

Combination devices

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The optimal solution for decentralized installation

The UP 511S32 switching actuator, the UP 562S32 switching/solar protection actuator and the UP 525S32 universal dimmer are designed for space-saving and flexible flush mounting in a device box to DIN 49073.

By means of a mounting housing M 592/01, which can be ordered as an accessory, a completely decentralized installation in false ceilings, floor tanks, electrical columns and cable ducts or the installation in an electrical distributor with top-hat rail can be realized.

The equipment of the combination units with three binary inputs enables the simultaneous connection of e.g. two push-buttons or switches, an additional window or door contact or a suitable sensor. Standard functions such as switching, dimming, solar protection control, sending values and scene control as well as sophisticated functions such as color temperature control, setting of operating modes and setpoint temperatures for room temperature controllers can be operated via these inputs.

The flush-mounted actuators offer different switching and dimming outputs depending on the device version:



Switch actuator UP 511S32:

- A relay contact at the output as a switching element for AC 230 V, 16 A, for switching electrical loads.

Switch actuator/solar protection actuator UP 562S32:

- Two relay contacts for AC 230 V, Σ 16 A, for switching electrical loads or for controlling motors (110...230 V AC) for sunshades, such as venetian blinds, roller shutters, venetian blinds, awnings, curtains, as well as ventilation flap drives with AC motors

Universal dimmer UP 525S32:

- One output for switching and dimming resistive, inductive or capacitive loads

All flush-mounted actuators offer 6 central functions, operating hours counting and locking functions in addition to the respective standard functions.

A logic module with eight internal functions offers comprehensive links for a wide range of applications in any project.

To ensure that the actuators always work error-free in the future, firmware updates via the Siemens Firmware Download Tool reliably keep the products at the latest functional status.

Thanks to KNX Data Secure encryption, the actuators are not only a versatile but also a particularly secure option for networked KNX installations.

KNX Data Secure

KNX Data Secure signs and encrypts communication in the KNX network and ensures secure data transmission of telegrams. The communication during commissioning processes with the ETS and the runtime communication between devices and to visualizations is thus secured.

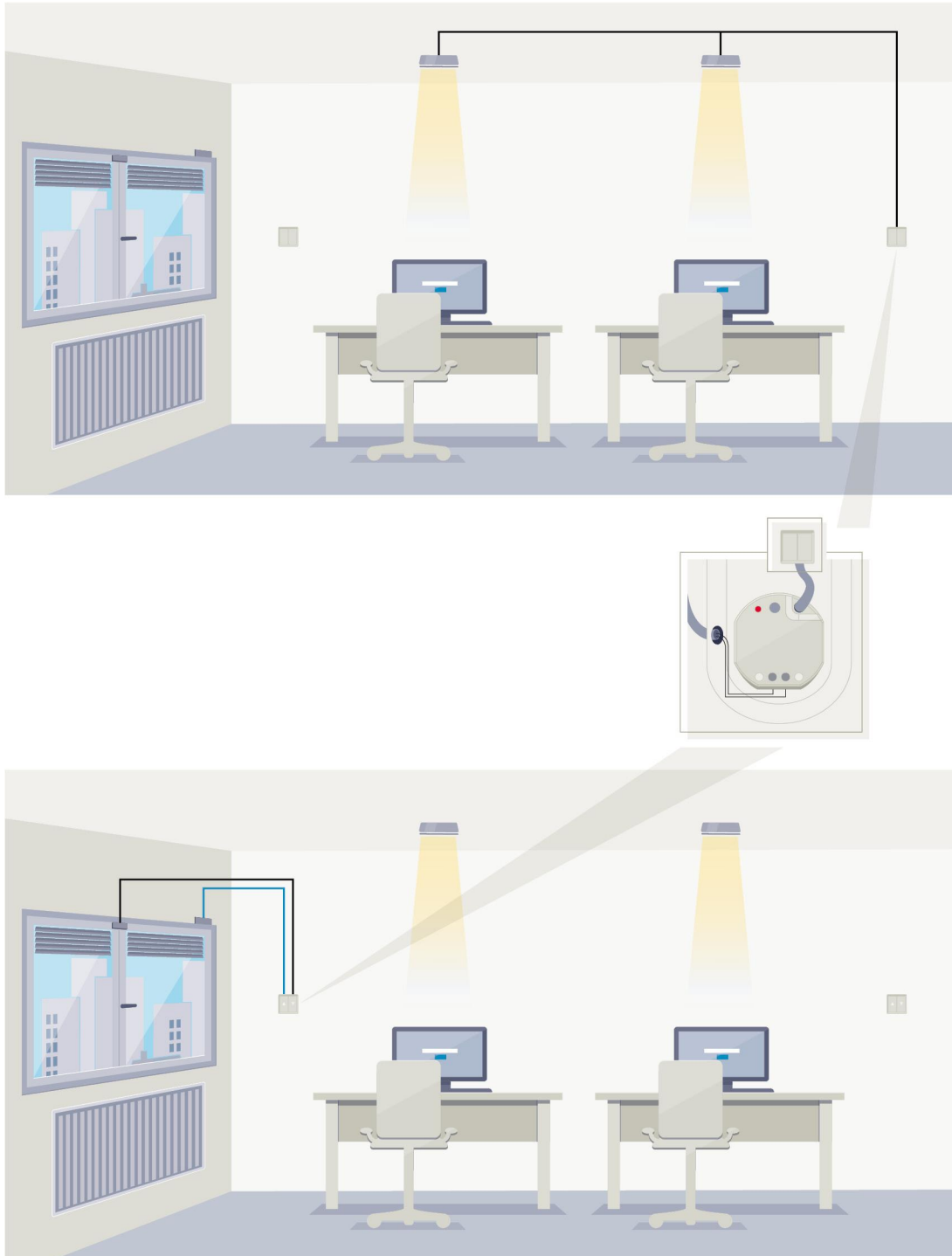
The concept ensures that all or only selected KNX telegrams are authenticated and encrypted, regardless of the medium. This protects the combination devices from unauthorized manipulation of the configuration. Fail-safe operation of building functions, trouble-free visualizations and function logic is always guaranteed.

