

**ESR12Z-  
ESR12DDX-  
ESR61NP-**



11

**ELECTRONIC IMPULSE SWITCHES -  
THE SILENT REVOLUTION.**

# Electronic impulse switches









<b>Selection table electronic impulse switches</b>	<b>11-2</b>
<b>Impulse switch <a href="#">ES12DX-UC</a></b>	<b>11-3</b>
<b>Impulse switch <a href="#">ES12-200-UC</a></b>	<b>11-4</b>
<b>Impulse switch <a href="#">ES12-110-UC</a></b>	<b>11-5</b>
<b>Impulse switch with integrated relay function <a href="#">ESR12NP-230V+UC</a></b>	<b>11-6</b>
<b>Digital settable multifunction impulse switch with integrated relay function <a href="#">ESR12DDX-UC</a></b>	<b>11-7</b>
<b>Impulse switch with potential free contacts <a href="#">ES12Z</a>, also for central control</b>	<b>11-8</b>
<b>4-fold impulse switch with integrated relay function <a href="#">ESR12Z-4DX-UC</a>, also for central control and group control</b>	<b>11-9</b>
<b>Impulse switch <a href="#">ES61-UC</a></b>	<b>11-10</b>
<b>Impulse switch with integrated relay function <a href="#">ESR61NP-230V+UC</a></b>	<b>11-11</b>
<b>Multifunction impulse switch with integrated relay function <a href="#">ESR61M-UC</a></b>	<b>11-12</b>
<b>Noiseless impulse switch with integrated relay function <a href="#">ESR61SSR-230V</a> with solid state relay</b>	<b>11-13</b>
<b>Impulse switch for installation in lighting fittings <a href="#">ES75-12..24V UC</a></b>	<b>11-14</b>
<b>Technical data electronic impulse switches, also for central control</b>	<b>11-15</b>
<b>Impulse switches with monostable relay <a href="#">IFE12-10TS</a>, <a href="#">IFES12-20TS</a> and <a href="#">IFED12-20</a></b>	<b>11-16</b>
<b>Impulse switches with bistable relay <a href="#">IFE12-10.11</a> and <a href="#">IFE12-20.13</a></b>	<b>11-17</b>
<b>Technical data impulse switches</b>	<b>11-18</b>


## SELECTION TABLE ELECTRONIC IMPULSE SWITCHES

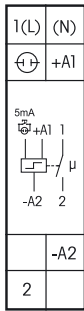
# THE SILENT REVOLUTION

Without attracting particular attention by switching noise, the importance of electronic impulse switches with all their variants compared to conventional mechanical versions is growing steadily. They offer a highly reduced switching noise and further attractive

advantages, such as multifunction, central control, zero passage switching for AC voltage, minimized control power demand and universal control voltage.

Page		11-3	11-4	11-5	11-6	11-7	11-8	11-8	11-9	11-10	11-11	11-12	11-13	11-14
	pictograms													
		ES12DX-UC	ES12-200-UC	ES12-110-UC	ESR12NP-230V+UC	ESR12DDX-UC	ES12Z-200-UC	ES12Z-110-UC	ESR12Z-4DX-UC	ES61-UC	ESR6INP-230V+UC	ESR6IM-UC	ESR6ISSR-230V	ES75-12...24V UC
Modular device for mounting on DIN rail EN 60715 TH35, number of modules 18 mm each		1	1	1	1	1	1	1	2					
Built-in device for installation (e.g. flush-mounting box)										■	■	■	■	■
Number NO contacts (not potential free)		1	2	1	(1)	1+1 <sup>3)</sup> 2 <sup>3)</sup>	2	1	4x1	1	(1)	1+1 <sup>3)</sup> 2 <sup>3)</sup>	(1)	(1)
Number NC contacts potential free				1		1-2 <sup>3)</sup>		1				1-2 <sup>3)</sup>		
Zero passage switching		■ <sup>10)</sup>			■				■ <sup>10)</sup>		■		■	
Switching capacity 16 A/250 V AC		■	■	■	■	■	■	■	■					
Switching capacity 10 A/250 V AC										■	■	■		■
Incandescent lamp load W		2000	2000	2000	3600	2000	2000	2000	2000	2000	2000	2000	400	500
Bistable relay(s) as relay contact(s)		■ <sup>8)</sup>	■ <sup>8)</sup>	■ <sup>8)</sup>		■ <sup>9)</sup>	■ <sup>9)</sup>	■ <sup>9)</sup>	■ <sup>9)</sup>	■ <sup>8)</sup>	■ <sup>9)</sup>	■ <sup>8)</sup>		
Universal control voltage		■	■	■	■	■	■	■	■	■	■	■		
Additional control voltage 230 V		■ <sup>5)</sup>	■ <sup>5)</sup>	■ <sup>5)</sup>	■ <sup>6)</sup>					■ <sup>5)</sup>	■ <sup>6)</sup>		■	
Control voltage 12 to 24 V UC														■
Supply voltage same as control voltage						■	■	■	■				■	
Supply voltage 230 V					■ <sup>6)</sup>						■ <sup>6)</sup>		■	■
No standby loss		■ <sup>10)</sup>	■	■						■		■		
Low standby loss					■	■ <sup>10)</sup>	■	■	■ <sup>10)</sup>		■		■	■
Glow lamp current (mA) at the control input 230 V		5 <sup>1)7)</sup>	5 <sup>1)7)</sup>	5 <sup>1)7)</sup>	150 <sup>2)</sup>					5 <sup>1)7)</sup>	50 <sup>2)7)</sup>			
Glow lamp current (mA) at the control input for universal voltage						5 <sup>1)</sup>	50 <sup>1)4)</sup>	50 <sup>1)4)</sup>						
Off delay, switch-off early warning function and permanent light by pushbutton can be switched on					■						■		■	
Multi circuit switch						■ <sup>3)</sup>						■ <sup>3)</sup>		
Group switch						■ <sup>3)</sup>						■ <sup>3)</sup>		
Central control electrically isolated from the local control							■	■	■					

<sup>1)</sup> Applies to glow lamps with 170 V ignition voltage, for glow lamps with 90 V ignition voltage approx. 1/2 glow lamp current. <sup>2)</sup> Glow lamp current independent from the ignition voltage. <sup>3)</sup> Depends on the set function. <sup>4)</sup> Will automatically be switched on starting at 110 V control voltage. <sup>5)</sup> Control with 230 V or low-voltage possible. <sup>6)</sup> If the control voltage is 230 V, but the phase conductor is different than the 230 V supply voltage, the universal voltage control input must be used due to the potential disconnection. <sup>7)</sup> At the control input . <sup>8)</sup> The relay contact can be open or closed when putting into operation. It will be synchronised at first operation. <sup>9)</sup> The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated. <sup>10)</sup> Patented Duplex technology: When switched with 230 V/50 Hz zero passage switching is activated if L is connected to (L) and N to (N). Then additional standby loss of only 0.1 watt.



# ES12DX-UC



**1 NO contact potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. No standby loss.**

Modular device for DIN-EN 60715 TH35 rail mounting.

1 module = 18 mm wide, 58 mm deep.

**With the patented Eltako Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear.**

**Simply connect the neutral conductor to the terminal (N) and L to 1(L) for this. This results in an standby consumption of only 0.1 watt.**

If the contact is used for controlling switching devices which do not perform zero passage switching themselves, (N) should not be connected because the additional closing delay otherwise causes the opposite effect.

**Either** universal control voltage 8 to 230 V UC at the control input +A1/A2

**or** 230 V with glow lamp current up to 5 mA at the control input ⊕(L)/-A2(N).

The simultaneous use of two potentials at the control inputs is not permitted.

Very low switching noise.

