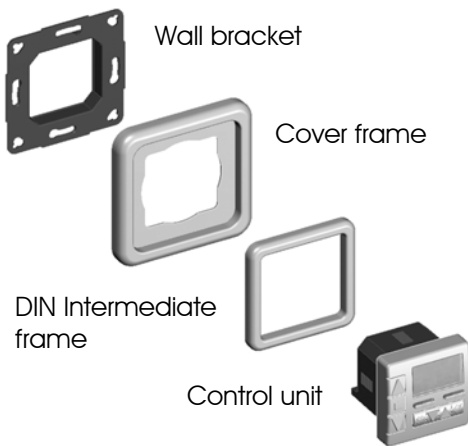


# Home Automation





Many of our products have the fitting dimension of 50 x 50 mm according to the DIN 49075 and can be integrated in many other switch ranges. For the integration of our products into different switch ranges, a cover frame and an intermediate frame according to DIN 49075 from the respective switch range are required.

**Berker**



Arsys

B.1

B.3

**Busch Jäger**



Carat

Alpha nea

Future

**GIRA**



E 2

E 22

Esprit

**Merten**



Artec

Atelier

M 1

**Hager**



Kallysto.art

Kallysto.pur

Kallysto.stil

**PEHA**



Aura





















Dialog

Standard



This table provides examples of different combinations of an NERO II Central Unit with frames of leading switch manufacturers. This table is used solely to illustrate all possible combinations. These same combinations are possible with those products of ours being marked with the red "50 x 50 label".

Because of the own colour palette of each switch manufacturing house, slight differences in colour may occur!

				<b>Berker</b>
B7 Glas	Modul 2	S.1		
				
Impuls	Reflex SI	Solo		<b>Busch Jaeger</b>
				<b>GIRA</b>
Event	Flächen	S-Color	Standard 55	
				
M-Arc	M-Plan	M-Smart	M-Star	<b>Merten</b>
				<b>Jung</b>
A 500	AS 500 / A Plus	CD 500	LS-Design	
				
Regina	Fiorena			<b>vedder</b>



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## NERO II - Powerline

NERO II – Control over the existing house mains





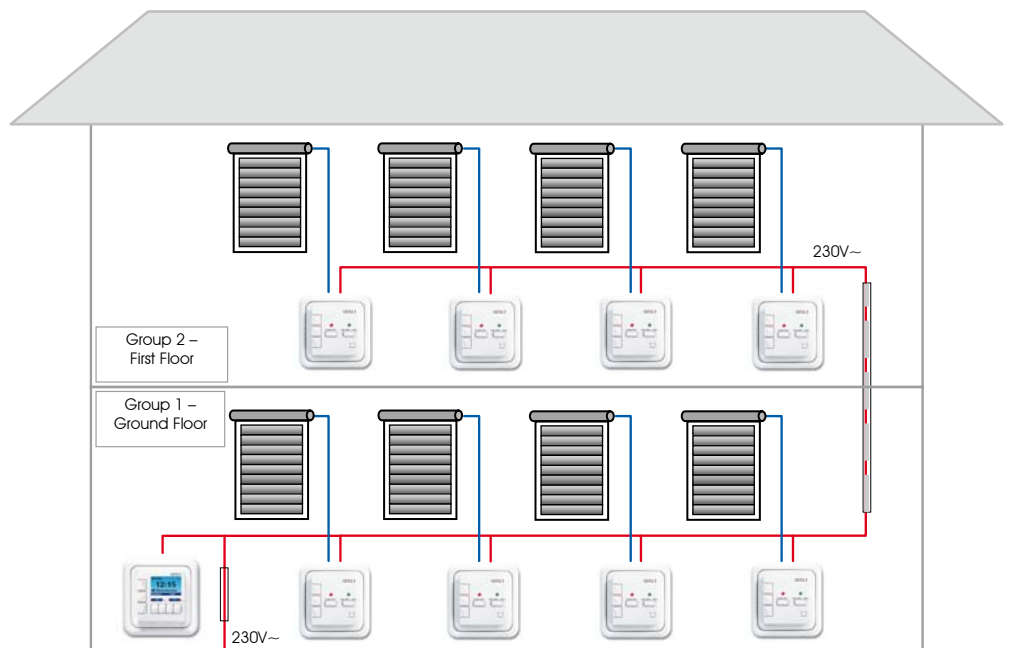
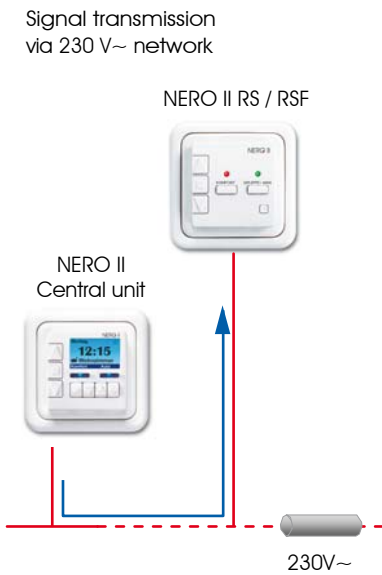
## NERO II Powerline System - What is Powerline?

NERO II transmits and receives its control signals via a 230 V AC-network mains supply by Powerline technology. Special features are an extremely high level of quality in transmission as well as easy installation, operation and maintenance.

NERO II has been especially developed for small to medium-sized commercial and private buildings. No additional control lines, or connecting of all individual units to the extra lines (like i.e. EIB) are required. There are enormous savings, too. There's no prying open of walls. No plastering and wallpapering of the walls and no dirt.

### What does Powerline NERO II mean for you?

- NERO II is comparably more economical than the most other customary bus systems that are currently on the market
- Simple installation and start-up
- No additional hard or software is necessary
- Programming of the individual modules of the system can be carried out either before or after installation in the building
- The amount of work required for installation and start-up is limited to a minimum
- The system can be converted and extended at all times without any noteworthy interventions required to the electrical installations or daily routine of users.
- NERO II provides data security and signal transmission reliability within the whole building



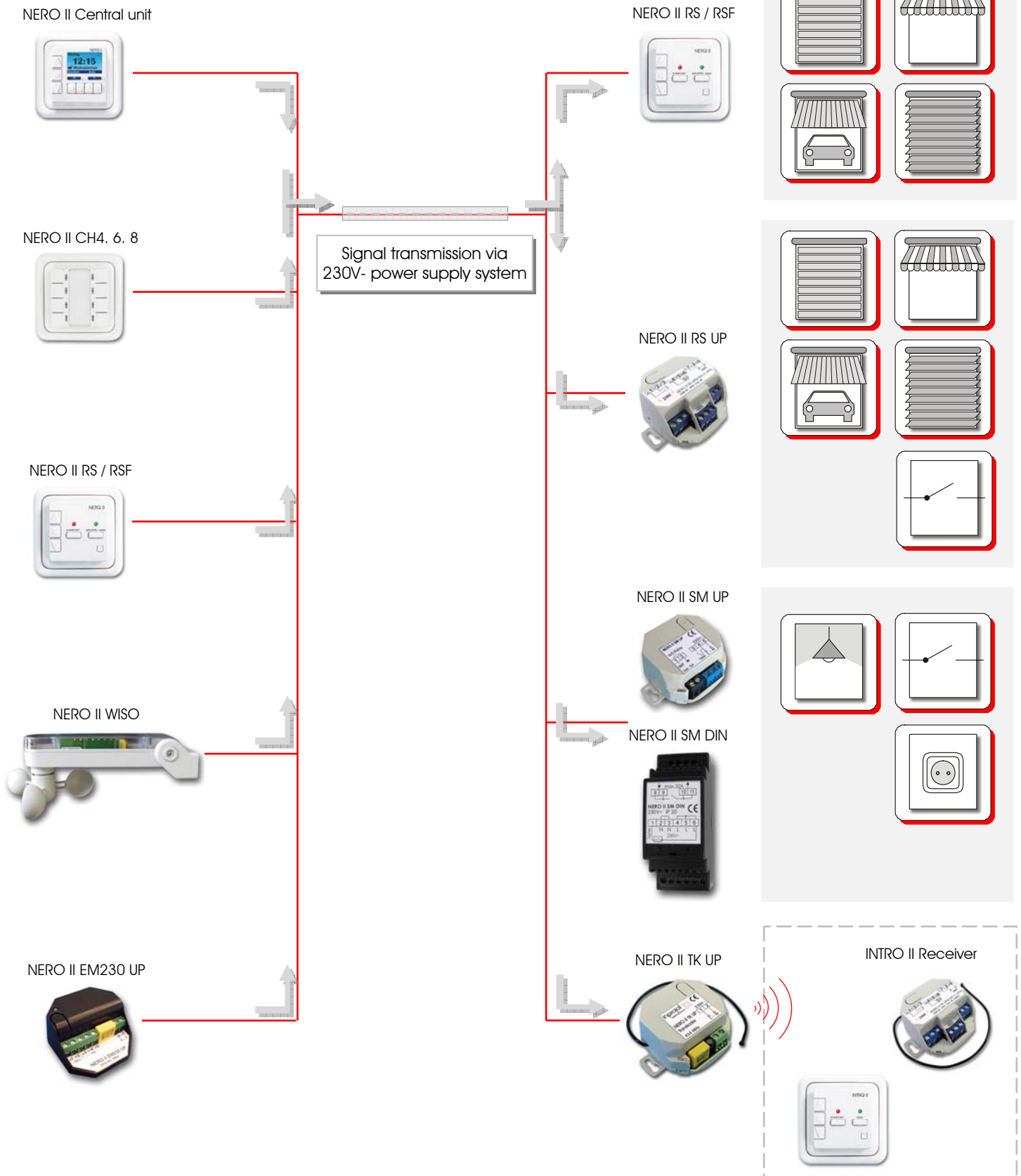




### NERO II - Transmitters

### NERO II - Receivers

### Applications



## ■ NERO II Zentrale – Central Unit



This is the central management unit of Nero II. It enables a maximum of 99 groups to be combined with a total of 32 weekly timers - on an individual basis, thus allowing for almost all kinds of combinations. All times and groups can be edited in the full text display.

### Features

- Unlimited units can be combined per group
- Remote control operation of various loads  
(i.e. roller shutters, venetian blinds, gates, lighting, sockets etc.)
- Groups can be organised as selected during programming  
(i.e. according to mode: floors, rooms, facades etc.)
- Up to 32 weekly time schedules can be programmed to control individual groups
- There is the possibility of switching between automatic and manual operating modes
- Description and labelling of the control groups is shown as clear text on the display
- Graphic display with blue backlight
- Interactive menu (GER-ENG-NED-FRA-DAN-RUS-POL)
- Inching mode for rotation of venetian blind slats
- Two "Comfort positions" (interim positions) manually or resulting from the time schedules
- Built-in power analyzer for phase identification and determination of transmission quality
- User-defined placement of NERO II central unit in the building
- Permanent storage of all settings
- Storage of time in case of power failure - at least 24 hours
- Compatible with all NERO II receivers
- Compatible with all INTRO II radio receivers with the aid of a NERO II TK transcoder

### Connections

- L, N – electricity network (230 V~)

### Technical Specifications

Operating voltage:	230 V / 50 Hz
Temperature range:	-5 ° C to + 45 ° C
Power consumption:	1,5 W
Power reserve time:	min. 24 hours
Protection rating:	IP 40

NERO II-Zentrale – Central Unit	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8450-50 M UWUW





## ■ NERO II CH 4,6,8 – Universal Transmitter (max. 4, 6 or, 8 channel)



NERO II universal transmitters can be discretionary configured, totally complying with the user's wishes and according to a planned application. In conjunction with appropriate NERO II universal receivers, universal transmitters can be used for following applications or for any combination of these applications:

### Applications

- Remote control of shutters, awnings, blinds and gates
- Remote control of lighting, sockets, etc.
- Remote control of the power supply of certain electric circuits
- Implementation of various switching scenarios (scenes)

### Features

- Free configurable as multi channel wall transmitter and / or scenario transmitter
- Inching mode for rotation of the blind slats
- Backlit keys (adjustable)
- 2 programmable "comfort positions" (when configuring the blind switching)
- Any placement in the building
- Compatible with all NERO II receivers
- Compatible with all INTRO II radio receivers using a Nero II TK transcoder
- Suitable for all standard switches according to DIN 49075

### Connections:

- L, N – Power supply (230 V~)

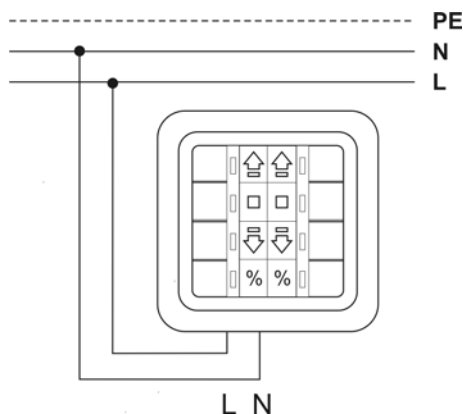
### Technical Specifications

Operating voltage: 230 V / 50 Hz

Temperature range: -5 ° C to + 45 ° C

Power consumption: 1.1 W

Protection rating: IP 20



NERO II – Universal Transmitter		Cat	PU	Article-No.
NERO II CH 4	Ultra white (RAL 9010)	2	1	8405-50-4 UWUW
NERO II CH 6	Ultra white (RAL 9010)	2	1	8405-50-6 UWUW
NERO II CH 8	Ultra white (RAL 9010)	2	1	8405-50-8 UWUW



## ■ NERO II EM230 UP – Input Unit



The input unit NERO II EM 230 UP makes the NERO II system still more powerful and versatile. With the aid of this unit, which easily fits into all flush-mounted boxes, existing control devices with an output voltage of 230 V can be integrated into the system. With that, the NERO II system controls not only the classical roller shutters but also many additional functionalities.