Functions and application examples

Flush-mounted actuators have been developed with their most versatile applications for decentralized installation options:

Lighting

The lighting can be switched (UP 511S32 for one lighting circuit, UP 56S32 for two lighting circuits) and dimmed (UP 525S32) via conventional pushbuttons connected to the binary inputs.



Solar protection

The blinds are moved UP and DOWN via a pushbutton connected to the binary inputs. The third binary input provides the status for a window contact.

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Overview and selection tools

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Input/output devices

Type	N 501/01	N 502/02	UP 220/21	UP 220D31	UP 511S32	UP 562S32	UP 525S32
Application program ¹⁾	981701	981601	982303	982204	20DF22	20DE22	303122
Enclosure data							
Design	N	N	UP	UP	UP	UP	UP
Modular installation device for mounting on TH35 EN 60715 mounting rail.	■	■					
For installation in flush-mounting switch and socket boxes with Ø = 60 mm			■	■	■	■	■
Built-in device in mounting housing M 592/01 ²⁾					■	■	■
Dimensions							
• Width/Ø [mm] (1 MW = 18 mm)	8 MW	8 MW	Ø 42	Ø 42	48	48	48
• Height [mm]					50	50	50
• Depth [mm]			8.5	8.5	28	28	28
Display/control elements							
LED for status indication per input	■	■					
LED for status indication per output	■	■					
LED for operation/status display	■	■					
Pushbuttons for local operation on the device	■	■					
Power supply							
Electronics powered via an integrated power supply unit for supply voltage AC 230 V	■	■					
Bus-powered electronics			■	■	■	■	■
Bus-dependent operation possible	■	■ ³⁾					
Bus connection							
Integrated bus coupling units	■	■	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■	■	■
Bus connection via contact system to data rail	■	■					
Outputs							
Load output							
Floating relay contact		8 ⁴⁾			1	2	
Electrically interlocked relays (for reversing direction of rotation)	4						
Dimming aoutput							1
Load types							
Rated contact voltage, AC [V]	230	230			230	230	230
Rated contact current [A]	6	16			16	Σ 16 ⁵⁾	1
Protection							
Electronic protection of outputs against overload and short circuit							■
Inputs							
Max. cable length, unshielded, twisted [m]	100	100	10	10	10	10	10
For signal input (floating contact)			2 ⁶⁾⁷⁾	4 ⁶⁾⁷⁾	3	3	3
Determination of switching state by means of the voltage generated in the device			■	■	■	■	■
For voltage input AC/DC 12...230 V	8	8					

¹⁾ For current application programs, see www.siemens.com/gamma-td

²⁾ The M 592/01 mounting device must be ordered separately, see Chapter Combination devices

³⁾ Each input affects the output of the same name, adjustable as timer or impulse relay

⁴⁾ Except channel A

⁵⁾ The sum applies to both load outputs

⁶⁾ The inputs are mutually insulated from the base

⁷⁾ Inputs, alternatively can be used as outputs for controlling LEDs up to a maximum of 2 mA