**No permanent power supply necessary, therefore no standby loss.**

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.**

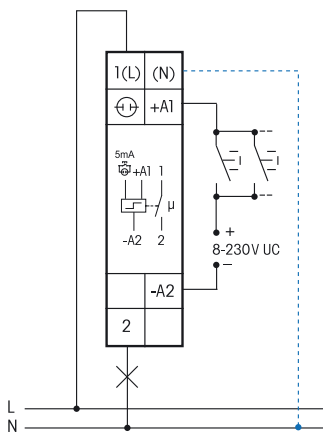
The relay contact can be open or closed when putting into operation. It will be synchronised at first operation.

Same terminal connection as the electromechanical impulse switch S12-100-.

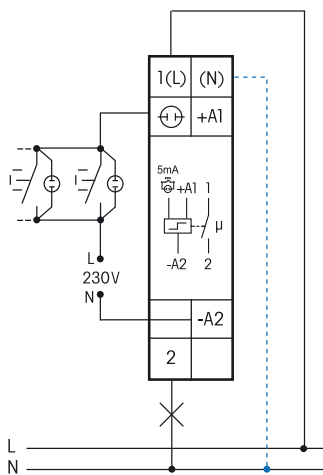
**If this impulse switch is in a circuit, which is monitored by a FR12-230V mains disconnection relay, no additional base load is required. However, the monitoring voltage of the FR12-230V must be set to 'max'. Control only through A1-A2.**

### Typical connections

**Either** universal control voltage 8 to 230 V UC



**or** control voltage 230 V with glow lamp current up to 5 mA

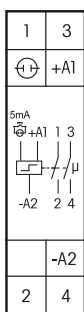


If N is connected, the zero passage switching is active.

Technical data page 11-15.  
Housing for operating instructions GBA12, see accessoires, chapter Z.

The electronics does not have an internal power supply and therefore no power is consumed in any contact position. A control current flows only during a short control impulse of 0.2 seconds. This activates the microcontroller, reads the last switching state from the non-voltage memory, switches the bistable relay to its opposite state accordingly and rewrites the new switching state to memory.

ES12DX-UC	1 NO contact 16 A	EAN 4010312107959	41,60 €/pc.
-----------	-------------------	-------------------	-------------



# ES12-200-UC



**2 NO contacts potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. No standby loss.**

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

**Either** universal control voltage 8 to 230 V UC at the control input +A1/A2  
**or** 230V with glow lamp current up to 5 mA at the control input  $\oplus$  (L)/-A2(N).  
The simultaneous use of two potentials at the control inputs is not permitted.  
Very low switching noise.

**No permanent power supply necessary, therefore no standby loss.**

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 relay contact can be open or closed when putting into operation. It will be synchronised at first operation.

Same terminal connection as the electromechanical impulse switch S12-200-.

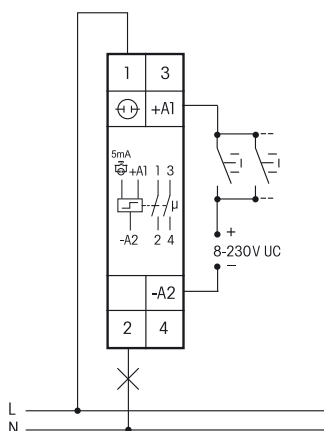
Maximum current across both contacts 16 A for 230 V.

**If this impulse switch is in a circuit, which is monitored by a FR12-230V mains disconnection relay, no additional base load is required. However, the monitoring voltage of the FR12-230V must be set to 'max'.**

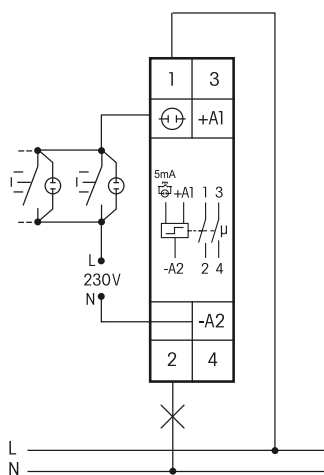
The electronics does not have an internal power supply and therefore no power is consumed in any contact position. A control current flows only during a short control impulse of 0.2 seconds. This activates the microcontroller, reads the last switching state from the non-voltage memory, switches the bistable relay to its opposite state accordingly and rewrites the new switching state to memory

### Typical connections

**Either** universal control voltage 8 to 230 V UC

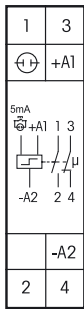


**or** control voltage 230 V with glow lamp current up to 5 mA



Technical data page 11-15.  
Housing for operating instructions GBA12,  
see accessoires, chapter Z.

<b>ES12-200-UC</b>	2 NO contacts 16 A	EAN 4010312108048	<b>44,90 €/pc.</b>
--------------------	--------------------	-------------------	--------------------



# ES12-110-UC



**1 NO contact + 1 NC contact potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. No standby loss.**

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

**Either** universal control voltage 8 to 230 V UC at the control input +A1/A2  
**or** 230V with glow lamp current up to 5 mA at the control input  $\ominus$  (L)/-A2(N).  
The simultaneous use of two potentials at the control inputs is not permitted.  
Very low switching noise.

**No permanent power supply necessary, therefore no standby loss.**

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 relay contact can be open or closed when putting into operation. It will be synchronised at first operation.

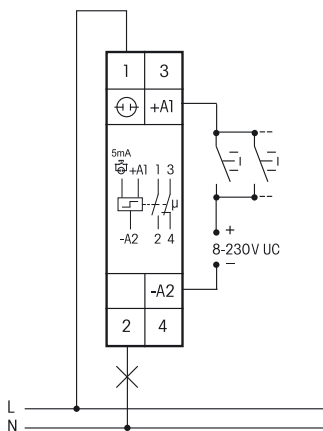
Same terminal connection as the electromechanical impulse switch S12-110-.

**If this impulse switch is in a circuit, which is monitored by a FR12-230V mains disconnection relay, no additional base load is required. However, the monitoring voltage of the FR12-230V must be set to 'max'.**

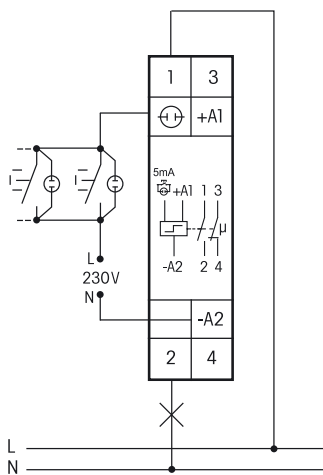
The electronics does not have an internal power supply and therefore no power is consumed in any contact position. A control current flows only during a short control impulse of 0.2 seconds. This activates the microcontroller, reads the last switching state from the non-voltage memory, switches the bistable relay to its opposite state accordingly and rewrites the new switching state to memory.

### Typical connections

**Either** universal control voltage 8 to 230 V UC



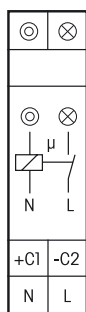
**or** control voltage 230 V with glow lamp current up to 5 mA



Technical data page 11-15.  
Housing for operating instructions GBA12,  
see accessoires, chapter Z.

<b>ES12-110-UC</b>	1 NO contact + 1 NC contact 16 A	EAN 4010312108055	<b>44,90 €/pc.</b>
--------------------	----------------------------------	-------------------	--------------------

# IMPULSE SWITCH WITH INTEGRATED RELAY FUNCTION ESR12NP-230V+UC



## ESR12NP-230V+UC



**1 NO contact not potential free 16 A/250 V AC. Incandescent lamp load up to 2300W. Off delay impulse switch with switch-off early warning and pushbutton permanent light 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.

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

Very low switching noise. If the function ESV is set, definitely variable off-delay time RV from 2 to 120 minutes, settable by minute scale.

Contact position indication with two LEDs. This starts blinking after 15 seconds in case of an inhibited pushbutton (not if the function ER is set).

