

Operating Instructions

Busch-Dimmer®

Potentiometer

2112-101

2112 U-101



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1 Safety



Warning

Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

2 Intended use

The device is to be used exclusively with the components that are supplied and licensed as described in chapter "Setup and function".

3 Environment



Consider the protection of the environment!

Used electric and electronic devices must not be disposed of with domestic waste.

- The device contains valuable raw materials which can be recycled. Therefore, dispose of the device at the appropriate collecting depot.

All packaging materials and devices bear the markings and test seals for proper disposal. Always dispose of the packaging material and electric devices and their components via the authorized collecting depots and disposal companies.

The products meet the legal requirements, in particular the laws governing electronic and electrical devices and the REACH ordinance.

(EU Directive 2002/96/EC WEEE and 2002/95/EC RoHS)

(EU REACH ordinance and law for the implementation of the ordinance (EC) No.1907/2006)

4 Technical data

General

Nominal voltage	230 V AC \pm 10%, 50/60 Hz
Module width	3 MW (1 MW = 18 mm) applies only to Modular DIN Rail Component (MDRC)

Potentiometer (terminal 1 / 2)

Control voltage	1 ... 10 V
Control current	50 mA


Switch (terminal 3 / 4)

Nominal voltage	230 V, 50/60 Hz
Nominal current	4 AX ($\cos \varphi$ 0.9)
Nominal power	700 W/VA
Series circuit-breaker	10 A
Inrush current	\leq 100 A

5 Setup and function

The device serves for activating all conventional electronic electronic ballasts with a control voltage of 1 ... 10 V, especially for the control of LEDs and for the flicker-free control of the brightness of fluorescent lamps up to 1% residual brightness without interfering humming noises.








The device is intended for the activation of the following type of load:

	Electronic ballasts for fluorescent lamps and LEDs
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5.1 Features of function and equipment

- Rotary actuation
- Rotary off-switch

5.2 Possible combinations

	Flush-mounted		MDRC
	 2112 U ...		 2112 ...
 6597 ...	X	 3099 ...	X
 2115-...	X	 6597 ...	X
 6540-...	X		



Note

The potentiometer in connection with control element 2115-... and 6540-..., is not illuminable. In order to prevent any errors, please remove the lighting element from the control element.

6 Installation and electrical connection



Warning

Electric voltage!

- Risk of death due to electrical voltage of 230 V during short-circuit in the low-voltage line.
- Low-voltage and 230 V lines must not be installed together in a flush-mounted socket!

6.1 Requirements for the electrician



Warning

Electric voltage!

Install the device only if you have the necessary electrical engineering knowledge and experience.

- Incorrect installation endangers your life and that of the user of the electrical system.
- Incorrect installation can cause serious damage to property, e.g. due to fire.

The minimum necessary expert knowledge and requirements for the installation are as follows:

- Apply the "five safety rules" (DIN VDE 0105, EN 50110):
 1. Disconnect from power;
 2. Secure against being re-connected;
 3. Ensure there is no voltage;
 4. Connect to earth and short-circuit;
 5. Cover or barricade adjacent live parts.
- Use suitable personal protective clothing.
- Use only suitable tools and measuring devices.
- Check the supply network type (TN system, IT system, TT system) to secure the following power supply conditions (classic connection to ground, protective earthing, necessary additional measures, etc.).

6.2 Mounting



Warning

Electric voltage!

Risk of death and fire due to electrical voltage of 230 V.

- Work on the 230V supply system may only be performed by authorised electricians!
- Disconnect the mains power supply prior to installation and/or disassembly!

The flush-mounted insert must only be installed in flush-mounted wall boxes according to DIN 49073-1, Part 1, or suitable surface-mounted housings.

The MDRC must only be installed on mounting rails according to DIN EN 50022. The MDRC is latched onto the mounting rail.



Caution

Risk of damaging the device due to overload!

Continuous excessive electric current in the control circuit damages the device.

- Ensure that the current in the control circuit does not exceed 50 mA.
- Use additional relays if excessive inrush currents occur.

For external relays see Fig. 2.

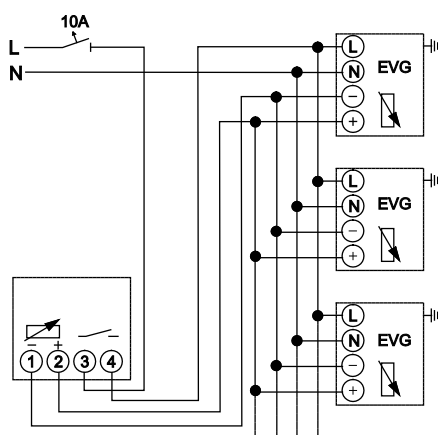
In the load circuit, a constant current of 4 A and a maximum inrush current of 100 A are admissible.



Note on the number of ballasts

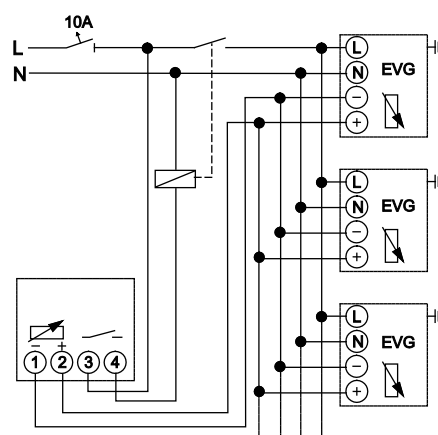
The manufacturer's specifications of the ballasts specify how many ballasts are permitted be controlled with the potentiometer.

6.3 Electrical connection



2112 ...

Fig. 1: Electronic potentiometer



2112 ...

Fig. 2: Electronic potentiometer with external relay

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Busch-Dimmer®

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