# Sunlight/dusk sensor <span style="font-size:small">Ref.-No. 32 SD</span>
# Glass-break sensor <span style="font-size:small">Ref.-No. 32 G</span>
# Coupling <span style="font-size:small">Ref.-No. 32 K</span>
# Decoupling relay <span style="font-size:small">Ref.-No. TR-S, TR-S REG</span>

## Sunlight/dusk sensor

Use the suction pad to attach the sunlight/dusk sensor (Diagram ①) to the window pane.

The sunshade function allows you to automatically roll the blinds down when the brightness exceeds a set value. Place the sensor anywhere on the window pane to determine the blind's limiting position.

Application: sunshade for computer work-stations, sunshade for flowers on windows sills or in greenhouses etc.

The dusk function allows you to automatically roll the blinds down when the brightness falls below a set value. The blinds will be rolled down to their bottom limiting position. You can place the dusk sensor anywhere on the window pane.

Application: rolling down the blinds when darkness falls. Only available in conjunction with the timer cover.

## Technical data
## Sunlight/dusk sensor

| | |
|---|---|
| Max. sensitivity of photodiode: | approx. 850 nm for λ |
| Max. amount: | 1 |
| Temperature range: | –30 °C to +70 °C |
| Type of protection: | IP 54 |

## Coupling

Connect the coupling (Diagram ④) to the 3-pole terminal located on the cover with sensor connector or on the insert. The coupling has two female connectors into which you plug the male sensor connectors of sunlight/dusk sensor and/or broken glass sensor.



① ② ③ 0 - 20 mm / 20 mm ④
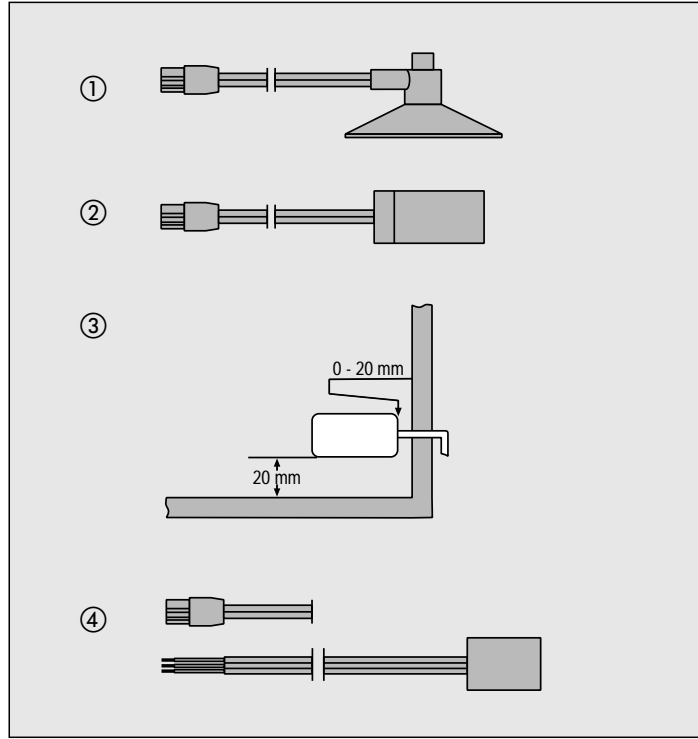
## Technical data
## Coupling

| | |
|---|---|
| Number of sensors: to be connected to the plug-in connector | max. 1 sunlight/dusk sensor and max. 1 broken glass sensor |

## Note

Glass-break sensors may not be used together with the converter (wind sensor). The wind protection function via the satellite input ▲ (blind is rolled up) is disabled after glass breakage, the blind or slats remain closed.

## Glass-break sensor

Glass-break sensors (Diagram ②) monitor flat glass surfaces within a radius of up to 2 m (depending on glass thickness, frame, putty etc.). Mechanical vibrations that are too weak to reach the sensor will not be detected (e.g. scratching the glass). Window panes with uneven surfaces (textured or wired glass) and laminated glass panes muffle vibrations too much and may therefore not be monitored by means of broken glass sensors.

Glass-break sensors are very sensitive devices. Knocking on it or any other improper treatment may destroy them.

Use a suitable glue (e.g. Loctite Glass-to-Metal Glue Kit) to attach the glass-break sensor to the window pane.

Observe the specified distances to the window frame (Diagram ③).

The blinds will be rolled down to their bottom limiting position when the glass gets broken.

Application: weather protection if the glass gets broken.