Glow lamp current up to 150 mA only at the control input 230 V independent from ignition voltage (not if the function ER is set).

**Relays with suitable functions to feed back the switching voltage signal of a dimmer switch.**

In case of a power failure the system is disconnected in a preset sequence.

The functions ES, ESV or ER are selectable **by means of a rotary switch.**

**ES** = Impulse switch

**ER** = Switching relay

**ESV** = Impulse switch with off delay. The impulse switch automatically disconnects after the set delay is timed out if a manual OFF command has not been given. Infinitely variable time range up to 120 minutes.

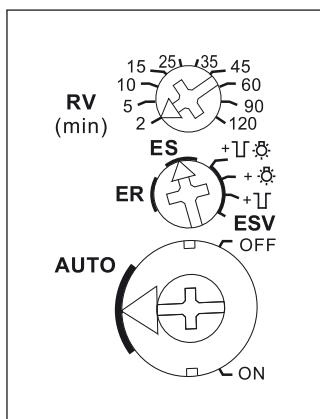
**ESV** = If switch-off early warning  $\sqcup$  is set the stairwell lighting starts flickering approximately +  $\sqcup$  30 seconds before timeout at repeated shorter time intervals. During this process reset is possible.

**ESV** = If pushbutton permanent light  $\odot$  is set permanent light can be switched on by pressing longer +  $\odot$  than 1 sec. This switches off automatically after 2 hours or by an operation longer than 2 seconds.

**ESV** = If both switch-off early warning function and permanent light by pushbutton set, the switch-off +  $\sqcup$   $\odot$  early warning function is activated before switching off the permanent light.

**If this impulse switch with integrated relay function is in a circuit, which is monitored by a FR12-230V mains disconnection relay, no additional base load is required. However, the monitoring voltage of the FR12-230V must be set to 'max'.**

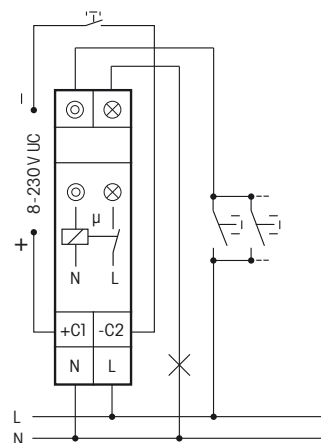
### Function rotary switches



Standard setting ex works.

- $\sqcup$  = switch-off early warning
- $\odot$  = pushbutton permanent light
- $\sqcup$   $\odot$  = switch-off early warning and pushbutton permanent light

### Typical connection

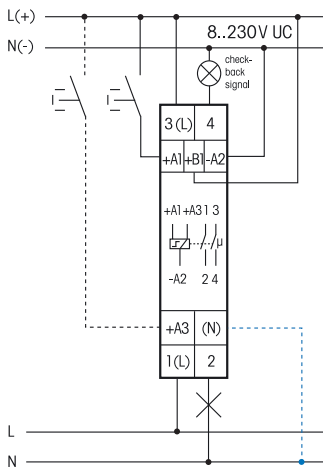


Technical data page 11-15.  
Housing for operating instructions GBA12,  
see accessoires, chapter Z.

<b>ESR12NP-230V+UC</b>	1 NO contact 16 A	EAN 4010312107928	<b>44,30 €/pc.</b>
------------------------	-------------------	-------------------	--------------------



**Typical connection**



If N is connected, the zero passage switching is active.

Technical data page 11-15.  
 Housing for operating instructions GBA12,  
 see accessoires, chapter Z.

# ESR12DDX-UC



**1+1 NO contacts potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. Standby loss 0.03-0.4 watt only.**

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

**With the patented Eltako Duplex technology (DX) the normally potential-free contacts can still switch in zero passage when switching 230 V AC 50 Hz and therefore drastically reduce wear. Simply connect the neutral conductor to the terminal (N) and L to 1(L) and/or 3(L) for this. This results in an additional standby consumption of only 0.1 Watt.**

**Universal control voltage 8 to 230 V UC.** Supply voltage is same as the control voltage.

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

**The accrued switch-on time** is continuously displayed. First in hours (h), then in months (m) with 1 digit after the decimal point.

**By using bistable relays 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.

Only impulse switch functions: After a power failure the system is disconnected in a definite sequence or the switch position is kept depending on the setting (then + on the display next to function abbreviations). Settings under RSM in the menu guidance. Furthermore, when using these functions, with the keys MODE and SET, the control inputs A1 and A3 can be defined as central control inputs.

**ZA1** = 'central off' with A1, local with A3; **ZE1** = 'central on' with A1, local with A3;

**Z00** = no central control. 'Central on' with A1, 'central off' with A3. No local control refer to function RS.

**Relays with suitable functions to feed back the switching voltage signal of a dimmer switch.**

From 110V control voltage and in the settings 2S, WS, SS and GS glow lamp current up to 5mA, dependent on the ignition voltage.

**With the keys MODE and SET you can select amongst 18 functions:**

- OFF** = Permanent OFF
- 2xS** = 2-fold impulse switch with 1 NO contact each, control inputs A1 and A3
- 2S** = Impulse switch with 2 NO contacts
- WS** = Impulse switch with 1 NO contact and 1 NC contact
- SS1** = Impulse multi circuit switch 1+1 NO contacts for switching sequence 0 - contact 1(1-2) - contact 2(3-4) - contacts 1+2
- SS2** = Impulse multi circuit switch 1+1 NO contacts for switching sequence 0 - contact 1 - contacts 1+2 - contact 2
- SS3** = Impulse multi circuit switch 1+1 NO contacts for switching sequence 0 - contact 1 - contacts 1+2
- GS** = Impulse group switch 1+1 NO contacts for switching sequence 0 - contact 1 - 0 - contact 2
- RS** = Switch with 2 NO contacts, with A1 = set control input and A3 = reset control input
- 2xR** = 2-fold switching relay with 1 NO contact each, control inputs A1 and A3
- 2R** = Switching relay with 2 NO contacts
- WR** = Switching relay with 1 NO contact and 1 NC contact
- RR** = Switching relay (closed-circuit current relay) with 2 NC contacts
- EAW** = Impulse relay for fleeting NO contact and fleeting NC contact with 1+1 NO contacts, wiping time 1 sec each
- EW** = Impulse relay for fleeting NO contact with 1 NO contact and 1 NC contact, wiping time 1 sec
- AW** = Impulse relay fleeting NC contact with 1 NO contact and 1 NC contact, wiping time 1 sec
- GR** = Group relay 1+1 NO contacts (relay with alternating closing contacts)
- ON** = Permanent ON

The control inputs A1 and A3 have the same functions except for 2xS, 2xR and RS, if not used as central control inputs.

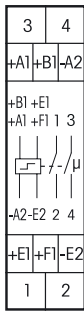
After setting the required function, the function can be blocked.

An arrow on the right of the abbreviation indicates the blocking status.

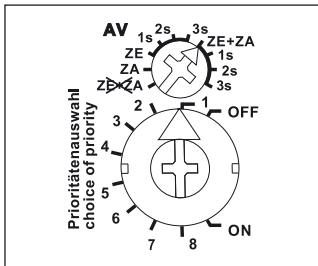
<b>ESR12DDX-UC</b>	1+1 NO contacts 16 A	EAN 4010312108093	<b>60,80 €/pc.</b>
--------------------	----------------------	-------------------	--------------------



## IMPULSE SWITCH WITH POTENTIAL FREE CONTACTS ES12Z, ALSO FOR CENTRAL CONTROL

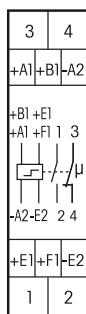
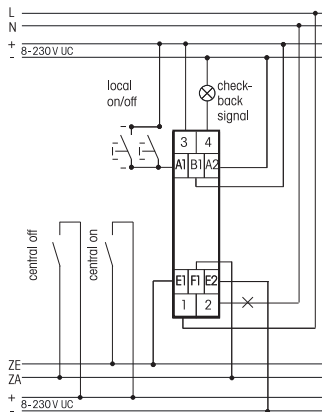


### Function rotary switches



Standard setting ex works.

