

Solar protection, anti-glare protection, utilization of daylight



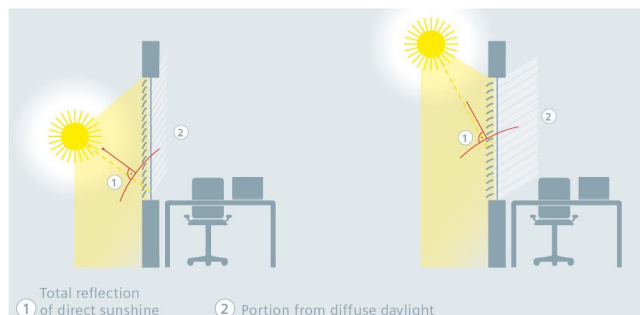
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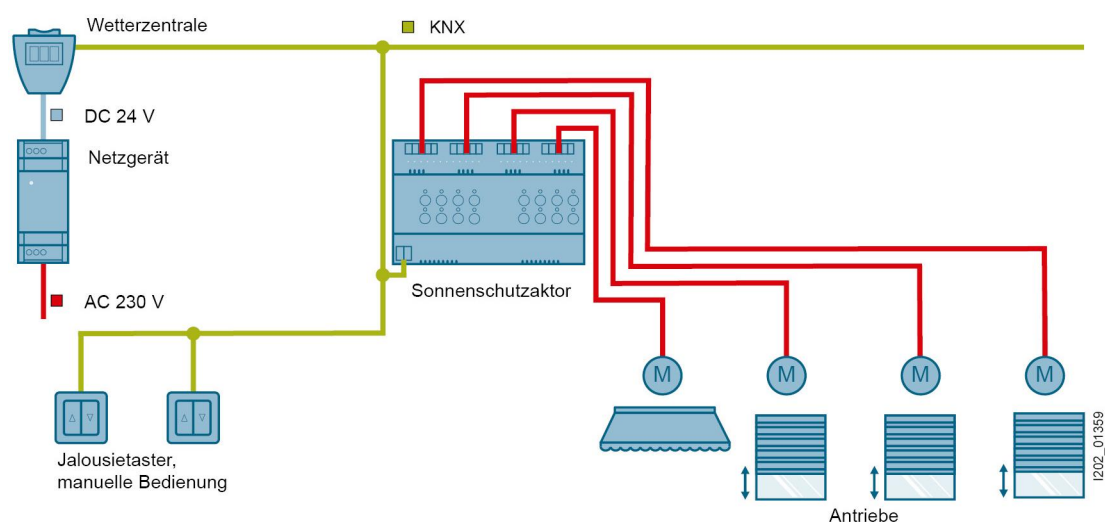
Overview and selection tools

Sunlight tracking control

With sunlight tracking control, the position of the sun is tracked so that the blind slats are not completely closed, but rather automatically adjusted to prevent the sun from shining directly into the room. The spacing between the blind slats still allows diffuse daylight to enter the room and contribute to ensuring glare-free room lighting while lowering electricity costs.



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Benefits

- Reduced energy consumption and costs for room lighting
- Optimum room climate
- Glare-free workplaces

You will need

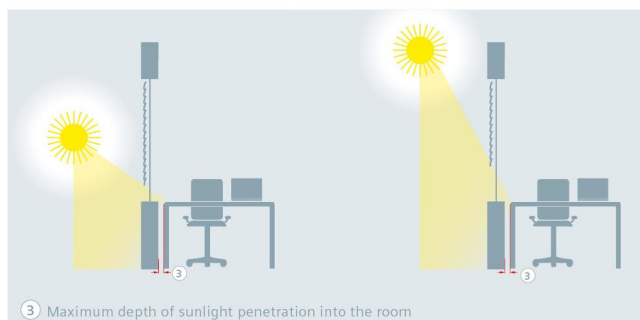
- Weather station AP 257/61 or AP 257/22
- Electronic power supply unit
- Sunblind actuator N 543
- Pushbutton, double UP 222/3
- Drives
- Bus coupling unit UP 117/12 (for pushbuttons)

Shadow tracking control

With shadow tracking control, sun protection is not lowered completely but only so far that the sun can still shine into the room for a certain distance (e.g. 50 cm), which can be set by adjustable parameters.

