

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



Type	ELD61 <sup>1)</sup>	EUD12NPN <sup>1)</sup> EUD12D <sup>1)</sup> EUD12DK <sup>1)</sup> LUD12 <sup>1)</sup> MFZ12PMD <sup>1)</sup>	EUD61NPN <sup>1)</sup> EUD61M <sup>1)</sup> EUD61NP <sup>1)</sup> EUD61NPL <sup>1)</sup>	EUD12F <sup>1)</sup>	SDS12 SUD12	SDS61	MOD12D	DTD65 <sup>1)</sup> DTD65L <sup>1)</sup> DTD55 <sup>1)</sup> DTD55L <sup>1)</sup>
Spacing of control connections/load	6 mm	6 mm	6 mm EUD61NP: 3 mm	6 mm	6 mm	3 mm	6 mm	3 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	-	-	-	up to 300 W DTD65L and DTD55L: up to 200 W
Inductive transformers (L) <sup>2)3)</sup>	-	up to 400 W EUD12DK: up to 800 W	up to 400 W (not EUD61NPL)	up to 300 W	-	-	-	up to 300 W DTD65L and DTD55L: -
Motor (L)	-	-	-	-	-	-	up to 300 W <sup>7)</sup>	-
Capacitive transformers (C) <sup>3)8)</sup>	-	up to 400 W EUD12DK: up to 800 W	up to 400 W EUD61NPL: 200 W	up to 300 W	-	-	-	up to 300 W DTD65L and DTD55L: up to 200 W
Dimmable energy saving lamps ESL <sup>5)6)9)</sup>	-	up to 400 W EUD12DK: up to 800 W	up to 400 W EUD61NPL: 200 W (not EUD61NP)	up to 300 W	-	-	-	up to 300 W DTD65L/FL and DTD55L: up to 200 W
Dimmable 230 V LED lamps <sup>5)6)9)</sup>	-	up to 400 W EUD12DK: up to 800 W	up to 400 W EUD61NPL: 200 W (not EUD61NP)	-	-	-	-	up to 300 W DTD65L and DTD55L: up to 200 W
Dimmable LED lamps 12-36 V DC	4 A	-	-	-	-	-	-	-
1-10 V EVG*	-	-	-	-	40 mA 600 VA	40 mA 600 VA	-	-
Maximum conductor cross-section (3-fold terminal)	4 mm <sup>2</sup>	6 mm <sup>2</sup> (4 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>	6 mm <sup>2</sup> (4 mm <sup>2</sup> )	4 mm <sup>2</sup>
Two conductors of same crosssection (3-fold terminal)	1.5 mm <sup>2</sup>	2.5 mm <sup>2</sup> (1.5 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>	2.5 mm <sup>2</sup> (1.5 mm <sup>2</sup> )	1.5 mm <sup>2</sup>
Screw head	slotted/crosshead	slotted/crosshead, pozidriv	slotted/crosshead	slotted/cross- head, pozidriv	slotted/cross- head, pozidriv	slotted/cross- head	slotted/cross- head, pozidriv	slotted/cross- head, pozidriv
Type of enclosure/terminals	IP30/IP20	IP50/IP20	IP30/IP20	IP50/IP20	IP50/IP20	IP30/IP20	IP50/IP20	IP50/IP20
Time on	100%	100%	100%	100%	100%	100%	100%	100%
Max./min. temperature at mounting location <sup>4)</sup>	+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	+50°C/-20°C
Standby loss (active power)	0.1 W	0.1 W EUD12DK: 0.2 W EUD12D and MFZ12PMD: 0.3 W	0.1 W EUD61NP: 0.5 W	0.1 W	1 W SUD12: 0.9 W	1 W	0.3 W	0.14 W DTD65L and DTD55L: 0.5 W
Control voltage	8..230 V UC	8..230 V UC	8..230 V UC EUD61NPN-230V und EUD61NP: 230V	internal DC voltage	8..230 V UC	230 V	8..230 V UC	230 V
Control current 230 V-control input (<5s)	-	-	EUD61NP: 0.7 mA EUD61NPN-230V: 4(100) mA	-	-	0.5 mA	-	0.4 mA
Control current universal control voltage all control voltages (<5s)	-	10(100) mA	-	-	-	-	2/3/8/5 (100) mA	-
8/12/24/230 V (<5s)	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 (<5s)	-	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)	-	0.3 µF (1000 m)	0.06 µF (200 m)	0.9 µF (3000 m)	0.3 µF (1000 m)
Max. parallel capacitance (approx. length) of central control lead at 230 V AC	-	0.9 µF (3000 m)	-	-	0.3 µF (1000 m)	-	0.9 µF (3000 m)	-

\* EVG = electronic ballast units; KVG = conventional ballast units<sup>1)</sup> Secondary cable length with a maximum of 2 m. <sup>1)</sup> At a load of more than 200 W (EUD12DK: 400 W, EUD12F: 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. <sup>2)</sup> 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! <sup>3)</sup> 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. <sup>4)</sup> Affects the max. switching capacity. <sup>5)</sup> In the settings ESL and LED no wound (inductive) transformer must be dimmed. <sup>6)</sup> Increase of capacity for dimmable energy saving lamps ESL and dimmable 230 V LED lamps see page 9-8. <sup>7)</sup> Only 1 fan motor may be connected. <sup>8)</sup> For 12 V halogen and LED lamps. <sup>9)</sup> Usually applies for dimmable energy saving lamps and dimmable 230 V LED lamps. Different lamp electronics may result in restricted dimming areas, on/off problems and a limited maximum number of lamps (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.