### Typical connection



Technical data page 11-15.  
Housing for operating instructions GBA12,  
see accessories, chapter Z.

## ES12Z-200-UC



**2 NO contacts potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. Standby loss 0.03-0.4 watt only. Central control priorities selectable.**

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.

Local universal control voltage 8 to 230 V UC.

In addition control inputs 8 to 230 V UC central ON and central OFF, electrically isolated from the local input.

Supply voltage same as the local control voltage. Very low switching noise. Glow lamp current starting at 110 V control voltage up to 50 mA in positions 1 to 3 and 5 to 7 of the rotary switch.

**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.

Maximum current across both contacts 16 A for 230 V. Contact position indication with LED. This starts blinking after 15 seconds in case of an inhibited pushbutton, not in position 4+8 of the rotary switch.

**With the upper rotary switch** this impulse switch can be partly or completely excluded from central control:

**ZE+ZA** = 'Central ON' and 'Central OFF' are active. You can select a response delay of 0, 1, 2 or 3 seconds for 'Central ON'. **ZE** = Only 'Central ON' is active. You can select a response delay of 0, 1, 2 or 3 seconds. **ZA** = Only 'Central OFF' is active. **ZE+ZA** = No central control is active.

The lower rotary switch sets several priorities. These determine which other control inputs are inhibited as long as another control input is excited permanently.

Furthermore, here it is decided if the switch position should be kept or not after a power failure:

In positions 1 to 4 of the rotary switch the switch position remains unchanged, in positions 5 to 8 it is switched off. Incoming central commands are executed immediately after the powersupply returns.

**OFF** = Permanent OFF, **ON** = Permanent ON

**1 and 5** = No priority. Also if central control inputs are excited permanently, it is possible to operate the device by pushing a local push-button. The last central command is executed. This is the setting ex factory.

**2 and 6** = Priority for central ON and OFF. Local push-buttons are temporarily inhibited. However, continuous excitation central OFF has priority over continuous excitation central ON.

**3 and 7** = Priority for central ON and OFF. Local push-buttons are temporarily inhibited.

However, continuous excitation central ON has priority over continuous excitation central OFF.

**4 and 8** = Priority for permanently excited local push-button. In the meantime central commands are not executed. In these positions a glow lamp current is not permitted.

ES12Z-200-UC	2 NO contacts 16 A	EAN 4010312107690	54,90 €/pc.
--------------	--------------------	-------------------	-------------

## ES12Z-110-UC

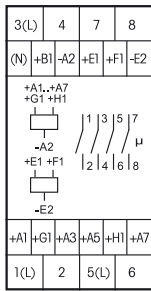


**1 NO contact + 1 NC contact potential free 16 A/250 V AC. Incandescent lamp load up to 2000 W. Standby loss 0.03-0.4 watt only. Central control priorities selectable.**

All functions same as ES12Z-200, but with 1 NO contact and 1 NC contact.

ES12Z-110-UC	1 NO contact + 1 NC contact 16 A	EAN 4010312107683	53,30 €/pc.
--------------	----------------------------------	-------------------	-------------

**4-FOLD IMPULSE SWITCH WITH INTEGRATED RELAY FUNCTION ESR12Z-4DX-UC, ALSO FOR CENTRAL CONTROL AND GROUP CONTROL**



**ESR12Z-4DX-UC**



**With 4 independent contacts, 1NO contact each potential free 16 A/250 V AC, incandescent lamp load up to 2000 W. Standby loss 0.03-0.4 watt only.**

Modular devices for DIN-EN 60715 TH35 rail mounting. 2 modules = 36 mm wide, 58 mm deep.

**Patented Eltako Duplex technology (DX) allows you to switch 3 of the 4 normally potential free contacts in zero passage switching when 230 V A/C voltage 50 Hz is switched. This drastically reduces wear. To achieve this, simply connect the N conductor to the terminal (N) and the phase conductors to 1(L), 3(L) or 5(L). This results in an additional standby consumption of only 0.1 watt.** If the channels are used to control switchgear that has no zero passage switching, (N) should not be connected, otherwise the additional off-delay would have the opposite effect.

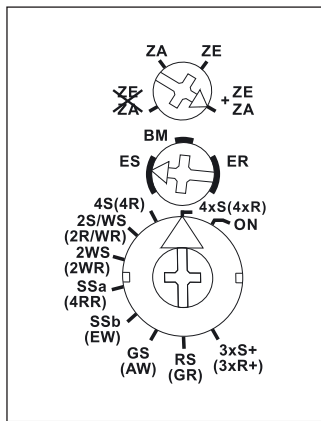
Local universal control voltage 8 to 230 V UC. In addition universal control inputs central ON and central OFF for 8 to 230V UC, electrically isolated from the local inputs.

**With additional group control inputs ON and OFF for 8..230 V UC.** Same potential like the local control inputs. Groups of these impulse switches can be controlled separately using the group control inputs. Supply voltage like the local control voltage. **By using a bistable relay coil power loss and heating is avoided even in the on mode.** The switched consumers may not be connected to the mains before the short automatic synchronisation after installation has terminated. Central commands always have priority, local control inputs are blocked as long as central commands are activated. In case of a power failure the system is disconnected in a defined mode.

**With the upper rotary switch** this impulse switch with integrated relay function can be partly or completely excluded from central control: ZE+ZA = central ON and central OFF ZE = central ON only ZA = central OFF only ~~ZE+ZA~~ = no central control

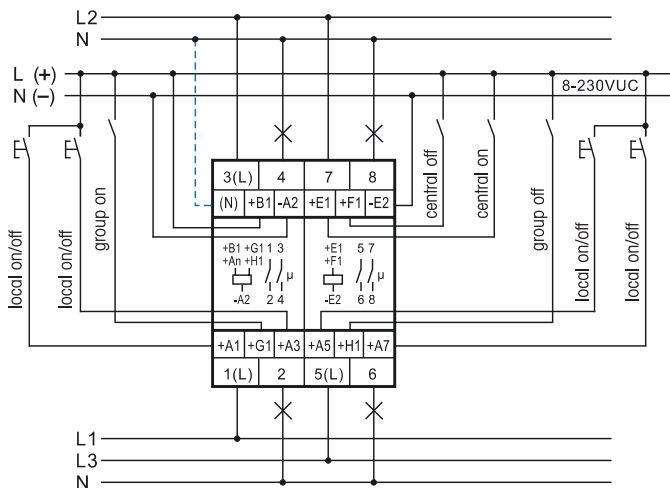
Use the middle rotary switch to preselect the functions of the lower rotary switch for ES and ER. Use ER to select the clamp functions. If BM is selected, control can be exerted by a motion detector. **Not suitable to feed back the switching voltage signal of a dimmer switch. Use only relays ESR12DDX-UC, ESR12NP-230V+UC or ESR61NP-230V+UC for this purpose. With the lower rotary switch 18 different functions may be selected:**

**Function rotary switches**



Standard setting ex works.

**Typical circuit with central control and group control**



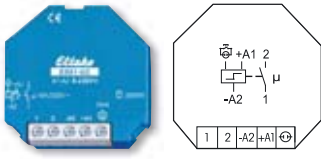
If N is connected, the zero passage switching is active at the contacts 1-2, 3-4 and 5-6.

Technical data page 11-15.  
Housing for operating instructions GBA12, see accessories, chapter Z.

