

Staircase Time Switches



The New Product Range



The Standard TLZ12-8E-230V+UC

Switch-off
early warning
Double connections
Optimisation for ESL

page **D1**



The Allrounder TLZ12D-230V+UC

Switch-off
early warning
Multifunction
Universal control
voltage
Optimisation for ESL

page **D2**



The Simple TLZ12-230V

Without
switch-off
early warning
function

page **D3**

Optimised for Energy Saving Lamps (ESL)

Supporting the technical development you can replace incandescent lamps with energy saving lamps without turning off the switch-off early warning function.



page **D5**

Built-in Staircase Time Switch TLZ61NP-230V

Switch-off early warning
Optimisation for ESL



page **D5**

Built-in Staircase Time Switch TLZ61NP-230V+UC

Switch-off early warning
Universal control voltage
Optimisation for ESL

Selection Table

Staircase Time Switches and Off-delay Timers

The new product range

Incandescent lamps are replaced by energy saving lamps ESL*. As the first leading manufacturer of staircase time switches, we produce new devices with optimisation for energy saving lamps.

When these staircase time switches are in ESL setting, the switch-off early warning by flickering function does not reduce the service life of the energy saving lamps. The warning function which prevents sudden darkness fully complies with the stipulations in DIN 18015-2.

In addition, the lighting is immediately switched on again after a power failure if the set time has not yet elapsed, to increase security.

'The Standard' TLZ12-8E-230V+UC replaces the TLZ12NP-230V and TLZ12-8E-230V+8..230V UC.

'The Allrounder' TLZ12D-230V+UC replaces the TLZ12M-230V+8..230V UC.

'The Simple' TLZ12-230V as new device in the range, without switch-off early warning function and without zero passage switching.

Page	D1	D2	D3	D4	B3	D5	D5	
	pictograms	TLZ12-8E-230V+UC	TLZ12D-230V+UC	TLZ12-230V	TLZ12-9E-230V	EUD12D-UC if the function TLZ is set	TLZ61NP-230V	TLZ61NP-230V+UC
Modular device for mounting on DIN rail EN 60715 TH35, number of modules 18mm each	1	1	1	1	1			
Built-in device for installation (e.g. flush-mounting box)						■	■	
Incandescent lamp load W	2300	2300	2000	2300	400 ³⁾	2000	2000	
Optimised function for energy saving lamps ESL	■	■				■	■	
Switch-off early warning function switchable ¹⁾	■	■		■	■ ⁴⁾	■	■	
Variable time range up to	30 min	99 min	12 min	12 min	9 min	12 min	12 min	
Low standby loss		■	■	■	■	■	■	■
230 V control voltage	■	■	■	■		■	■	
Universal control voltage (additionally) 8 to 230 V UC		■	■			■		■
Glow lamp current mA		50	50	50	50	5	50	50
Double connections push-button and lamp	■							
Single connections below				■				
Automatic detection 3-/4-wire circuit	■	■	■			■	■	
3-wire circuit, without attic lighting				■				
4-wire circuit					■			
Resettable	■	■	■		■	■	■	
Permanent light and switch-off logics with push-button switchable	■	■			■	■	■	
Incrementing ²⁾	■	■			■	■	■	
Separate switch for permanent light	■	■	■	■				
Additional input for motion control		■						
With multifunction: TLZ, ESV, ES and ER	■	■			■	without ER	without ER	
Zero passage switching		■	■		■	■	■	■

* ESL = abbr. for energy saving lamps

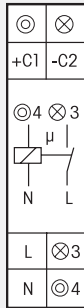
¹⁾ As stipulated in DIN 18015-2 under 4.3.3 the following should be taken into account: For lighting systems in stairwells of multiple dwellings it is recommended to use staircase time switches with switch-off early warning function to prevent sudden darkness. If the switch-off early warning function is switched on the light starts flickering approx. 30 seconds before time-out and is repeated three times at decreasing time intervals.

²⁾ Time can be extended: Within the first second after switching on or resetting the time can be extended by pressing the push-button repeatedly up to three times (incrementing). Each operation increments the set time once.

³⁾ Up to 3400 W with capacity enhancer LUD12-230V.

⁴⁾ Switch off early warning function through dimming.

