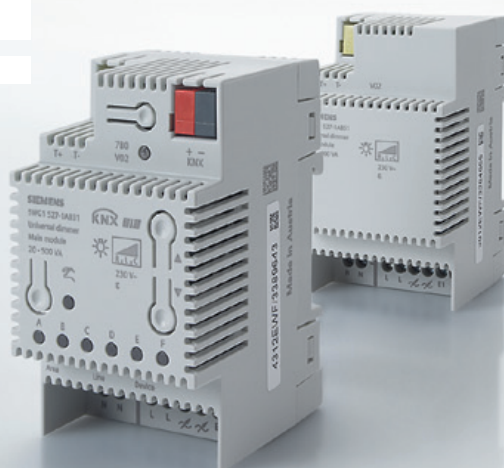


SIEMENS



The worldwide
standard for
home and
building control



Universal dimmers for all needs – modular and flexible

Innovative products for effective illumination

Comprehensive product line

The universal dimmers are of very compact design and have an output of up to 2,000 VA. They have been designed for use with all kinds of loads and meet all requirements, regardless of the type of application, be it in the conventional field or in KNX networks.

Built-in cost efficiency

Using the modular universal dimmers, up to five dimmer extension modules can be connected to a universal main module. Hence, both the number of bus connections and the number of bus power supplies can be reduced. The two inputs also facilitate operation via conventional buttons.

Combinations make the dimmers very powerful

The product line includes two universal main modules delivering a maximum dimming output of 300 VA and 500 VA

respectively. The universal extension modules are available in three versions offering dimming outputs of up to 300 VA, 500 VA and 1,000 VA. In addition, the dimming output can be increased to a maximum of 2,000 VA by connecting in parallel the outputs of two universal extension modules of 1,000 VA each.

Versions for islanding

There are also modular universal dimmers N 527 available – optimized for islanding. These modules are suited for use in networks with no synchronous connection to the common network, e.g. in islanding with generators.

Safe operation

Universal dimmers N 527 excel in longevity and safe, continuous operation. They signal via KNX impending overloads, potential short-circuits or the risk of overheating.