With this input unit NERO II stays true to its principle: A 230 Volt line is enough for controlling and switching, existing control systems are integrated - in short the ideal solution for retrofitting and modernization. This unit converts an incoming 230 Volt control command to a NERO II signal, which will be redirected to a local NERO II control device through the 230 V electricity network.

The range of new applications that this input unit allows for is really wide: wind / solar control, blinds timers, radio receiver, mechanical switch... - a maximum performance is achieved with a minimal effort so that completely new opportunities arise. Just everywhere where the installation of additional power lines is not desired or impossible, the NERO II system provides valuable services.

**Here just some of the numerous applications:**

### Storm protection

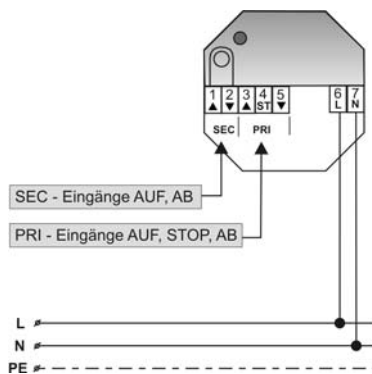
From a defined wind force an entire NERO II system will be storm protected by using an external wind control with a 230 Volt output: the input module makes then all external blinds being connected to the system roll up.

### Remote control with a timer

An existing standard roller shutter timer can be connected to the input module. The commands of the timer can be transferred through the 230 V ~ electricity network to a group of NERO II motor control units (e.g. NERO II RS) so that all shutters can be used time-dependently.

### Remote switching - easily made

A switch is connected to the input unit. On the opposite side and with the aid of the local NERO II control a passage barrier, a light or any other load is switched on or off.



### Features

- Remote control of different loads (e.g. blinds, Venetian blinds, gates, light, Sockets etc.)
- Any placement in the building
- Compatible with all NERO II receivers
- Compatible with all INTRO II radio receivers by using a NERO II TK transcoders

### Connections

- L, N – electricity network (230 V~)
- PRI switching inputs (230 V ~ inputs UP, STOP, DOWN) with priority
- SEC switching inputs (230 V ~ inputs DOWN) without priority

### Technical Specifications

Operating voltage:	230 V / 50 Hz
Temperature range:	-5 ° C to + 45 ° C
Power consumption:	0.7 W
Protection rating:	IP 20
Size:	55 mm x 55 mmx 27 mm (H x W x D)
Assembly:	in a junction box or in a deep flush-mounted box

NERO II EM230 UP – Input Unit		Cat	PU	Article-No.
	Black	2	1	8410 EM230UP



## ■ NERO II WISO – Wind-/Sun Sensor



With NERO II WISO premises are protected from excessive exposure to sunlight and unnecessary warming. Windstorm damage to external venetian blinds and awnings can be avoided. Switching commands are triggered by sunlight or wind and the wind / sun sensor transmits the signal through the 230V electricity network to all connected NERO II receivers.

### Features

- Wind/sun-based remote control of a group of NERO II receivers (e.g. a facade, a building) without additional wiring
- Wind or sun function to use separately or together
- Blocking of manual operation of local NERO II controls in strong windy scenarios
- Threshold values for wind and sun directly adjustable on the device
- Variable grading of shading when the sun function triggers (either complete closing or starting of an adjustable comfort position of the roller shutters / blinds)
- Compatible with all NERO II receivers
- Compatible with all INTRO II radio receivers by using a NERO TK transcoder

### Connections

- L, N – electricity network (230 V~)

### Technical Specifications

Operating voltage:	230 V / 50 Hz
Temperature range:	-20 ° C to + 50 ° C
Power consumption:	1 W
Protection rating:	IP 54
Size:	90 mm x 260 mmx 110 mm (H x W x D)
Assembly:	wall mounting outdoors

NERO II WISO		Cat	PU	Article-No.
	Grey	2	1	8443



## ■ NERO II RS – Motor Control Unit (Powerline)



Roller shutter / venetian blind controls for one motor, which serve as a direct control device for roller shutters, venetian blinds, awnings and gates. Remote control commands are received from the 230 V~ electricity network. NERO II RS can be registered in max. 123 of NERO II groups.

### Features

- Programmable motor operating time of 0.5 sec. - 10 min. (factory setting: 120 sec.)
- Redirection delay: 0.5 sec.
- Permanent storage of all settings
- Compatible with all NERO II transmitters / receivers
- Compatible with all INTRO II radio transmitters / receivers with the aid of a NERO II TK transcoder
- Suitable for all standard switches according to DIN 49075

### Individually Operated

- Operation UP / STOP / DOWN / COMFORT
- Inching mode for rotation of venetian blind slats
- Locking of control to prevent against external automatic remote control commands
- 2 programmable "Comfort Positions" (interim position) pre-programmed as default

### Group Function

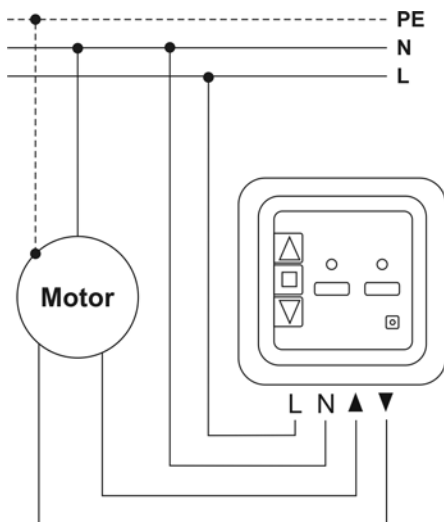
- Organisation and control of a separate NERO II group without Nero II Zentrale - Central Unit

### Connections

- L, N – electricity network (230 V~)
- UP, DOWN – Motor

### Technical Specifications

Operating voltage:	230V / 50Hz
Switching voltage:	230V AC
Breaking capacity:	max. 3A
Temperature range:	-5°C bis +45°C
Power consumption:	0,8W
Protection rating:	IP 40



NERO II RS – Motor Control Unit (Powerline)	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8413-50 UWUW



## NERO II RSF – Motor Control Unit (Powerline + Radio Control)

Roller shutter / venetian blind controls for one motor, which serve as a direct control device for roller shutters, venetian blinds, awnings and gates. Remote control commands can be received via the 230 V~ electricity network or radio. A NERO II RSF can be registered in max. 123 NERO II groups.

### Features

- Programmable motor operating time of 0.5 sec. - 10 min. (factory setting: 120 sec.)
- Redirection delay: 0.5 sec.
- Permanent storage of all settings
- Compatible with all NERO II transmitters / receivers
- Compatible with all INTRO II radio transmitters / receivers with the aid of a NERO II TK transcoder
- Suitable for all standard switches according to DIN 49075

### Individually Operated

- Operation UP / STOP / DOWN / COMFORT
- Inching mode for rotation of venetian blind slats
- Locking of control to prevent against external automatic remote control commands
- 2 programmable "Comfort Positions" (interim position) pre-programmed as default

### Group Function

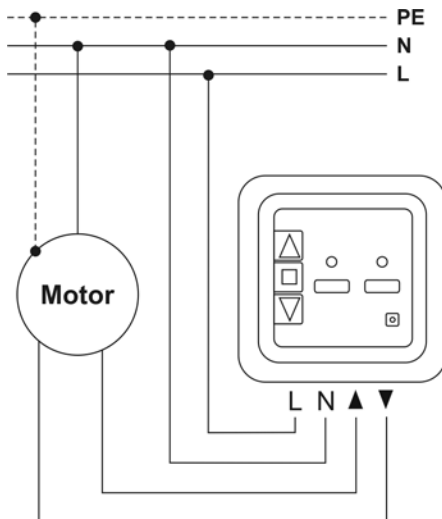
- Organisation and control of a „separate“ NERO II group without Nero II Zentrale

### Connections

- L, N – electricity network (230 V~)
- UP / DOWN – Motor

### Technical Specifications

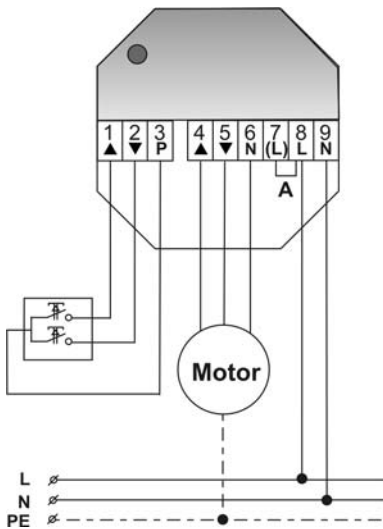
Operating voltage:	230 V / 50 Hz
Switching voltage:	230 V AC
Breaking capacity:	max. 3 A
Operating frequency:	434 MHz
Temperature range:	-5 °C to +45 °C
Power consumption:	1,4 W
Protection rating:	IP 40



NERO II RSF – Motor Control (Powerline / Radio)	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8713-50 UWUW



## NERO II RS UPM – Universal Module



NERO II RS UPM can be used to control various loads like, for example, roller shutters, venetian blinds, gates, lighting (up to 400 W), sockets etc. up to 5 A. Remote control commands are received from the 230 V~ electricity network. The universal control unit can be registered in max. 123 NERO II groups. There is also the possibility of directly operating the load.

### Features

- Programmable motor operating time of 0.5 sec. - 10 min. (factory setting: 120 sec.)
- Potential-free contact by removing the bridge L - (L)
- Adjustable operating mode (pulse / shutters / blinds / continuous operation)
- Inching mode for rotation of venetian blind slats
- Locking of controls to prevent against external remote automatic control commands
- Connectivity for one / several blind pushbutton/s or an external control with potential-free contacts
- Permanent storage of all settings
- Compatible with all NERO II transmitters
- Compatible with all INTRO II radio transmitters with the aid of a NERO II TK transcoder

### Connections

- L, N - electricity network (230 V~)
- UP, DOWN, N loads (potential-free, if necessary)
- Additional operating elements like
  - push-button or
  - external controls or timer with potential-free output

### Technical Specifications

Operating voltage: 230 V / 50 Hz

Switching voltage: max. 230 V AC / 24 V DC (potential-free)

Breaking capacity: max. 5 A (cos phi=1), 2 A (cos phi=0,4)

Temperature range: -20 °C to +45 °C

Power consumption: 1 W

Protection rating: IP 20

Measurements: 55 mm x 55 mm x 27 mm (H x W x D)

Assembly: in a junction box or in a deep flush-mounted box

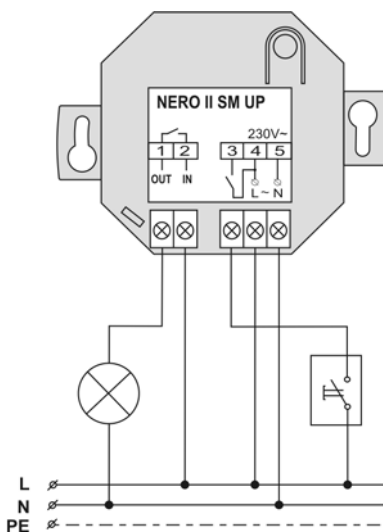
NERO II RS UPM		Cat	PU	Article-No.
	Grey	2	1	8413 UPM





## NERO II SM UP – Switching Module / Switching Relay

The Powerline switching unit NERO II SM UP is a convenient and secure solution for remote controlling of lights, sockets, motors, heating and other similar equipment. The NERO II SM UP units communicate with a NERO II central unit or with other controls of the NERO II product range via the existing 230 V AC electricity network ("Powerline").



### Features

- Receiving of remote control commands via the 230V- electricity network
- Adjustable functioning (normally open or normally closed)
- Potential-free switching contact
- Locking of controls to prevent against external remote automatic control commands
- Optional recovery of the last switching status after power failure
- Permanent storage of all settings
- Compatible with all NERO II transmitters
- Compatible with all INTRO II radio transmitters with the aid of a NERO II TK transcoder

### Connections

- L, N - electricity network (230 V~)
- Input / Output loads (potential-free, max. 16 A)
- Individual operation
  - Push-buttons
  - external control with potential-free switching contacts

### Technical Specifications

Operating voltage:	230 V / 50 Hz
Switching voltage:	max 230 V AC / 24 V DC (potentialfrei)
Breaking capacity:	max. 16 A (cos phi=1), 8 A (cos phi=0,6)
Temperature range:	-20 °C bis +45 °C
Power consumption:	0,7 W
Protection rating:	IP 20
Measurements:	57 mm x 57 mm x 30 mm (H x W x D)
Assembly:	in a junction box or in a deep flush-mounted box

NERO II SM UP	Cat	PU	Article-No.
Grey	2	1	8422 UP



## NERO II SM DIN – Switching Module / Switching Relay for DIN Rail



The Powerline switching unit NERO II SM DIN is a convenient and secure solution for remote control of lights, electrical outlets or electrical power for a circuit or an area (e.g. switch-off of the stand-by load or of potentially dangerous household appliances).