TLZ12-8E-230V+UC



1 NO contact not potential free 16 A/250 V AC. Incandescent lamps up to 2300W, energy saving lamps ESL up to 200W. Switch-off early warning and permanent light by push-button switchable. Standby loss 0.5 watt only. With ESL optimisation and multifunction.

Modular device for DIN EN 60715 TH35 rail mounting.
1 module = 18 mm wide, 58 mm deep.

Zero passage switching to protect contacts and lamps. This prolongs in particular the lifetime of energy saving lamps.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

Control voltage, supply voltage and switching voltage 230V. In addition electrically isolated universal voltage from 8 to 230V UC.

Glow lamp current up to 50 mA, dependent on the ignition voltage of the glow lamps.

Precise variable time range from 1 to 30 minutes, settable by minute scale.

Permanent light switch ⊙ with the big rotary switch.

3-wire and 4-wire circuits, resettable, with attic lighting if 4-wire circuit.

Automatic detection of the method of connection.

If the function TL is set, the lighting is switched on again after a power failure provided the set time has not yet elapsed.

With double connections for push-button and lamp in order to connect either above or below or only below.

If switch-off early warning function ⊏ is switched on, the light starts flickering approx. 30 seconds before time-out and is repeated three times at decreasing time intervals.

If permanent light by push-button ⊙ is switched on, permanent light can be switched on by pressing the push-button longer than 1 second. This is switched off automatically after 60 minutes or by pressing the push-button longer than 2 seconds.

If both switch-off early warning function and permanent light by push-button ⊙ ⊏ are switched on, the switch-off early warning function is activated before the permanent light switches off.

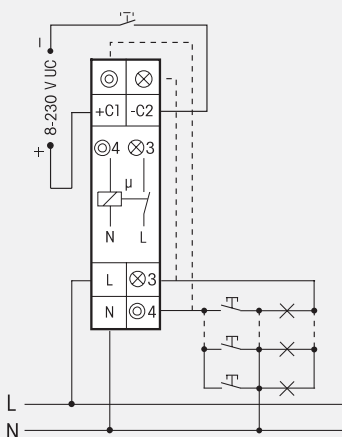
When energy saving lamps ESL are completely or partially switched, then set the switch-off early warning and the permanent light by push-button on the right hand side of the rotary switch.

If the function TL is selected **the time can be extended** within the first second after switching on or resetting **by pressing the push-button repeatedly up to three times** (incrementing). Each momentary-contact control increments the set time once.

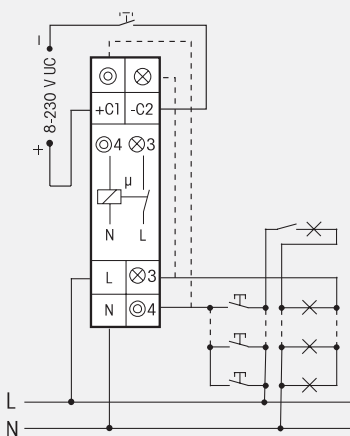
With multifunction: The following functions can be selected optionally: **ES** (impulse switch), **ER** (relay), **ESV** (impulse switch with release delay).

If the function ESV is set the time ranges (t), which can be set with the middle rotary switch are as follows: 1 = 2 min, 2 = 5 min, 3 = 10 min, 4 = 15 min, 6 = 25 min, 8 = 35 min, 10 = 45 min, 12 = 60 min, 20 = 90 min, 30 = 120 min. In this function the impulse switch automatically disconnects after the set delay is timed out, if a manual OFF command has not been given. Switch-off early warning and permanent light by push-button can also be switched on in this position. Forgotten permanent light is switched off after 2 hours.

Typical connections

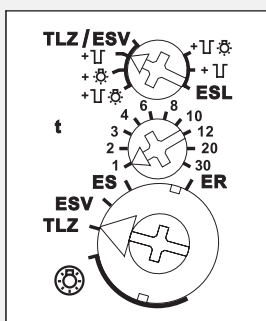


3-wire circuit, resettable



4-wire circuit with attic lighting, resettable

Function rotary switches



⊏ = Switch-off early warning function

⊙ = Permanent light by push-button

⊙ ⊏ = Switch-off early warning function and permanent light by push-button

⊙ = Permanent light switched on (all click-stop positions)

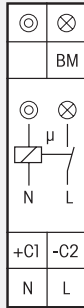
TLZ/ESV/ES/ER = The set function is active

Technical data page D6. Housing for operating instructions GBA12 see catalogue "Switchgear, power supply units and electronic energy meters" page Z3.

