

Universal power boost unit REG 500 W

Order no.: 1035 00

Function

The universal power boost unit REG 500 W is used for extending the power rating of Tronic or universal-type dimmers from Gira.

Connectable loads:

- 230 V incandescent lamps, 230 V halogen lamps
- LV halogen lamps in combination with Tronic transformers
- LV halogen lamps in combination with conventional transformers

The universal power boost unit REG 500 W has no control elements. The device is entirely controlled from the connected dimmer.

Depending on the required power rating, several power boost units can be connected to one dimmer. The connected loads are supplied via a common load line.



Safety instructions

Attention: Electrical equipment must be installed and fitted by qualified electricians only.

Not suitable for disconnection of the mains.

Switching off does not isolate the universal power boost unit REG 500 W electrically from the mains.

To prevent electric shocks, disconnect the mains (by cutting out the circuit breaker) before working on the device or on the load.

When conventional transformers are used, each of these transformers must be fuse-protected on the primary side in accordance with the manufacturer's instructions. Use only safety transformers in acc. with EN 61558-2-6.

When the device is operated in isolating transformer networks, the transformers must have a power rating of at least 10kVA.

There is otherwise the risk of the dimmer using the false dimming principle for the connected load.

Failure to observe the installation instructions may result in fire or other hazards.

Fitting

The universal power boost unit REG 500 W is designed as a modular rail-mounted device and snap-fastened on a mounting rail in acc. with EN 50022.

The connecting terminals are at the top.

Important:

If several dimmers or power boost units are installed in the same control cabinet, it is necessary to observe a clearance of 1 modular spacing between the devices in order to prevent overheating.

Under rated load conditions, the temperature inside the control cabinet must not exceed 45 °C at the hot-test point.

For temperatures above 45 °C, the load that can be connected must be reduced by 15 % per every 5 °C.

Fitting instructions

- Only the dimmers mentioned in the reference list can be used in combination with universal power boost unit REG 500 W.
- **Do not connect capacitive loads (e.g. Tronic transformers) together with inductive loads (e.g. conventional transformers) to the universal power boost unit REG 500 W.**
- The overall power consumed by the connected loads is shared by the dimmer and the connected power boost units.
- The common load line must therefore have the required cross-section.
- At least 85 % of the load of conventional transformers must consist of lamps.
- A minimum load of 200 W/VA is necessary to prevent flickering of the lamps connected.
- Lighting systems with a power consumption of more than 3500 W/VA must be supplied by two separate circuits, however from the same phase conductor.
The circuit breakers of these circuits must be ganged in order to ensure safe disconnection of the lighting system from the mains.
- Lighting systems with a power consumption of more than 1000 W/VA are considered as a professional system.
- Observe the technical connection conditions of the power supply companies.
- Centralized telecontrol signals of the power stations may be noticed as flickering of the lamps.
This is not a defect of the dimmer.

Short-circuit protection

The power boost unit shows the same behaviour as the connected dimmer.

Example: Universal dimmer REG 500 W

Phase cut-off operation (capacitive load, resistive load):

The device shuts off and restarts automatically if the short-circuit is removed within 7 seconds. If the short-circuit lasts longer than 7 s, the universal dimmer remains permanently off until it is switched on again manually.

Phase cut-on operation (inductive load):

The device shuts off and restarts automatically if the short-circuit is removed within 100 ms. If the short-circuit lasts longer than 100 ms, the universal dimmer remains permanently off until it is switched on again manually.

Over-temperature protection

The power boost unit is shut off automatically when the ambient temperature is too high.

The load supply is then at first shared by all of the remaining devices.

The subsequent behaviour of the system varies and is influenced by:

- the type of dimmer used
- the number of devices
- the utilization of the devices
- the fitting location of the devices

Connection as per fig. A

Important

Wrong connection will cause irreparable damage to the device.

- (1) Local extension unit
- (2) Universal dimmer REG 500 W
- (3) Universal power boost unit REG 500 W
- (4) Load

Example:

- P_L Load to be dimmed
e.g. 2000 W incandescent lamps
- P_D Max. dimmer load 500 W
- P_{LZ} Max. load of universal power boost unit
REG 500W
- P_{LZG} Power to be supplied by the power boost
units
- n Number of power boost units needed