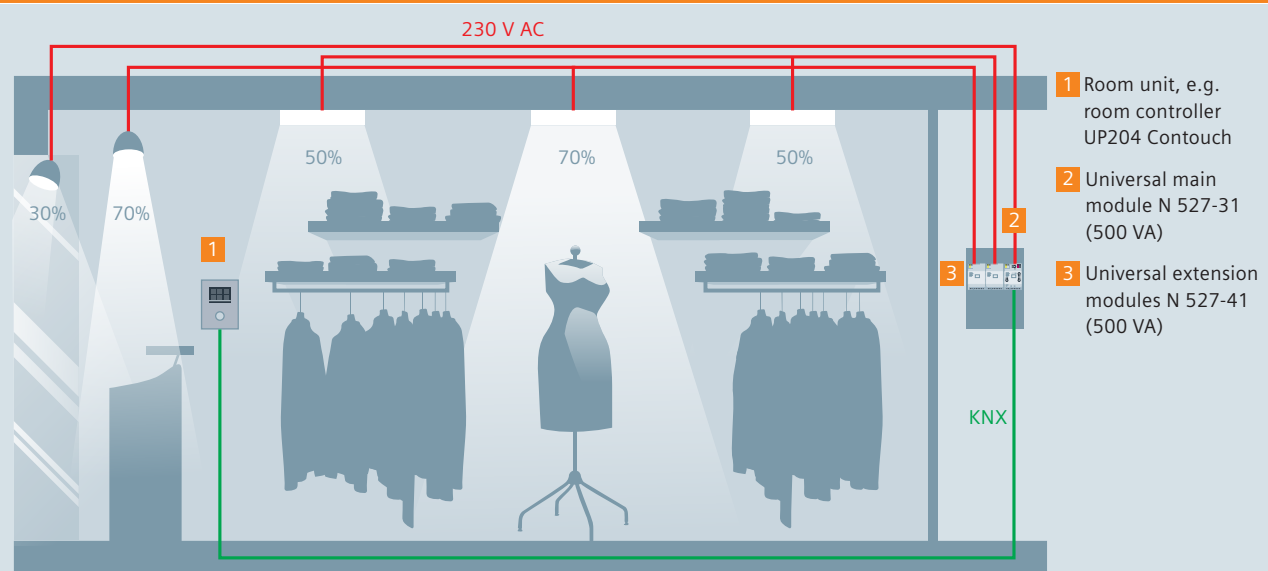
Highlights

- Output up to 2000 VA
- Suited for all types of resistive, capacitive or inductive loads
- Compact design of 3 TE
- Free combination of up to six output modules
- All extension modules can be operated individually
- Conventional series buttons can be connected for switching and dimming
- Versions for islanding

Answers for infrastructure.

Application example

Application: Scene control



To create attractive illumination and an inviting atmosphere in the sales field, the universal dimmers can be set to different dimming levels. This way, the focus can be put on products and exhibits while in other areas lighting can be dimmed to a lower level. This saves energy and directs attention to the more important objects. Using a room operating unit, the dimmers can be controlled via

KNX and a number of lighting scenarios can be selected, stored and retrieved, e.g. for shop opening and closing times. To highlight products and to ensure optimum presentation during shop opening times, more lighting is used. During shop closing times, lighting is reduced.

Powerful product line

The two universal main modules for up to 300 VA and 500 VA are equipped with an interface for the connection of up to five universal extension modules. These modules deliver a dimming output of up to 300 VA, 500 VA and 1000 VA respectively.

What's more, the dimming output can be increased to a maximum of 1,000 VA by connecting in parallel the outputs of two extension modules of 1,000 VA each. Special versions are available for proper islanding.

Installation and handling



Universal dimmers N 527 are easy to install. The main modules can be manually operated directly on the housing front. A yellow LED indicates direct operation. The operating state of the extension modules can also be viewed: Six LEDs show whether the connected extension modules are on (red), off (green) or whether there is a fault (flashing). All universal dimmers also feature two inputs for the connection of conventional buttons used for direct control of the respective dimming output. Hence, the extension modules can also be operated in a conventional way, individually and autonomously, without KNX.

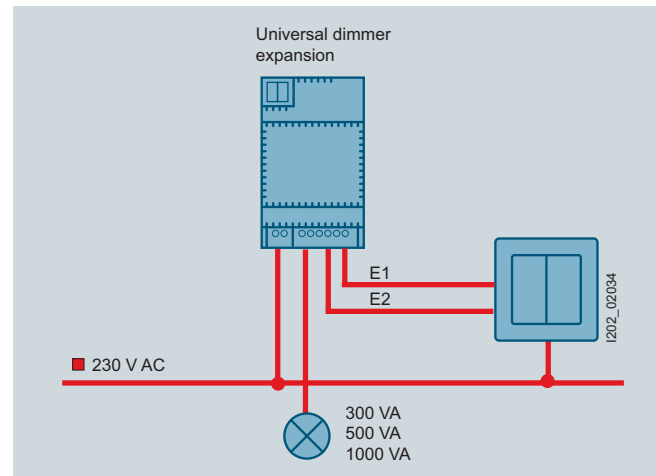
Thanks to the wiring between main module and extension modules, the devices can be placed individually in the control panel, on two or several top hat rails, if required.