### Features

- Receiving of remote control commands via the 230V- electricity network
- Adjustable functioning (normally open or normally closed)
- Programmable motor operating time of 0.5 sec. - 10 min. (factory setting: 120 sec.)
- Potential-free contact by removing the bridge L - (L)
- Adjustable operating mode (pulse / shutters / blinds / continuous operation)
- Locking of controls to prevent against external remote automatic control commands
- Optional recovery of the last switching status after power failure
- Permanent storage of all settings
- Compatible with all NERO II transmitters
- Compatible with all INTRO II radio transmitters with the aid of a NERO II TK transcoder

### Connections

- L, N - electricity network (230 V~)
- Input / Output loads (potential-free, max. 32 A)
- Individual operation
  - Push-button
  - external control with potential-free switching contacts

### Technical Specifications

Operating voltage: 230 V / 50 Hz

Switching voltage: max. 230 V AC / 24 V DC (potential-free)

Breaking capacity: max 32 A (cos phi=1), 20 A (mixed loads)

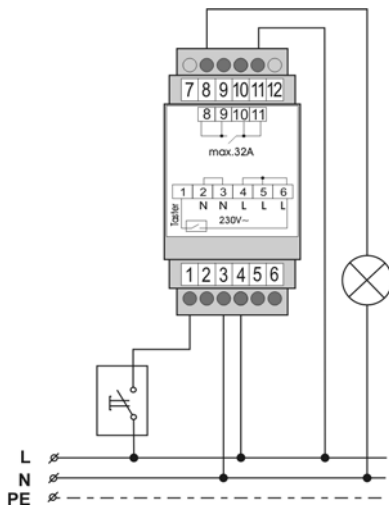
Temperature range: 0 °C to +45 °C

Power consumption: 0,8 W

Protection rating: IP 20

Measurements: 90 mm x 34 mm x 65 mm (H x W x D)

Assembly: to a 35 mm DIN Rail (2TE)



NERO II SM DIN		Cat	PU	Article-No.
	Black	2	1	8422 DIN



■ **NERO II PK – Phase Coupler**

The fact that all Nero II units are controlled over the 230 V electricity network implies the necessity of ensuring a secure signaling (a defined phase coupling) between the different phases of the power grid. The phase coupler allows the use of NERO II systems in buildings where the NERO II units are connected to the different phases of the power grid.

The phase coupler is to be fastened to a DIN rail inside the buildings electricity distribution box, behind the electricity meter and is to be connected to all three phase wires (L1, L2, L3).

The use of additional phase couplers may be required in large buildings with multiple phase separation (e.g. multiple power distribution unit in the building) in order to achieve a free communication in the entire building.

**Connections**

- L1, L2, L3 – Phase wires (230 V~)

**Assembly**

- Easy assembly to a 35 mm DIN Rail (2TE)
- Measurements: 90 mm x 34 mm x 65 mm (H x W x D)

NERO II PK		Cat	PU	Article-No.
	Black	2	1	8400 DIN



■ NERO II TK UP – Transcoder (Powerline <--> Radio)



The transcoder forms an interface between Powerline transmission and radio transmission and allows mutual connection of control units from both product ranges within a control system. Moreover the transcoder increases on demand the transmission range within an extensive NERO II installation or the technical connection of information of two installation areas each with separate power supply (e.g. between adjacent buildings or parts of the same building).

The commands received via radio are forwarded by the transcoder as Powerline commands over the 230 V electricity network. Similarly does the transcoder with the NERO II commands received over the 230 V electricity network: they are first transformed and then transmitted as appropriate INTRO II radio commands.

**Application Possibilities:**

- Connection of INTRO II transmitters (radio) to NERO II receivers (Powerline)
- Connection of NERO II transmitters (Powerline) to INTRO II receivers (radio)
- Forwarding / repeated transmission of incoming signal in order to increase the functional range within an extensive installation (repeater)
- Bridging of a galvanic separation between buildings / parts of a building

**Connections**

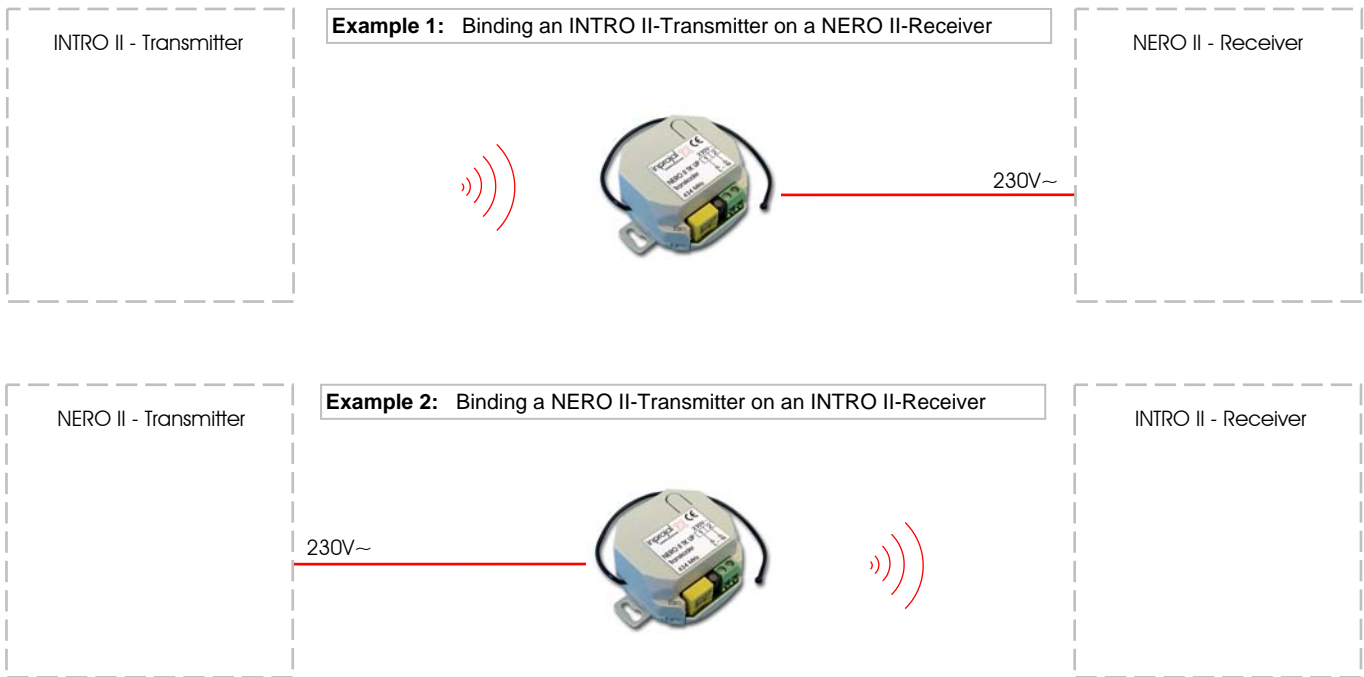
- L, N – Power supply (230 V~)

**Technical Specifications**

Operating voltage:	230 V / 50 Hz
Temperature range:	-20 °C to +45 °C
Operating frequency (radio):	434 MHz
Power consumption:	1,7 W
Protection rating:	IP 20
Measurements:	57 mm x 57 mm x 30 mm (H x W x D)
Assembly:	in a junction box or in a deep flush-mounted box

NERO II TK UP	Cat	PU	Article-No.
Grey	2	1	8761 UP

**Examples of use**





NERO II - Transmitter

**Example 3:** NERO II-Repeating an instruction (NERO II-Repeater)

NERO II - Receiver



INTRO II - Transmitter

**Example 4:** INTRO II-Repeating an instruction (INTRO-Repeater)

INTRO II - Receiver



NERO II - Transmitter

**Example 5:** Bridging a galvanic isolation (Radio bridging)

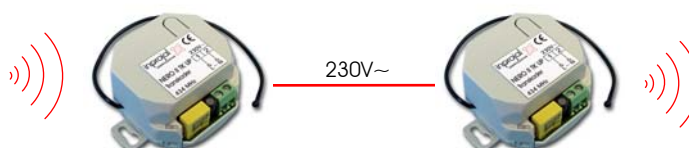
NERO II - Receiver



INTRO II - Transmitter

**Example 6:** Increasing the operating range with Powerline (PLC bridging)

INTRO II - Receiver





Example

■ **NERO II Demo-Box**

The demo-box is light to transport and facilitates on-site NERO II presentations. It is also perfect for easy handling of the modules while programming.

**Scope of delivery**

- Demo-Box
- Power lead
- Without NERO II module

NERO II Demo-Box		Cat	PU	Article-No.
	Black	2	1	NERO II DB01





## INTRO II - Radio





## INTRO II - Transmitters

INTRO II Duomatic



INTRO II Zentrale



INTRO II WS



INTRO II Helio



INTRO II HS9



INTRO II HS5



INTRO II HS4M, HS2M, HS1M



## INTRO II - Receivers

INTRO II RS



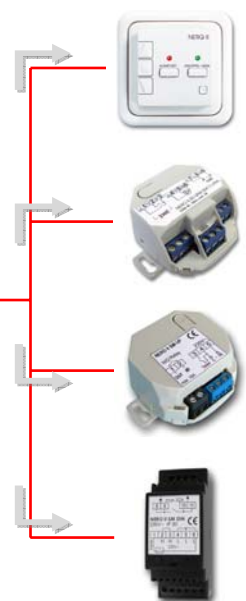
INTRO II RS UPM



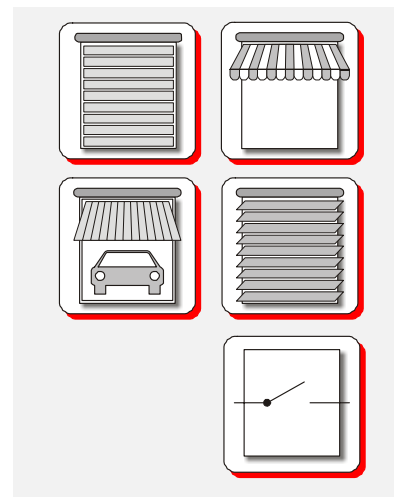
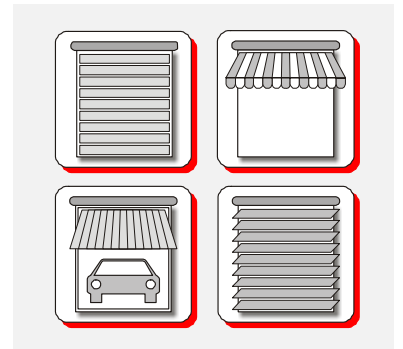
NERO II TK UP

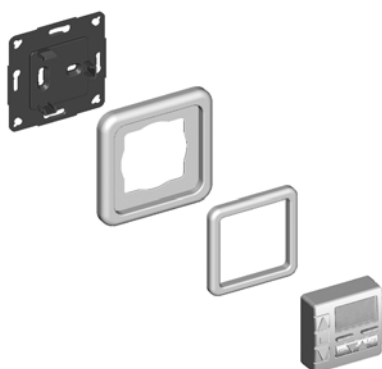


NERO II Receiver



Signaltransmission via  
230V AC- power network





### INTRO II Centrale – Central Unit / Timer

Battery-powered radio timer, 9 channels for remote control of up to 9 independent receivers or independent groups of receivers.

This radio central unit is a high-performance timer whose opportunities go far beyond the usual performance spectrum of a timer. The radio technology is excellent and extremely reliable. In combination with NERO II, both of these product series offer the optimum controls for your projects.

#### Features

- An unlimited amount of receivers can be combined per group
- Remote control operation of different loads, such as, for example, roller shutters, venetian blinds, gates, lighting, sockets etc.
- Especially interference-resistant INTRO II coding of radio transmission
- Up to 9 weeks time schedule for the timing of individual groups
- Groups can be organised as selected during programming (i.e. according to mode: floors, rooms, facades etc.)
- There is the possibility of switching between automatic and manual operating modes
- Large, clear display with intelligent menu
- Automatic switching between Winter / Summer Time
- Holiday switching mode
- Inching mode for rotation of venetian blind slats
- Execution of the "Comfort Position" (interim position) or "Comfort Lighting" (dimming) feature for the control groups from the central unit
- User-defined placement of central control unit in the building through simple wall assembly
- Permanent storage of all settings
- Programming mode of the receiver/s can be activated from the transmitter unit
- Battery operation with a long-lasting 3 V-Li coin cell (type CR 2430)
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Scope of delivery complete with frames, type Regina
- Suitable for all standard switches according to DIN 49075

INTRO II Centrale – Central Unit / Timer	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8551-50 UWUW



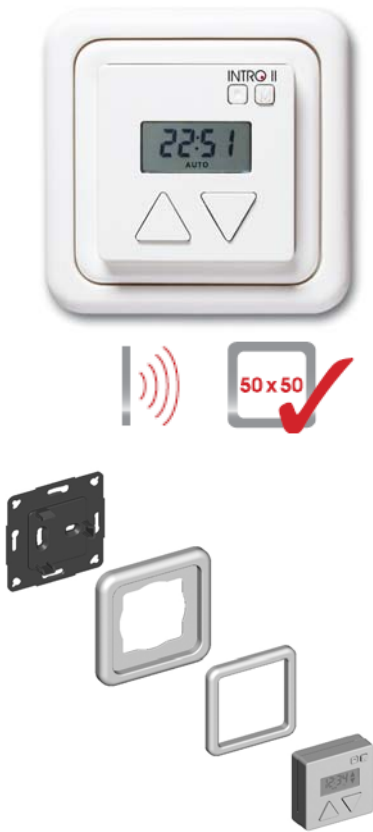
## INTRO II DUOMATIC

Battery-powered radio clock timer, 1 channel

The perfect radio timer for the cost-efficient controlling of individual venetian blinds or roller shutters. Highest security guaranteed with INTRO II transmission technology.

### Features

- Manual and / or automatic remote control operation of venetian blinds, roller shutters, lighting, sockets etc.
- Especially interference-resistant INTRO II coding of radio transmission
- Daily programme (same UP and DOWN time every day)
- Switching between automatic and manual mode
- Extremely simple programming
- Holiday switching mode
- Inching mode for rotation of venetian blind slats
- User-defined placement of INTRO II DUOMATIC in the building through simple wall assembly
- Permanent storage of all programmable settings
- Programming mode of the receiver/s can be activated from the transmitter unit
- Long-lasting 3 V-Li coin cell (type CR 2430)
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Scope of delivery complete with frames, type Regina
- Suitable for all standard switches according to DIN 49075



INTRO II DUOMATIC	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8552-50 UWUW

## INTRO II WS – Radio Wall Transmitter

1 or 2 channel, for the remote control of max. 2 groups of receivers

Remote control operation of roller shutters, awnings, gate systems, for the switching of lighting, heating and other similar systems in connection with INTRO II Radio controls and the Powerline- / Radio Control NERO II RSF.