Digital settable Staircase Time Switch TLZ12D

The Allrounder

TLZ12D-230 V+UC



1 NO contact not potential free 16A/250V AC. Incandescent lamps up to 2300W, energy saving lamps ESL up to 200W. Switch-off early warning and permanent light by push-button switchable. Standby loss 0.5 watt only. With ESL optimisation and multifunction.

Modular device for DIN EN 60715 TH35 rail mounting.
1 module = 18mm wide, 58mm deep.

The functions and times are set by the keys MODE and SET as described in the operating instructions. They are indicated on the display and can be blocked if required.

Zero passage switching to protect contacts and lamps. This prolongs in particular the lifetime of energy saving lamps.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

230V control input that allows a **glow lamp current up to 50 mA**, dependent on the ignition voltage of the glow lamps. 230V supply voltage and switching voltage. In addition electrically isolated universal voltage from 8 to 230V UC.

Extremely low switching noise. Precise variable time range from 1 to 99 minutes.

Separate Permanent light switch with the projecting key SET if the functions STS, ISO, IS or R are set.

With motion detector control input BM, which converts the input signal into a control impulse if the function STS is set. In this case the permanent light by push-button function is not active. 3-wire and 4-wire circuits, resettable, with attic lighting if 4-wire circuit.

Automatic detection of the method of connection.

If the function STS is set, the lighting is switched on again after a power failure provided the set time has not yet elapsed.

The elapsed period is shown in the middle of the display. The set time flashes at the bottom edge of the display until the set period elapses. **The accrued switch-on time** is displayed there outside the elapsed time, first in hours (h), then in months (m) with 1 digit after the decimal point.

When the set time flashes but the elapsed time does not change, a control push-button is inhibited.

If switch-off early warning function is switched on, the light starts flickering in time variable from 10 to 50 seconds before time-out and is repeated three times at decreasing time intervals.

If permanent light by push-button is switched on, permanent light can be switched on by pressing the push-button longer than 1 second. This is switched off automatically after time variable from 0.5 to 10 hours or by pressing the push-button longer than 2 seconds. This function is not active at the BM input.

If both switch-off early warning function and permanent light by push-button are switched on, the switch-off early warning function is activated before the permanent light switches off.

If energy saving lamps are switched completely or partially, activate position 'ESL' in the menu guidance. This is indicated by a + sign next to the abbreviation for the function at the top of the display.

If the function STS is selected **the time can be extended** within the first second after switching on or resetting **by pressing the push-button repeatedly up to three times** (incrementing). Each momentary-contact control increments the set time once. This function is not active at the BM input.

With multifunction: Switchable to the functions **IS** (impulse switch), **R** (relay), **ISO** (impulse switch with off-delay) and **HC** (hour counter, see also digital adjustable operating hours impulse counter BZR12DDX on page G1). After setting the required function, the function can be blocked. An arrow on the right of the abbreviation indicates the blocking status.

ISO: The impulse switch automatically disconnects after the set delay from 0.1 to 9.9 hours is timed out, provided there is no manual OFF command. Switch-off early warning, permanent light by push-button and ESL are also switchable if the function ISO is set.

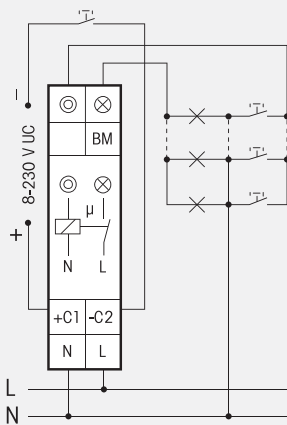
HC: As long as the push-button input is excited, the + sign is indicated next to the abbreviation for the function HC at the top of the display. The time is added and indicated at the bottom of the display. Initially up to 9999 hours (h), then automatic change-over to months (m) each with 730 hours and display with 1 digit after the decimal point. The relay is not switched on if the function HC is set.

Menu guidance with selectable languages German, English or French as described in the attached operating instructions. Also visit www.elfako-ba.de.