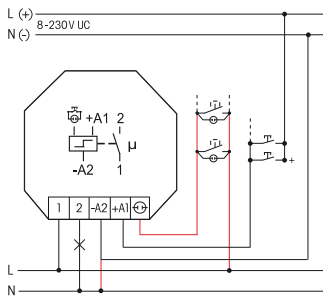
- ON** = Permanent ON
- 4xS** = 4-fold impulse switch with 1 NO contact each, 4x control inputs A1, A3, A5 and A7
- (4xR)** = 4-fold switching relay with 1 NO contact each, control inputs A1, A3, A5 and A7
- 4S** = Impulse switch with 4 NO contacts
- (4R)** = Switching relay with 4 NO contacts
- 2S/WS** = Impulse switch with 3 NO contacts and 1 NC contact
- (2R/WR)** = Switching relay with 3 NO contacts and 1 NC contact
- 2WS** = Impulse switch with 2 NO contacts and 2 NC contacts
- (2WR)** = Switching relay with 2 NO contacts and 2 NC contacts
- SSa** = Impulse multi circuit switch 2+2 NO contacts for switching sequence 0-2-2+4-2+4+6; check back signal 8
- (4RR)** = closed-circuit current relay with 4 NC contacts
- SSb** = Impulse multi circuit switch 2+2 NO contacts for switching sequence 0-2-2+4-2+4+6-2+4+6+8
- (EW)** = Impulse relay for fleeting NO contact with 3 NO contacts and 1 NC contact, wiping time 1 sec
- GS** = Impulse group switch. Switching sequence 0-2-0-4-0-6-0; check back signal 8
- (AW)** = Impulse relay fleeting NC contact with 3 NO contacts and 1 NC contact, wiping time 1 sec
- RS** = Switch with 4 NO contacts, A1 = set control input and A3 = reset control input
- (GR)** = Group relay 1+1+1 NO contacts
- 3xS+** = 3-fold impulse switch with 1 NO contact each + check back signal 8, control inputs A1, A3 and A5
- (3xR+)** = 3-fold switching relay with 1 NO contact each + check back signal 8, control inputs A1, A3 and A5

<b>ESR12Z-4DX-UC</b>	4 x 1 NO contact 16 A	EAN 4010312108130	<b>94,90 €/pc.</b>
----------------------	-----------------------	-------------------	--------------------

## IMPULSE SWITCH ES61-UC



### Typical connection



Technical data page 11-15.

## ES61-UC



**1 NO contact potential free 10 A/250 V AC. Incandescent lamp load up to 2000 W. No standby loss.**

For installation. 45 mm long, 45 mm wide, 18 mm deep.

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

**Either** universal control voltage 8 to 230 V UC at the control input +A1/-A2

**or** 230 V with a glow lamp current up to 5 mA at the control input  $\ominus(L)/-A2(N)$ .

Using two potentials simultaneously at the control inputs is not permitted.

Very low switching noise.

**No permanent power supply necessary, therefore no standby loss.**

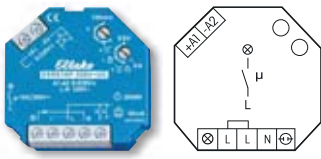
**By using a bistable relay coil power loss and heating is avoided even in the on mode.**

The relay contact can be open or closed when putting into operation. It will be synchronised at first operation.

**If this impulse switch is in a circuit, which is monitored by a FR12-230V mains disconnection relay, no additional base load is required. However, the monitoring voltage of the FR12-230V must be set to 'max'.**

The electronics does not have an internal power supply and therefore no power is consumed in any contact position. A control current flows only during a short control impulse of 0.2 seconds. This activates the microcontroller, reads the last switching state from the non-voltage memory, switches the bistable relay to its opposite state accordingly and rewrites the new switching state to memory.

ES61-UC	1 NO contact 10 A	EAN 4010312107966	42,00 €/pc.
---------	-------------------	-------------------	-------------

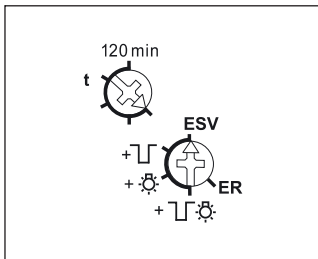


## ESR61NP-230V+UC



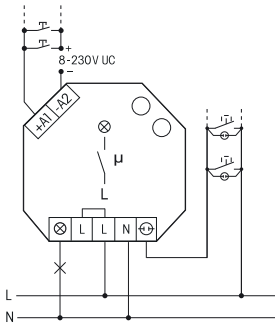
**1 NO contact not potential free 10 A/250 V AC, incandescent lamp load up to 2000 W. Off delay impulse switch with switch-off early warning and pushbutton permanent light switchable. Standby loss 0.7 watt only.**

### Function rotary switches



Standard setting ex works.

### Typical connection



Technical data page 11-15.

For installation. 45 mm long, 45 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.

Control voltage 230V. In addition electrically isolated universal control voltage from 8 to 230 V UC. Supply voltage and switching voltage 230 V. Very low switching noise. Variable time range up to 120 minutes in the function ESV. At the control input  $\oplus$  pushbuttons with a glow lamp current up to 50 mA can be connected. In case of a power failure the system is disconnected in a preset sequence.

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. The function ER is selectable. If the function ER is selected a glow lamp current is not permitted. Only the control input A1-A2 should be used.

**When set to the function ER this device is suitable to feed back the switching voltage signal of a dimmer switch.**

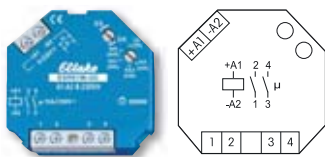
**If switch-off early warning function**  $\square$  is switched on, the light starts flickering approx. 30 seconds before time-out. This is repeated three times at decreasing time intervals.

**If the permanent light function**  $\odot$  is switched on, the function can be activated by pressing the pushbutton for longer than 1 second. This function switches off automatically after 2 hours or by pressing the pushbutton for longer than 2 seconds.

If both switch-off early warning function and permanent light by pushbutton  $\square$   $\odot$  are set, the switch-off early warning function is activated before switching off the permanent light.

<b>ESR61NP-230V+UC</b>	1 NO contact 10 A	EAN 4010312107911	<b>42,40 €/pc.</b>
------------------------	-------------------	-------------------	--------------------

## MULTIFUNCTION IMPULSE SWITCH WITH INTEGRATED RELAY FUNCTION ESR61M-UC



# ESR61M-UC



**1+1 NO contacts potential free 10 A/250 V AC. Incandescent lamp load up to 2000 W.  
No standby loss.**

For installation. 45 mm long, 45 mm wide, **32 mm deep.**

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

Universal control voltage 8 to 230 V UC.

**No permanent power supply necessary, therefore no standby loss.**

**By using bistable relays 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.

The functions of the second rotary switch are preselected using the rotary switch ES/ER.

The setting ER selects the function in brackets. 10 different functions are selectable.

**2S** = Impulse switch with 2 NO contacts

**(2R)** = Switching relay with 2 NO contacts

**WS** = Impulse switch with 1 NO contact and 1 NC contact

**(WR)** = Switching relay with 1 NO contact and 1 NC contact

**SS1** = Impulse multi circuit switch 1+1 NO contacts for switching sequence  
0 - contact 1(1-2) - contact 2(3-4) - contacts 1+2

**(RR)** = Switching relay (closed-circuit current relay) with 2 NC contacts

**SS2** = Impulse multi circuit switch 1+1 NO contacts for switching sequence  
0 - contact 1 - contacts 1+2 - contact 2

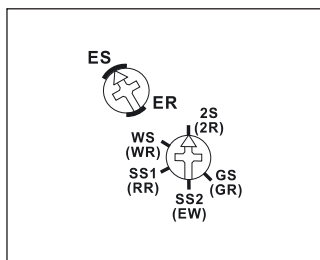
**(EW)** = Impulse relay for fleeting NO contact with 1 NO contact and 1 NC contact, wiping time 1 sec

**GS** = Impulse group switch 1+1 NO contacts for switching sequence 0 - contact 1 - 0 - contact 2

**(GR)** = Group relay 1+1 NO contacts (relay with alternating closing contacts)

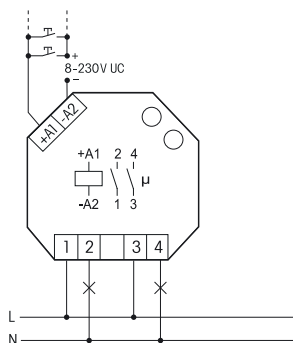
**This relay is not suitable to feed back the switching voltage signal of a dimmer switch. Use only relays ESR12DDX-UC, ESR12NP-230V+UC or ESR61NP-230V+UC for this purpose.**

### Function rotary switches



Standard setting ex works.

