



The universal dimmer actuator is a built-in device for use e.g. in standard luminaires, trunking or false ceilings.

It is used for switching and dimming incandescent lamps, 230 V tungsten-halogen lamps as well as low-voltage halogen lamps with conventional or electronic transformers.

Local operation is also possible using a conventional push button.

This can also be done without the need for programming as long as the bus voltage and a power supply are available.

Should the bus voltage fail, the load circuit is activated (e.g. for functional or emergency lighting).

The device requires a 230 V power supply.

In addition a bus connecting terminal is necessary.

Technical Data

Power supply	– EIB	24 VDC, via the bus line
	– Auxiliary supply	230 VAC +/- 10 %, 50 Hz
Inputs	– 1, for extension input operation	
	– Signal voltage	230 VAC +/- 10 %, 50 Hz
Outputs	– Max. cable length	100 m
	– Switching voltage	230 VAC +/- 10 %, 50 Hz
	– Power range	40 VA ... 400 VA (also refer to: "Note")
Operating and display elements	– red LED and push button	for assigning the physical address
Connections	– 230 V power supply	Screw terminals Wire range 1 ... 2.5 mm ²
	– Load circuit	Screw terminals Wire range 1 ... 2.5 mm ²
	– Extension input	Screw terminals Wire range 1 ... 2.5 mm ²
	– EIB	Plug for bus connecting terminal
	– IP 20, EN 60 529	
Type of protection	– IP 20, EN 60 529	
Ambient temperature range	– Operation	- 5 °C ... 45 °C
	– Storage	-25 °C ... 55 °C
	– Transport	-25 °C ... 70 °C
Design	– Built-in device	
Housing, colour	– Plastic housing, white	
Mounting	– Screw fixing in trunking, false ceilings, ...	
Dimensions	– 42 x 240 x 32 mm (H x W x D)	
Weight	– 0.27 kg	
Certification	– EIB-certified	
CE norm	– in accordance with the EMC guideline and low voltage guideline	

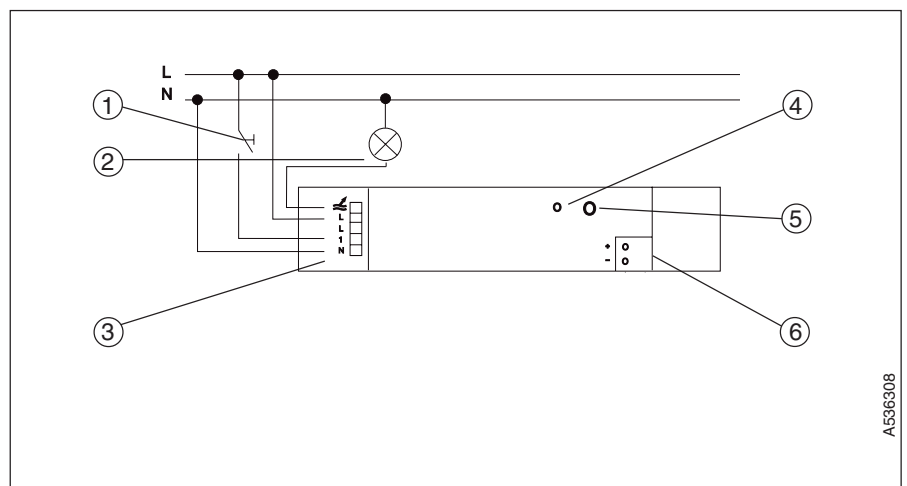
Application programs	Number of communication objects	Max. number of group addresses	Max. number of associations
Switch Dim Value Ext. input /1	3	6	6
Switch Dim Value /2	3	11	11

The following applications serve for constant brightness control:

Constant brightness save setpoint /1	5	21	22
Constant brightness setpoint /1	5	21	22
Outdoor brightness dependant illum. control /2	6	6	6

A detailed description of the application programs for constant brightness control/ brightness depending illumination are deposited on the EIB-database CD-ROM in PDF-format.

Circuit diagram



- 1 Extension input push button
- 2 Consumer device
- 3 Terminals

- 4 Programming LED
- 5 Programming push button
- 6 Bus terminal

Note

After connecting the mains voltage to the system, the actuator automatically recognises the operating mode required (phase control or phase alignment). A mixture of conventional and electronic transformers is not permitted.

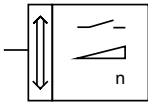
It is not permitted to connect the mains voltage when a secondary, open-circuited conventional transformer is being used.

The push button input and the power supply must be connected to the same external conductor. The control of several actuators simultaneously using an extension input push button is not permitted.

Even if the actuator is only used during extension input operation (conventional push button), you should still assign a group address to the relevant communication objects.