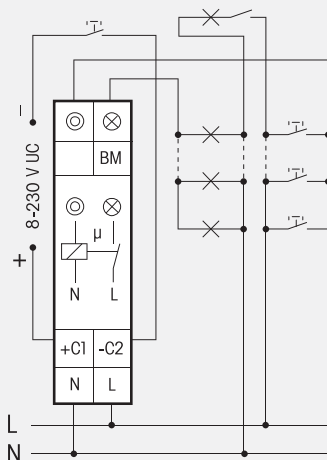
Technical data page D6. Housing for operating instructions GBA12 see catalogue "Switchgear, power supply units and electronic energy meters" page Z3.

D2

Typical connections



3-wire circuit, resettable



4-wire circuit with attic lighting, resettable

TLZ12D-230V+UC

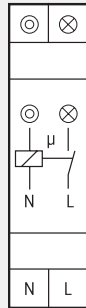
1 NO 16A

EAN 4010312400760

43,30 €/pc.

Recommended retail prices excluding VAT.

TLZ12-230V



1 NO contact not potential free 16 A/250 V AC.

Incandescent lamps up to 2000W, energy saving lamps ESL up to 100W, without switch-off early warning. Standby loss 0.7 watt only.

Modular device for DIN EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

230V control voltage, supply voltage and switching voltage.

Extremely low switching noise.

Variable time range from approx. 0.2 to 12 minutes.

Glow lamp current up to 50 mA, dependent on the ignition voltage of the glow lamps.

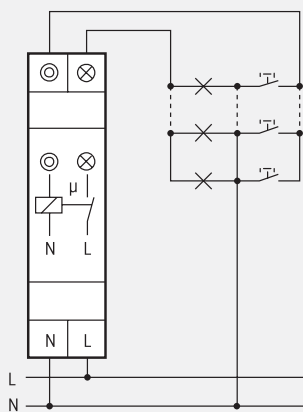
Own permanent light switch with the big rotary switch.

3-wire and 4-wire circuits, resettable, with attic lighting if 4-wire circuit.

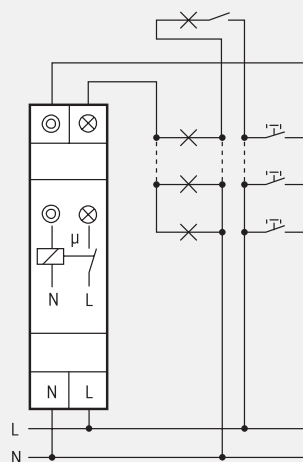
Automatic detection of the method of connection.

Without switch-off early warning function and without zero passage switching.

Typical connections

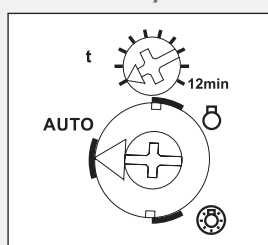


3-wire circuit, resettable



4-wire circuit with attic lighting, resettable

Function rotary switches



= Function switched off

= Permanent light switched on

AUTO = The set function is active

Technical data page D6. Housing for operating instructions GBA12 see catalogue "Switchgear, power supply units and electronic energy meters" page Z3.

D3

TLZ12-230V

1 NO 16A

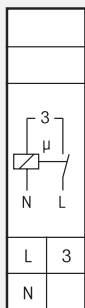
EAN 4010312400142

25,80 €/pc.

Recommended retail prices excluding VAT.

Staircase Time Switch TLZ12-9E

TLZ12-9E-230 V



1 NO contact not potential free 16 A/250 V AC.
Incandescent lamps up to 2300W, energy saving lamps ESL up to 100W.
Switch-off early warning switchable. Standby loss 0.5 watt only.

Modular device for DIN EN 60715 TH35 rail mounting.
 1 module = 18 mm wide, 58 mm deep.

Zero passage switching to protect contacts and lamps. This prolongs in particular the lifetime of energy saving lamps.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

230V control voltage, supply voltage and switching voltage.

Glow lamp current up to 50 mA, dependent on the ignition voltage of the glow lamps.

Precise variable time range from 1 to 12 minutes, settable by minute scale.

Own permanent light switch with the big rotary switch.

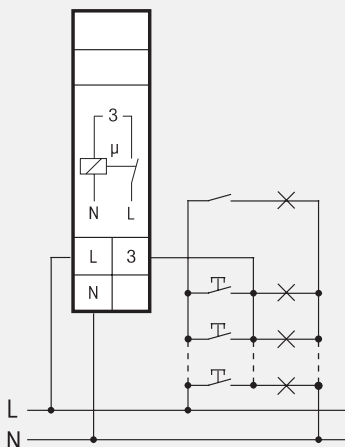
3-wire circuit with attic lighting, not resettable. Only for retrofitting existing systems.