### Features

- Operation UP / STOP / DOWN / Comfort
- Inching mode for rotation of venetian blind slats
- 2 "Comfort Positions" (interim position) programmable / accessible
- Especially interference-resistant INTRO II encoding of the radio transmission
- User-defined placement in the building through simple wall assembly
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Programming mode of the receiver/s can be activated from the transmitter unit
- Scope of delivery complete with frames, type Regina
- Battery operation (1 x 12V Battery, Type 23A)
- Suitable for all standard switches according to DIN 49075



INTRO II WS	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8503-50 UWUW



## INTRO II HS9 – Radio Hand Remote Control

9 channel for remote control of up to 9 different receivers or groups of receivers, with 3 programmable switching scenarios (scenes).

Remote control operation of roller shutters, awnings, gate systems, for the switching of lighting, heating and other similar systems in connection with INTRO II Radio controls and the Powerline- / Radio Control NERO II RSF.

### Features

- Operation UP / STOP / DOWN / Comfort or IN / OUT
- Inching mode for rotation of venetian blind slats
- Especially interference-resistant INTRO II encoding of the radio transmission
- 2 "Comfort Positions" (interim position) pro channel adjustable / accessible
- 3 separate switching scenarios (scenes) programmable / accessible
- User-defined placement in the building through simple wall assembly
- Programming mode of the receiver/s can be activated from the transmitter unit
- Compatible with all INTRO II radio control units and Powerline / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Battery operation (3 x 1,5 V - Batteries, Type AAA)

INTRO II HS9		Cat	PU	Article-No.
	Black	2	1	8533-9

## INTRO II HS5 – Radio Hand Remote Control

5-channel, for the remote control of up to 5 different receivers or receiver groups.

Remote control operation of roller shutters, awnings, gate systems, for the switching of lighting, heating and other similar systems in connection with INTRO II Radio controls and the Powerline- / Radio Control NERO II RSF

### Features

- Operation UP / STOP / DOWN / Comfort or ON / OFF
- Inching mode for rotation of venetian blind slats (this mode can be deactivated)
- Especially interference-resistant INTRO II encoding of the radio transmission
- 2 "Comfort Positions" (interim position) programmable / accessible
- User-defined placement in the building through simple wall assembly
- Programming mode of the receiver/s can be activated from the transmitter unit
- Compatible with all INTRO II radio receivers and Powerline / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Battery operation (1 x 12V Battery, Type 23A)



INTRO II HS5		Cat	PU	Article-No.
	Signal white / Signal white	2	1	8501-5 SIWSIW
	Slate-grey / Black	2	1	8501-5 SGRSCH



## INTRO II HS4M – Hand Remote Control

4-channel, for the remote control of up to 4 independent receivers or receiver groups

Remote control operation of roller shutters, awnings, gate systems, for the switching of lighting, heating and other similar systems in connection with INTRO II Radio controls and the Powerline- / Radio Control NERO II RSF.

### Features

- Sequential switching UP / STOP / DOWN / STOP by pushing a button of the hand control
- Especially interference-resistant INTRO II encoding of the radio transmission
- Programming mode of the receiver/s can be activated from the transmitter unit
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Battery operation (1 x 3V Li-coin cell, Type CR2032)



INTRO II HS4M		Cat	PU	Article-No.
	Black / Grey	1	1	8501-4M

## INTRO II HS2M – Hand Remote Control

2-channel, for the remote control of up to 2 independent receivers or receiver groups

Remote control operation of roller shutters, awnings, gate systems, for the switching of lighting, heating and other similar systems in connection with INTRO II Radio controls and the Powerline- / Radio Control NERO II RSF.

### Features

- Sequential switching UP / STOP / DOWN / STOP by pushing a button of the hand control
- Especially interference-resistant INTRO II encoding of the radio transmission
- Programming mode of the receiver/s can be activated from the transmitter unit
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Battery operation (1 x 3V Li-coin cell, Type CR2032)



INTRO II HS2M		Cat	PU	Article-No.
	Black / Grey	1	1	8501-2M

## INTRO II HS1M – Hand Remote Control

1-channel, for the remote control of 1 receiver or receiver group

Remote control operation of roller shutters, awnings, gate systems, for the switching of lighting, heating and other similar systems in connection with INTRO II Radio controls and the Powerline- / Radio Control NERO II RSF.

### Features

- Sequential switching UP / STOP / DOWN / STOP by pushing a button of the hand control
- Especially interference-resistant INTRO II encoding of the radio transmission
- Programming mode of the receiver/s can be activated from the transmitter unit
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Battery operation (1 x 3V Li-coin cell, Typ CR2032)



INTRO II HS1M		Cat	PU	Article-No.
	Black / Grey	1	1	8501-1M





## INTRO II HELIO S – Radio-Sun Sensor



Radio transmission of operating commands triggered by solar insolation to INTRO II radio controls or Powerline Radio Control NERO II RSF for the perfect shading of interiors.

### Features

- Programming of threshold for the sun function
- Simple placement of the sensor on the windowpane by means of a suction cup
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Long-lasting 3 V-Li coin cell (type CR 2450)
- No connection wire

INTRO II HELIO S		Cat	PU	Article-No.
with sun function	Ultra White (RAL 9010)	2	1	8541 S

## INTRO II HELIO R – Radio-Sun / Twilight Sensor



Radio transmission of operating commands triggered by solar insolation / twilight to INTRO II radio controls or Powerline Radio Control NERO II RSF for the perfect shading of interiors.

### Features

- Separate programming of thresholds for the sun / twilight function
- Simple placement of the sensor on the windowpane by means of a suction cup
- Compatible with all INTRO II radio control units and Powerline- / Radio Control NERO II RSF
- Compatible with all NERO II receivers with the aid of a NERO II TK transcoder
- Long-lasting 3 V-Li coin cell (type CR 2450)
- No connection wire

INTRO II HELIO R		Cat	PU	Article-No.
With sun and twilight function	Ultra White (RAL 9010)	2	1	8541 R



## INTRO II RS – Motor Control Unit (Receiver) for a motor with max. 3 A input power



### Features

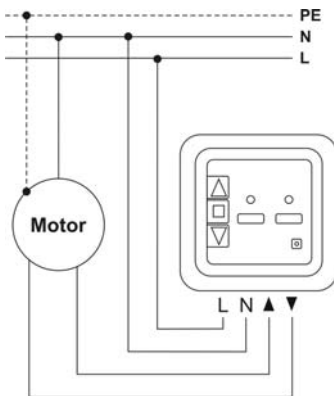
- Programmable motor operating time of 0.5 sec. - 10 min. (factory setting 120 sec.)
- Redirection delay: 0.5 sec.
- Permanent storage of all settings
- Operation UP / STOP / DOWN / Comfort
- Inching mode for rotation of venetian blind slats
- Locking of controls to prevent against automatic remote control commands
- 2 programmable "Comfort Positions" (interim position) pre-programmed as default
- Registration of up to max. 123 hand remote controls, radio timers or radio sensors
- Compatible with all INTRO II transmitters

### Connections

- L, N – electricity network (230 V~)
- UP, DOWN – Motor

### Technical Specifications

Operating voltage:	230V / 50Hz
Switching voltage:	230V AC
Breaking capacity:	max. 3A
Motor operating time:	0.5 sec. - 10 min. adjustable (factory setting 120 sec.)
Operating Frequency:	434,42 MHz
Temperature range:	-5°C bis +45°C
Power consumption:	1W
Protection rating:	IP 20



INTRO II RS	Cat	PU	Article-No.
Ultra White (RAL 9010)	2	1	8513-50 UWUW



## INTRO II RS UPM – Motor Control Unit (Receiver)

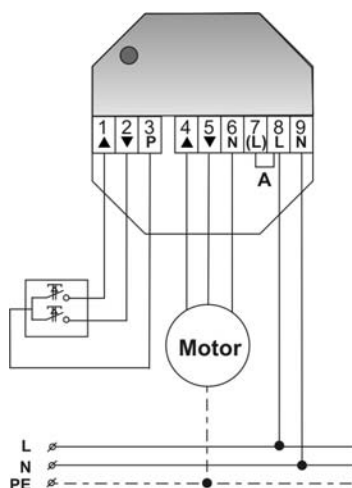
Flush-mounted, max. 3 A, 230 V~

### Features

- Operation of loads of up to 5 A (roller shutters, awnings etc.) garage door motors, for the switching of lighting (up to 400 W), heating and other similar systems
- Registration of max. 123 hand remote controls, radio timers or radio sensors
- Programmable motor operating time of 0.5 sec. - 10 min. (factory setting: 120 sec.)
- Locking of controls to prevent against automatic remote control commands
- Inching mode for rotation of venetian blind slats
- Potential-free contact by removing the bridge L - (L)
- Permanent storage of all settings
- Compatible with all INTRO II transmitters

### Connections

- L, N - electricity network (230 V~)
- UP, DOWN, N - loads (potential-free, if necessary)
- Additional operating elements like
  - push-button or
  - external controls or timer with potential-free output



### Technical Specifications

Operating voltage:	230V / 50Hz
Switching voltage:	230V AC
Breaking capacity:	max. 5A
Motor operating time:	0.5 sec. - 10 min. adjustable (factory setting 120 sec.)
Operating Frequency:	434,42 MHz
Temperature range:	-5°C bis +45°C
Power consumption:	1W
Protection rating:	IP 20
Measurements:	55 mm x 55 mm x 27 mm (H x W x D)
Assembly:	in a junction box or in a deep flush-mounted box

INTRO II RS UPM		Cat	PU	Article-No.
	Black	2	1	8513 UPM



## INTRO II RS A – Motor Control Unit (Receiver), IP55, for roller shutter box for a motor with max. 3 A input power

### Features

- Compatible with all INTRO II transmitters
- Operation of loads of up to 3 A (roller shutters, blinds, awnings, garage doors etc.)
- Registration of max. 500 hand remote controls, radio timers or radio sensors
- Registration mode can be activated from already programmed transmitters
- convenient programming via touch sensor cable on the housing
- Permanent storage of all settings

### Connections:

- L, N, PE – power supply (230 V~)
- AUF, AB, N, PE – Motor
- external push-button

### Technical Specifications

Operating voltage:	230V / 50Hz
Switching voltage:	230V AC
Breaking capacity:	max. 5A
Motor operating time:	60 sec.
Operating Frequency:	434,42 MHz
Temperature range:	-20°C bis +45°C
Power consumption:	<1W
Protection rating:	IP 55
Measurements:	98 mm x 27 mm x 22 mm (H x W x D)
Assembly:	in a junction box or in a deep flush-mounted box



### INTRO II RS A

Cat PU Article-No.

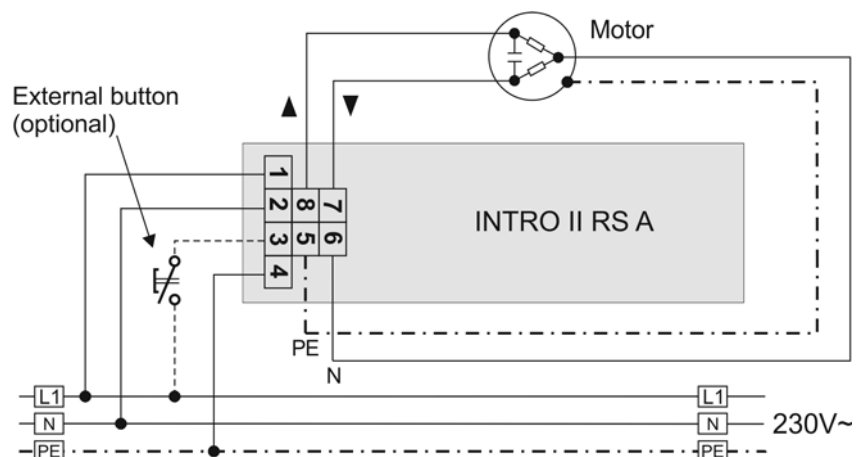
Grey

2

1

8513 A

### Wiring diagram



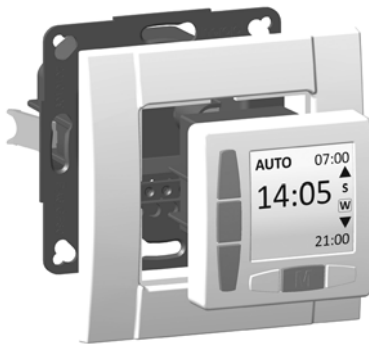


## Timers / Control Relays / RFID Controls





## ■ ROJAL M – Timer for a 230V~ shutter / blind drive



- Day program (the set UP and DOWN switching times are the same for every day of the week)
- automatic summer / winter changeover
- Holiday mode (presence simulation by random slight variation of switching times)
- Inching mode for rotation of venetian blind slats
- Quick programming of the switching times (memory function)
- Large 1.7-inch LCD shows all important information (time, switching times, operation mode, etc.)
- Compatible with most switch programs of leading switch manufacturers thanks to the dimension of 50x50mm (according to DIN 49075)
- Travel time: 2.5 min.
- Power reserve after a power failure: min. 72 hours
- Switching capacity: max. 3 A, 230 V~, 50 Hz
- Power consumption: 0,5W
- Included in delivery: ROJAL cover frame
- Connection compatible with earlier known models (eg DUOMATIC 7082 N, S, SD, Memory Switch 7013), which can be easily replaced by ROJAL M

ROJAL M		Cat	PU	Article No.
	Ultra white (RAL 9010)	5	1	6083-50 UWUW
	White (RAL 1013)	5	1	6083-50 WW



## ■ Surface-mounted housing ROJAL

- Suitable for timers ROJAL M / ROJAL S and all products with ROJAL cover frame
- Dimensions (W x H x D): 80.5 x 80.5 x 39 mm