Benefits

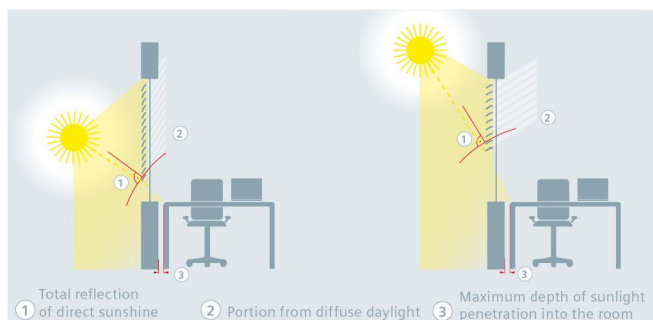
This enables room occupants to look outside through the lower part of the window, and plants arranged on the windowsill can still be exposed to direct sunlight, while the room occupants are protected. This creates an optimum room climate, ensures glare-free workplaces and lowers energy demand and costs for room lighting.



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Sunlight tracking control with shadow tracking control

The functions of sunlight tracking control and shadow tracking control can be performed with the same devices individually or in combination.



You will need

- Weather station AP 257/22
- Electronic power supply unit
- Solar protection actuator N 543
- Pushbutton, double UP 222/3
- Drive
- Bus coupling unit UP 117/12 (for pushbuttons)

Solar protection, anti-glare protection, utilization of daylight

Overview and selection tools

Anti-glare/sun protection actuators

	N 543D31	N 543D51	N 545D31	N 523/03	N 501/01	UP 520/03	UP 520/13	RS 520/23	RL 524D23	RL 521/23	UP 562S32
Type	N	N	N	N	N	UP	UP	RS	RL	RL	UP
Enclosure data											
Design	N	N	N	N	N	UP	UP	RS	RL	RL	UP
Modular installation devices for mounting on TH35 EN 60715 mounting rail	■	■	■	■	■						
For installation in flush-mounting switch and socket boxes with Ø = 60 mm						■	■				■
Modular installation device for mounting in AP 118 ¹⁾ automation module box, AP 641 ¹⁾ room control box ¹⁾ or M 590/01 ¹⁾ DIN-rail housing								■ ⁵⁾	■	■	
Built-in device in mounting housing M 592/01 ²⁾											■
10-pole BTI socket (BTI - Bus Transceiver Interface) for plugging of bus terminal devices with BTI connector						■					
Dimensions											
• Width/Ø [mm] (1 MW = 18 mm)	4 MW	8 MW	4 MW	4 MW	8 MW	71	50	50.2	47.8	47.8	48
• Height [mm]						71	50.9	35.5	86.5	86.5	50
• Depth [mm]						42	41.3	48.8	36.2	36.2	28
Mounting type											
Screw fixing						■					
Display/control elements											
LED for status indication per output	■	■	■	■	■						
Direct operation (local operation)	■	■	■	■	■						
Power supply											
Bus-powered electronics	■	■	■			■	■	■	■	■	■
Electronics powered via an integrated power supply unit. Supply voltage AC 230 V				■	■						
Bus connection											
Integrated bus coupling units	■	■	■	■	■	■	■	■	■	■	■
Bus connection via bus terminal	■	■	■	■	■	■	■	■	■	■	■
Bus connection via contact system to data rail				■	■						
Outputs											
Load output											
Number of channels (one UP and one DOWN each)	4	8	4	4 ³⁾	4 ³⁾	1	1	1	2	2	1
Electrically interlocked relays (for reversing direction of rotation)	■	■	■	■	■	■	■	■	■	■	
Contact rated voltage											
• AC 230 V/50 Hz	■	■		■	■	■	■	■		■	■
• DC 24 V			■						■		
Contact rated current [A]	6	6	6 DC	6	6	6	6	6	6 DC	6	Σ 16 ⁴⁾
Inputs											
Max. cable length, unshielded, twisted [m]					100						10

¹⁾ The AP 641 room control box, AP 118 automation module box or DIN-rail housing M 590/01 must be ordered separately, see Chapter Quick-assembly system - Room control box - enclosure

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

³⁾ 2 floating

⁴⁾ The sum applies to both load outputs

⁵⁾ Only for installation in AP 118 automation module box and AP 641 room control box.

