Technical Data Electronic Switching Relays, Control Relays and Coupling Relays

Eltako ELECTRONICS

Contacts	ESR12NP-230V+UC [a]	ESR12DDX-UC [b], ER12DX-UC [a], ER12-200-UC [a], ER12-110-UC [a], ER12-001-UC [a], ER12-002-UC [a]	ESR61NP-230V+UC [b] ESR61M-UC [a] ETR61NP-230V, ER61-UC [a]	KR09 -12V UC, -24V UC, -230V
Contact material/contact gap	$AgSnO_2$/0.5mm			
Spacing of control connections/contact	3mm	6mm	6mm, ER61: 3mm	6mm
Spacing of control connections C1-C2 or A1-A2/contact	6mm	6mm	ESR61NP+M: 6mm	–
Test voltage contact/contact	–	ESR12DDX: 4000V ER12-200/110: 2000V	ESR61M: 2000V	–
Test voltage control connections/contact Test voltage C1-C2 or A1-A2/contact	2000V 4000V	4000V –	2000V ESR61NP+M+ETR61NP: 4000V	4000V –
Rated switching capacity	16A/250V AC	16A/250V AC [4]	10A/250V AC	6A/250V AC
Incandescent lamp and halogen lamp load [1] 230V, I on ≤ 70A/10ms	2300W	2000W	2000W	500W
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000VA	1000VA	1000VA	600VA
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500VA	500VA	500VA	300VA
Compact fluorescent lamps with EVG* and energy saving lamps ESL	15x7W 10x20W [5]	I on ≤ 70A/10ms [2] When using DX types: 15x7W, 10x20W [3] [5]	I on ≤ 70A/10ms [2] ESR61NP: 15x7W, 10x20W [5]	52W
230V LED lamps	up to 200W [5]	up to 200W [5]	up to 200W [5]	up to 50W [5]
Max. switching current DC1: 12V/24V DC	–	8A	not ESR: 8A	6A
Life at rated load, cos φ = 1 or for incandescent lamps 1000W at 100/h	$> 10^5$	$> 10^5$	$> 10^5$	$> 10^5$
Life at rated load, cos φ = 0.6 at 100/h	$> 4 \times 10^4$	$> 4 \times 10^4$	$> 4 \times 10^4$	–
Max. operating cycles	10^3/h	10^3/h	10^3/h	10^4/h
Contact position indication	LED (not series 61)			
Maximum conductor cross-section	series 12: 6mm² (3-fold terminal 4mm²), series 61: 4mm²			
Two conductors of same cross-section	series 12: 2.5mm² (3-fold terminal 1.5mm²), series 61: 1.5mm²			
Screw head	series 12: slotted/crosshead, pozidriv, series 61: slotted/crosshead			
Type of enclosure/terminals	series 12: IP50/IP20, series 61: IP30/IP20			
Electronics				
Time on	100%	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
Stand by loss (active power)	0.5W	–; ESR12DDX: 0.4W	–; ESR61NP: 0.7W, ETR61NP: 0.5W	–
Control current 230V control input local ±20%	10mA	–	10mA, ER61 and ESR61M: –	–
Control current universal control voltage all control voltages mA ± 20%	–	4 (not ESR12DDX)	ER61: 2, ESR61M:4	–
Control current at 8/12/24/230V (<10s) mA ± 20%	2/4/9/5(100)	only ESR12DDX: 2/3/7/3(50)mA	only ESR61NP: 2/4/9/5(100) only ETR61NP: 10mA/24V DC	–/15/10/11
Max. parallel capacitance (approx. length) of control lead at 230V AC	ES: 0,3µF (1000m) ER: 3nF (10m) C1-C2: 15nF (50m)	0,06µF (200m) ESR12DDX: 0,3µF (1000m)	0,06µF (200m)	0.06µF (200m)

* 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 150W max.

[2] A 40-fold inrush current must be expected for electronic ballast devices. For steady loads of 1200W or 600W use the currentlimiting 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] For ER12-200 maximum current across both contacts 16A for 230V.

[5] Usually applies for dimmable energy saving lamps and dimmable 230V 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 5W-LEDs).

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