Surface-mounted housing		Cat	PU	Article No.
	Ultra white (RAL 9010)	1	10	61 UW
	White (RAL 1013)	1	10	61 W

Examples: Combinations with other switch programs



Berker



Busch-Jäger

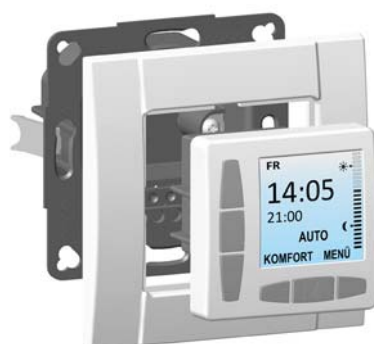


GIRA





## ROJAL S – Timer for a 230V~ shutter / blind drive



- Weekly program (different UP and DOWN switching times for each day of the week available)
- automatic summer / winter changeover
- Holiday mode (presence simulation by random slight variation of switching times)
- Inching mode for rotation of venetian blind slats
- Motor travel time: 0.0 sec. - 180 sec., freely adjustable (factory setting - 60 sec.)
- automatic slats turn function (from 0.0 sec. to 5.0 sec. adjustable)
- all parameters are easily adjustable in bilingual plain text menu (German/English)
- Large 1.7-inch LCD with colored backlight (7 color schemes)
- LCD shows all important information (time, next switching time, operation mode, current external brightness, sensor limits for sun and twilight function)
- Connection for an optional sun / twilight sensor
- Compatible with most switch programs of leading switch manufacturers thanks to the dimension of 50x50mm (according to DIN 49075)
- Travel time: 2.5 min.
- Power reserve after a power failure: min. 72 hours
- Switching capacity: max. 3 A, 230 V~, 50 Hz
- Power consumption: < 1W
- Included in delivery: ROJAL cover frame
- Connection compatible with earlier known models (eg DUOMATIC 7082 N, S, SD, Memory Switch 7013), which can be easily replaced by ROJAL S

ROJAL S	Cat	PU	Article No.
Ultra white (RAL 9010)	5	1	6085-50 UWUW
White (RAL 1013)	5	1	6085-50 WW

## Sun / Twilight sensor

with connecting cable for ROJAL S – timer

The sun / twilight sensor can be used to achieve optimal shading of interior rooms when the sunlight is very bright and/or to close the shutter automatically on the onset of twilight. The limit values for brightness and twilight can be adjusted individually.



Sun / Twilight sensor	Cat	PU	Article No.
Cable length 1,5 m	5	1	SO 1,5 M
Cable length 3 m	5	1	SO 3 M
Cable length 5 m	5	1	SO 5 M
Cable length 10 m	5	1	SO 10 M

Examples: Combinations with other switch programs



Jung



Merten



PEHA





## ■ DUOMATIC 50 AZ – Timer

for a 230V~ roller shutter motor / venetian blind motor



- automatic summer / winter changeover
- Day program (the set UP and DOWN switching times are the same for every day of the week)
- Holiday mode (presence simulation by random slight variation of switching times)
- Compatible with most switch programs of leading switch manufacturers thanks to the dimension of 50x50mm (according to DIN 49075)
- Switching capacity: max. 3 A, 230 V~, 50 Hz
- Travel time: 2.5 min.
- Power reserve after a power failure: min. 48 hours
- Power consumption: 0,5W
- Included in delivery: Regina combination frame

DUOMATIC 50 AZ		Cat	PU	Article-No.
	Ultra White (RAL 9010)	5	1	7082-50 AZ UWUW
•	White (RAL 1013)	5	1	7082-50 AZ WW



## ■ Surface-mounted housing Regina

- Suitable for all products with Regina cover frame
- Suitable for Venetian blind switches, production series 322...
- Dimensions (W x H x D): 80.5 x 80.5 x 39 mm



Surface-mounted housing Regina		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	71 UW
	White (RAL 1013)	1	10	71 W



### ■ DUOMATIC 50 BZ – Timer

for a 230V~ roller shutter motor / venetian blind motor



- automatic summer / winter changeover
- Day program (the set UP and DOWN switching times are the same for every day of the week)
- Holiday mode (presence simulation by random slight variation of switching times)
- Inching mode for rotation of venetian blind slats
- Compatible with most switch programs of leading switch manufacturers thanks to the dimension of 50x50mm (according to DIN 49075)
- Switching capacity: max. 3 A, 230 V~, 50 Hz
- Travel time: 2 min.
- Power reserve after a power failure: min. 24 hours
- Power consumption: < 0,5W
- Removable plug-in terminal
- Included in delivery: Regina combination frame

DUOMATIC 50 BZ	Cat	PU	Article-No.
Cover: Ultra white (RAL 9010), Frame: Ultra white	5	1	7082-50 BZ UWUW
Cover: White (RAL 1013), Frame: White	5	1	7082-50 BZ WW
Cover: Black, Frame: Black	5	1	7082-50 BZ SCH KPL
Cover: Slate Grey, Frame: Slate Grey	5	1	7082-50 BZ SGR KPL



## Individual Control / Group Control / Multipoint Control Relay for one motor, 230 V ~, microprocessor controlled

- Adjustable mode (120 sec. lock or dead man's control)
- Inching mode for rotation of venetian blind slats
- Connection possibility for one / numerous individually operated button(s) or switch(es)
- Locking to prevent against simultaneous switching of both directions of the engine
- Redirection delay: 0.5 sec.
- Locking of main command optional

### Technical Specifications

Operating voltage: 230V AC (+10% / -15%)

Switching voltage: max. 230V AC

Breaking capacity: max. 3A / Motor

Temperature range: -20°C to +45°C

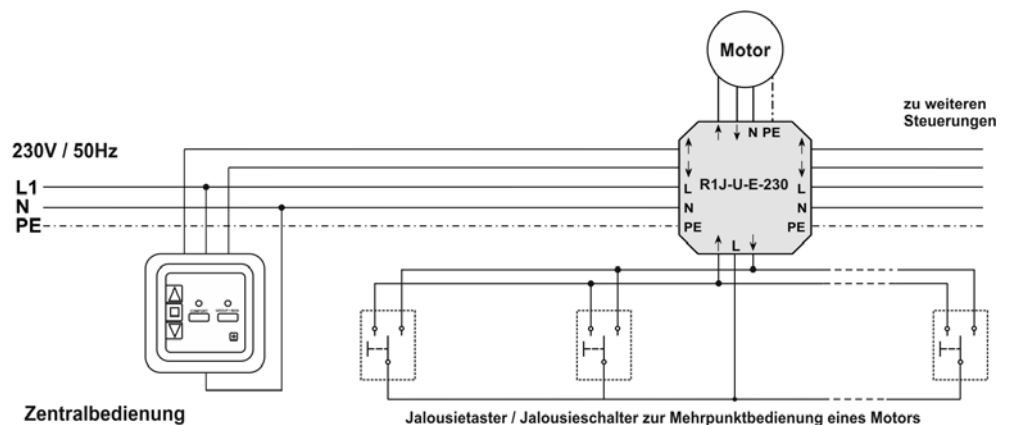
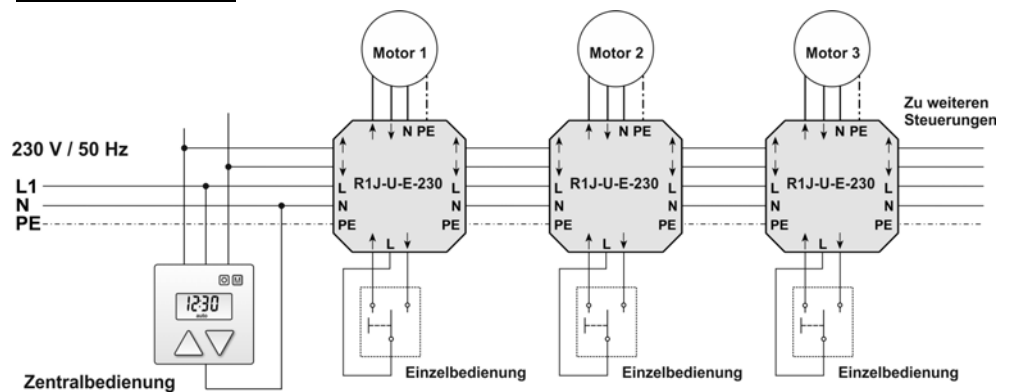
Protection rating: IP 20

Measurements: 57mm x 57mm x 26mm (H x W x D)

Assembly: in a junction box or in a deep flush-mounted box

Individual- /Group- / Multipoint Relay	Cat	PU	Article-No.
Flush-mounted	1	1	R1J-U-E-230

### Connection examples





## ■ Individual Control / Group Control / Multipoint Control Relay for 2 motors, 230 V ~, microprocessor controlled

- Adjustable mode (120 sec. lock or dead man's control)
- Inching mode for rotation of venetian blind slats
- Connection possibility for one / numerous individually operated button(s) or switch(es)
- Locking to prevent against simultaneous switching of both directions of the engine
- Redirection delay: 0.5 sec.
- Locking of main command optional

### Technical Specifications

Operating voltage: 230V AC (+10% / -15%)

Switching voltage: max. 230V AC

Breaking capacity: max. 2,5A / Motor

Temperature range: -20°C to +45°C

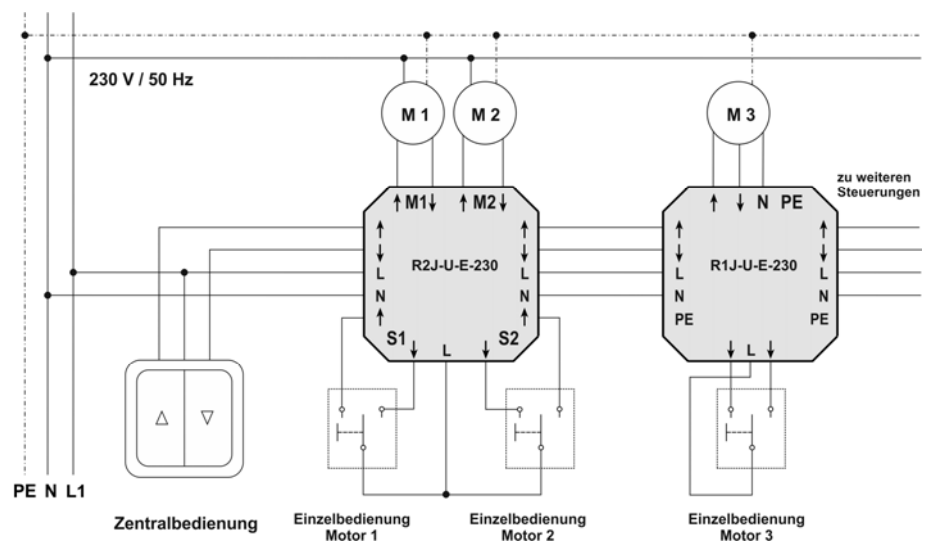
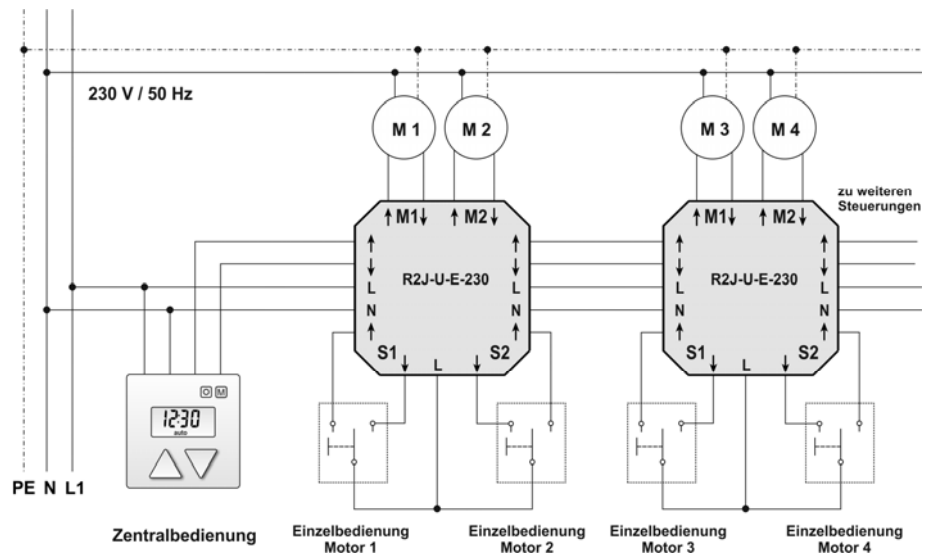
Protection rating: IP 20

Measurements: 57mm x 57mm x 26mm (H x W x D)

Assembly: in a junction box or in a deep flush-mounted box

Individual- /Group-/ Multipoint Relay	Cat	PU	Article-No.
Flush-mounted	1	1	R2J-U-E-230

### Connection examples





## ■ Group Control / Multipoint Control Relay for 3 Motors, 230 V ~

- Connection possibility for one / numerous shutter button(s) or switch(es)
- Locking to prevent against simultaneous switching of both directions of the engine

### Technical Specifications

Operating voltage: 230V AC (+10% / -15%)