... Continuation of the table

Type	N 543D31	N 543D51	N 545D31	N 523/03	N 501/01	UP 520/03	UP 520/13	RS 520/23	RL 524D23	RL 521/23	UP 562S32
	9A0B01	9A0C01	9A1A04	980183	981701	982A01	982A01	982A01	9A0D04	982B01	20DE22
Application program¹⁾											
Output functions											
Max. number of group addresses	2000	2000	2000	100	220	120	120	120	2000	120	1600
Max. number of assignments	2000	2000	2000	100	220	120	120	120	2000	120	1600
Configurable behavior in the event of a bus voltage failure	■	■	■		■	■	■	■	■	■	■
Configurable behavior in the event of a bus voltage recovery	■	■	■		■	■	■	■	■	■	■
Configurable behavior in the event of a system voltage recovery					■						
Operating mode											
Automatic mode for sunlight tracking control	■	■	■		■	■	■	■	■	■	■
Manual mode	■	■	■		■	■	■	■	■	■	■
Standard mode	■	■	■	■	■	■	■	■	■	■	■
Status											
Transmitting status per channel	■	■	■	■	■	■	■	■	■	■	■
Indication of direct operation with status object	■	■	■		■				■		
Status position of sun protection, 8-bit	■	■	■	■	■	■	■	■	■	■	■
Status position of slats, 8-bit	■	■	■		■	■	■	■	■	■	■
Scene control											
Integrated 1-bit scene control	■	■	■	■	■	■	■	■	■	■	
Integrated 8-bit scene control	■	■	■		■	■	■	■	■	■	■
Scenes to be integrated per channel	8	8	8	2	8	8	8	8	8	8	64
Shutter/blind control											
Travel lock (e. g. for cleaning the outer shutter/blinds)	■	■	■	■	■	■	■	■	■	■	■
Separate raising/lowering protection	■	■	■	■	■				■	■	
Alarm											
• Move to safety position	■	■	■	■	■	■	■	■	■	■	■
• Locking in this position for as long as alarm is active	■	■	■	■	■	■	■	■	■	■	■
• Alarm check, wire break, alarm delayed	■	■	■	■	■	■	■	■	■	■	■
• Channels single lockable during alarm	■	■	■	■	■	■	■	■	■	■	■
Individual configuration of actuator channels	■	■	■	■	■	■	■	■	■	■	■
Shared configuration of actuator channels				■	■						
Adaptation of objects and functions to drive type	■	■	■	■	■	■	■	■	■	■	■
Delay time adjustable	■	■	■						■		
Suitable for integration in a sunlight tracking control system	■	■	■		■	■	■	■	■	■	■
End position detection	■	■	■			■	■	■	■	■	
Sun protection control (UP/DOWN)											
Using position data (8-bit value)	■	■	■		■	■	■	■	■	■	■
Travel to end position, stopping, stepwise adjustment	■	■	■	■	■	■	■	■	■	■	■
Slat control (OPEN/CLOSE)											
Using position data (8-bit value)	■	■	■		■	■	■	■	■	■	■
Travel to end position, stopping, stepwise adjustment	■	■	■		■	■	■	■	■	■	■
Step adjustable ²⁾	n	n	n		n	n	n	n	n	n	

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

²⁾ n = number, % = %-value

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Overview and selection tools

Load data for shutter/blind actuators per channel

Type	N 543D31 N 543D51	N 545D31	N 501/01	N 523/03	RL 521/23	RL 524D23	UP 520/03 UP520/13 RS 520/23	UP 562S32
Contact current								
Rated current [A]	6 (AC)	6 (DC)	6 (AC)	6 (AC)	6 (AC)	6 (DC)	6 (AC)	∑ 16 (AC) ¹⁾
AC3 operation (p.f. = 0.45)[VA]			200	200	500		500	∑ 1380 (AC) ¹⁾
Contact voltage								
Rated voltage [V]	AC 230	DC 24	AC 230	AC 230	AC 230	DC 24	AC 230	AC 230
Service life								
Mechanical service life Switching operations in millions	50	10	20	20	10	10	10	3
Electrical service life Switching operations in millions	0,1	0,05	0.1	0.1	0.1	0,05	0.1	
Power loss								
Maximum power loss per device at rated power [W]	2,8 / 5,5	3	7	3	5	3	3	
Switching capacities/load types, loads								
Resistive load [W]	1380	144	1380	1380	1380	144	1380	∑ 2500 ¹⁾
Minimum switching capacity [V/mA]	5/10	5/100	6/10	6/10	24/10	5/100	24/10	
DC switching capacity [V/A]	30/6	24/6	24/6	24/6	30/10	24/6	30/10	