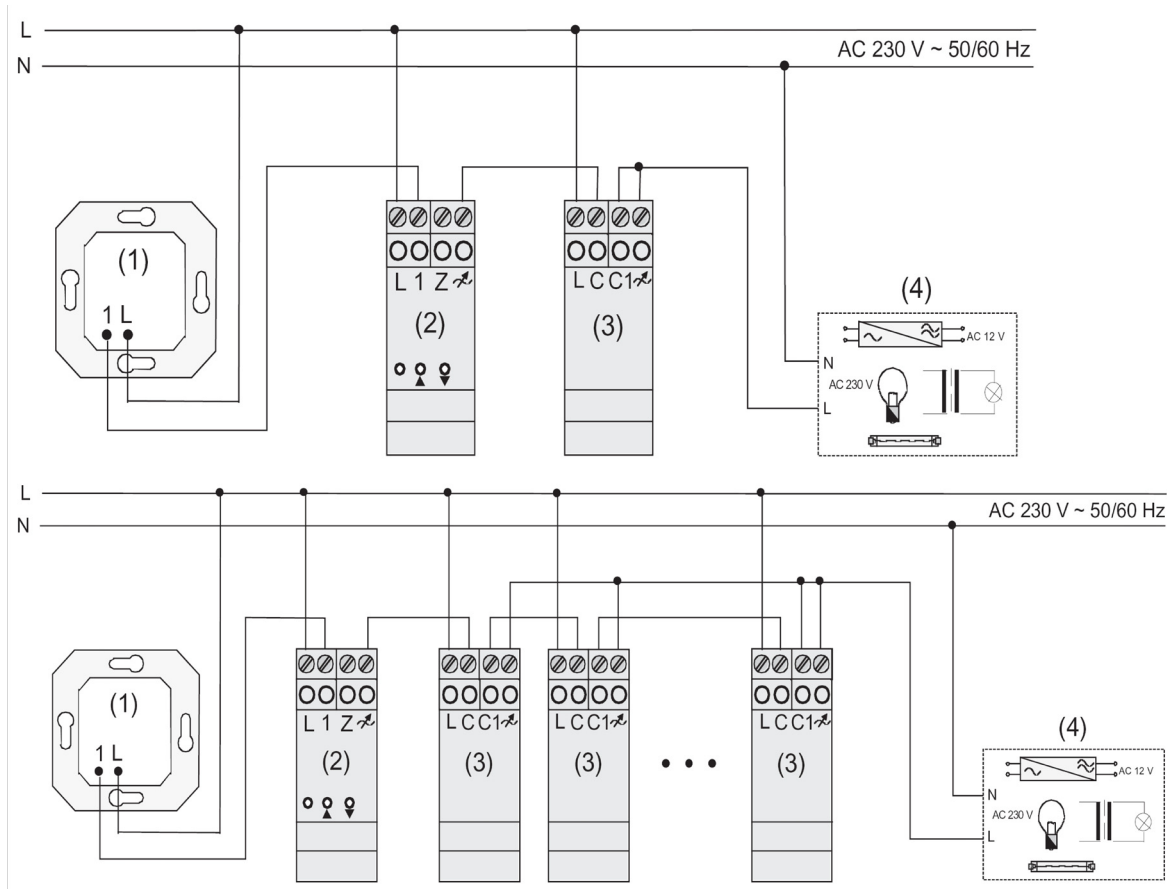
$$P_L - P_D = P_{LZG}$$

$$2000 \text{ W} - 500 \text{ W} = 1500 \text{ W}$$

$$P_{LZG} / P_{LZ} = n$$

$$1500 \text{ W} / 500 \text{ W} = 3$$

fig. A



Technical data

Rated voltage:	AC 230 V~, 50/60 Hz
Load rating (P):	see table total load greater 1000 W/VA for professional systems only.
Minimum load:	200 W/VA
Load types:	- 230 V incandescent (resistive load, phase cut-off) - 230 V-halogen lamps (resistive load, phase cut-off) - TRONIC transformers (capacitive load, phase cut-off) - conventional transformers (inductive load, phase cut-on)

Mixed loads composed of the loads specified (**capacitive loads not together with inductive loads**).

If mixed loads are used with conventional transformers, the share of resistive loads (incandescent, 230 V halogen lamps) must not exceed 50 %.



The symbols used to identify dimmer loads designate the type of the electrical behaviour of loads connected to dimmers: R = ohmic, L = inductive, C = capacitive

Nominal power losses:	5 W
Ambient temperature (Ta):	0 ... 45 °C
Observe the load reductions for temperatures above 45 °C, see 'Fitting'.	
Dimensions:	2 modules
Degree of protection:	IP 20
Max. number (n) of power boost units:	see table
Emitted interference:	as per EN 55015
Terminals:	L, C, C1, 
Terminal cross-section:	max. 4.0 mm²

Dimmer-Referenzliste	 		 	
	max. Anzahl n	Anschlussleistung P	Anzahl n	Anschlussleistung P
Universal-Dimmer REG 500 W Best. Nr. 1034 00	10	500 W	5	420 VA
Funk-Universal-Dimmaktor 1fach REG Best. Nr. 1135 00	10	500 W	5	420 VA
Funk-Universal-Dimmer Best. Nr. 0809 00	10	500 W	5	300 VA
Instabus Universal-Dimmaktor 1fach Best. Nr. 1031 00	10	500 W	5	420 VA
Instabus Universal-Dimmaktor 2fach Best. Nr. 1032 00	10	500 W	5	1-Kanal 350 VA 2-Kanal 250 VA
Instabus Universal-Dimmaktor 4fach Best. Nr. 1043 00	10	500 W	---	---
System 2000 Universal-Dimm-Einsatz Best. Nr. 0305 00	10	500 W	5	420 VA
Universal-Seriendimmer-Einsatz Best. Nr. 2263 00	10	500 W	---	---
Universal-Dimmer-Einsatz mit Druck-/ Drehschalter 50-420 W/VA Best. Nr. 1176 00	10	500 W	5	420 VA
Tronic-Dimmer-Einsatz mit Druck- Wechselschalter Best. Nr. 0307 00	10	500 W	---	---
Tronic-Einbaudimmer Best. Nr. 0381 00	10	400 W	---	---

Acceptance of guarantee

We accept the guarantee in accordance with the corresponding legal provisions.

Please return the unit postage paid to our central service department giving a brief description of the fault:

Gira
Giersiepen GmbH & Co. KG
Service Center
Dahlienstrasse 12
D-42477 Radevormwald

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