

Switch/dim actuator N 526/02  
3 x 230 V AC / 6 A

5WG1 526-1AB02

## Product and Applications Description



The switch/dim actuator N 526/02 is a DIN rail mounted device in N-system dimensions which controls three dimmable electronic ballasts (DIMM- EVG) for fluorescent lamps via their 1-10 V DC control inputs. In addition, three switch contacts are available for switching the fluorescent lamps on and off directly. Three brightness sensors can be connected directly to the device N 526/02 for constant light control. The length of the installation cable between the brightness sensors and the N 526/02 may not exceed 100 m. The sensors are connected via a three-core cable, whereby one core is used as a power supply for the sensor electronics.

If the device is operated with a brightness sensor, a calibration can be carried out [see brightness sensor 5WG1 255-4AB01 for description).

If the constant light control function is not implemented and no brightness sensors have been connected, the N 526/02 can also be used purely as a switch/dim actuator. The switch/dim actuator electronics is supplied independently of the EIB bus voltage via an integrated power supply unit which is linked internally with terminals L3 and N. It is therefore also possible to switch the fluorescent lamps on and off independently of the EIB, if the EIB has not yet been installed or a relevant application program has not yet been loaded. One push button per switch output is available on the front plate of the device for local operation. The switch output can be switched on or off by pressing the push button briefly [TOGGLE function]. A long push button action can start the calibration of the corresponding brightness sensor for the respective output. The switching state of the three switch contacts is displayed via three LEDs on the front plate of the device.

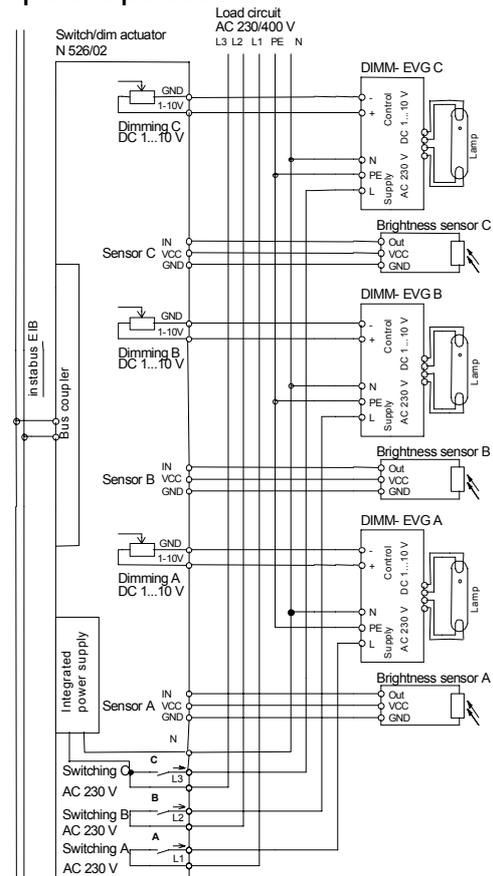
Several DIMM- EVG electronic ballasts per output can be controlled with one switch/dim actuator. The number is limited by the switching or control capacity of the outputs of the N 526/02.

## Application Programs

### 20 A3 Switch/dim actuator 905303

- 3-fold switch/dim actuator for switching ON/OFF, dimming, setting values and constant light control
- Constant light control and switching ON/OFF possible without dependence on the bus
- Switching possibility on bus voltage failure
- Switching possibility on bus voltage recovery
- Status interrogation possible
- Initial value can be parameterised
- "Night mode" can be set via local push buttons
- "Cleaning mode" possible via adjustable time periods

## Example of Operation



**Note:** Co-phasal outer conductors of a network can be connected to terminals L1, L2, L3 according to diagram 1, A1 instead of the various outer conductors L1, L2, L3.

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## Installation Instructions

- The device may be used for permanent interior installations in dry locations within distribution boards or small casings with DIN rail EN 60715-TH35-7,5.



### WARNING

- The device must be mounted and commissioned by an authorised electrician.
- When connecting the device, it is important to ensure that the device can be isolated, particularly when connecting several current paths.
- The prevailing safety and accident regulations must be observed.
- The device must not be opened.
- For planning and construction of electric installations, the relevant guidelines, regulations and standards of the respective country are to be considered.

## Technical Specifications

### Power supply

- Bus voltage: via the bus line
- N 526/02 electronics: integrated power supply unit (230 V AV +10% / -15%) which is supplied via terminals L3 and N.

