



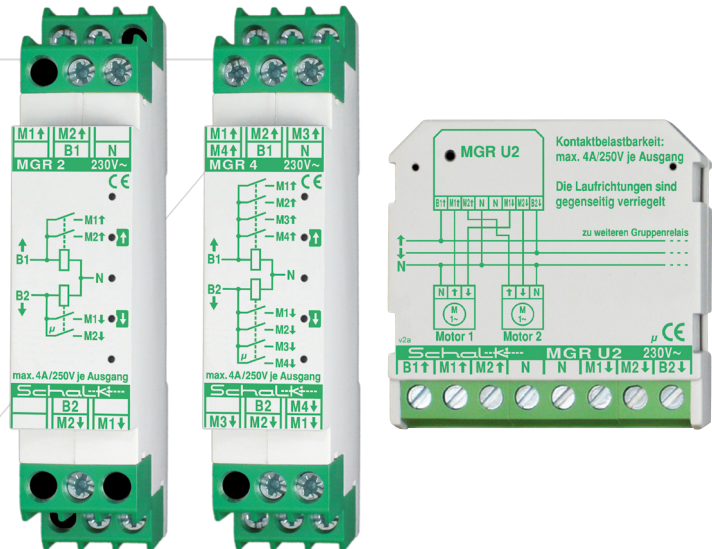
Motor-Group-Relay

- MGR U2** (flush mounting version)
- MGR 2** (rail mounting version, 4 relays)
- MGR 4** (rail mounting version, 8 relays)

For electrical decoupling of motors for roller shades or awnings connected in parallel

Special features

- ▶ Interlocked outputs
- ▶ Very compact package
- ▶ Can be connected in parallel
- ▶ Easy installation



General information

Direct parallel connection of open/close drives is usually not permissible due to undesirable reverse voltages. Mutual electrical decoupling of the motors is therefore necessary to enable parallel configurations.

The motor group relays in the MGR series are specifically designed for this electrical decoupling of motors in parallel configurations. This allows two or four motors to be operated simultaneously with a minimum of wiring effort. Furthermore, several MGR relays can be connected in parallel if it is necessary to operate significantly more drives in parallel. Thanks to the very compact package and easy wiring, even relatively large motor groups can be installed very easily, neatly and economically.

In addition, interlocking of the run direction ensures that the connected motors cannot be switched to run in both directions at the same time.

Application

Electrically correct and therefore reliable parallel connection of open/close drives (230V AC).

Operation

The control device is connected to the control inputs B1 (Open) and B2 (Close). The control signals may come from a

simple Open/Close switch or from the outputs of an electronic controller, such as the Schalk Universal Motor Controller UMS 5 or UMS U5.

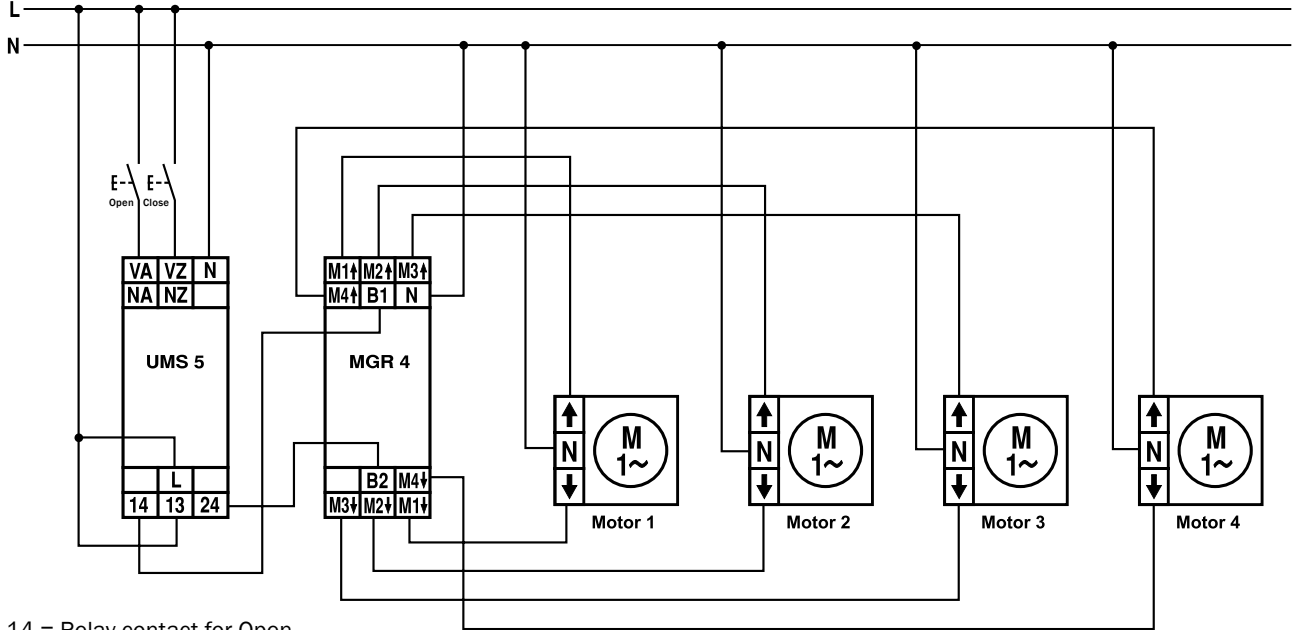
Up to four drives can be connected to the MGR motor outputs M1 to M4, depending on the relay type.

If it is necessary to operate more than four drives in parallel, the control inputs of several MGR relays can easily be connected in parallel.

In addition, interlocking of the run direction ensures that even with control devices that are not inherently safe (such as simple series switches) the motors cannot be switched to run in both directions at the same time.