Switching voltage: max. 230 V AC

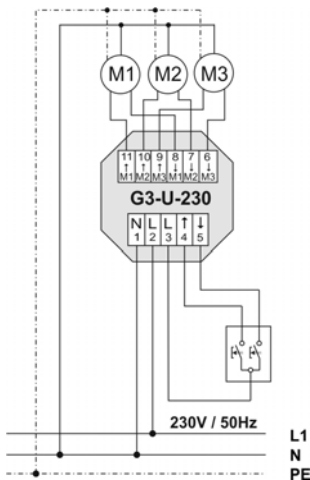
Breaking capacity: max. 3 A / Motor

Temperature range: -20°C to +45°C

Protection rating: IP 20

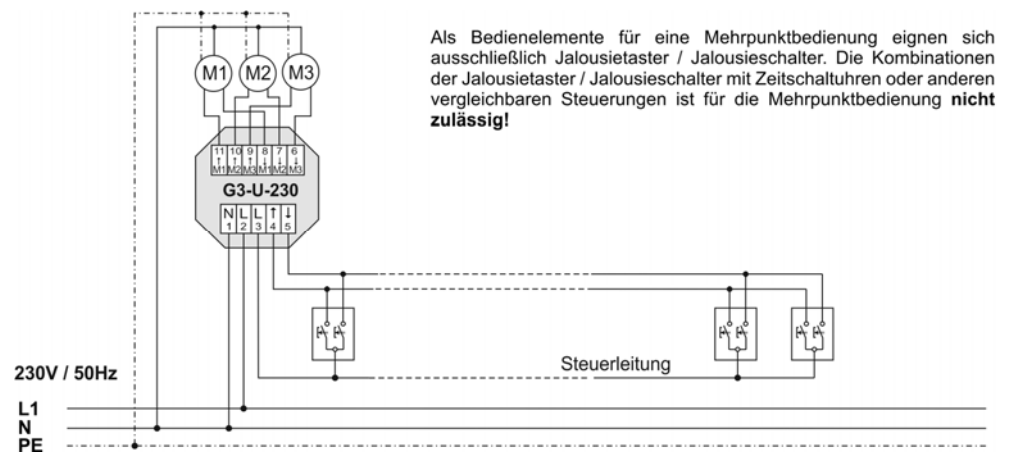
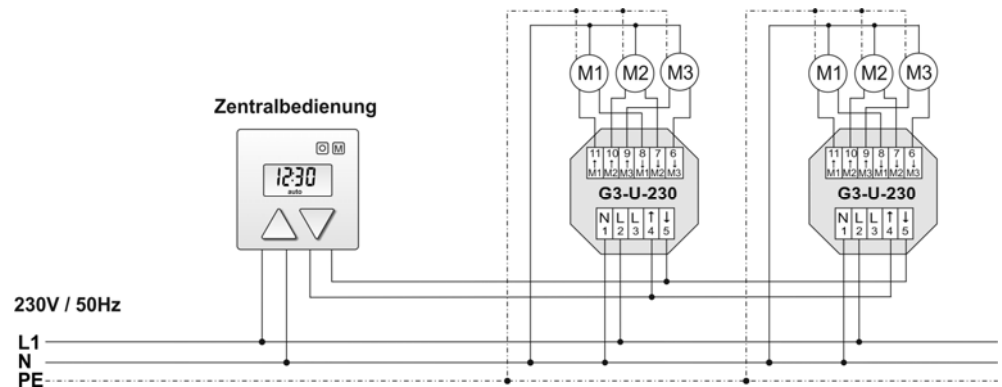
Measurements: 55mm x 55mm x 43mm (H x W x D)

Assembly: in a junction box or in a deep flush-mounted box



Group Control / Multipoint Control Relay	Cat	PU	Article-No.
Flush-mounted	1	1	G3-U-230

### Connection examples





## ■ Group Control Relay for 4 Motors, 230 V ~

- Connection possibility for one shutter button(s) or one external control

### Technical Specifications

Operating voltage: 230V AC (+10% / -15%)

Switching voltage: max. 230 V AC

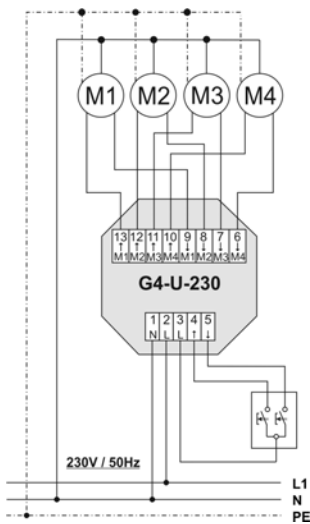
Breaking capacity: max. 3 A / Motor

Temperature range: -20°C to +45°C

Protection rating: IP 20

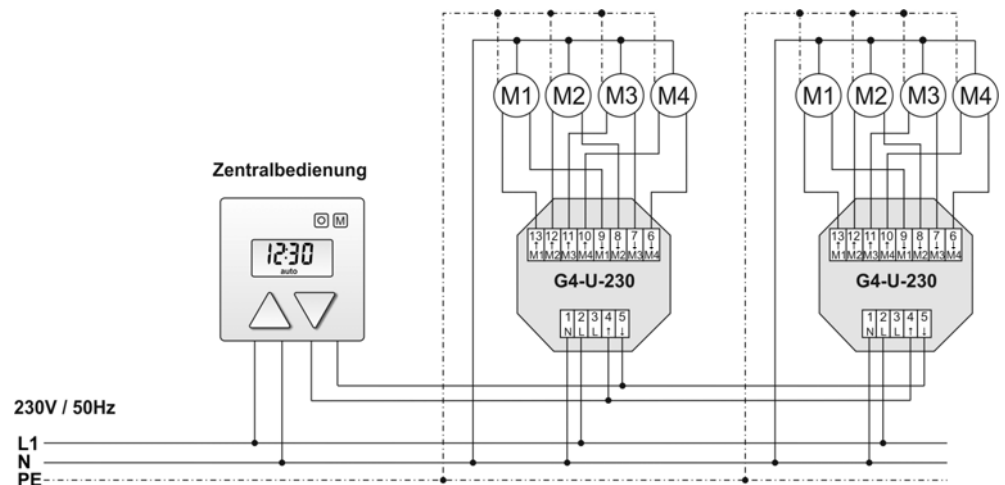
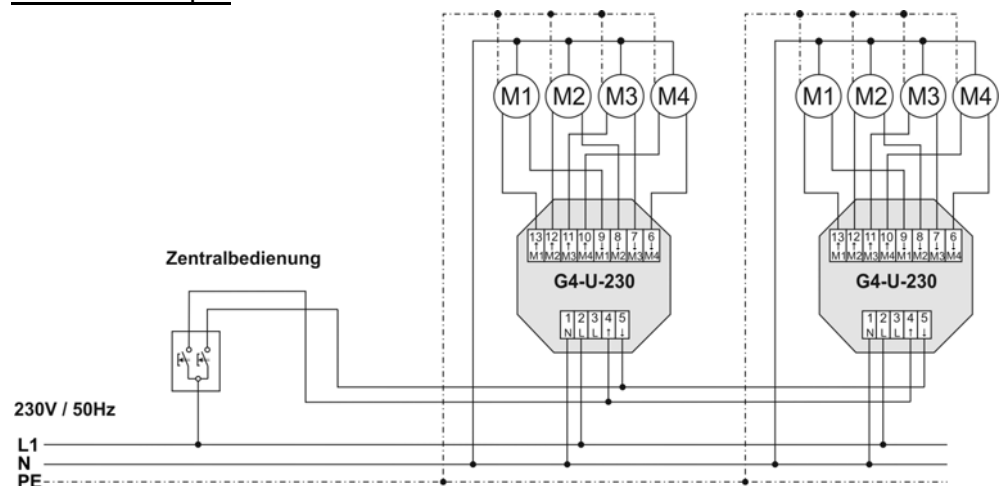
Measurements: 55mm x 55mm x 42mm (H x W x D)

Assembly: in a junction box or in a deep flush-mounted box



Group Control Relay	Cat	PU	Article-No.
Flush-mounted	1	1	G4-U-230

### Connection examples





## ■ EKU 4.1M KL – Transponder Control with Card Reader

Transponder Control for contact-free operating of roller shutters, blinds, gates, for the switching of lighting, for the operation of electrical locks and door openers (9-24V DC / AC) with separate power supplies and other similar installations. It can be used for access control applications and as an "electronic key-operated switch". Thanks to the potential-free inputs and outputs, this control can be integrated in many existing control systems.

### Features

- Contact-free control of the connected loads with transponder keys
- Optional hidden installation of the reading unit (card reader)
- Connection possibility for one / numerous buttons or for a control with potential-free switching contact
- Adjustable operating mode and command duration (1,5 sec., 5 sec., 120 sec., unlimited)
- Potential-free closing of the relay contacts by removing the bridge A
- Blocking of the reader function by snapping in a connected switch
- Electronic locking to prevent against simultaneous switching of both directions of the motor

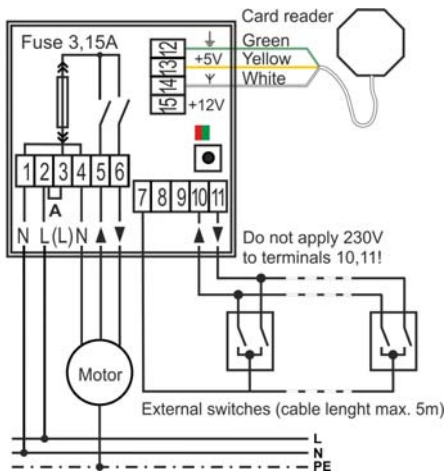
### Technical Specifications

Operating voltage:	230V / 50Hz
Switching voltage:	max 230 V AC / 24 V DC (potential-free)
Breaking capacity:	max 3 A (cos phi=1), 2A phi= 0,6)
Temperature range:	-20°C to +45°C
Power consumption:	1,7W
Protection rating of housing:	IP 65
Measurements:	80mm x 80mm x 55mm (H x W x D)
Operating range:	max 5 cm (through plaster, wood etc.- no metal)
Key-encoding:	4x 10 <sup>9</sup> combinations
Length of the reading cable:	max. 30 m
Screw terminals: max.	2,5 mm <sup>2</sup> (one core)/ 1,5 mm <sup>2</sup> (flexible)
Number of keys: max.	31 keys

Transponder Control		Cat	PU	Article-No.
	Light-grey	2	1	EKU – 4.1M KL

Transponder Card		Cat	PU	Article-No.
	White	2	1	EKU – K

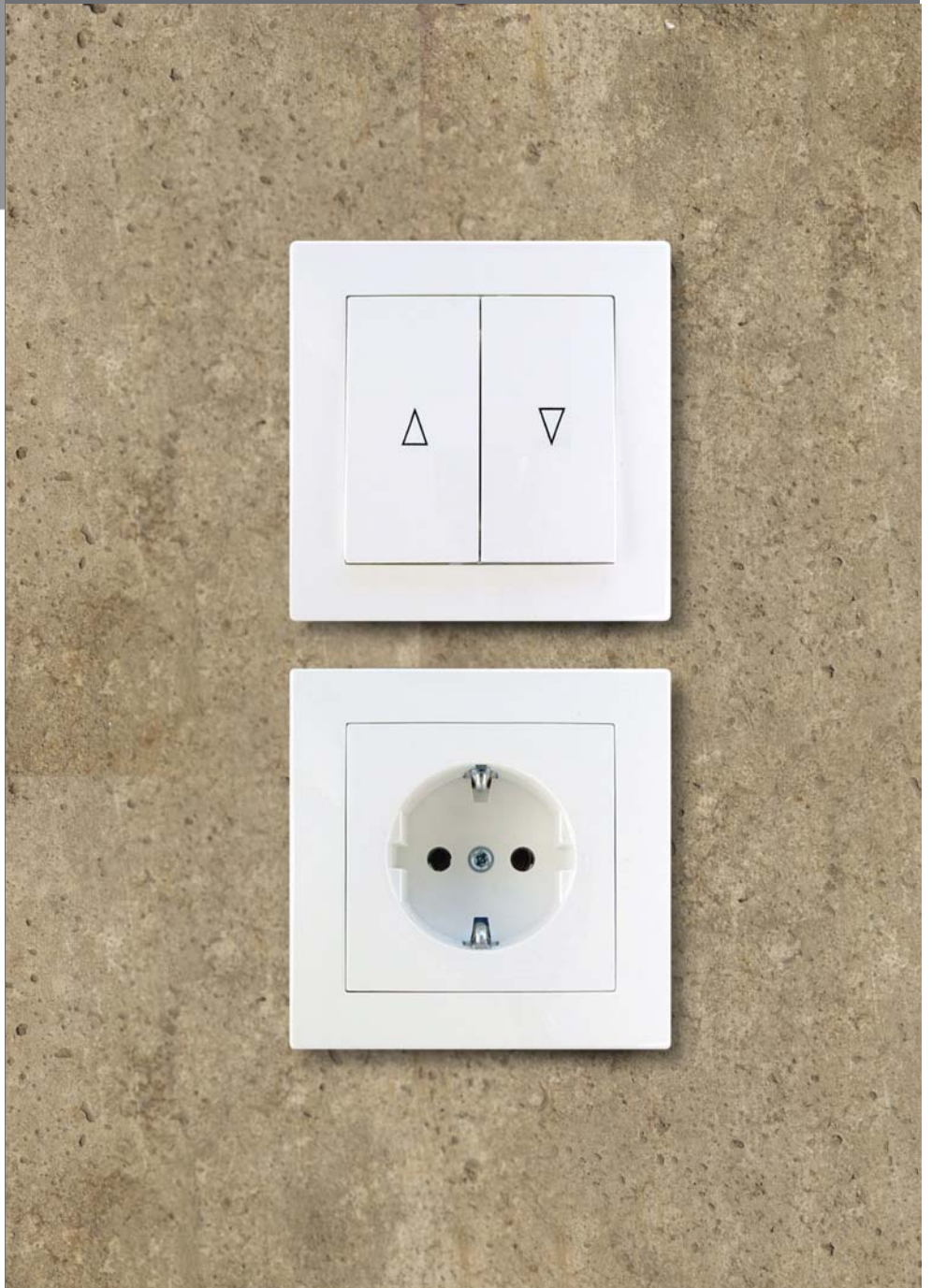
Transponder Key Ring		Cat	PU	Article-No.
	Black	2	1	EKU – AN