### Inputs

- Number: 3 (for brightness sensor 5WG1 255-4AB01 or 5WG1 255-4AB02)
  - Connection of a brightness sensor via a three-core cable with a maximum length of 100 m; the power supply of the sensor electronics is also carried out via this cable

### Outputs

- 3 switch outputs
  - rated voltage: AC 230 V, 50 ... 60 Hz
  - rated current: 6 A (resistive load)
- 3 control voltage outputs (1-10 V DC)

### Switching capacity of an output at AC 230 V

- Osram Quicktronic® dimmable single lamp for 1x58 W  
FL: max. 20
- Osram Quicktronic® dimmable single lamp for 1x36 W  
FL: max. 30
- Osram Quicktronic® dimmable twin lamp for 2x58 W  
FL: max. 10
- Osram Quicktronic® dimmable twin lamp for 2x36 W  
FL: max. 15

### Control voltage

- DC 1 ... 10 V (from DIMM- EVG)

### Control power

- max. 50 Siemens DIMM- EVG

### Operating elements

- 1 programming button for toggling between normal mode/addressing mode
- 3 buttons for local operation of the switch/dim actuator, independently of EIB

### Display elements

- 1 red LED: for checking the bus voltage and for displaying normal mode/addressing mode
- 3 red LEDs: for displaying the switching state of the switch outputs
- 1 green LED for displaying the operating voltage

### Connections

- Screw terminals
  - Insulation strip length 9 ... 10 mm
  - 2 x 0.5...2.5 mm<sup>2</sup> single-core or 2 x 0.5...1.5 mm<sup>2</sup> finely-stranded with connector sleeve
- Bus line: screwless bus terminal  
0.6 ... 0.8 mm Ø single-core
- Cable for connecting the brightness sensor: JY(St)Y 2x2x0.8 (should be laid separately from the 230 V cables). VDE 0100 T520 should be observed.
- Electronic ballast control circuit: control cable in accordance with the data from the manufacturer of the electronic ballast. VDE 0100 T520 should be observed.

### Mechanical data

- Housing: plastic
- Colour of housing: light grey
- Dimensions: DIN rail mounted device in N-system dimensions, width = 6 modules (1 module = 18 mm)
- Weight: approx. 405g
- Fire load: approx. 5300kJ ±10%
- Installation: clip-on mounting onto DIN rail  
DIN EN 50022-35 x 7.5

### Electrical safety

- Degree of pollution (in accordance with IEC 60664-1): 2
- Type of protection (in accordance with EN 60529): IP 20
- Overvoltage category (according to IEC 60664-1): III
- Bus: safety extra-low voltage SELV DC 24 V
- Device complies with:  
EN 50090-2-2 and EN 60669-2-1

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### Reliability

- Failure rate: 939 fit at 40 °C

### EMC requirements

- Complies with: EN 50081-1 and EN 50082-2, EN 50090-2-2

### Environmental conditions

- Climatic withstand capability: EN 50090-2-2
- Ambient operating temperature: -5 ... +45 °C
- Storage temperature: -25 ... +70 °C
- Relative humidity (not condensing): 5% ... 93%

### Markings

KNX / EIB

### Location and Function of the Display and Operator Elements

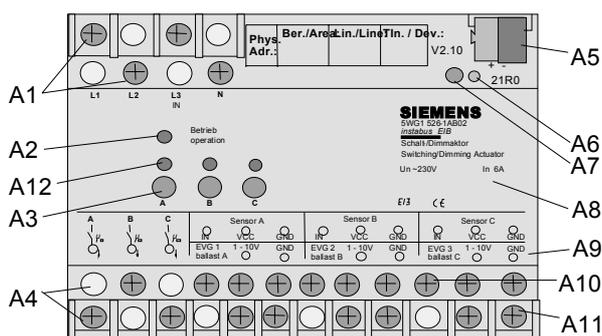


Diagram 1: Location of the display and operator elements

- A1 Screw terminals for connecting the mains voltage
- A2 Operational LED
- A3 Push button for local operation of the three switch outputs or longer operation (>6 sec.) for calibration of the respective brightness sensors
- A4 Screw terminals for connecting the switch outputs in order to switch the DIMM- EVGs on and off
- A5 Plug for bus connecting terminal
- A6 LED for displaying normal mode (LED off) or addressing mode (LED on); it is extinguished automatically once the physical address has been transferred
- A7 Learning button for toggling between normal mode and addressing mode for transferring the physical address
- A8 Type label
- A9 Terminal assignment of the screw terminals
- A10 Screw terminals for connecting the brightness sensors
- A11 Screw terminals for connecting the control circuits of the electronic ballasts

A12 LEDs for displaying the switching state of the outputs

### Mounting and Wiring

The N-system DIN rail mounted device (6 modules) can be inserted in the N-system distribution board, either surface- or flush-mounted and wherever EN 50022-35 x 7.5 DIN rails are available.

The connection with the bus line is carried out via a bus terminal.