- Lamp wattage for 230 V incandescent lamps: 40 W up to 400 W
- Lamp wattage for low-voltage halogen lamps with Busch electronic transformer 40 W up to 400 W
- Lamp wattage for low-voltage halogen lamps with a conventional transformer: 100 VA up to 400 VA, $\cos \varphi = 0,95$

Switch Dim Value
Ext. input /1



Selection in ETS2

- ABB
 - └ Illumination
 - └ Dimmer

Switch

The actuator can be switched on and off via the 1 bit communication object. As long as the transmission flag is active, the actuator sends its current state to the EIB both when it switches on and off. The brightness value that the actuator uses when it switches on is defined in the parameters.

Value

Using the 1 byte communication object, the luminaire can be given one of 256 brightness values from 0 = off to 255 = total brightness. If the transmission flag is active, the actuator sends its current brightness value when it is switched on and off and also at the end of the dimming process.

Dim

The connected luminaires can be dimmed with the 4 bit communication object according to EIS 2. If the actuator is switched off, it can also be dimmed via this 4 bit object. It is possible to specify the period for passing the dimming range from minimal to maximum brightness in the parameters.

Extension input

Via a conventional push button, the actuator can be switched on or off with the assigned starting brightness value.

Communication objects

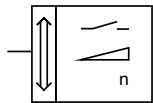
No.	Type	Name	Function
0	1 bit	Output	Switch
1	4 bit	Dimmer	Relative dimming
2	1 byte	Dimmer	Brightness value

Parameters

The default setting for the values is **printed in bold type**.

Switch on with	10 % brightness / 20 % brightness / ... 90 % brightness / 100 % brightness
Duration for passing the dimming range	2 s / ... / 10 s / ... / 8 min

Switch Dim Value /2



Selection in ETS2

- ABB
 - └ Illumination
 - └ Dimmer

Switch

The actuator can be switched on and off via the 1 bit communication object. As long as the transmission flag is active, the actuator sends its current state to the EIB both when it switches on and off. The brightness value that the actuator uses when it switches on is defined in the parameters.

Value

Using the 1 byte communication object, the luminaire can be given one of 256 brightness values from 0 = off to 255 = total brightness. If the transmission flag is active, the actuator sends its current brightness value when it is switched on and off and also at the end of the dimming process.

Dim

The connected luminaires can be dimmed with the 4 bit communication object according to EIS 2. If the actuator is switched off, it can also be dimmed via this 4 bit object. It is possible to specify the period for passing the dimming range from minimum to maximum brightness in the parameters.

With the two parameters “Maximum brightness” and “Minimum brightness”, the actual setting range can be limited. The dimmer actuator calculates internally a characteristic curve for conversion. The value “1” corresponds to the parameter “Minimum brightness” and the value “255” to the parameter “Maximum brightness”. The characteristic curve is used both for setting the required value and for status display in the opposite direction.

Communication objects

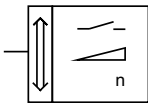
No.	Type	Object name	Function
0	1 bit	Output	Switch
1	4 bit	Dimmer	Relative dimming
2	1 byte	Dimmer	Brightness value

Parameters

The default setting for the values is **printed in bold type**.

Duration for passing the dimming range	2 s / 3.5 s / 5.5 s / ... / 3 min
Maximum brightness	5 % / 10 % / ... / 100 %
Minimum brightness	5 % / 10 % / ... / 100 %
Switch on with	10 % brightness / 20 % brightness / ... / 100 % brightness

Switch Dim Value
Memory/1



Selection in ETS2

- ABB
 - └ Illumination
 - └ Dimmer

Switch

The actuator can be switched on and off via the 1 bit communication object. As long as the transmission flag is active, the actuator sends its current state to the EIB when it is switched on and off.

Dim

The connected luminaires can be dimmed with the 4 bit communication object according to EIS 2. If the actuator is switched off, it can also be dimmed via this 4 bit object. It is possible to specify the period for passing the dimming range from minimum to maximum brightness in the parameters.

Value

Using the 1 byte communication object, the luminaire can be given one of 256 brightness values from 0 = off to 255 = total brightness. If the transmission flag is active, the actuator sends its current brightness value when it is switched on and off and also at the end of the dimming process.

Memory

The reaction of the actuator to an “On” command depends on the setting in the parameter “Brightness for On telegram”:

- If the setting “adjustable value” is selected, the actuator uses the value which has been selected by the parameter “Switch on with”.
- In the setting “final brightness value”, the actuator takes note of the final brightness value when it is switched off and reproduces this value when it is switched on again.

Communication objects

No.	Type	Object name	Function
0	1 bit	Output	Switch
1	4 bit	Dimmer	Relative dimming
2	1 byte	Dimmer	Brightness value

Parameters

The default setting for the values is **printed in bold type**.

Duration for passing the dimming range	2 s / 3.5 s / 5.5 s / ... / 3 min
Maximum brightness	5 % / 10 % / ... / 100 %
Minimum brightness	5 % / 10 % / ... / 100 %
Brightness for On telegram	adjustable value final brightness value
Switch on with	10 % brightness / 20 % brightness / ... / 100 % brightness