# Mechanical Switches





## ■ Rotary Switch / Push-button for roller shutters, venetian blinds

- flush-mounted
- tip or tip / catch function can be changed at all times
- complete with intermediate frame and LENORA frame
- 10 A, 230 V~

Rotary Switch / Push-button, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	64228/1 NE UW
	White (RAL 1013)	1	10	64228/1 NE W
Tip / catch function	Ultra White (RAL 9010)	1	10	64229/1 NE UW
	White (RAL 1013)	1	10	64229/1 NE W

Rotary Switch / Push-button, 2-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	64228/2 UW
	White (RAL 1013)	1	10	64228/2 W
Tip / catch function	Ultra White (RAL 9010)	1	10	64229/2 UW
	White (RAL 1013)	1	10	64229/2 W

## ■ Double Rocker Switch / Push-button for roller shutters, venetian blinds

- flush-mounted
- with electrical and mechanical locking device
- with screwless connector terminals
- 10 A, 230 V ~



Double Rocker Switch / Push-button		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	6424/1D UW
	White (RAL 1013)	1	10	6424/1D W
Tip / catch function	Ultra White (RAL 9010)	1	10	6428/1D UW
	White (RAL 1013)	1	10	6428/1D W

## ■ Two Way Switch, flush-mounted, with / without Indicator (Orientation Light)

- with screwless connector terminals
- 10 A, 230 V ~



Two Way Switch		Cat	PU	Article-No.
with Indicator	Ultra White (RAL 9010)	1	10	64215/6 UW
	White (RAL 1013)	1	10	64215/6 W
without Indicator	Ultra White (RAL 9010)	1	10	64205/6 UW
	White (RAL 1013)	1	10	64205/6 W



## Switch with Control Light, 1-pole, flush-mounted

- with screwless connector terminals
- 10 A, 230 V ~

Switch with control light, 1-pole		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	64225/1UW
	White (RAL 1013)	1	10	64225/1 W



## Two Circuit Switch, flush-mounted

- with screwless connector terminals
- 10 A, 230 V ~

Two Circuit Switch		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	64205/5UW
	White (RAL 1013)	1	10	64205/5 W



## Push-button, flush-mounted

- printed with symbol (Light / Bell / Lock)
- with screwless connector terminals
- 10 A, 230 V ~

Push-button		Cat	PU	Article-No.
With light symbol	Ultra White (RAL 9010)	1	10	64290 UW L
	White (RAL 1013)	1	10	64290 W L
With bell symbol	Ultra White (RAL 9010)	1	10	64290 UW KL
	White (RAL 1013)	1	10	64290 W KL
With lock symbol	Ultra White (RAL 9010)	1	10	64290 UW T
	White (RAL 1013)	1	10	64290 W T



## Push-button, flush mounted, with / without Indicator (Orientation Light)

- printed with symbol (Light / Bell / Lock)
- with screwless connector terminals
- 10 A, 230 V ~

Push-button		Cat	PU	Article-No.
With light symbol	Ultra White (RAL 9010)	1	10	64291 UW L
	White (RAL 1013)	1	10	64291 W L
With bell symbol	Ultra White (RAL 9010)	1	10	64291 UW KL
	White (RAL 1013)	1	10	64291 W KL
With lock symbol	Ultra White (RAL 9010)	1	10	64291 UW T
	White (RAL 1013)	1	10	64291 W T



## ■ Schuko-Socket, flush-mounted, with / without shutter



- with screwless connector terminals
- 2-pole + PE- terminal
- 16 A, 230 V ~

Schuko-Socket		Cat	PU	Article-No.
Without shutter	Ultra White (RAL 9010)	1	10	6420 UW
	White (RAL 1013)	1	10	6420 W
With shutter	Ultra White (RAL 9010)	1	10	6420 K UW
	White (RAL 1013)	1	10	6420 K W

## ■ Schuko-Socket with hinged lid, flush-mounted, with / without shutter



- with screwless connector terminals
- 2-pole + PE- terminal
- 16 A, 230 V ~

Schuko-Socket with hinged lid		Cat	PU	Article-No.
Without shutter	Ultra White (RAL 9010)	1	10	6420 KLF UW
	White (RAL 1013)	1	10	6420 KLF W
With shutter	Ultra White (RAL 9010)	1	10	6420K KLF UW
	White (RAL 1013)	1	10	6420K KLF W

## ■ Surface-mounted housing (high) for LENORA switch range



- 40mm high (suitable for switches and sockets)
- Dimensions (W x H x D): 81 x 81 x 40 mm

Surface-mounted housing		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	641 UW
	White (RAL 1013)	1	10	641 W

## ■ Surface-mounted housing (flat) for LENORA switch range



- 27mm high (suitable for switches only, not suitable for sockets)
- Dimensions (W x H x D): 81 x 81 x 27 mm

Surface-mounted housing		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	641 F UW
	White (RAL 1013)	1	10	641 F W



## ■ Surface-mounted double housing (flat) for LENORA switch range

- 27mm high (suitable for switches only, not suitable for sockets)
- Dimensions (W x H x D): 153 x 81 x 27 mm

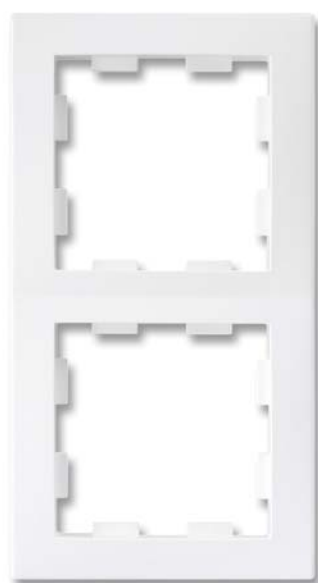
Surface-mounted double housing	Cat	PU	Article-No.
Ultra White (RAL 9010)	1	10	642 F UW
White (RAL 1013)	1	10	642 F W



## ■ Intermediate / Adapter Frame for LENORA switch range

- for integration of devices with dimension 50x50mm (DIN 49075) in the LENORA program

Intermediate Frame	Cat	PU	Article-No.
Ultra White (RAL 9010)	1	10	64030 UW
White (RAL 1013)	1	10	64030 W



## ■ Cover Frame for LENORA switch range

Cover Frame		Cat	PU	Article-No.
single, 82 x 82mm	Ultra White (RAL 9010)	1	10	64071 UW
	White (RAL 1013)	1	10	64071 W
double, 82 x 153mm	Ultra White (RAL 9010)	1	10	64072 UW
	White (RAL 1013)	1	10	64072 W
triple, 82 x 228mm	Ultra White (RAL 9010)	1	10	64073 UW
	White (RAL 1013)	1	10	64073 W
quadruple, 82 x 295mm	Ultra White (RAL 9010)	1	10	64074 UW
	White (RAL 1013)	1	10	64074 W



## ■ Rotary Switch / Push-button for roller shutters, venetian blinds



- flush-mounted
- tip or tip / catch function can be changed at all times
- complete with Regina frame
- 10 A, 230 V~

Rotary Switch / Push-button, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	7228/1 NE 01 7071 UW
	White (RAL 1013)	1	10	7228/1 NE 01 7071 W
Tip / catch function	Ultra White (RAL 9010)	1	10	7229/1 NE 01 7071 UW
	White (RAL 1013)	1	10	7229/1 NE 01 7071 W

Rotary Switch / Push-button, 2-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	7228/2 01 7071 UW
	White (RAL 1013)	1	10	7228/2 01 7071 W
Tip / catch function	Ultra White (RAL 9010)	1	10	7229/2 01 7071 UW
	White (RAL 1013)	1	10	7229/2 01 7071 W

## ■ Double Rocker Switch / Push-button for roller shutters, venetian blinds



- flush-mounted
- with electrical locking
- with screwless connector terminals
- 10 A, 230 V ~

Double Rocker Switch / Push-button		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	324/1D UW KPL
	White (RAL 1013)	1	10	324/1D W KPL
Tip / catch function	Ultra White (RAL 9010)	1	10	328/1D UW KPL
	White (RAL 1013)	1	10	328/1D W KPL

## ■ Surface-mounted housing Regina



- Suitable for all products with Regina cover frame
- Suitable for Venetian blind switches, production series 322...
- Dimensions (W x H x D): 80.5 x 80.5 x 39 mm

Surface-mounted housing Regina		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	71 UW
	White (RAL 1013)	1	10	71 W



## ■ Surface-mounted Frame Regina

- Suitable for all products with Regina cover frame
- Suitable for Venetian blind switches, production series 322...
- Dimensions (W x H x D): 84 x 84 x 39 mm

Surface-mounted Frame regina		Cat	PU	Article-No.
single	Ultra White (RAL 9010)	1	10	51 UW
	White (RAL 1013)	1	10	51 W
double	Ultra White (RAL 9010)	1	10	52 UW
	White (RAL 1013)	1	10	52 W



## ■ Cover Frame for Regina switch range

Cover Frame		Cat	PU	Article-No.
single – 80,5 x 80,5 mm	Ultra White (RAL 9010)	1	10	7071 UW
	White (RAL 1013)	1	10	7071 W
double – 151,0 x 80,5 mm	Ultra White (RAL 9010)	1	10	7072 UW
	White (RAL 1013)	1	10	7072 W
triple – 222,5 x 80,5 mm	Ultra White (RAL 9010)	1	5	7073 UW
	White (RAL 1013)	1	5	7073 W
quadruple – 293,5 x 80,5 mm	Ultra White (RAL 9010)	1	5	7074 UW
	White (RAL 1013)	1	5	7074 W
quintuple – 364,5 x 80,5 mm	Ultra White (RAL 9010)	1	1	7075 UW
	White (RAL 1013)	1	1	7075 W





## Uni 50 - Rotary Switch / Push-button for roller shutters, venetian blinds



- flush-mounted, with central plate 50 x 50 mm, without frames
- 10 A, 230 V~
- Tip or tip / catch function, can be changed at all times
- Suitable for all standard switches according to DIN 49075



Rotary Switch / Push-button		Cat	PU	Article-No.
Tip / catch function, 1-pole	Ultra White (RAL 9010)	1	10	50229/1 UW
Tip / catch function, 2-pole	Ultra White (RAL 9010)	1	10	50229/2 UW



Rotary Switch Uni 50



DIN intermediate frame of the respective manufacturer



Cover frame of the respective manufacturer

### Combination example:



Busch Jaeger Impuls



Berker B.3



GIRA Event



Jung LS-Design



Merten M.1



## Rotary Switch / Push-button, flush-mounted

- 10 A, 230 V~
- Tip or tip / catch function, can be changed at all times

Rotary Switch / Push-button, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	3228/1 NE 01 UW
	White (RAL 1013)	1	10	3228/1 NE 01 W
Tip / catch function	Ultra White (RAL 9010)	1	10	3229/1 NE 01 UW
	White (RAL 1013)	1	10	3229/1 NE 01 W

Rotary Switch / Push-button, 2-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	3228/2 01 UW
	White (RAL 1013)	1	10	3228/2 01 W
Tip / catch function	Ultra White (RAL 9010)	1	10	3229/2 01 UW
	White (RAL 1013)	1	10	3229/2 01 W



## Venetian Blind Key Switch / Push-button, flush-mounted

- With safety lock and 2 keys, key can be removed when positioned at 0
- all locks and keys are identical
- 10 A, 230 V ~
- Tip or tip / catch function, can be changed at all times

Venetian Blind Key Switch, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	3228/1 NE 01 S UW
	White (RAL 1013)	1	10	3228/1 NE 01 S W
Tip / catch function	Ultra White (RAL 9010)	1	10	3229/1 NE 01 S UW
	White (RAL 1013)	1	10	3229/1 NE 01 S W

## Rotary Switch / Push-button, flush-mounted

- with central plate 50 x 50 mm and ROJAL cover frame
- 10 A, 230 V~
- Tip or tip / catch function, can be changed at all times
- Suitable for all standard switches according to DIN 49075



Rotary Switch / Push-button		Cat	PU	Article-No.
Tip / catch function, 1-pole	Ultra White (RAL 9010)	1	10	60229/1 UW
Tip / catch function, 2-pole	Ultra White (RAL 9010)	1	10	60229/2 UW



## ■ Rotary Switch / Push-button, surface-mounted



- 10 A, 230 V~;
- Dimensions (W x H x D): 84 x 84 x 39 mm
- Tip or tip / catch function, can be changed at all times

Rotary Switch / Push-button, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	4228/1 NE 01 UW
	White (RAL 1013)	1	10	4228/1 NE 01 W
Tip / catch function	Ultra White (RAL 9010)	1	10	4229/1 NE 01 UW
	White (RAL 1013)	1	10	4229/1 NE 01 W

Rotary Switch / Push-button, 2-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	4228/2 01 UW
	White (RAL 1013)	1	10	4228/2 01 W
Tip / catch function	Ultra White (RAL 9010)	1	10	4229/2 01 UW
	White (RAL 1013)	1	10	4229/2 01 W

## ■ Venetian Blind Key Switch / Push-button, surface-mounted



- With safety lock and 2 keys, key can be removed when positioned at 0
- all locks and keys are identical
- 10 A, 230 V~
- Dimensions (W x H x D): 56 x 65 x 40mm
- Tip or tip / catch function, can be changed at all times

Jalousie-Schloßschalter/-taster, 1-polig		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	4228/1 NE 01 S UW
	White (RAL 1013)	1	10	4228/1 NE 01 S W
Tip / catch function	Ultra White (RAL 9010)	1	10	4229/1 NE 01 S UW
	White (RAL 1013)	1	10	4229/1 NE 01 S W

## ■ Base Plate

made of fire-retardant thermoplastic

- optional for the assembly of venetian blind switches of the serie 422..
- with two strain relief devices and screws
- Dimensions (W x H x D): 68 x 76 x 18mm



Base Plate	Cat	PU	Article-No.
Ultra White (RAL 9010)	1	1	BO 56-4 UW KPL
White (RAL 1013)	1	1	BO 56-4 W KPL



