

	<b>ESR12NP-230V+UC</b>	<b>ESR12DDX-UC<sup>a)</sup>, ER12DX-UC<sup>a)</sup>, ER12-200-UC<sup>a)</sup>, ER12-110-UC<sup>a)</sup>, ER12-001-UC<sup>a)</sup>, ER12-002-UC<sup>a)</sup></b>	<b>ESR61NP-230V+UC<sup>b)</sup>, ESR61M-UC<sup>b)</sup>, ETR61NP-230V, ER61-UC<sup>b)</sup></b>	<b>ESR61SSR</b>	<b>KR09 -12V UC, -24V UC, -230V</b>
<b>Contacts</b>					
Contact material/contact gap		AgSnO <sub>2</sub> /0.5 mm		Opto Triac	AgSnO <sub>2</sub> /0.5 mm
Spacing of control connections/contact	3 mm	6 mm	6 mm, ER61: 3 mm		6 mm
Spacing of control connections C1-C2 or A1-A2/contact	6 mm	6 mm	ESR61NP+M: 6 mm	–	–
Test voltage contact/contact	–	ESR12DDX: 4000V ER12-200/110: 2000V	ESR61M: 2000V	–	–
Test voltage control connections/contact	2000 V	4000V	2000V	–	4000V
Test voltage C1-C2 or A1-A2/contact	4000 V	–	ESR61NP+M+ETR61NP: 4000V	–	–
Rated switching capacity	16 A/250 V AC	16 A/250 V AC <sup>4)</sup>	10 A/250 V AC	–	6 A/250V AC
Incandescent lamp and halogen lamp load <sup>1)</sup> 230V, I on ≤ 70A/10ms	2300 W	2000 W	2000 W	up to 400 W	500 W
Fluorescent lamp load with KVG* in lead-lag circuit or non compensated	1000 VA	1000 VA	1000 VA	–	600 VA
Fluorescent lamp load with KVG* shunt-compensated or with EVG*	500 VA	500 VA	500 VA	up to 400 VA <sup>5)</sup>	300 VA
Compact fluorescent lamps with EVG* and energy saving lamps ESL	15x7 W 10x20 W <sup>5)</sup>	I on ≤ 70A/10ms <sup>2)</sup> When using DX types: 15x7W, 10x20W <sup>3)</sup> 5)	I on ≤ 70A/10ms <sup>2)</sup> ESR61NP: 15x7 W, 10x20W <sup>5)</sup>	up to 400W <sup>5)</sup>	52 W
230 V LED lamps	up to 200 W <sup>5)</sup> I on ≤ 30A/20ms	up to 200 W <sup>5)</sup> I on ≤ 120A/5ms	up to 200 W <sup>5)</sup> I on ≤ 120A/5ms	up to 400 W <sup>5)</sup> I on ≤ 120A/20ms	up to 50 W <sup>5)</sup> I on ≤ 10A/10ms
Max. switching current DCI: 12V/24V DC	–	8 A	not ESR: 8 A	–	6 A
Life at rated load, cos φ = 1 or for incandescent lamps 1000 W at 100/h	> 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	> 4 x 10 <sup>4</sup>	> 4 x 10 <sup>4</sup>	> 4 x 10 <sup>4</sup>	–	–
Max. operating cycles	10 <sup>3</sup> /h	10 <sup>3</sup> /h	10 <sup>3</sup> /h	10 <sup>3</sup> /h	10 <sup>4</sup> /h
Contact position indication			LED (not series 61)		
Maximum conductor cross-section			series 12: 6 mm <sup>2</sup> (3-fold terminal 4 mm <sup>2</sup> ), series 61: 4 mm <sup>2</sup>		
Two conductors of same cross-section			series 12: 2.5 mm <sup>2</sup> (3-fold terminal 1.5 mm <sup>2</sup> ), series 61: 1.5 mm <sup>2</sup>		
Screw head			series 12: slotted/crosshead, pozidriv, series 61: slotted/crosshead		
Type of enclosure/terminals			series 12: IP50/IP20, series 61: IP30/IP20		
<b>Electronics</b>					
Time on	100 %	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	+50°C/-20°C
Stand by loss (active power)	0.5 W	–; ESR12DDX: 0.4 W	–; ESR61NP: 0.7 W, ETR61NP: 0.5 W	0.3 W	–
Control current 230 V control input local ±20%	10 mA	–	10 mA, ER61 and ESR61M: –	1 mA	–
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: 10 mA/24V DC	–	–/15/10/11
Max. parallel capacitance (approx. length) of control lead at 230V AC	ES: 0,3 μF (1000 m) ER: 3 nF (10 m) C1-C2: 15 nF (50 m)	0,06 μF (200 m) ESR12DDX: 0,3 μF (1000 m)	0,06 μF (200 m)	30 nF (100 m)	0.06 μF (200 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 150W max. <sup>2)</sup> 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. <sup>3)</sup> When using DX types close attention must be paid that zero passage switching is activated! <sup>4)</sup> For ER12-200 maximum current across both contacts 16A for 230V. <sup>5)</sup> 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).

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.