Overview

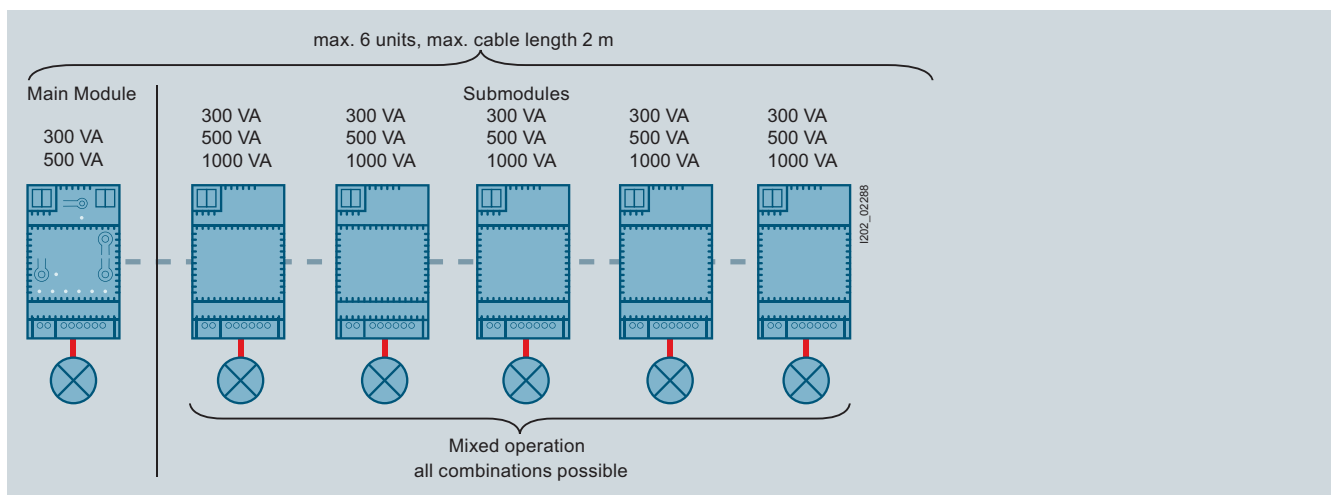
Universal dimmers

Universal dimmers are dimmers which automatically determine the load type connected to their outputs (resistive, inductive or capacitive) and switch over accordingly to leading-edge phase mode (for a resistive or inductive load such as incandescent lamps or LV halogen lamps with an upstream conventional transformer) or trailing-edge phase mode (for a capacitive load such as LV halogen lamps with an upstream electronic transformer).

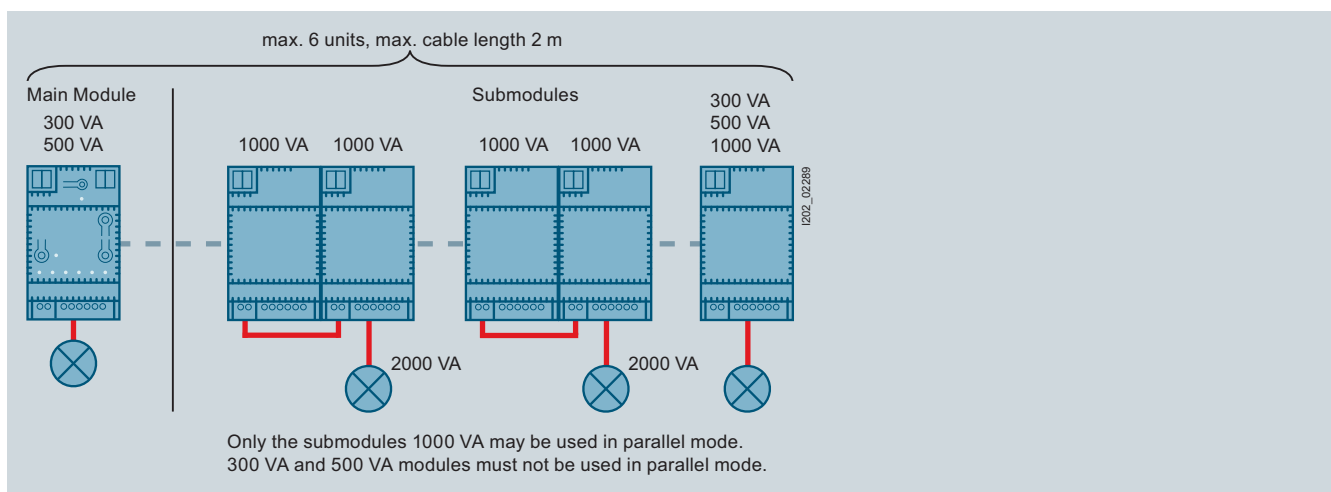
Block diagram 1:
1-channel operation without KNX, control via conventional push-buttons at the two inputs (E1, E2).¹⁾