¹⁾ The sum applies to both load outputs

For complete technical specifications, see: www.siemens.com/gamma-td

Solar protection actuator

N 543D..1



- For control of drives with a motor for AC 230 V
 - Electrically interlocked relays to reverse the direction of rotation
 - Rated contact operating voltage AC 230 V
 - Rated contact frequency: 50/60 Hz
 - Rated contact current: 6 A
 - Electronics for detection of the actuation of an electromechanical and electronic limit switches
 - Automatic travel time determination via current measurement
 - Per actuator channel direct operation function on the device for driving solar protection up/down, stop command and slat adjustment
 - Two status LEDs per actuator channel to indicate the direction of travel and an override
 - Button on the device front for deactivation of the direct mode operation and LED to indicate activation direct mode operation
 - Maintenance-free terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - Two terminals per actuator channel for motor connection (up, down)
 - At least one phase connection terminal for two actuator channel each
 - Bus-powered electronics
 - Housing: plastic, color RAL 7035 (light grey), N-system
 - DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
 - Type of protection: IP 20
-
- Selectable operation mode blinds, shutter/awning, ventilation flap
 - Per actuator channel motion commands for moving and stopping the solar protection or for adjustment of blind slats
 - Per actuator channel direct movement to a position of the sunblind and the blind slats
 - Per actuator channel central movement of the solar protection in manual mode and automatic mode and delay time for Up / Down
 - Distinction between automatic and manual mode (position of the sunblind and blind slats) and adjustable behaviour in sunshine
 - Programming and recalling preset positions 1-4 and 8-bit scene control
 - Adjustable behaviour in case of override (wind, rain, frost, lock, forced position, forced control, range limitation)
 - Adjustable reverse pause time and delay times of the drives
 - Per actuator channel configurable state on bus voltage failure and start value on bus voltage recovery
 - Adjustable transmission of status objects (direct operation, automatic operation, curtain and slat position, travel, calibration travel time to end positions, overriding) on request, cyclically and/or upon change
 - Adjustable transmission time of the status objects after bus voltage recovery and transmission delay between the status objects
 - Surveillance of device function

Rated current

6 A

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Anti-glare/solar protection actuators

N 543D31



KNX Solar protection actuator, 4 x AC 230 V, 6 A, with end position detection

- DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
- all functions as N 543D..1

Data sheet	A6V11986596
Dimensions (W x H x D)	72 x 90 x 60 mm
Dimension width (1 MW = 18 mm)	4 MW

N 543D51



KNX Solar protection actuator, 8 x AC 230 V, 6 A, with end position detection

- DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
- all functions as N 543D..1

Data sheet	A6V11986596
Dimensions (W x H x D)	144 x 90 x 60 mm
Dimension width (1 MW = 18 mm)	8 MW

6

Stock no.	Product no.
5WG1543-1DB31	N 543D31

Stock no.	Product no.
5WG1543-1DB51	N 543D51

KNX Solar protection actuator, 4 x DC 24 V, 6 A

N 545D31



- For control of drives with a DC motor for DC 24 V
 - Two relays per output for polarity switching of the output voltage
 - Rated contact operating voltage DC 24 V
 - Rated contact current: 6 A
 - Electronics for detection of the actuation of an electromechanical and electronic limit switches
 - Automatic travel time determination via current detection
 - Per actuator channel direct operation function on the device for driving solar protection up/down, stop command and slat adjustment
 - Two status LEDs per actuator channel to indicate the direction of travel and an override
 - Button on the device front for deactivation of the direct mode operation and LED to indicate activation direct mode operation
 - Maintenance-free terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - Two terminals per actuator channel for motor connection (up, down)
 - Two terminals on the device to connect the DC 24 V (+/-) to supply the load circuits
 - Bus-powered electronics
 - Housing: plastic, color RAL 7035 (light grey), N-system
 - DIN rail mounted device for mounting on rail TH35 according to DIN EN 60715
 - Type of protection: IP 20
-
- Selectable operation mode blinds, shutter/awning, ventilation flap
 - Per actuator channel motion commands for moving and stopping the solar protection or for adjustment of blind slats
 - Per actuator channel direct movement to a position of the sunblind and the blind slats
 - Per actuator channel central movement of the solar protection in manual mode and automatic mode and delay time for Up / Down
 - Distinction between automatic and manual mode (position of the sunblind and blind slats) and adjustable behaviour in sunshine
 - Programming and recalling preset positions 1-4 and 8-bit scene control
 - Adjustable behaviour in case of override (wind, rain, frost, lock, forced position, forced control, range limitation)
 - Adjustable reverse pause time and delay times of the drives
 - Per actuator channel configurable state on bus voltage failure and start value on bus voltage recovery
 - Adjustable transmission of status objects (direct operation, automatic operation, curtain and slat position, travel, calibration travel time to end positions, overriding) on request, cyclically and/or upon change
 - Adjustable transmission time of the status objects after bus voltage recovery and transmission delay between the status objects
 - Surveillance of device function

