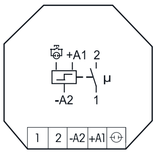
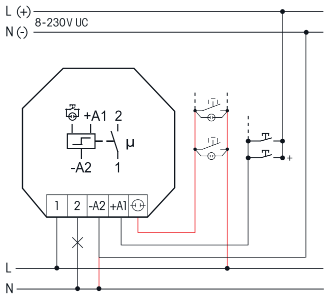


Typical connection



Manuals and documents in further languages:
http://eltako.com/redirect/ES61-UC

Technical data page 11-15.

ES61-UC

1 NO contact potential free 10 A/250 V AC. 230 V LED lamps up to 200 W, 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 (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	Impulse switch, 1 NO contact 10 A	**Art. No. 61100501**	

TECHNICAL DATA ELECTRONIC IMPULSE SWITCHES, ALSO FOR CENTRAL CONTROL

Type	ES12DX [a] ES12-200 [a] ES12-110 [a]	ESR12NP	ESR12DDX [b]	ES12Z [b] ESR12Z-4DX [b]	ES61 [a] ESR61M [a]	ESR61NP [b]	ESR61SSR
Contacts							
Contact material/contact gap	$AgSnO_2$/0.5 mm	$AgSnO_2$/0.5 mm	$AgSnO_2$/0.5 mm	$AgSnO_2$/0.5 mm	$AgSnO_2$/0.5 mm	$AgSnO_2$/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	16A/250V AC [5]	16A/250V AC	16A/250V AC	16A/250V AC [5]	10A/250V AC	10A/250V AC	–
Incandescent lamp and halogen lamp load [1] 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 ≤ 70A/ 10 ms [2] ES12DX: 15x7 W 10x20 W [3,7]	15x7 W 10x20 W [7]	15x7 W 10x20 W [3,7]	I on ≤ 70A/ 10 ms [2] ESR12Z-4DX: 15x7 W 10x20 W [3,7]	I on ≤ 70A/ 10 ms [2]	15x7 W 10x20 W [7]	up to 400 W [7]
230V LED lamps	up to 200 W [7] I on ≤ 120 A/5 ms	up to 200 W [7] I on ≤ 30 A/20 ms	up to 200 W [7] I on ≤ 120 A/5 ms	up to 200 W [7] I on ≤ 120 A/5 ms	up to 200 W [7] I on ≤ 120 A/5 ms	up to 200 W [7] I on ≤ 120 A/5 ms	up to 400 W [7] 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	>10^5	>10^5	>10^5	>10^5	>10^5	>10^5	–
Life at rated load, cos φ = 0,6 at 100/h	> $4x10^4$	> $4x10^4$	> $4x10^4$	> $4x10^4$	> $4x10^4$	> $4x10^4$	∞
Max. operating cycles	10^3/h	10^3/h	10^3/h	10^3/h	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)	6 mm^2 (4 mm^2)	6 mm^2 (4 mm^2)	4 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)	2.5 mm^2 (1.5 mm^2)	2.5 mm^2 (1.5 mm^2)	1.5 mm^2	1.5 mm^2	1.5 mm^2
Screw head	slotted/crosshead, pozidriv				slotted/crosshead, pozidriv		
Type of enclosure/terminals	IP50/IP20	IP50/IP20	IP50/IP20	IP50/IP20	IP30/IP20	IP30/IP20	IP30/IP20
Electronics							
Time on (also for central on/off)	100%	100%	100%	100%6)	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 [4]	–	–	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	1.5mA (15 mA) 30(23)mA ESR61M: 4mA	– 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

[a] Bistable relay as relay contact. The relay contact can be open or closed when putting into operation. It will be synchronised at first operation. [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] For lamps with 150 W max. [2] 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. [3] When using DX types close attention must be paid that zero passage switching is activated! [4] Standby loss at 24 V approx. two times greater than at 12 V. [5] For ES12-200 and ES12Z-200 maximum current across both contacts 16 A for 230 V. [6] 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. [7] 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.

Compliance with: EN 61000-6-3, EN 61000-6-1 and EN 60 669