### Typical connection

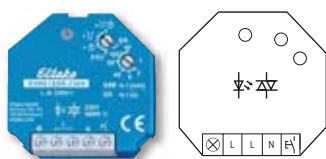


Technical data page 11-15.

The electronics does not have an internal power supply and therefore no power is consumed in any contact position. A control current flows only during a short control impulse of 0.2 seconds. This activates the microcontroller, reads the last switching state from the non-voltage memory, switches the bistable relay to its opposite state accordingly and rewrites the new switching state to memory.

<b>ESR61M-UC</b>	1 + 1 NO contacts 10 A	EAN 4010312108079	<b>54,90 €/pc.</b>
------------------	------------------------	-------------------	--------------------

# NOISELESS IMPULSE SWITCH WITH INTEGRATED RELAY FUNCTION ESR61SSR-230V WITH SOLID STATE RELAY

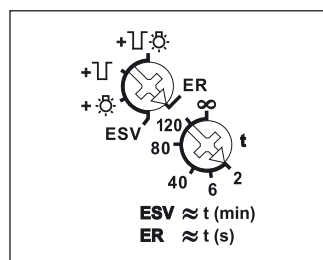


## ESR61SSR-230V



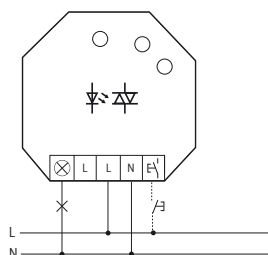
**Noiseless solid state relay not potential free, 400 Watt, off delay impulse switch with switch-off early warning and pushbutton permanent light switchable. Standby loss 0,3 watt only.**

### Function rotary switches



Standard setting ex works.

### Typical connection



Technical data page 11-15.

For installation. 45 mm long, 45 mm wide, 18 mm deep.

Supply, switching and control voltage 230 V.

Zero passage switching.

In case of a power failure the system is disconnected in a preset sequence.

In the ER function the relay switches back on when the power is restored and the control input is active.

It is not permitted to apply a glow lamp current to the control input.

With automatic electronic overtemperature switch-off.

At a load of < 1W a GLE must be switched in parallel to the load.

**Use the top rotary switch** to select the required function of this impulse switch:

**ER** = switching relay

**ESV** = impulse switch. Possibly with off delay, then

+ [ ] with light bulb = ESV with pushbutton permanent light

+ [ ] = ESV with switch-off early warning

+ [ ] with light bulb = ESV with pushbutton permanent light and switch-off early warning

The LED flashes when the rotary switch reaches a new setting range to assist you to find the require position with certainty.

The LED lights up permanently when the relay is switched on.

**When the pushbutton permanent light is switched on** [ ] with light bulb, set the LED to permanent light by pressing the pushbutton for longer than 1 second. This is indicated by the LED flickering briefly. After 2 hours, the permanent light switches off automatically or it can be switched off previously by briefly pressing the pushbutton.

**If the switch-off early warning** [ ] is switched on, the light starts to flicker approx. 30 seconds before time-out. This is repeated three times at decreasing time intervals.

During the switch-off early warning, the light can be switched back on by briefly pressing the pushbutton.

If both switch-off early warning and pushbutton permanent light [ ] with light bulb are switched on, switch-off early warning is activated before automatic switch-off of the permanent light.

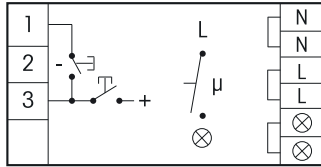
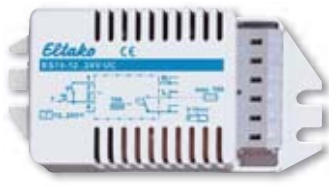
The function **ESV on the bottom rotary switch** sets the off delay from 2 to 120 minutes.

In setting  $\infty$  normal impulse switch function ES without off delay, without pushbutton permanent light and without switch-off early warning.

In the ER function a switch-on wipe time can be set between 2 and 120 seconds. On expiry of the wipe time the relay switches off automatically.

In setting  $\infty$  default relay function ER without wipe time.

<b>ESR61SSR-230V</b>	Impulse switch with integrated relay function with SSR	EAN 4010312109786	<b>44,70 €/pc.</b>
----------------------	--	-------------------	--------------------



## ES75-12..24V UC



**For installation in lighting fittings. 1 NO contact not potential free 10 A/250 V AC. Standby loss 1 watt only.**

Built-in device for installation. 85 mm long, 40 mm wide, 28 mm deep.

With integrated transformer to galvanically separate the control circuit from the switching circuit to comply with the requirements for safety extra low voltage (SELV) to EN 60669-2-2. As of production week 18/18, compliance is fulfilled with the safety requirements of 2x MOPP to EN 60601-1. Activation by internal voltage or external control voltage of 12 to 24 V UC, control current 10 mA at 24 V. Continuous power supply 230 V.

A circuit breaker of max. 10 A is required.

Incandescent lamps and halogen lamps load up to 500 W<sup>1)</sup> and fluorescent lamps with conventional ballast units in lead-lag circuit up to 1000 VA. Fluorescent lamps with conventional ballast units parallel compensated 300 VA.

Temperatures at the mounting location between -20°C and +50°C.

Min. command pulse duration/command pause 20/300 ms.

Connections on the low voltage side: 4-pole pin receptacle for STOCKO MKF 13264-6-0-404 plug, 230 V connections: 6-pole terminal strip with plug-in terminals. max. conductor cross section 2.5 mm<sup>2</sup>. One STOCKO plug comes with each device.

<sup>1)</sup> For lamps with 150 W max.

<b>ES75-12..24VUC</b>	1 NO contact 10 A	EAN 4010312101063	<b>41,70 €/pc.</b>
-----------------------	-------------------	-------------------	--------------------