Pushbutton interface

- Inputs / outputs each configurable for potential-free contacts or for control of an LED
- Generation of the sensing voltage for potential-free contacts
- For inserting into flush-mounting switch and socket boxes with Ø = 60 mm
- Inputs max. 10 m cable length, unshielded, twisted
- Input functions: Locking of inputs using blocking objects, Adjustable duration of long button press, Configurable contact type (NO contact/NC contact)
- Transmission parameters: Adjustable cyclic transmission, Configurable transmission in the event of bus voltage recovery
- Short/long button press can be evaluated
- Switching on/off/toggle
- Value transmission 8 Bit, 16 Bit
- Single button dimming
- 2-pushbutton dimming with stop telegram (4 bit)
- 1-/2-pushbutton shutter/blind control
- Scene store and call up scene: 8 Bit, in conjunction with scene module 1 Bit
- Pulse counting with/without limit value monitoring (8 bit, 16 bit, 32 bit)
- 1-pushbutton group control
- Bus-powered electronics
- Integrated bus coupling unit, bus connection via bus terminal



Range overview UP 220/..

Product Title	Stock no.	Product no.
KNX Pushbutton interface 2 x potential-free contact, output for LED control	5WG1220-2AB21	UP 220/21
KNX Pushbutton interface 4 x potential-free contact, output for LED control	5WG1220-2DB31	UP 220D31

Recommendation: LED light insert, for switches and pushbutton inserts, red, 1.5 V DC, 1 mA

N 502/02



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KNX Combi switching actuator 8 x AC 230 V, 16 A, 8 x binary inputs

- 8 inputs AC/DC 12...230 V
- 8 relay contact outputs
- Rated contact voltage AC 230 V
- Rated contact operating current 16 A, p.f. = 1
- Electronics power supply via an integrated power supply unit for AC 230 V
- Device functional even without bus connection or if bus voltage absent or bus communication interrupted or not yet activated
- Push button to switch between bus and direct mode
- Push button for each output to switch the output in direct mode via a toggling function by a short actuation and for changing the output mode between remote control relay and time switch relay by holding down the push button for some seconds
- Device preset at the factory for direct switching of an output through a toggling function via the input of the same name
- Selectable function for each input when using the Engineering Tool Software (ETS):
 - Switching status / binary value transmission
 - Switching, short / long operation
 - Single button dimming, single button sun protection control, 1-button group control (sequence control)
 - 1-bit scene control
 - 8-bit scene control, 8-bit value, edge-triggered, 8-bit value, short / long operation
 - 16-bit floating point value, edge-triggered, 16-bit value, short / long operation, 16-bit value, edge-triggered, 16-bit floating point value, short / long operation
- Selectable function for each pair of inputs:
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton shutter/blind control
- Selectable blocking / releasing of each input via a corresponding blocking object
- Sending of the input objects after a change of status
- Selectable logic operation (AND/OR) for one input with a further communication object and with variable start value of the logic operation at bus voltage recovery
- Setting by means of the ETS, whether all outputs are to be configured identically or individually
- Selectable mode for each output (normal mode, time switch mode)
- Optional addition of a night mode object for each output for time-limited switching On of the output (and hence the illumination) at night
- Variable On and Off delay times for each output
- Variable On period in night mode or in time switch mode
- Selectable warning signal prior to imminent switching-off by means of three-times short off and on switching (flashing) in night mode or in time switch mode
- Optional status object per output for status reporting
- Sending of status objects on request and/or automatically after a change
- Integrated 8-bit scene control and linking of each output with up to 8 scenes
- Selectable switching state for each output at mains or bus power failure as well as after bus or mains voltage recovery
- Integrated bus coupling unit with only half a standard bus load
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Data sheet	A6V10416148
Rated voltage	AC 230 V
Rated current	16 A
Number of channels	8
Number of inputs potentialfree	8
Dimensions (W x H x D)	144 x 90 x 60 mm
Dimension width (1 MW = 18 mm)	8 MW
Warranty	24 Months