## Technical data
## Glass-break sensor

| | |
|---|---|
| Contact: | 1-pole break contact |
| Switching capacity: | max. 350 mW |
| Transitory resistance: Idle mode | max. 30 Ohm |
| Alert mode | min. 1 MOhm |
| Alert signal duration: | approx. 0.5 – 5 s |
| Supply line: | LIYY 2 x 0.14 mm² |
| Temperature range: | –30°C to +70°C |
| Type of protection: | IP 67 |
| Max. amount: | 10 (series-connected) |
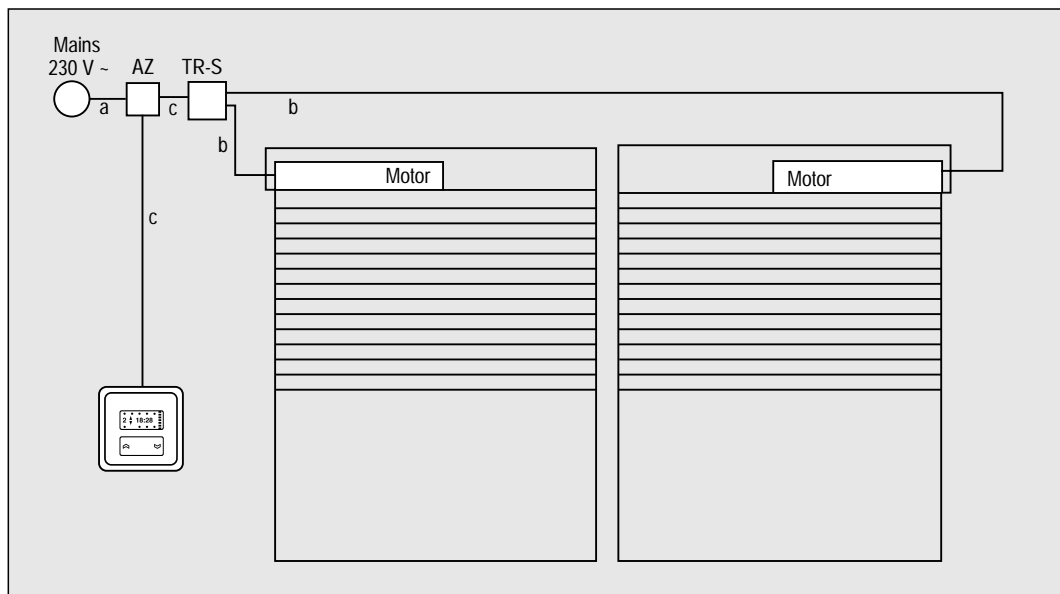
## Decoupling relay TR-S with separate mains connection
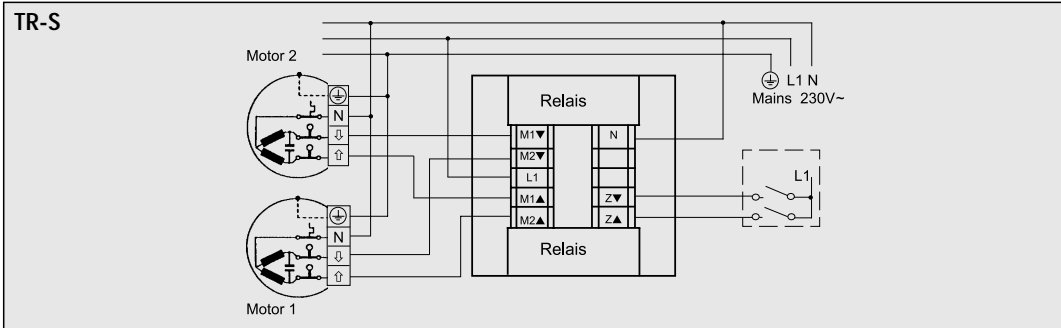
### Application example:

Decoupling relays are required if you wish to use one single blinds controller to operate several drive units because it is not possible to connect electrical shutter drives in parallel. JUNG TR-S can be installed in any 60 mm wall or junction box.