# TECHNICAL DATA ELECTRONIC IMPULSE SWITCHES, ALSO FOR CENTRAL CONTROL



Type	ES12DX <sup>a)</sup> ES12-200 <sup>a)</sup> ES12-110 <sup>a)</sup>	ESR12NP	ESR12DDX <sup>b)</sup>	ES12Z <sup>b)</sup> ESR12Z- 4DX <sup>b)</sup>	ES61 <sup>a)</sup> ESR61M <sup>a)</sup>	ESR61NP <sup>b)</sup>	ESR61SSR
<b>Contacts</b>							
Contact material/contact gap	AgSnO <sub>2</sub> /0.5 mm	AgSnO <sub>2</sub> /0.5 mm	AgSnO <sub>2</sub> /0.5 mm	AgSnO <sub>2</sub> /0.5 mm	AgSnO <sub>2</sub> /0.5 mm	AgSnO <sub>2</sub> /0.5 mm	Opto Triac
Spacing of control connections/contact control connections C1-C2 or A1-A2/contact	6 mm -	3 mm 6 mm	6 mm -	6 mm -	3 mm ESR61M: 6 mm	3 mm 6 mm	- -
Test voltage contact/contact	ES12-200/110: 2000 V	-	4000 V	4000 V	ESR61M: 2000 V	-	-
Test voltage control connection/contact Test voltage C1-C2 or A1-A2/contact	4000 V -	2000 V 4000 V	4000 V -	4000 V -	2000 V 4000 V	2000 V 4000 V	- -
Rated switching capacity	16 A/250 V AC <sup>5)</sup>	16 A/250 V AC	16 A/250 V AC	16 A/250 V AC <sup>5)</sup>	10 A/250 V AC	10 A/250 V AC	-
Incandescent lamp and halogen lamp load <sup>1)</sup> 230 V, I on ≤ 70 A/10 ms	2000 W	2300 W	2000 W	2000 W	2000 W	2000 W	up to 400 W
Fluorescent lamp load with KVG* in lead-lag or non compensated	1000 VA	1000 VA	1000 VA	1000 VA	1000 VA	1000 VA	-
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500 VA	500 VA	500 VA	500 VA	500 VA	500 VA	up to 400 VA
Compact fluorescent lamps with EVG* and energy saving lamps ESL	I on ≤ 70 A/ 10 ms <sup>2)</sup> ES12DX: 15x7 W 10x20 W <sup>3m)</sup>	15x7 W 10x20 W <sup>7)</sup>	15x7 W 10x20 W <sup>3m)</sup>	I on ≤ 70 A/ 10 ms <sup>2)</sup> ESR12Z-4DX: 15x7 W 10x20 W <sup>3m)</sup>	I on ≤ 70 A/ 10 ms <sup>2)</sup>	15x7 W 10x20 W <sup>7)</sup>	up to 400 W <sup>7)</sup>
230 V LED lamps	up to 200 W <sup>7)</sup> I on ≤ 120 A/5 ms	up to 200 W <sup>7)</sup> I on ≤ 30 A/20 ms	up to 200 W <sup>7)</sup> I on ≤ 120 A/5 ms	up to 200 W <sup>7)</sup> I on ≤ 120 A/5 ms	up to 200 W <sup>7)</sup> I on ≤ 120 A/5 ms	up to 200 W <sup>7)</sup> I on ≤ 120 A/5 ms	up to 400 W <sup>7)</sup> I on ≤ 120 A/5 ms
Max. switching current DC1: 12 V/24 V DC	8 A	-	8 A	8 A	8 A	-	-
Life at rated load, cos φ = 1 resp. for incandescent lamps 1000 W at 100/h	>10 <sup>5</sup>	>10 <sup>5</sup>	>10 <sup>5</sup>	>10 <sup>5</sup>	>10 <sup>5</sup>	>10 <sup>5</sup>	-
Life at rated load, cos φ = 0.6 at 100/h	> 4x10 <sup>4</sup>	> 4x10 <sup>4</sup>	> 4x10 <sup>4</sup>	> 4x10 <sup>4</sup>	> 4x10 <sup>4</sup>	> 4x10 <sup>4</sup>	∞
Max. operating cycles	10 <sup>5</sup> /h	10 <sup>5</sup> /h	10 <sup>5</sup> /h	10 <sup>5</sup> /h	10 <sup>5</sup> /h	10 <sup>5</sup> /h	10 <sup>5</sup> /h
Maximum conductor cross-section (3-fold terminal)	6 mm <sup>2</sup> (4 mm <sup>2</sup> )	6 mm <sup>2</sup> (4 mm <sup>2</sup> )	6 mm <sup>2</sup> (4 mm <sup>2</sup> )	6 mm <sup>2</sup> (4 mm <sup>2</sup> )	4 mm <sup>2</sup>	4 mm <sup>2</sup>	4 mm <sup>2</sup>
Two conductors of same cross-section (3-fold terminal)	2.5 mm <sup>2</sup> (1.5 mm <sup>2</sup> )	2.5 mm <sup>2</sup> (1.5 mm <sup>2</sup> )	2.5 mm <sup>2</sup> (1.5 mm <sup>2</sup> )	2.5 mm <sup>2</sup> (1.5 mm <sup>2</sup> )	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>	1.5 mm <sup>2</sup>
Screw head	slotted/crosshead, pozidriv				slotted/crosshead		
Type of enclosure/terminals	IP50/IP20	IP50/IP20	IP50/IP20	IP50/IP20	IP30/IP20	IP30/IP20	IP30/IP20
<b>Electronics</b>							
Time on (also for central on/off)	100%	100%	100%	100% <sup>6)</sup>	100%	100%	100%
Max./min. temperature at mounting location	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C	+50°C/-20°C
Standby loss (active power) 230 V	-	0.5 W	0.4 W	0.4 W	-	0.7 W	0.3 W
Standby loss (active power) 12 V <sup>4)</sup>	-	-	0.03 W	0.03 W	-	-	-
Control current 230 V-control input local (<10 s)	-	10 mA	-	-	-	10 mA	1 mA
Control current universal control voltage all control voltages (<5 s) ± 20% 8/12/24/230 V (<10 s) ± 20%	1.5 mA (15 mA) ⊕ 30 (23) mA	- 2/4/9/5 (100) mA	- 2/3/7/3 (50) mA	- 0.1/0.1/0.2/1 (30) mA	1.5 mA (15 mA) ⊕ 30 (23) mA ESR61M: 4 mA	- 2/4/9/5 (100) mA	-
Control current central 8/12/24/230 V (<10 s) ± 20%	-	-	-	2/4/9/5 (100) mA	-	-	-
Max. parallel capacitance (approx. length) of single control lead at 230 V AC	⊖ 0.3 μF (1000 m) A1-A2: 0.06 μF (200 m)	ES: 0.3 μF (1000 m) ER: 3 nF (10 m) C1-C2: 15 nF (50 m)	0.3 μF (1000 m)	0.3 μF (1000 m)	⊖ : 0.3 μF (1000 m) A1-A2: 0.06 μF (200 m) ESR61M: 0.5 nF (2 m)	⊖ 0.06 μF (200 m) A1-A2: 0.3 μF (1000 m)	30 nF (100 m)
Max. parallel capacitance (approx. length) of central control lead at 230 V AC	-	-	-	0.9 μF (3000 m)	-	-	-

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

<sup>a)</sup> Bistable relay as relay contact. The relay contact can be open or closed when putting into operation. It will be synchronised at first operation. <sup>b)</sup> Bistable relay as relay contact. The switched consumer may not be connected to the mains before the short automatic synchronisation after installation has terminated. <sup>1)</sup> For lamps with 150 W max. <sup>2)</sup> A 40-fold inrush current must be expected for electronic ballast devices. For steady loads of 1200 W or 600 W use the current-limiting relay SBR12 or SBR61. See chapter 14, page 14-8. <sup>3)</sup> When using DX types close attention must be paid that zero passage switching is activated! <sup>4)</sup> Standby loss at 24 V approx. two times greater than at 12 V. <sup>5)</sup> For ES12-200 and ES12Z-200 maximum current across both contacts 16 A for 230 V. <sup>6)</sup> Please consider sufficient ventilation at permanent connection of several impulse switches according to power loss calculation, and if necessary leave a ventilation distance of about ½ module. <sup>7)</sup> Usually applies for dimmable energy saving lamps and dimmable 230 V LED lamps. Due to differences in the lamps electronics, there may be a restriction on the maximum number of lamps; especially if the connected load is very low (for 5 W-LEDs).

To comply with DIN VDE 0100-443 and DIN VDE 0100-534, a Type 2 or Type 3 surge protection device (SPD) must be installed.