Data sheet	A6V12883338
Rated current	6 A
Number of channels	4
Dimensions (W x H x D)	72 x 90 x 61 mm
Dimension width (1 MW = 18 mm)	4 MW
Warranty	24 Months

Stock no.	Product no.
5WG1545-1DB31	N 545D31

N 568/81



KNX Room actuator 24-fold, 24 x AC 230 V, 10 A, multifunctional

- One relay contact per output as switching element
 - For controlling drives with AC motor for AC 230 V or DC motor for DC 30 V
 - For controlling electrothermal/electromotive actuators for AC 230 V
 - For controlling ventilation motors via up to 3 stages
 - Rated contact operating voltage: AC 230 V
 - Rated contact frequency: 50/60 Hz
 - Rated contact current: 10 A
 - Rated contact operating voltage: DC 30 V
 - Screw terminals for connecting stranded wires or single-wire conductors with a conductor cross-section of 0.2 to 5.2 mm²
 - Direct operation per channel on the device for activating the switching output, moving the solar protection up/down, stop command, slat adjustment, opening/closing the valve, setting the fan speed
 - Status LEDs on the device for each channel to display the switching status, moving time up/down and upper/lower end position, valve open/closed, fan level
 - Button on the front of the device for activating/deactivating direct operation and LED for status display
 - Bus-powered electronics
 - Housing: plastic, color light grey, N dimension
 - DIN rail mounting device for mounting on TH35 DIN EN 60715 mounting rail
 - Protection class: IP 20
 - Max. width 12 MU
- Selectable operating mode (24 channel switching output/12 solar protection channels AC 230 V/2 solar protection channels DC 30 V/24 channel valve control/6 fan controls)
 - One switching/status object per output
 - Adjustable relay operating mode, switch-on/switch-off delay, staircase function, flashing, central function, scene control, logic operations, forced control, operating hours counting
 - Selectable blind/shutter operating mode
 - Per channel move commands, stop shading/slat adjustment
 - Per channel direct movement to a position of the sunblind/blind slats
 - Per channel central movement, scene control
 - Differentiation between manual/automatic operation with automatic sunshine function
 - Adjustable behavior for safety functions
 - Per fan control adjustable 3 fan stages, fan operating mode, switch-off delay, start behavior, forced control, automatic function, control value monitoring
 - Per valve control selectable 2-/3-point valve
 - Per valve control, adjustable heating/cooling operating mode, direction of valve control, control via two-point-/continuous control, control value monitoring
 - Per valve control, parameterizable valve flushing
 - Surveillance of device function

Data sheet

A6V13469668

Dimensions (W x H x D)

216 × 90 × 64 mm

Warranty

24 Months

Stock no.

Product no.

5WG1568-1A881

N 568/81

KNX Roller shutter actuator, 4 x AC 230 V, 6 A

N 523/03

- Rated contact current 6 A
- LED for status indication per output
- Direct operation (local operation)
- Electrically interlocked relays (for reversing direction of rotation)
- Transmitting status per channel
- Status Position Sonnenschutz 8 Bit
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Alarm: Move to safety position, locking in this position for as long as alarm is active
- Individual or shared configuration of actuator channels
- Adaptation of objects and functions to drive type
- Sun protection control (up/down): travel to end position, stopping, stepwise adjustment
- Integrated bus coupling units
- Bus connection via bus terminal or contact system to data rail
- Modular installation devices for mounting on TH35 EN 60715 mounting rail
- 4 channels (one up and one down each)
- Rated contact voltage AC 230 V, 50 Hz
- Integrated 1-bit scene control, 2 Scenes to be integrated per channel
- Integrated power supply unit for the electronics, connected to AC 230 V
- Separate raising/lowering protection



6

Data sheet	A6V10416172
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	4
Dimensions (W x H x D)	72 x 90 x 60 mm
Dimension width (1 MW = 18 mm)	4 MW
Warranty	24 Months

Stock no.	Product no.
5WG1523-1AB03	N 523/03

Solar protection, anti-glare protection, utilization of daylight

Anti-glare/solar protection actuators

N 501/01



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

- 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

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

UP 562S32



- 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

Accessories for UP 5..S32

Mounting case

M 592/01



- 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

UP 520/..3



Shutter Blind Actuator, 1 x AC 230 V, 6 A

- Electrically interlocked relays (drive protection)
- End position detection
- Screwless terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5...2.5mm²
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- For insertion in flush-mounting switch and socket boxes 60 mm in diameter and 60 mm deep
- Configurable behavior in the event of a bus voltage failure and recovery
- Automatic mode for sunlight tracking control
- Manual or standard mode
- Status: transmitting status per channel, status position of sun protection 8-bit, status position of slats 8-bit
- Integrated 1-/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual or shared configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- Using position data (8-bit value) travel to end position, stopping, stepwise adjustment sun protection control (up/down) and Slat control (open/closed)