Block diagram 2:
Combination options for universal dimmers, main modules and expansions.¹⁾





Block diagram 3:
Combination options for universal dimmers, main modules and expansions, as well as for increased performance.¹⁾













¹⁾ The block diagrams shown here are just an example of how modules can be interconnected and interfaced. For more detailed information, see www.siemens.de/gamma-td

Technical specifications

Type	Description
	<p>N 528/31, N 527/31, N 527/32 universal dimmer main modules</p> <ul style="list-style-type: none"> Interface for connecting universal dimmer submodules and with software for controlling up to 5 universal dimmer submodules Power supply of electronics via AC 230 V, 50/60 Hz One output for switching and dimming resistive, inductive or capacitive loads Automatic adjustment to leading edge or trailing edge control, depending on the type of load Electronic protection of the output against overload, short circuit and temperature rise Reporting of overload, short circuit and temperature rise via the bus Configurable parallel operation of the outputs of two universal dimmer submodules for 20...1000 VA for doubling the dimming power to 40...2000 VA 2 subsidiary inputs for 230 V AC (with neutral line as reference potential) for connecting 2 conventional pushbuttons for direct switching and dimming of the output and with selectable additional transmission of these switching and dimming commands via the bus Length of connecting lines on the subsidiary inputs up to 100 m A pushbutton on top of the device for switching between bus mode and direct mode and for selecting the device (output A...F) to be switched directly Yellow LED to indicate direct mode activated Status object for reporting direct mode 6 bicolor LEDs for indicating the switch status (red = on, green = off) or an error (blinking) in the selected device (output) Two pushbuttons on top of the device for switching and dimming the selected output in direct operating mode, functional when main module and submodules are connected to 230 V AC, even if bus communication fails or has not yet been started Selection of whether all devices (outputs) are to be configured identically or individually Selectable mode for each output (normal mode, one- or two-level timer mode, blinking) Adjustable On- and Off-delay Separately adjustable dimming time from 0 ... 100% for switching on/off and dimming brighter/darker <ul style="list-style-type: none"> Two dimming value objects, each with individually adjustable dimming time from 0 ... 100% Ability to switch an output on or off by dimming brighter/darker Adjustable dimming value when switching on Immediate activation (jumping) or dimming to a new dimming value Selectable additional status object switching and/or status object dimming value for each output Additional object for each output for blocking/releasing the output Sending of status objects on request and / or automatically after a change Adjustable blocking time for sending status objects after restart and bus voltage recovery Adjustable dimming value for each output in the event of bus voltage failure and recovery, as well as for mains voltage recovery Additional night mode object for time-limited switching on the output (and hence illumination) at night Adjustable ON period at night or with timer mode Selectable warning of imminent switching off the illumination by dimming to 50% of the previous dimming value during night mode or timer mode Integrated 8-bit scene control and integration of each output in up to 8 scenes Separately adjustable dimming time for scene control Integrated bus coupling unit, bus connection via bus terminal Device for DIN-rail mounting on a TH35 mounting rail according to DIN EN 60715, max. width 3 MU (1 MU = 18 mm) <p>N 528/31 universal dimmer main modules</p> <ul style="list-style-type: none"> 20...300 VA, AC 230 V, 50/60 Hz <p>N 527/31 universal dimmer main modules</p> <ul style="list-style-type: none"> 20...500 VA, AC 230 V, 50/60 Hz <p>N 527/32 universal dimmer main modules</p> <ul style="list-style-type: none"> 20...500 VA, AC 230 V, 50/60 Hz For Islanding
	<p>N 528/41, N 527/41, N 527/42, N 527/51, N 527/52 universal dimmer expansions</p> <ul style="list-style-type: none"> Interface for connecting the universal dimmer submodule to the universal dimmer main module and / or connecting further universal dimmer submodules Power supply of electronics via AC 230 V, 50/60 Hz One output for switching and dimming resistive, inductive or capacitive loads Automatic adjustment to leading edge or trailing edge control, depending on the type of load Electronic protection of the output against overload, short circuit and temperature rise Rotary switch for adjusting the device (output) address to B...F 2 subsidiary inputs for 230 V AC (with neutral line as reference potential) for connecting 2 conventional pushbuttons for direct switching and dimming of the output and with selectable additional transmission of these switching and dimming commands via the bus Length of connecting lines on the subsidiary inputs up to 100 m Selectable objects and adjustable operation mode of each device (output) as well as for the main module via the main module's application program Device for DIN-rail mounting on a TH35 mounting rail according to DIN EN 60715 Max. width 3 MU (1 MU = 18 mm) <p>N 528/41 universal dimmer expansions</p> <ul style="list-style-type: none"> 20...300 VA, AC 230 V, 50/60 Hz <p>N 527/41 universal dimmer expansions</p> <ul style="list-style-type: none"> 20...500 VA, AC 230 V, 50/60 Hz <p>N 527/42 universal dimmer expansions</p> <ul style="list-style-type: none"> 20...500 VA, AC 230 V, 50/60 Hz For Islanding <p>N 527/51 universal dimmer expansions</p> <ul style="list-style-type: none"> 20...1000 VA, AC 230 V, 50/60 Hz <p>N 527/52 universal dimmer expansions</p> <ul style="list-style-type: none"> 20...1000 VA, AC 230 V, 50/60 Hz For Islanding

