized.
- Only one phase is fused. In case the fuse is blown hazardous live voltage can still be present in the REL08.
- The device must not be opened.
- Electrical shock when live parts are touched.

## 1. Product Description

Module for DIN-rail, suitable for switching eight devices. The relay module has 8 potential-free, change over contacts which can each connect max 16A at 230V (cosφ=1). These are 8 independently working contacts that can each be allocated an individual function by means of the 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, shutter operation, blinds etc. Therefore this module can be combined for motor controls and for lighting.

In the case of heavy inductive loads (TL lamp transformers) with a high capacity or bipolar applications, contactors need to be added. The relay module contact then activates the coil of the contactor.

Each module has 2 unique serial numbers (6-digits) enabling programming anywhere and anytime. The 1st serial number refers to the 4 upper contacts, the 2nd serial number refers to the 4 lower contacts.

All programming remains internally stored in a non-volatile memory. After a voltage cut off, the outputs return to their latest position.

A bipolar automatic fuse of a maximum of 16A must be placed on the mains power.

## 2. Safety Instructions

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

## 3. Mounting and wiring

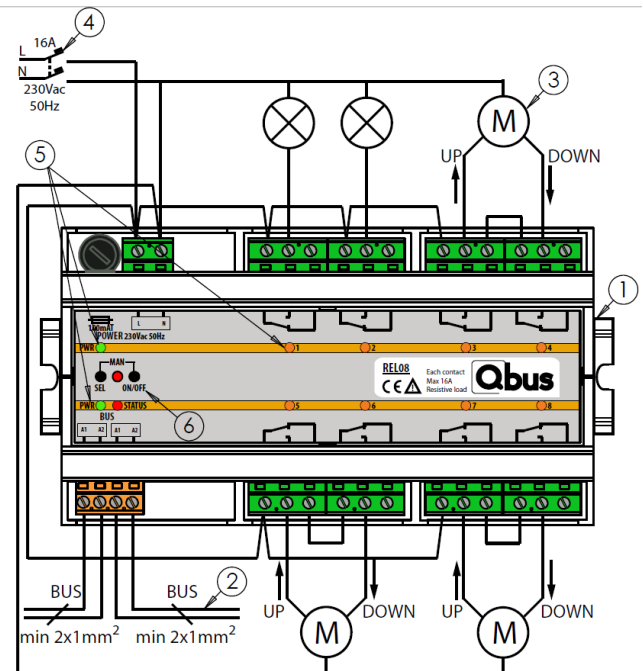


Figure 2 : Connection example for mains voltage and loads

### FITTING ①:

Snap device onto DIN rail to DIN EN50022.

### BUS WIRING ② :

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

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allowed when the conductors are guided per 2 in order to obtain a section of minimum  $2 \times 1\text{mm}^2$ .

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

## LOAD CIRCUITS ③ :

Connect the loads according the connection example (Figure 2). Conductor cross section : minimum  $1,5\text{mm}^2$ . Remove approx 7mm of insulation from the wire and screw it into the terminals OUT1 – OUT8.

If sockets are to be connected to the domotics, this should be done with separate contactors (2P/20A contactor required).

If shutters are to be connected to the relay module please pay attention to the according connection diagram. Each shutter makes use of 2 outputs!

Optionally, wiring bridges can be ordered to facilitate the connection of the loads to the relay module.



Figure 3: REL08-CON (in sets of 10)

## POWER SUPPLY ④ :

A bipolar automatic fuse of a maximum of 16A must be placed on the mains power 230Vac.

Conductor cross section : minimum  $1,5\text{mm}^2$ .

Remove approx 7mm of insulation from the wire and screw it into the terminals Ph-N.

**WARNING :**

**BEFORE WORKING ON THE DEVICE DISCONNECT THE SUPPLY VOLTAGE.**

## LED INDICATION:

Green light : power supply.

Red light : start-up 2 seconds and during programming.

Orange light 1-8 : output 1 till 8 active.