Range overview UP 520/..3

Product Title	Dimensions (WxHxD) [mm]	Stock no.	Product no.
KNX Shutter Blind Actuator, 1 x AC 230 V, 6 A, with mounting frame and BTI interface	71 x 71 x 42	5WG1520-2AB03	UP 520/03
KNX Shutter Blind Actuator UP, 1 x AC 230 V, 6 A	50 x 50.9 x 41.3	5WG1520-2AB13	UP 520/13

RS 520/23, RL 521/23: The AP 641 room control box and AP 118 automation module box must be ordered separately. See Chapter Quick-Assembly System, Room Control Box.

KNX Shutter Blind Actuator, 2 x AC 230 V, 6 A

RL 521/23



- 2 channels
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- Type of protection: IP 20
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- For mounting in AP 118 automation module box or AP 641 room control box
- Communication objects per actuator channel for moving the sun protection to limit positions or to stop travel and for step-by-step adjustment of blind slats
- Communication objects for moving the sun protection and adjusting blind slats directly to a new position by positioning commands as percentage values
- Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from upper to lower limit position
- Integrated 1-bit scene control for programming/recalling of 2 favored positions of blind and slats
- Integrated 8-bit scene control and assignment of up to 8 scenes per channel
- An optional object "Sunshine" for activation/deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
- Differentiation between automatic and manual mode and with automatic switch-over from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
- Priority of manual mode over automatic positioning commands
- Optional central command object for switching-over of all actuator channels to automatic mode and for moving the sun blinds to the upper or lower limit position
- Alarm object wind/rain/frost per channel for moving the sun protection to the configured safety position in the event of an alarm and with blocking of travel to another position as long as alarm pending
- Travel blocking object per device or per channel for blocking the sun protection in its current position (e.g. during cleaning of an outdoor Venetian blind)
- Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage values
- Optional status objects for signalling that the lower or upper limit position has been reached

The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Data sheet	A6V10416169
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	2
Dimensions (W x H x D)	48 x 87 x 36 mm
Warranty	24 Months

Stock no.	Product no.
5WG1521-4AB23	RL 521/23

RL 524D23



KNX Solar protection actuator 2 x DC 24 V, 6 A

- For control of drives with a DC motor for DC 24 V
 - Two relays per output for polarity switching of the output voltage
 - Rated contact operating voltage DC 24 V
 - Rated contact current: 6 A
 - Electronics for detection of the actuation of an electromechanical and electronic limit switches
 - Automatic travel time determination via current detection
 - Maintenance-free terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
 - Two terminals per actuator channel for motor connection (up, down)
 - Two terminals on the device to connect the DC 24 V (+/-) to supply the load circuits
 - Bus-powered electronics
 - Housing: plastic
 - As built-in device for mounting in a separately to be ordered Control Module Box AP 118
 - Type of protection: IP 20
-
- Selectable operation mode blinds, shutter/awning, ventilation flap
 - Per actuator channel motion commands for moving and stopping the solar protection or for adjustment of blind slats
 - Per actuator channel direct movement to a position of the sunblind and the blind slats
 - Per actuator channel central movement of the solar protection in manual mode and automatic mode and delay time for Up / Down
 - Distinction between automatic and manual mode (position of the sunblind and blind slats) and adjustable behaviour in sunshine
 - Programming and recalling preset positions 1-4 and 8-bit scene control
 - Adjustable behaviour in case of override (wind, rain, frost, lock, forced position, forced control, range limitation)
 - Adjustable reverse pause time and delay times of the drives
 - Per actuator channel configurable state on bus voltage failure and start value on bus voltage recovery
 - Adjustable transmission of status objects (automatic operation, curtain and slat position, travel, calibration travel time to end positions, overriding) on request, cyclically and/or upon change
 - Adjustable transmission time of the status objects after bus voltage recovery and transmission delay between the status objects
 - Surveillance of device function

The automation module box AP 118 must be ordered separately. See chapter Modular installation system, Room automation box - Housing.