#### Installing the DIN rail mounted device (Diagram 2)

- Slide the DIN rail mounted device (B1) onto the DIN rail (B2) and
- rotate the device downwards until the slide switch (C3) audibly clicks into position.

#### Dismantling the DIN rail mounted device (Diagram 2)

- Remove all connected cables,
- press the slide switch (C3) downwards with a screwdriver and
- remove the device (C1) from the DIN rail (C2) with a swivel action.

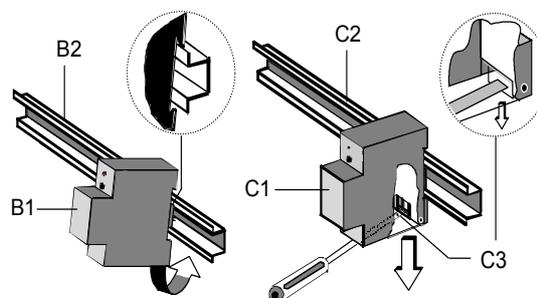


Diagram 2: Installing and dismantling the DIN rail mounted device

#### Removing the bus terminal [Diagram 3]

- The bus terminal is located on top of the device.
- The bus terminal (D2) consists of two sections (D2.1, D2.2), each with four terminal contacts. Care should be taken not to damage the two test sockets (D2.3), either by accidentally connecting them to the bus conductor or with the screwdriver (when trying to remove the bus terminal)].
- Carefully insert the screwdriver in the wire entry slot underneath the bus terminal (D2) and pull the bus terminal forwards out of the switch/dim actuator N 526/02 (D1).

**Note:** Care should be taken as there is a risk of shorting when removing the device.

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#### Connecting the bus terminal (Diagram 3)

- Place the bus terminal in the guide slot and press the bus terminal (D2) backwards until it reaches the stop.

#### Connecting the bus cable (Diagram 3)

- The bus terminal (D2) is suitable for single core conductors with 0.6... 0.8 mm Ø.
- Strip approx. 5 mm of insulation from the conductor (D2.4) and plug in the terminal (D2) (red = +, black = -).

#### Disconnecting the bus cable (Diagram 3)

- Remove the bus terminal (D2) and pull the conductor (D2.4) out of the bus cable by rotating it backwards and forwards.

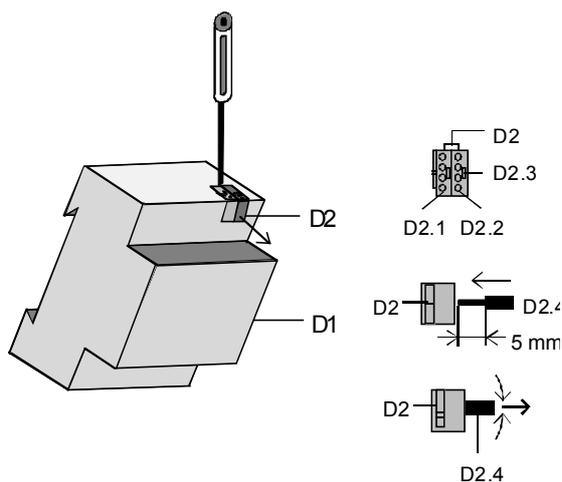


Diagram 3: Connecting and disconnecting the bus cable

#### Connecting load circuits (Diagram 4)

- Strip approx. 8 ... 9 mm of insulation from the conductor (F1.1), plug in the terminals (F1) and tighten the screws (F1.2).

Cross sections: "see Technical data"

#### Disconnecting load circuits (Diagram 4)

- Loosen the screw (G1.2) and pull the conductor (G1.1) out of the terminal (G1).

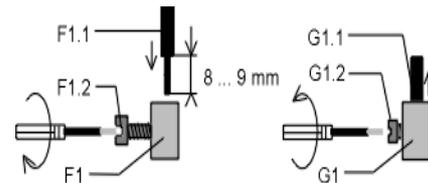
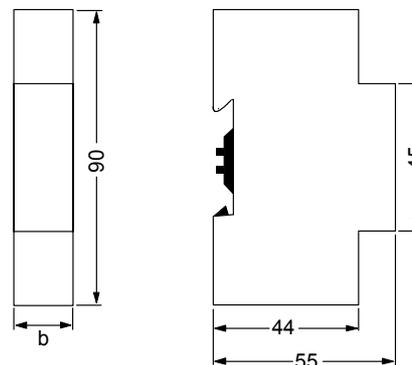


Diagram 4: Connecting and disconnecting load circuits

#### Dimension drawing

Dimensions in mm



b = 6 module

1 module = 18 mm

#### General Notes

- Any faulty devices should be returned to the local Siemens office.
- If you have further questions about the product, please contact our Technical Support:

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