a = 3 x 1.5 mm², 230 V ~

b = 4 x 1.5 mm², 230 V ~

c = 5 x 1.5 mm², 230 V ~

AZ = junction box



Mains 230 V ~  AZ  TR-S  a  c  b  b  c  Motor  Motor

# Wiring diagrams
# Decoupling relay

**Ref.-No. TR-S, TR-S REG**

## TR-S



Motor 2

Relais

M1▼
M2▼
L1
M1▲
M2▲
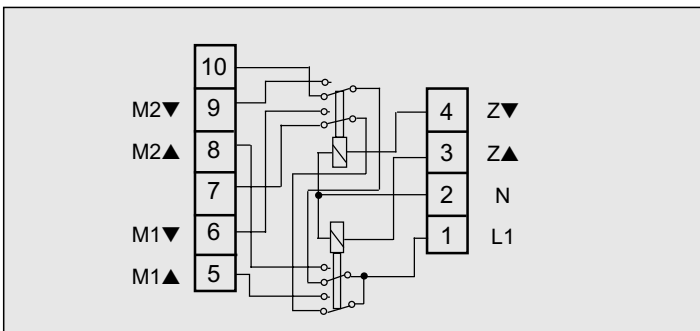
N

Z▼
Z▲

L1

⊕ L1 N
Mains 230V~

Relais

Motor 1

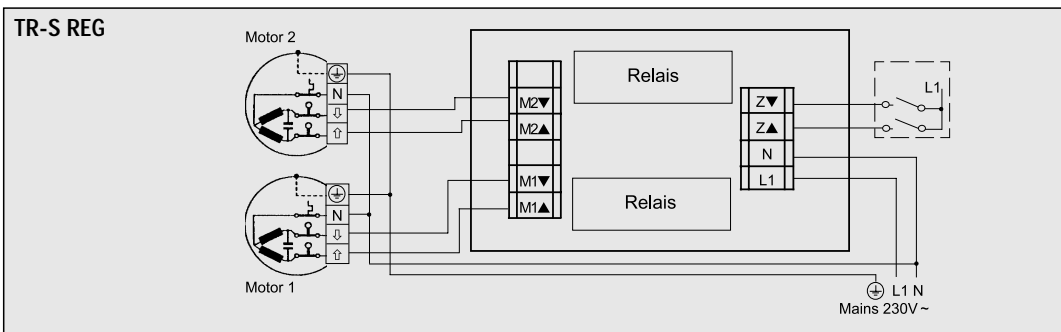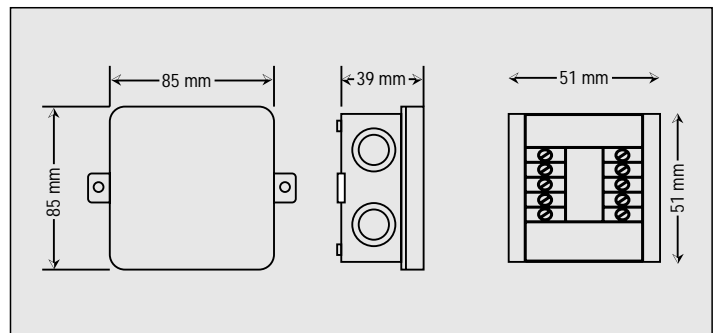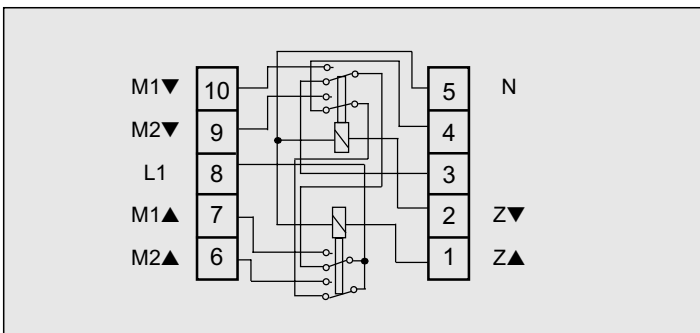### Operation

The TR-S or the TR-S REG is used for the simultanous operation of two drives.

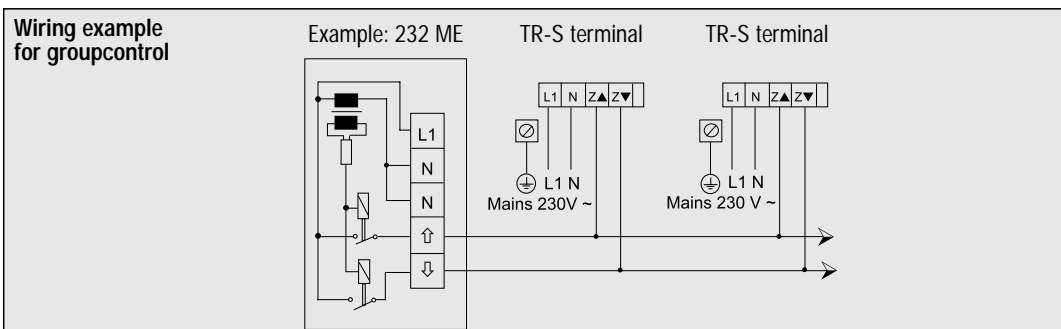For the control all mechanical blinds push-buttons as well as the motor control inserts can be used.

### Mounting

The TR-S can be installed in a standard junction wall box.



| M1▼ | 10 | | 5 | N |
| M2▼ | 9 | | 4 | |
| L1 | 8 | | 3 | |
| M1▲ | 7 | | 2 | Z▼ |
| M2▲ | 6 | | 1 | Z▲ |



← 85 mm →

85 mm

← 39 mm →

← 51 mm →

51 mm

## TR-S REG



Motor 2

Relais

M2▼
M2▲

Z▼
Z▲
N
L1

L1

M1▼
M1▲

Relais

Motor 1

⊕ L1 N
Mains 230V ~

### Mounting

The TR-S REG is a panel mounted device for a 35 mm DIN rail.



| | 10 | | 4 | Z▼ |
| M2▼ | 9 | | 3 | Z▲ |
| M2▲ | 8 | | 2 | N |
| | 7 | | 1 | L1 |
| M1▼ | 6 | | | |
| M1▲ | 5 | | | |

## Wiring example for groupcontrol



Example: 232 ME

L1
N
N
⇧
⇩

TR-S terminal

L1 N Z▲ Z▼

⊘

⊕ L1 N
Mains 230V ~

TR-S terminal

L1 N Z▲ Z▼

⊘

⊕ L1 N
Mains 230 V ~

### Technical data

| | |
|---|---|
| Mains | AC 230 V ~, 50 Hz |
| Control | AC 230 V ~, 50 Hz |
| Capacity | 4A, AC 230 V ~, $\cos \varphi \geq 0{,}8$ |