Stock no.	Product no.
5WG1502-1AB02	N 502/02

KNX Combination blind actuator, 4 x AC 230 V, 6 A, 8 x binary inputs

N 501/01



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- 8 inputs for DC or AC in the range from 12 to 230 V
- 8 relay contact outputs locked in pairs against each other for controlling 4 x AC 230 V sunblind drives
- Contact rated voltage AC 230 V
- Contact rated current 6 A, p.f. = 1
- Electronics powered by a AC 230 V integrated power supply
- Device functional even without bus connection or if the bus communication fails
- Preset on delivery for direct output control for each blind button function via momentary contact switches connected to the inputs
- Key for switching between bus and direct mode
- Button for each relay contact output, for switching the output in direct mode
- Selectable function for each input when using the ETS:
 - Switching status, send binary value
 - Switching on leading edge, switching Short/Long
 - 1-pushbutton dimming, sunblind control, group control
 - 1-bit/8-bit scene control
 - 8-bit/16-bit value leading edge, Short/Long
 - 16-bit floating point value leading edge, Short/Long
- Or for each pair of inputs:
 - Acting directly on the corresponding outputs as blind button
 - 2-button dimming with stop telegram or with cyclical sending
 - 2-pushbutton sunblind control
- Selectable blocking of each input via a corresponding blocking object
- Sending of input objects after change
- Selectable cyclical input object sending
- Individual or shared configuration of actuator channels
- Communication objects for each blind channel for driving the sun protection into the end positions or for stopping the procedure and adjusting the blind slats in steps
- Communication objects for setting position of slats and blinds in percentage information
- Automatic opening of the blind slats to a preconfigured nominal setting after uninterrupted driving down of the blind from the top to the bottom end position, with integrated 1-bit scene control for storing and calling up (reproduction) of 2 interim blind and slat settings
- Integrated 1-bit/8-bit scene control, 8 scenes can be integrated per channel
- Optional "Sun" object for integration in a sunlight tracking control system
- Differentiation between automatic and manual mode and with automatic switchover from automatic to manual mode for the channel in question by pressing a bus button for manual control of the corresponding sun protection
- Manual mode taking precedence over automatic position commands
- Optional central command for each device or each channel for switching the relevant channels to automatic mode and driving the sun protection into the up or down end position
- Alarm: move to safety position, Locking in this position for as long as alarm is active
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Status objects for each channel for querying or for automatic sending of sun protection and slat settings as a percentage value
- Optional status objects for reporting that the up or down position has been reached
- Integrated bus coupling unit, Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail

Data sheet	A6V10416147
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	4
Number of inputs potentialfree	8
Dimensions (W x H x D)	144 x 90 x 60 mm
Dimension width (1 MW = 18 mm)	8 MW
Warranty	24 Months

Stock no.	Product no.
5WG1501-1AB01	N 501/01

UP 511S32



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KNX Switch actuator 1 x AC 230 V, 16 A

- One relay contact per output
- Rated contact operating voltage: AC 230 V
- Rated contact frequency: 50/60 Hz
- Rated contact current: 16 A
- Screw terminals for connection of untreated single-core conductors, stranded without conductor sleeve 0.5 to 4 mm², stranded with conductor sleeve 0.5 to 2.5 mm²
- 3 binary inputs for potential-free contacts, determination of switching status via voltage generated in the device
- Poll voltage of the inputs: approx. 5 V
- Max. 10 m length of connecting cables, preferably J-Y(St)Y, pre-assembled YY6x0.6
- Bus-powered electronics
- Integrated bus coupling unit
- Mounting in appliance boxes according to DIN 49073 or in mounting case M 592/01 (accessories)
- KNX Data Secure compatible
- Updateable with Siemens Firmware Download Tool
- Switching output optionally directly operable via input 1 or input 1 and 2
- Adjustable functions of switching output: status feedback, active status signalling function, adjustable as NO or NC contact, adjustable preferred position after download, adjustable preferred position in case of bus voltage failure and recovery, cyclical monitoring of switching output, adjustable switch-on and switch-off delay, staircase function, 8-bit scene control, logic operations, operating hours counting with limit value monitoring, disabling function or forced control, central switching function
- Adjustable functions of each input: switching, dimming, colour temperature control, solar protection control, sending values (1 byte, 2 byte, 3 byte, 6 byte), scene control, pair of inputs operation, controller extension (operating mode switchover, presence function, setpoint shift)
- Adjustable debounce time per input
- Adjustable locking of each input via locking object
- 8 logic functions (logic gate, value converter, disabling element, comparator, limit value switch)

Data sheet	A6V12632887
Rated current	16 A
Number of channels	1
Dimensions (W x H x D)	48 x 50 x 28 mm
Warranty	24 Months

