

TECHNICAL DATA UNIVERSAL DIMMER SWITCHES, CAPACITY ENHANCERS AND 1-10 V CONTROLLERS



Type	ELD61 ^{a)}	EUD12NPN ¹⁾ EUD12D ¹⁾ EUD12DK ¹⁾ LUD12 ¹⁾ MFZ12PMD ¹⁾	EUD61NPN ¹⁾ EUD61M ¹⁾ EUD61NP ¹⁾ EUD61NPL ¹⁾	EUD12F ¹⁾ EUD12NPN/ 300W-BT- 230V ¹⁾	SDS12 SUD12	SDS61	MOD12D
Spacing of control connections/load	6 mm	6 mm	6 mm EUD61NP: 3 mm	6 mm	6 mm	3 mm	6 mm
Incandescent and halogen lamps 230 V (R)	-	up to 400 W EUD12DK: up to 800 W	up to 400 W EUD61NPL: 200 W	up to 300 W	-	-	-
Inductive transformers (L) ²⁾³⁾	-	up to 400 W EUD12DK: up to 800 W	up to 400 W (not EUD61NPL)	up to 300 W	-	-	-
Motor (L)	-	-	-	-	-	-	up to 300 W ⁷⁾
Capacitive transformers (C) ³⁾⁸⁾	-	up to 400 W EUD12DK: up to 800 W	up to 400 W EUD61NPL: 200 W	up to 300 W	-	-	-
Dimmable 230 V LED lamps ⁵⁾⁶⁾⁹⁾	-	Trailing edge up to 400 W Leading edge up to 100 W EUD12DK: Trailing edge up to 800 W Leading edge up to 200 W	Trailing edge up to 400 W, NPL: 200 W Leading edge up to 100 W, NPL: 40 W (not EUD61NP)	up to 300 W	-	-	-
Dimmable LED lamps 12-36 V DC	4 A	-	-	-	-	-	-
Dimmable energy saving lamps ESL ⁵⁾⁶⁾⁹⁾	-	up to 400 W EUD12DK: up to 800 W	up to 400 W EUD61NPL: 200 W (not EUD61NP)	up to 300 W	-	-	-
1-10 V EVG*	-	-	-	-	40 mA 600 VA	40 mA 600 VA	-
Maximum conductor cross-section (3-fold terminal)	4 mm ²	6 mm ² (4 mm ²)	4 mm ²	6 mm ² (4 mm ²)	6 mm ² (4 mm ²)	4 mm ²	6 mm ² (4 mm ²)
Two conductors of same crosssection (3-fold terminal)	1.5 mm ²	2.5 mm ² (1.5 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	2.5 mm ² (1.5 mm ²)
Screw head	slotted/cross-head	slotted/crosshead, pozidriv	slotted/crosshead	slotted/cross-head, pozidriv	slotted/cross-head, pozidriv	slotted/cross-head	slotted/cross-head, pozidriv
Type of enclosure/terminals	IP30/IP20	IP50/IP20	IP30/IP20	IP50/IP20	IP50/IP20	IP30/IP20	IP50/IP20
Time on	100%	100%	100%	100%	100%	100%	100%
Max./min. temperature at mounting location ⁴⁾	+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)	0.1 W	0.2 W LUD12: 0.1 W EUD12D and MFZ12PMD: 0.3 W	0.2 W EUD61M: 0.1 W EUD61NPL, EUD61NP: 0.5 W	0.5 W EUD12NPN/ 300W-BT-230V: 0.3 W	0.5 W	0.5 W	0.3 W
Control voltage	12..230 V UC	12..230 V UC EUD12NPN/ 110-240 V: 110-240 V AC	8..230 V UC EUD61NPN-230V and EUD61NP: 230 V	internal DC voltage	8..230 V UC	230 V	12..230 V UC
Control current 230 V-control input (<5 s)	-	-	EUD61NP: 0.7 mA EUD61NPN-230 V: 4(100) mA	EUD12NPN/ 300W-BT-230V: 2.2 mA	-	0.5 mA	-
Control current universal control voltage all control voltages (<5 s)	-	10(100) mA	-	-	-	-	2/3/8/5 (100) mA
Control current central 8/12/24/230 V (<5 s)	2/3/7/4(100) mA	-	2/3/7/4(100) mA	-	3/5/10/4(100) mA	-	-
Control current central 8/12/24/230 V (<5 s)	-	3/5/10/4(100) mA	-	-	3/5/10/4(100) mA	-	2/3/8/5 (100) mA
Max. parallel capacitance (approx. length) of single control lead at 230 V AC	0.3 µF (1000 m)	0.9 µF (3000 m)	0.9 µF (3000 m) EUD61NP: 0.3 µF (1000 m)	EUD12NPN/ 300W-BT-230V: 0.03 µF (100 m)	0.3 µF (1000 m)	0.06 µF (200 m)	0.9 µF (3000 m)
Max. parallel capacitance (approx. length) of central control lead at 230 V AC	-	0.9 µF (3000 m)	-	EUD12NPN/ 300W-BT-230V: 0.3 µF (1000 m)	0.3 µF (1000 m)	-	0.9 µF (3000 m)

* EVG = electronic ballast units; KVG = conventional ballast units^{a)} Secondary cable length with a maximum of 2 m. ¹⁾ At a load of more than 200 W (EUD12DK: 400 W; EUD12F: 100 W; EUD12NPN-BT/300W-230V: 100 W) a ventilation clearance of 1/2 module to adjacent devices must be maintained. The switching capacity of the EUD61 and DTD depends also on the ventilation conditions. ²⁾ Per dimmer or capacity enhancer it is only allowed to use max. 2 inductive (wound) transformers of the same type, **furthermore no-load operation on the secondary part is not permitted. The dimmer might be destroyed.** Therefore do not permit load breaking on the secondary part. Operation in parallel of inductive (wound) and capacitive (electronic) transformers is not permitted! ³⁾ **When calculating the load a loss of 20% for inductive (wound) transformers and a loss of 5% for capacitive (electronic) transformers must be considered in addition to the lamp load.** ⁴⁾ Affects the max. switching capacity. ⁵⁾ In the settings LED and ESL no wound (inductive) transformer must be dimmed. ⁶⁾ Increase of capacity for dimmable 230 V LED lamps and dimmable energy saving lamps ESL see page 9-8. ⁷⁾ Only 1 fan motor may be connected. ⁸⁾ For LED and 12 V halogen lamps. ⁹⁾ Usually applies for dimmable 230 V LED lamps and dimmable energy saving lamps. Different lamp electronics may result in restricted dimming areas, on/off problems and a limited maximum number of lamps (up to 10 units), especially if the connected load is very low (e.g. with 5 W LEDs). The comfort positions of the dimmer switches optimize the dimming range, which, however, only gives a maximum power up to 100 W. No inductive (wound) transformers may be dimmed in these comfort positions.

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.