Data sheet	A6V12883340
Rated current	6 A
Number of channels	2
Dimensions (W x H x D)	48 x 87 x 36 mm
Warranty	24 Months

	Stock no.	Product no.
	5WG1524-4DB23	RL 524D23

KNX Shutter Blind Actuator, 1 x AC 120 V, 6 A

JB 520C23



- 1 channel
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- For control of sun protection, door or window drive with a motor for AC 120 V and electromechanical or electronic limit switches per actuator channel
- Relay contacts rated for nominal voltage AC 120 V, 6 A (resistive load)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Configurable behavior in the event of a bus voltage failure/recovery
- Automatic mode for sunlight tracking control
- Manual and standard mode
- Status: Transmitting status per channel, status position of sun protection, 8-bit, status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- End position detection
- Using position data (8-bit value) for sun protection control (up/down) and slat control (open/closed)

Data sheet	A6V11786009
Dimensions (W x H x D)	70 x 90 x 44.6 mm
Warranty	24 Months

Stock no.	Product no.
5WG1520-4CB23	JB 520C23

JB 521C23



KNX Shutter Blind Actuator, 2 x AC 120 V, 6 A

- 2 channels
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling units, bus connection via bus terminal
- Type of protection: IP 20
- For separate control of a sun protection, door or window drive with a motor for AC 120 V and electromechanical or electronic limit switches per actuator channel
- Relay contacts rated for AC 120 V, 6 A (resistive load)
- As built-in device with 1/2 inch thread connection for mounting to or in a UL/NEMA Junction Box with feedthrough of the function wires through the 1/2 inch threaded connector
- Communication objects per actuator channel for moving the sun protection to limit positions or to stop travel and for step-by-step adjustment of blind slats
- Communication objects for moving the sun protection and adjusting blind slats directly to a new position by positioning commands as percentage values
- Automatic opening of blind slats up to a set position after the blinds have been lowered without any stop from upper to lower limit position
- Integrated 1-bit scene control for programming/recalling of 2 favored positions of blind and slats
- Integrated 8-bit scene control and assignment of up to 8 scenes per channel
- An optional object "Sunshine" for activation/deactivation of sunlight tracking of the slats for shading with greatest possible daylight component
- Differentiation between automatic and manual mode and with automatic switch-over from automatic to manual mode of the respective actuator channel on activation of a bus pushbutton for manual control of the sun blind
- Priority of manual mode over automatic positioning commands
- Optional central command object for switching-over of all actuator channels to automatic mode and for moving the sun blinds to the upper or lower limit position
- Alarm object wind/rain/frost per channel for moving the sun protection to the configured safety position in the event of an alarm and with blocking of travel to another position as long as alarm pending
- Travel blocking object per device or per channel for blocking the sun protection in its current position (e.g. during cleaning of an outdoor Venetian blind)
- Status objects per actuator channel for query or automatic transmission of sun blind and slat position as percentage values
- Optional status objects for signalling that the lower or upper limit position has been reached

Data sheet	A6V11786010
Dimensions (W x H x D)	70 x 90 x 44.6 mm
Warranty	24 Months

Stock no.	Product no.
5WG1521-4CB23	JB 521C23

KNX Shutter Blind Actuator RS, 1 x AC 230 V, 6 A

RS 520/23

- 1 channel
- Electrically interlocked relays to reverse the direction of rotation
- Integrated electronics for detection of the actuation of an electromechanical limit switch and with auto-calibration of the travel time from one limit switch to the other
- Bus-powered electronics
- Integrated bus coupling unit, Bus connection via bus terminal block
- Type of protection: IP 20
- For the separate control per actuator channel of a sun protection, damper, door or window drive with a motor for AC 230 V and electromechanical limit switches
- Screw-less terminals for connection and through-wiring of untreated single-core, stranded or multi-core conductors, 0.5 ... 2.5 mm²
- With bus connection module
- Modular installation device for mounting in AP 118 automation module box or AP 641 room control box
- Configurable behavior in the event of a bus voltage failure/recovery
- Automatic mode for sunlight tracking control
- Manual and standard mode
- Status: Transmitting status per channel, status position of sun protection, 8-bit, status position of slats, 8-bit
- Integrated 1-bit/8-bit scene control
- 8 scenes to be integrated per channel
- Travel lock (e. g. for cleaning the outer shutter/blinds)
- Separate raising/lowering protection
- Alarm (Wind, Rain, Frost): Move to safety position, locking in this position for as long as alarm is active
- Individual configuration of actuator channels
- Adaptation of objects and functions to drive type
- Suitable for integration in a sunlight tracking control system
- End position detection
- Using position data (8-bit value) for sun protection control (up/down) and slat control (open/closed)



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The AP 641 room control box and AP 118 automation module box must be ordered separately.
See chapter Modular Installation System - Room control box - Module boxes.