## ■ Cord Switch / Push-button



- 10 A, 230 V ~, 1-pole
- Tip or catch function
- Switching positions: UP, DOWN, STOP in the middle position

Cord Switch / Push-button		Cat	PU	Article-No.
Catch function	White (RAL 1013)	1	10	424/1 NE 01 W
Tip function	White (RAL 1013)	1	10	428/1 NE 01 W

## ■ Cord Switch / Push-button

assembled as test switch



- 10 A, 230 V ~, 1-pole
- Tip or catch function
- Switching positions: UP, DOWN, STOP in the middle position
- Supply lead 2 m with Schuko plug and end lead 1.5 m with Wago-Terminal
- Special assembly forms on request

Cord Switch / Push-button, assembled		Cat	PU	Article-No.
Catch function	White (RAL 1013)	1	1	424 A 150/200
Tip function	White (RAL 1013)	1	1	428 A 150/200



## ■ Rotary Switch / Push-button for roller shutters, venetian blinds

- 10 A, 230 V ~, water proof IP44, Dimensions (W x H x D): 75 x 75 x 50mm
- Tip or tip / catch function, can be changed at all times



Rotary Switch / Push-button, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	63228/1 NE UW
	Grey (RAL 7035)	1	10	63228/1 NE GR
Tip / catch function	Ultra White (RAL 9010)	1	10	63229/1 NE UW
	Grey (RAL 7035)	1	10	63229/1 NE GR

Rotary Switch / Push-button, 2-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	63228/2 UW
	Grey (RAL 7035)	1	10	63228/2 GR
Tip / catch function	Ultra White (RAL 9010)	1	10	63229/2 UW
	Grey (RAL 7035)	1	10	63229/2 GR

## ■ Rotary Switch / Push-button for roller shutters, venetian blinds

- 10 A, 230 V ~, water proof IP44, Dimensions (W x H x D): 76 x 80 x 52mm
- Tip or tip / catch function, can be changed at all times



Rotary Switch / Push-button, 1-pole		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	9328/1 NE 01 UW
	Grey / Light Grey	1	10	9328/1 NE 01
Tip / catch function	Ultra White (RAL 9010)	1	10	9329/1 NE 01 UW
	Grey / Light Grey	1	10	9329/1 NE 01

## ■ Double Rocker Switch / Push-button for roller shutters, venetian blinds

- 10 A, 230 V ~, water proof IP44, Dimensions (W x H x D): 62 x 70 x 44mm
- with electrical and mechanical locking device



Double Rocker Switch / Push-button, 1-polig		Cat	PU	Article-No.
Tip function	Ultra White (RAL 9010)	1	10	5328/1 D UW
	Grey	1	10	5328/1 D
Catch function	Ultra White (RAL 9010)	1	10	5324/1 D UW
	Grey	1	10	5324/1 D

## ■ Push-button

- 10 A, 230 V ~, water proof IP44, Dimensions (W x H x D): 62 x 70 x 44mm



Push-button		Cat	PU	Article-No.
	Ultra White (RAL 9010)	1	10	311010



## Key Switches IP54







### Put together your key switch

- Die-cast housing, Dimensions (W x H x D): 81 x 81 x 52mm
- Housing is locked against unauthorized opening
- Tip / Catch function is optionally adjustable
- Lock with profile half cylinder (40 mm) and 3 keys
- 10 A, 230 V~, IP 54



Basic Module / 3 Keys		1-sided	Cat	PU	2-sided	Cat	PU
Surface-mounted basic module	1-pole	SAP 1T1	3	1	SAP 2T1	3	1
	2-pole	SAP 1T2	3	1	SAP 2T2	3	1
Cover	Plastic	SK 1	3	1	SK 2 RR	3	1
	Metal	SM 1	3	1	SM 2 RR	3	1

### Key Switch, assembled



Key Switch, 1-sided 1-pole	Factory setting		Cat	PU	Article-No.
	left	right			
Plastic cover	-	Tip	3	1	SAP 1T/1 K
	-	Catch	3	1	SAP 1R/1 K
Metal cover	-	Tip	3	1	SAP 1T/1 M
	-	Catch	3	1	SAP 1R/1 M

2-pole	left	right			
Plastic cover	-	Tip	3	1	SAP 1T/2 K
	-	Catch	3	1	SAP 1R/2 K
Metal cover	-	Tip	3	1	SAP 1T/2 M
	-	Catch	3	1	SAP 1R/2 M



Key Switch, 2-sided 1-pole	Factory setting left	right	Cat	PU	Article-No.
Plastic cover	Tip	Tip	3	1	SAP 2T/1 K
	Catch	Catch	3	1	SAP 2R/1 K
	Catch	Tip	3	1	SAP 2RT/1 K
Metal cover	Tip	Tip	3	1	SAP 2T/1 M
	Catch	Catch	3	1	SAP 2R/1 M
	Catch	Tip	3	1	SAP 2RT/1 M
2-pole	left	right			
Plastic cover	Tip	Tip	3	1	SAP 2T/2 K
	Catch	Catch	3	1	SAP 2R/2 K
	Catch	Tip	3	1	SAP 2RT/2 K
Metal cover	Tip	Tip	3	1	SAP 2T/2 M
	Catch	Catch	3	1	SAP 2R/2 M
	Catch	Tip	3	1	SAP 2RT/2 M





## ■ Stellen Sie Ihre Schlüsselschalter selbst zusammen

- Die –cast housing, Dimensions (W x H x D): 81 x 81 x 58mm (for round mounting boxes ø64mm)
- Housing is locked against unauthorized opening
- Tip / Catch function is optionally adjustable
- Lock with profile half cylinder (40 mm) and 3 keys
- 10 A, 230 V~, IP 54



Basic Module / 3 Keys		1-sided	Cat	PU	2-sided	Cat	PU
Flush-mounted basic module	1-pole	SUP 1T1	3	1	SUP 2T1	3	1
	2-pole	SUP 1T2	3	1	SUP 2T2	3	1
Cover	Plastic	SK 1	3	1	SK 2 RR	3	1
	Metal	SM 1	3	1	SM 2 RR	3	1

## ■ Key Switch, assembled



Key Switch, 1-sided 1-pole	Factory setting		Cat	PU	Articlel-No.
	left	right			
Plastic cover	-	Tip	3	1	SUP 1T/1 K
	-	Catch	3	1	SUP 1R/1 K
Metal cover	-	Tip	3	1	SUP 1T/1 M
	-	Catch	3	1	SUP 1R/1 M
2-pole	left	right			
Plastic cover	-	Tip	3	1	SUP 1T/2 K
	-	Catch	3	1	SUP 1R/2 K
Metal cover	-	Tip	3	1	SUP 1T/2 M
	-	Catch	3	1	SUP 1R/2 M

Key Switch, 2-sided 1-pole		Factory setting left                  right		Cat	PU	Articlel-No.
Plastic cover	Tip	Tip	3	1	SUP 2T/1 K	
	Catch	Catch	3	1	SUP 2R/1 K	
	Catch	Tip	3	1	SUP 2RT/1 K	
Metal cover	Tip	Tip	3	1	SUP 2T/1 M	
	Catch	Catch	3	1	SUP 2R/1 M	
	Catch	Tip	3	1	SUP 2RT/1 M	
2-pole		left	right			
Plastic cover	Tip	Tip	3	1	SUP 2T/2 K	
	Catch	Catch	3	1	SUP 2R/2 K	
	Catch	Tip	3	1	SUP 2RT/2 K	
Metal cover	Tip	Tip	3	1	SUP 2T/2 M	
	Catch	Catch	3	1	SUP 2R/2 M	
	Catch	Tip	3	1	SUP 2RT/2 M	



## 1. Scope of validity

1.1 Our deliveries and offers will be rendered exclusively under the provisions of these Terms and Conditions of Sale. They shall also apply to all future business relations, even if they were not explicitly agreed again. These conditions shall be considered accepted upon receipt of the goods or services at the latest. Any deviations from these conditions imposed by the buyer with reference to his terms of trade and purchase are expressly excluded.

1.2 Any modifications to these Terms and Conditions are only valid if they are confirmed by us in writing.

## 2. Prices

2.1 All prices are stated in € and are ex Lüdenscheid

2.2 We charge € 25,00 for handling for order values below € 250,00.

2.3 Our price indications are binding for 3 months from the delivery date stipulated in the contract, alternatively from conclusion of the contract. After expiration of the three month period we are entitled to raise the prices according to the increase in production cost and considering the market development for similar products. In case of an increase of more than 10%, the buyer is entitled to withdraw from the contract. Beforehand, he has to inform us in writing about the refusal of the price increase and give us the opportunity for a period of 3 weeks to declare the request for price increase invalid so that the contract can be continued and settled according to the original conditions.

## 3. Delivery time

3.1 The indicated dates and terms are nonbinding unless otherwise expressly agreed upon in writing.

3.2 Delivery periods will be effective from the date of mailing the order acknowledgement. The delivery shall be considered as performed during the specified time if the customer has been informed until expiry of the deadline that the delivery item is ready for shipment. The delivery period will be reasonably extended within the scope of trade disputes as well as in case of unforeseen events beyond our control, if such events are evidently of considerable influence on the completion or delivery of said item. This is also valid if such events occur while the delivery is already delayed. Partial deliveries remain reserved unless they have been expressly excluded.

3.3 We are only liable for damages caused by delay if these are due to intent or gross negligence. Delays in delivery and performance which are caused by delays of sub-suppliers have to be tolerated by the buyer for a period of 2 weeks without indemnification unless a fixed date transaction was agreed.

## 4. Shipment and passage of risk

4.1 Shipment is executed ex Lüdenscheid and at the buyer's risk unless otherwise agreed.

4.2 The risk passes to the buyer as soon as the delivery has been handed over to the person executing the transport or has left our stock –

concerning direct mailing the German port of entry - for shipment.

4.3 An insurance of the goods against transport damages is only issued at the buyers express wish and at his cost.

## 5. Warranty and Liability

5.1 The warranty period for goods and services is 6 months from passage of risk. Our liability will also end 6 months after passage of risk if shipment is delayed without our being at fault.

5.2 For important bought-in products our liability is restricted to the assignment of liability claims which we have against the supplier of the bought-in goods.

5.3 No warranty is granted in case of improper use, faulty installation or commissioning by the buyer or third persons, in case of natural wear and faulty or careless handling.

5.4 The buyer has to immediately inform us about faults in writing, at the latest within one week after receipt of the products. Faults which cannot be discovered within this period in spite of thorough examination have to be reported to us in writing immediately after their discovery.

5.7 We are only obliged to remedy defects or deliver replacements if the buyer on his part has fulfilled his obligations from the contract.

## 6. Retention of Title

6.1 The delivered goods shall remain our property until all due and consequent claims, for whatever legal reason, have been paid.

6.2 Processing or transformation is done in our name as the producer. Should we lose ownership due to processing or fusion, we will become partial co-owner (value of invoice) of the new product. The buyer will store the co-owned products free of charge. These goods will be referred to as reserved goods in the following.

6.3 The buyer is entitled to process and sell the reserved goods in the regular course of business as long as payment obligations are fulfilled. As a precaution, the buyer fully assigns to us the claims concerning the reserved goods resulting from resale or any other legal reason against any of his customers or buyers. We hereby revocably authorize the buyer to collect in his own name the claims assigned to us. On our request, the buyer will disclose the assignment and provide the necessary information and documents. Should the assignment lead to an oversecuring of more than 25% of the value of the reserved goods, we will release all further assignments or customer claims on request.

6.4 If third persons access the reserved goods, especially for levy of distress, the buyer will indicate that they are our property and inform us immediately. The buyer shall bear all cost and damages.

6.5 If the buyer acts in contrary to the contract, above all in case of delay in payment, we shall have the right to take back the reserved goods at the buyer's cost or, if necessary, to demand the assignment of the buyer's right to

recovery against third persons. Our recovery and levy of distress of the reserved goods shall not signify a withdrawal from the contract.

## 7. Payment

7.1 Unless otherwise agreed, the goods have to be paid within 30 days net after date of invoice.

7.2 We have the right to first deduct payments from former liabilities even if the buyer has stipulated something else. If cost and interest have already incurred we are entitled to deduct payments first from the cost, second from the interest and third from the main service.

7.3 Should the buyer be in default of payment, we have the right to charge interest according to customary banking rates, however at least 5% above the respective official rate of discount of Deutsche Bundesbank, from the start of delay.

7.4 If the buyer does not meet his obligations for payment according to the contract, if he stops his payments or if we become aware of other circumstances which call the buyer's creditworthiness into question, we are entitled to declare the total remaining debt due or to demand advance payments or securities.

7.5 The buyer is only entitled to set-off, retention or reduction, even if deficiency claims or counter claims are filed, if we expressly agree or if the rights of the buyer are undisputed or legally established.

## 8. Place of performance and legal venue

8.1 Legal venue in commerce is Lüdenscheid exclusively. We are entitled, however, to also appeal to the court situated at the buyer's registered seat.

8.2 This contract is subject to the laws of the Federal Republic of Germany. The UN Convention on the International Sale of Goods shall not apply.

## 9. Partial nullity

Should individual provisions be or become void, ineffective or questionable, the effectiveness of the remaining provisions shall not be affected and then have to be interpreted or completed, respectively, in a way that the intended purpose is reached in a legally allowed manner as precisely as possible. This is also true for possible omissions that have to be filled.

## 10. Applicable law

German law applies exclusively. The validity of the international trade law (UNITRAL treaty) is expressly excluded.

## 11 Severability Clause

If any of the provisions in these General Terms and Conditions are or become legally invalid, this shall have no effect on the validity of the remaining provisions. In such a case, a potentially invalid provision shall be replaced with a valid provision, which comes as close as possible to the desired commercial purpose of the potentially invalid provision.



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