After a power failure the lighting is switched on again in case the set time has not elapsed yet.

If switch-off early warning function is switched on, the light starts flickering approx. 30 seconds before time-out and is repeated three times at decreasing time intervals.

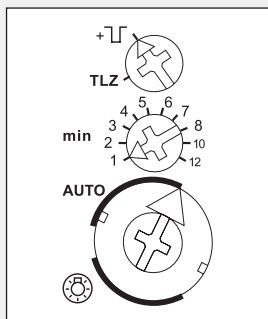
The noiseless electronics is not even audible to a highly sensitive ear - unlike many synchronous motors with mechanical gearboxes.

Typical connection



3-wire circuit with attic lighting, not resettable

Function rotary switches



- = Switch-off early warning function
- = Permanent light switched on (all click-stop positions)
- AUTO = The set function is active (all click-stop positions)

Technical data page D6. Housing for operating instructions GBA12 see catalogue "Switchgear, power supply units and electronic energy meters" page Z3.

TLZ12-9E-230V

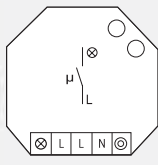
1 NO 16A

EAN 4010312400715

37,00 €/pc.

Recommended retail prices excluding VAT.

TLZ61NP-230 V



1 NO contact not potential free 10A/250V AC. Incandescent lamps up to 2000 W, energy saving lamps ESL up to 200W. Switch-off early warning and permanent light by push-button switchable. Standby loss 0.7 watt only. With ESL optimisation.

Built-in device for installation. 45 mm long, 55 mm wide, 18 mm deep.

Zero passage switching to protect contacts and lamps. This prolongs in particular the lifetime of energy saving lamps.

State-of-the-art hybrid technology combines advantages of nonwearing electronic control with high capacity of special relays.

By using a bistable relay coil power loss and heating is avoided even in the on mode.

The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

230V control voltage, supply voltage and switching voltage. With infinitely variable time range from 1 to 12 minutes. 50mA glow lamp current, dependent on the ignition voltage of the glow lamps.

3-wire and 4-wire circuits, resettable, with attic lighting if 4-wire circuit.

Automatic detection of the method of connection.

After a power failure the lighting is switched on again in case the set time has not elapsed yet.

If switch-off early warning function \sqcap is switched on, the light starts flickering approx. 30 seconds before time-out and is repeated three times at decreasing time intervals.

If permanent light by push-button \odot is switched on, permanent light can be switched on by pressing the push-button longer than 1 second. This is switched off automatically after 60 minutes or by pressing the push-button longer than 2 seconds.

If both switch-off early warning function and permanent light by push-button $\odot \sqcap$ are switched on, the switch-off early warning function is activated before the permanent light switches off.

When energy saving lamps ESL are completely or partially switched, then set the switch-off early warning with the push-button permanent light ESL on the lower rotary switch.

If the function TLZ is selected the **time** can be **extended** within the first second after switching on or resetting by pressing the push-button repeatedly up to three times (incrementing).

Each momentary-contact control increments the set time once.

The function **ESV**, impulse switch with release delay up to 120 minutes, can be selected optionally. If this function is set it is automatically disconnected after the set delay is timed out if a manual OFF command has not been given.

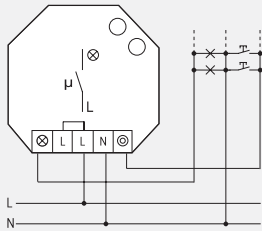
If the timing period is set to minimum in the function **ESV**, the release delay is switched off.

The standard impulse switch function **ES** is then set.

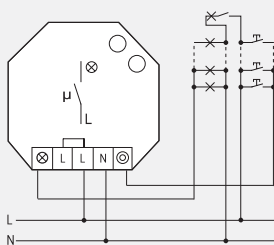
\sqcap = Switch-off early warning function; \odot = Permanent light by push-button;

$\odot \sqcap$ = Switch-off early warning function and permanent light by push-button

Typical connection

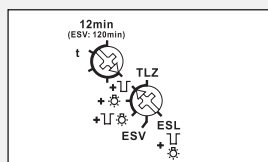


3-wire circuit, resettable



4-wire circuit with attic lighting, resettable

Function rotary switches



Technical data page D6.