Data sheet	A6V10416164
Rated voltage	AC 230 V
Rated current	6 A
Number of channels	1
Dimensions (W x H x D)	50.2 x 48.8 x 35.5 mm
Warranty	24 Months

Stock no.	Product no.
5WG1520-2AB23	RS 520/23

Solar protection, anti-glare protection, utilization of daylight

Central weather/solar protection systems

AP 257/..2



Weather-/sun station

- Receiver for GPS time signal
- Input the assembly location by selecting country and city or by stating the GPS longitude/latitude coordinates
- Transmission and receipt of date and time over bus
- Transmission of all measured values via bus
- Functions:
 - Monitoring of all measured values up to 3 limit values each
 - Sensor monitoring
 - Sunlight tracking control
 - Shadow outline tracking
 - Central command for activation/deactivation of sun protection at the start and end of sunshine
 - 4 AND operations
 - 4 OR operations
 - 8 OR operations for alarm/fault indications
 - Blocking function for window cleaning tasks
 - Safety/alarm objects
- LED for the display of GPS reception
- Heated sensor for measuring wind speed without mechanically moved parts, measuring range at least 0...35 m/s
- Brightness sensor, measuring range min. 0...150 klx
- Dusk detection, measuring range min. 0...1000 lx
- Outdoor temperature sensor, measuring range min. -35...+80 °C
- Integrated bus coupling units
- Bus connection via bus terminal

Data sheet

A6V10416520

Range overview AP 257/..2

Product Title	Dimensions (WxHxD) [mm]	Stock no.	Product no.
KNX Weather center (GPS), 8 facade sectors, sun tracking	96 x 77 x 118	5WG1257-3AB22	AP 257/22

AP 257/51



KNX Weather station

- Sensor for measuring wind speed, measuring range 2-30 m/s
- Three independent brightness sensors, measuring range 1-100 k Lux
- Consideration of up to two external brightness sensors
- Outdoor temperature sensor, measuring range -30 ... +60°C
- Transmission of all measurement readings via the bus
- Monitoring of all measurement readings
- Consideration of the alignment of up to 3 facades and automatic activation / deactivation of the solar protection of a facade during the time in which the sun shines on the respective facade
- Safety alarm for deactivating the solar protection, initiated by an external safety object or by logical AND/ OR operations of the measured weather data
- 4 threshold switches, independent of the weather data, each with 2 output objects
- 6 logical AND, OR or XOR operations, independent of the whether data, of respectively up to 4 input objects and each with 2 output objects
- Integrated bus coupling unit, bus connection via a bus terminal block
- As a compact unit for mast or wall mounting, including mast fixture for diameter 48-60 mm

Data sheet

A6V11418967

Dimensions (W x H x D)

121 x 108 x 227 mm

Warranty

24 Months

Product Title	Dimensions (WxHxD) [mm]	Stock no.	Product no.
KNX Weather center (GPS), 8 facade sectors, sun tracking	96 x 77 x 118	5WG1257-3AB51	AP 257/51

KNX Weather station

AP 257/61



- Sensor for measuring wind speed, measuring range 2-30 m/s
- Three independent brightness sensors, measuring range 1-100000 Lux
- Consideration of up to two external brightness sensors
- Outdoor temperature sensor, measuring range -30 ... +60°C
- Heated precipitation sensor
- Transmission of date and time via the bus
- Transmission of GPS position via the bus
- Transmission of all measurement readings via the bus
- Monitoring of all measurement readings
- Input of the geographical location of the installation site via the entry of longitude and latitude or automatic detection via GPS
- Calculation and transmission of the angle data (azimuth and elevation) for current position of the sun
- Consideration of the alignment of up to 8 facades and automatic activation / deactivation of the solar protection of a facade during the time in which the sun shines on the respective facade
- Sun tracking control of the slats position for solar protection, so that no direct sunshine, but as much diffuse daylight as possible reaches the room
- Safety alarm for deactivating the solar protection, initiated by an external safety object or by logical AND/ OR operations of the measured weather data
- 4 threshold switches, independant of the weather data, each with 2 output objects
- 6 logical AND, OR or XOR operations, independant of the weather data, of respectively up to 4 input objects and each with 2 output objects
- External power supply of the heating for the precipitation sensor via 24 V DC, 210 mA
- Feed of the additional auxiliary power supply via the white / yellow twisted pair of the bus cable
- Integrated bus coupling unit, bus connection via a bus terminal block
- Compact unit for mast or wall mounting, including mast fixture for diameter 48-60 mm

Data sheet	A6V11418967
Dimensions (W x H x D)	121 x 108 x 227 mm
Warranty	24 Months

Stock no.	Product no.
5WG1257-3AB61	AP 257/61