## IMPULSE SWITCHES WITH MONOSTABLE RELAY 10 A/250 V AC

### OVERVIEW

Type	Switching type	Control voltage	Current consumption	Nominal switching current/voltage	Pushbutton type	Advantages and application
IFE12-10TS	Off-switch	12 V AC	5 mA	10 A/250 V AC	Without glow lamp	Impulse switch with 1 NO contact
IFES12-20TS	Impulse multi-circuit switch	12 V AC	5 mA	10 A/250 V AC	Without glow lamp	Multicircuit switch sequence 0/1/2/1+2/0
IFED12-20	Double off-switch	12 V AC	5 mA	10 A/250 V AC	Without glow lamp	Two separately controllable remote switch in one device; space-saving and well suited for new distributions



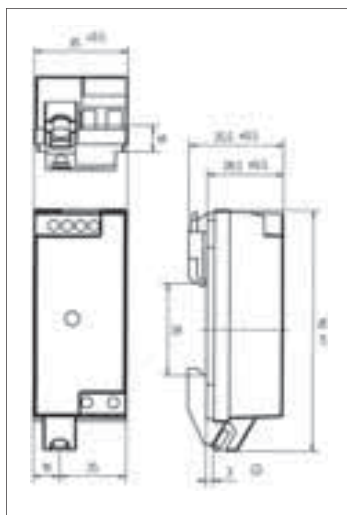
Mounting plate HPI

## IFE..

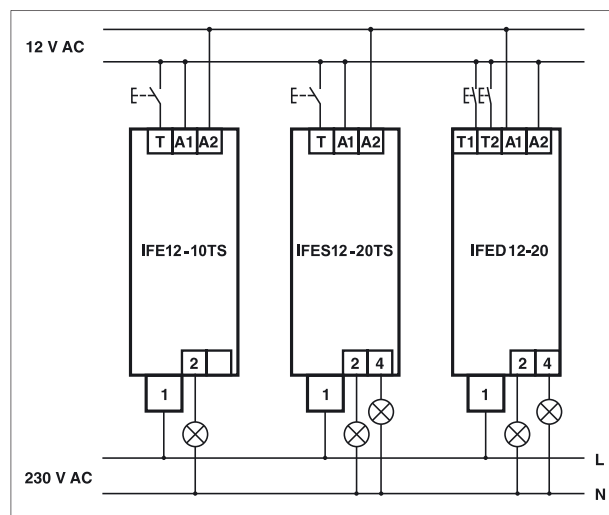
### Impulse switches with monostable relay 10 A/250 V AC

No annoying switching noises.  
 For DIN rail and screw fastening.  
 100% duty cycle.  
 Increased insensitivity to unsafe contact with the button.  
 Minimal power consumption.  
 According to DIN VDE 0637 and EMC directive.  
 Shock protected.

#### Dimension drawing in mm



#### Wiring diagram



Max. fuse 10 A

Note: the buttons must be connected to T and optionally to A1 or A2. The remote switches with monostable relay are not suitable for operation with illuminated buttons.

<b>IFE12-10TS</b>	1 NO contact 10 A	EAN 4010312107379	<b>18,50 €/pc.</b>
<b>IFES12-20TS</b>	1+1 NO contact 10 A	EAN 4010312107430	<b>25,60 €/pc.</b>
<b>IFED12-20</b>	2x1 NO contacts 10 A	EAN 4010312107454	<b>25,60 €/pc.</b>
<b>HPI</b>	Mounting plate with screws	EAN 4010312901663	<b>1,10 €/pc.</b>

Technical data page 11-18.

Recommended retail prices excluding VAT.

## OVERVIEW

Type	Switching type	Control voltage	Current consumption	Nominal switching current/voltage	Pushbutton type	Advantages and application
IFE12-10.11	Off-switch	12 V AC	1 mA	10 A/250 V AC	With or without glow lamp <sup>1)</sup>	Use with illuminated buttons: The button lighting is always on.
IFE12-20.13	Double off-switch	12 V AC	1 mA	10 A/250 V AC	without glow lamp	two separately controllable remote switch in one device

<sup>1)</sup>Suitable for all illuminated button types up to a maximum glow lamp current of 50 mA.

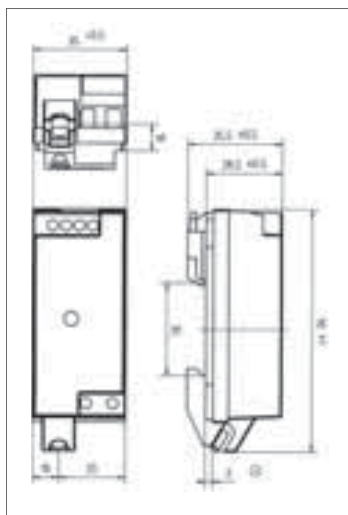


Mounting plate HP1

## IFE..

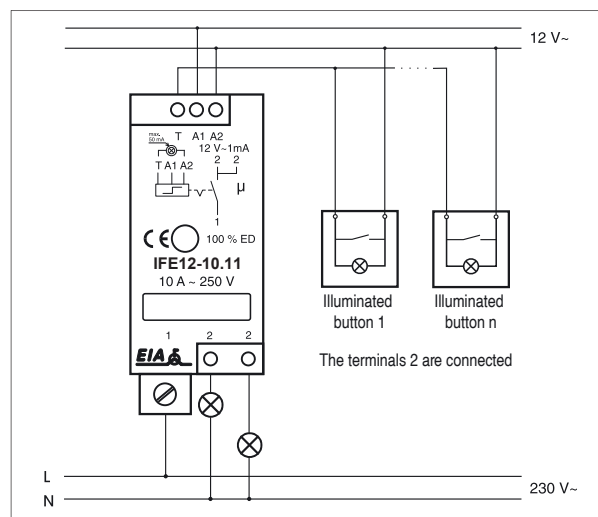
### Impulse switches with bistable relay 10 A/250 V AC

#### Dimension drawing in mm



#### IFE12-10.11

For illuminated and non-illuminated buttons, button lighting always on.



IFE12-10.11	1 NO contact 10 A	EAN 4010312107386	<b>25,60 €/pc.</b>
IFE12-20.13	2x1 NO contacts 10 A	EAN 4010312107461	<b>35,50 €/pc.</b>
HP1	Mounting plate with screws	EAN 4010312901663	<b>1,10 €/pc.</b>

Technical data page 11-18.

## TECHNICAL DATA IMPULSE SWITCHES

Type	IFE12-10TS IFES12-20TS <sup>1)</sup> IFED12-20	IFE12-10.11 IFE12-20.13
<b>Control part</b>		
Rated voltage	12 V AC (10..20 V AC)	12 V AC (10..20 V AC)
Time on	100%ED	100%ED
Minimum command time	20 ms	20 ms
Switching frequency	180/min	180/min
<b>Load part</b>		
Rated switching capacity	10A/250V AC <sup>3)</sup>	10A/250V AC <sup>3)</sup>
Incandescent lamp and halogen lamp <sup>2)</sup> 230V, I on ≤ 70A/10ms	2000 W	1200 W
EVG* and energy saving lamps ESL	1000 VA, max. 5 pcs in parallel	400 VA, max. 5 pcs in parallel
Fluorescent lamp load with KVG* in lead-lag or non compensated	1000 VA	400 VA, max. 3 pcs in parallel
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	400 VA	not approved
Connections	Socket clamp 2.5 mm <sup>2</sup> for control input and load output Head screw terminal 2.5 mm <sup>2</sup> for load input	
Max./min. temperature at mounting location	+35°C/-5°C	+35°C/-5°C
Protection class	IP 00	IP 00
Mounting position	All positions	All positions
Mounting method	For quick fastening on mounting rails or for screw fastening using holding plate and screws HP1.	
In case of power failure	Defined OFF (not IFED12)	The switch position is retained in the event of a power failure

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

<sup>1)</sup> Switching sequence of the multicircuit switch: 0/1/2/1+2/0

<sup>2)</sup> For lamps with 150 W max.

<sup>3)</sup> Multicircuit switch and switch double: sum of both contacts max. 2500 VA.