Example connection diagram

MGR 4: parallel operation of four motors from one controller (e.g. UMS 5)



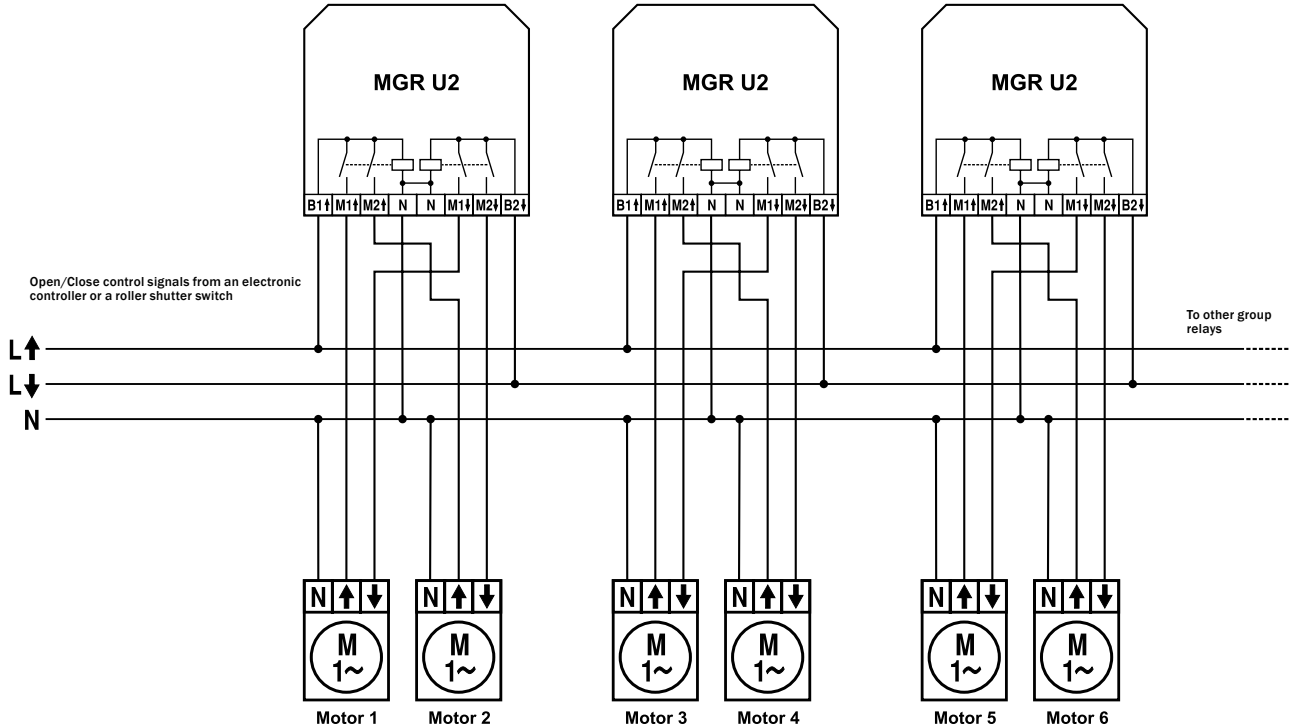
14 = Relay contact for Open
24 = Relay contact for Close

Info

The signals on the control inputs of the MGR may have 100% duty cycle.
This allows the relay to be controlled by conventional roller shutter switches if necessary.

Motor controllers

MGR U2: parallel operation of six motors in cascade



Open/Close control signals from an electronic controller or a roller shutter switch

To other group relays

General technical data

Operating voltage	230V 50Hz 10%
Switch rating	See data sheet "Relay contact load ratings"
Ambient temperature	-10°C to +45°C
RAL colour	Grey 7035 / Green 6029

MGR 4 technical data

Power consumption	approx. 0.6 W
Relay contacts	8 NO contacts 4 A / 250 V AC
Connections	Socket terminals with captive screws M3.5
Clamping range	0.5 mm ² - 4.0 mm ²
Strip length	6.0 mm - 6.5 mm
Screwing torque	0.80 Nm
Mounting	Click-mount on standard 35-mm rail (EN 60715)
Outside dimensions	18 x 88 (45) x 58 mm
Installation depth	55 mm
Weight	approx. 90 g

MGR 2 technical data

Power consumption	approx. 0.3 W
Relay contacts	4 NO contacts 4 A / 250 V AC
Connections	Socket terminals with captive screws M3.5
Clamping range	0.5 mm ² - 4.0 mm ²
Strip length	6.0 mm - 6.5 mm
Screwing torque	0.80 Nm
Mounting	Click-mount on standard 35-mm rail (EN 60715)
Outside dimensions	18 x 88 (45) x 58 mm
Installation depth	55 mm
Weight	approx. 70 g

MGR U2 technical data

Power consumption	approx. 0.3 W
Relay contacts	4 NO contacts 4 A / 250 V AC
Connections	Socket terminals with captive screws M3
Clamping range	0.5 mm ² - 2.5 mm ²
Strip length	6.5 mm - 7.0 mm
Screwing torque	0.50 Nm
Outside dimensions	43 x 43 x 18.5 mm
Weight	approx. 40 g

Order data

Part no.	EAN	Type	Designation
MGRU29	4 046929 401050	MGR U2	Motor group relay, 230V AC, 4 NO (for 2 motors) (FMD)
MGR209	4 046929 401142	MGR 2	Motor group relay, 230V AC, 4 NO (for 2 motors)
MGR409	4 046929 401159	MGR 4	Motor group relay, 230V AC, 8 NO (for 4 motors)