		Stock no.	Product no.
		5WG1511-2SB32	UP 511S32

KNX Switch/solar protection actuator 2 x AC 230 V, Σ 16 A

UP 562S32



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- One relay contact per output
- Rated contact operating voltage: AC 230 V
- Rated contact frequency: 50/60 Hz
- Rated contact current: Σ 16 A
- Screw terminals for connection of untreated single-core conductors, stranded without conductor sleeve 0.5 to 4 mm², stranded with conductor sleeve 0.5 to 2.5 mm²
- 3 binary inputs for potential-free contacts, determination of switching status via voltage generated in the device
- Poll voltage of the inputs: approx. 5 V
- Max. 10 m length of connecting cables, preferably J-Y(St)Y, pre-assembled YY6x0.6
- Bus-powered electronics
- Integrated bus coupling unit
- Mounting in appliance boxes according to DIN 49073 or in mounting case M 592/01 (accessories)
- KNX Data Secure compatible
- Updateable with Siemens Firmware Download Tool
- Adjustable functions per switching output: status feedback, adjustable as NO or NC contact, cyclical monitoring, adjustable switch-on and switch-off delay, staircase function, scene control, logic operations, operating hours counting, disabling function or forced control, central switching function
- Adjustable functions of solar protection channel: adjustable operating modes: venetian blind with slats, shutter/awning, venting louver/roof window, direct movement to a position of the sunblind and the slats, status feedback, adjustable behaviour in case of alarm (wind, rain, frost), adjustable solar protection or heating/cooling automatic, scene control, disabling function, forced control
- Adjustable preferred position after download, in case of bus voltage failure and recovery
- Adjustable functions of each input: switching, dimming, colour temperature control, solar protection control, sending values, scene control, pair of inputs operation, controller extension (operating mode switchover, presence function, setpoint shift), adjustable debounce time, locking of each input
- 8 logic functions

Data sheet	A6V12632892
Rated current	16 A
Number of channels	2
Dimensions (W x H x D)	48 x 50 x 28 mm
Warranty	24 Months

	Stock no.	Product no.
	5WG1562-2SB32	UP 562S32

UP 525S32



Universal dimmer, 1-fold

- One output for switching and dimming resistive, inductive and capacitive loads
- Automatic or manual adjustment to leading edge or trailing edge control, depending on the type of load
- Electronic protection against open-circuit, short circuit and temperature rise
- Rated contact operating voltage: AC 230 V
- Rated contact frequency: 50/60 Hz
- Power rating: 1...200 W LEDs, 20...230 W conventional lamps
- Screw terminals for connection of untreated single-core conductors, stranded without conductor sleeve 0.5 to 4 mm², stranded with conductor sleeve 0.5 to 2.5 mm²
- 3 binary inputs for potential-free contacts, determination of switching status via voltage generated in the device
- Poll voltage of the inputs: approx. 5 V
- Max. 10 m length of connecting cables, preferably J-Y(St)Y, pre-assembled YY6x0.6
- Bus-powered electronics
- Integrated bus coupling unit
- Mounting in appliance boxes according to DIN 49073 or in mounting case M 592/01 (accessories)
- KNX Data Secure compatible
- Updateable with Siemens Firmware Download Tool
- Dimming output optionally directly operable via input 1 or input 1 and 2
- Adjustable functions of dimming output: status feedback, adjustable brightness limit values, adjustable dimming curves for optimising the dimming behaviour of lamps, adjustable switch-on and dimming behaviour, adjustable switch-on and switch-off delay, staircase function, scene control, logic operations, operating hours counting, disabling function or forced control, central function
- Message in case of short-circuit, overload/mains voltage failure and type of load
- Adjustable preferred behaviour after download, in case of bus voltage failure and recovery
- Adjustable functions of each input: switching, dimming, colour temperature control, solar protection control, sending values, scene control, pair of inputs operation, controller extension (operating mode switchover, presence function, setpoint shift)
- Adjustable debounce time per input
- Adjustable locking of each input via locking object
- 8 logic functions (logic gate, value converter, disabling element, comparator, limit value switch)

Data sheet

A6V12632898

Dimensions (W x H x D)

48 x 50 x 28 mm

Warranty

24 Months

Stock no.

Product no.

5WG1525-2SB32

UP 525S32

Accessories for UP 5..S32

M 592/01



Mounting case

- One mounting location for a flush-mounted actuator type UP 511S32, UP 562S32 or UP 525S32
- Separate wiring space and strain relief for function wiring
- Housing for mounting on DIN rail TH35 DIN EN 60715
- Housing with screw fastening for installation in cable ducts, under raised floors or for surface mounting under a ceiling
- Housing: plastic
- Type of protection: IP 20

Dimensions (W x H x D)

97 x 53 x 36 mm

Warranty

24 Months

Stock no.

Product no.

5WG1592-8AB01

M 592/01