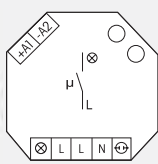
TLZ61NP-230V

1 NO 10A

EAN 4010312400791

37,90 €/pc.

TLZ61NP-230 V+UC



1 NO contact not potential free 10A/250V AC. Incandescent lamps up to 2000 W, energy saving lamps ESL up to 200W. Switch-off early warning and permanent light by push-button switchable. Standby loss 0.7 watt only. With ESL optimisation.

Built-in device for installation. 45 mm long, 55 mm wide, 18 mm deep.

Control voltage, supply voltage and switching voltage 230V. In addition electrically isolated universal voltage from 8 to 230V UC.

Push-buttons with a glow lamp current up to 50mA, dependent on the ignition voltage of the glow lamps, can be connected to the control input \oplus .

All functions same as type TLZ61NP-230 V.

Typical connection

same as type TLZ61NP-230V, but with universal control voltage input +A1/-A2 additionally

Function rotary switches

same as type TLZ61NP-230V

Technical data page D6.

TLZ61NP-230V+UC

1 NO 10A

EAN 4010312400739

40,40 €/pc.

Recommended retail prices excluding VAT.

Technical Data

Staircase Time Switches and Off-delay Timers

D6

Contacts	TLZ12D TLZ12-8E	TLZ12-230V TLZ12-9E	TLZ61NP ^{b)}
Contact material / contact gap	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm	AgSnO ₂ /0.5 mm
Spacing of control connections / contact Spacing of control connections C1-C2 or A1-A2/contact	3 mm 6 mm	3 mm -	3 mm 6 mm
Test voltage control connection / contact Test voltage C1-C2 or A1-A2/contact	2000V 4000V	2000V -	2000V 4000V
Rated switching capacity	16 A/250V AC	16 A/250V AC	10 A/250V AC
Incandescent lamp and halogen lamp load ¹⁾ 230V	2300W	2300W; TLZ12-230V: 2000W	2000W
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000VA	1000VA; TLZ12-230V: 500VA	1000VA
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500VA	500VA	500VA
Compact fluorescent lamps with EVG* and energy saving lamps ESL	15x7W 10x20W	7x7W 5x20W	15x7W 10x20W
Life at rated load, cos φ = 1 or for incandescent lamps 1000W at 100/h	> 10 ⁵	> 10 ⁵	> 10 ⁵
Life at rated load, cos φ = 0.6 at 100/h	> 4 x 10 ⁴	> 4 x 10 ⁴	> 4 x 10 ⁴
Max. operating cycles	10 ³ /h	10 ³ /h	10 ³ /h
Maximum conductor cross-section (3-fold terminal)	6 mm ² (4 mm ²)	6 mm ² (4 mm ²)	4 mm ²
Two conductors of same cross-section (3-fold terminal)	2.5 mm ² (1.5 mm ²)	2.5 mm ² (1.5 mm ²)	1.5 mm ²
Screw head	slotted / crosshead, pozidriv	slotted / crosshead, pozidriv	slotted / crosshead
Type of enclosure/terminals	IP50/IP20	IP50/IP20	IP30/IP20
Electronics			
Time on	100%	100%	100%
Max./min. temperature at mounting location	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C
Standby loss (activ power)	0.5 W	0.5 W; TLZ12-230V: 0.7 W	0.7 W
Control current local at 230V (<10 s) ± 20%	5 (100) mA	5 (100) mA	5 (100) mA;
Control current universal control voltage 8/12/24/230V (<10 s) ± 20%	2/4/9/5 (100) mA	-	2/4/9/5 (100) mA
Max. parallel capacitance (approx. length) of individual control lead at 230V AC	0.06 µF (200 m) C1/C2: 0.9 µF (3000 m)	0.06 µF (200 m)	0,06 µF (200 m) A1-A2: 0.3 µF (1000 m)
Compliance with:	EN 61000-6-3, EN 61000-6-1 and EN 60 669. With switch-off early warning function according to DIN18015-2		

* EVG = electronic ballast units; KVG = conventional ballast units

^{b)} Bistable relay as relay contact. The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated.

¹⁾ Applies for lamps with max. 150 W.