## MANUAL OVERRIDE:

Used to override the bus-steering of the relays. Press both the “SEL” and the “ON/OFF” button at the same time on the cover of the relay for 2 seconds. While pushing the buttons, the red led in between these buttons will flash for 2 seconds and then turn to constant red while the orange led under the first relay output will start flashing fast. Pushing the “on/off” button the relay can be set on manual on, manual off, or automatic (controlled by the bus). The setting will be indicated by the orange led:

- Manual on = flashing long on, short off
- Manual off = flashing short on, long off
- Automatic = constant on

When you use the REL08 to control motors, you can position the motors by pushing long on the “ON/OFF” button (cfr the Qbus switch).

By pushing the “SEL” button you can move between the relays – from 1 to 8.

If during 5 seconds nor the SEL button nor the ON/OFF button is being pushed, the red LED between the two buttons will be turned off and the SEL or the ON/OFF buttons can no longer be used. On the module, the status of the outputs will be visible (flashing fast, flashing slow, steady).

Pushing at the same time the “SEL” and the “on/off” button for 5 seconds (red led between buttons will be flashing for first 2 seconds, then will be constant red for 2 seconds and then turn off) will erase the manual settings on all relays of the REL08 so all relays will work automatically again.

## 4. Technical Data

### GENERAL SPECIFICATIONS :

- Power supply : 230Vac  $\pm 10\%$ , 50Hz - maximum protection 16A/2P
- Insulation voltage : 3 kVac tested.
- Characteristic consumption : 15 VA maximum – all relays on.
- Ambient temperature :  
Working temp. range :  $10^{\circ}\text{C}$  to  $50^{\circ}\text{C}$   
Storage temp. range :  $-10^{\circ}\text{C}$  to  $60^{\circ}\text{C}$
- Maximum humidity : 93%, no moisture condensation.
- Bus load : 10mA at nominal 13,8V.
- Internal fuse : 500mA T single-phase.
- Max installation altitude : 2.000 meters.

### OUTPUTS :

- OUT1 – OUT8 : 8 potential-free change over single contacts

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- Rated current : 16A
  - Contact resistance : 100mΩ
  - Set/Reset time : 15msmax / 5ms max
  - Endurance : 20mil. Operations
  - Rated load :
    - Resistive load ( $\cos\phi = 1$ )
      - 16A at 230Vac
      - 16A at 30VDC
    - Inductive load ( $\cos\phi = 0,4$ ; L/R = 7 ms)
      - 8A at 230Vac
      - 8A at 30VDC
  - Maximum switching power :
    - Resistive load ( $\cos\phi = 1$ )
      - 3680VA at 230Vac
      - 480W at 30Vdc
    - Inductive load ( $\cos\phi = 0,4$ ; L/R = 7 ms)
      - 1840VA at 230Vac
      - 240W at 30Vdc
- We strongly recommend not to exceed these values, otherwise an external contactor should be used!

## PHYSICAL SPECIFICATIONS

- Housing : Plastic, self-extinguishing according to UL94-V0
- Protection Degree : IP20, EN60529
- Installation : rapid mounting on DIN-RAIL, width 9 modules
- Dimensions (HxWxL) : 63mm x 86mm x 157mm
- Weight : approx. 0,523 kg

## ELECTRICAL SAFETY

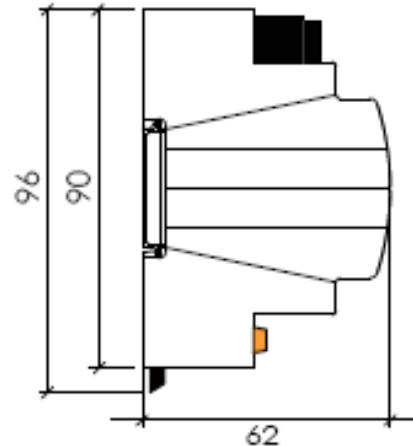
- Bus : 13,8VDC safety extra low voltage.
- Complies according EN60950 – 1 : 2006
- Dielectric strength : module has been tested (and approved) 3kVac. ( 50 Hz, 1 min)
- Non-toxic WEEE/RoHS compliant

## CE

- Complies with the EMC regulations and low voltage regulations. The device complies with HBES – EN50090-2-2 and EN60950 – 1 : 2006.

## 5. Dimension Diagram

Dimensions in mm.



Width = 9 modules.

1 Module = 17 mm.

## 6. 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 :

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