Selection and ordering data

Type	Version	DT	Order-No.	PU	PS*/ P. unit	Weight per PU approx. kg	
 <p>5WG1 528-1AB31 5WG1 527-1AB31 5WG1 527-1AB32</p>	N 528/31	N 528/31 universal dimmer main modules 20...300 VA ¹⁾ , AC 230 V, 50/60 Hz 	B	5WG1 528-1AB31	1	1 ST	0,190
	N 527/31	N 527/31 universal dimmer main modules 20...500 VA ¹⁾ , AC 230 V, 50/60 Hz 	B	5WG1 527-1AB31	1	1 ST	0,170
	N 527/32	N 527/32 universal dimmer main modules 20...500 VA ¹⁾ , AC 230 V, 50/60 Hz for Islanding 	B	5WG1 527-1AB32	1	1 ST	0,170
Accessories							
 <p>5WG1 528-1AB41 5WG1 527-1AB41 5WG1 527-1AB42 5WG1 527-1AB51 5WG1 527-1AB52</p>	N 528/41	N 528/41 universal dimmer expansions 20...300 VA ¹⁾ , AC 230 V, 50/60 Hz 	B	5WG1 528-1AB41	1	1 ST	0,140
	N 527/41	N 527/41 universal dimmer expansions 20...500 VA ¹⁾ , AC 230 V, 50/60 Hz 	B	5WG1 527-1AB41	1	1 ST	0,140
	N 527/42	N 527/42 universal dimmer expansions 20...300 VA ¹⁾ , AC 230 V, 50/60 Hz for Islanding 	B	5WG1 527-1AB42	1	1 ST	0,140
	N 527/51	N 527/51 universal dimmer expansions 20...1000 VA ¹⁾ , AC 230 V, 50/60 Hz 	B	5WG1 527-1AB51	1	1 ST	0,165
	N 527/52	N 527/52 universal dimmer expansions 20...1000 VA ¹⁾ , AC 230 V, 50/60 Hz for Islanding 	B	5WG1 527-1AB52	1	1 ST	0,165

¹⁾ Low-voltage halogen lamps with electronic transformers require a minimum load of 40 VA.

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The information in this document contains general descriptions of technical options available, which do not always have to be present in individual cases. The required features should therefore be specified in each individual case at the time of closing the contract.

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Answers for infrastructure.

Our world is undergoing changes that force us to think in new ways: demographic change, urbanization, global warming and resource shortages. Maximum efficiency has top priority – and not only where energy is concerned. In addition, we need to increase comfort for the well-being of users. Also, our need for safety and security is constantly growing. For our customers, success is defined by how well they manage these challenges. Siemens has the answers.

“We are the trusted technology partner for energy-efficient, safe and secure buildings and infrastructure.”