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

Type	ELD61[a] KLD61[a]	EUD12NPN[1] EUD12D[1] EUD12DK[1] LUD12[1] MFZ12PMD[1]	EUD61NPN[1] EUD61M[1] EUD61NP[1] EUD61NPL[1]	EUD12F[1]	SDS12 SUD12	SDS61	MOD12D	DTD65[1] DTD65F[1] DTD65L[1] DTD65FL[1] DTD55[1] DTD55L[1]
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/FL and DTD55L: up to 200 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	–	–	–	up to 300 W DTD65L/FL and DTD55L: –
Motor (L)	–	–	–	–	–	–	up to 300 W [7]	–
Capacative transformers (C)[3][8]	–	up to 400 W EUD12DK: up to 800W	up to 400 W EUD61NPL: 200W	up to 300 W	–	–	–	up to 300 W DTD65L/FL and DTD55L: up to 200 W
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	–	–	–	up to 300 W DTD65L/FL and DTD55L: up to 200 W
Dimmable 230 V LED lamps [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 DTD65L/FL and DTD55L: up to 200 W
Dimmable LED lamps 12-36 V DC	ELD61:4A KLD61:30 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)	4 mm^2
Two conductors of same crosssection (3-fold terminal)	1.5 mm^2	2.5mm^2 (1.5mm^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)	1.5 mm^2
Screw head	slotted/crosshead, pozidriv	slotted/crosshead, pozidriv	slotted/crosshead, pozidriv	slotted/cross-head, pozidriv	slotted/cross-head, pozidriv	slotted/cross-head, pozidriv	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 [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	+50°C/-20°C
Standby loss (active power)	0.1W	0.1 W EUD12DK: 0.2 W EUD12D and MFZ12PMD: 0.3 W	0.1 W EUD61NP: 0.5W	0.1 W	1 W SUD12: 0.9W	1 W	0.3 W	0.14W DTD65L/FL and DTD55L: 0.5 W
Control voltage	8..230 V UC	8..230 V UC	8..230 V UC EUD61NPN-230 V und EUD61NP: 230 V	internal DC voltage	8..230 V UC	230 V	8..230 V UC	230 V
Control current 230 V-control input (<5 s)	–	–	EUD61NP: 0.7 mA EUD61NPN-230 V: 4 (100) mA	–	–	0.5 mA	–	0.4 mA
Control current universal control voltage all control voltages (<5 s) 8/12/24/230 V (<5 s)	– 2/3/7/4(100) mA	10(100) mA –	– 2/3/7/4(100) mA	– –	– 3/5/10/4(100) mA	– –	2/3/8/5 (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 (1000m)	0.9 µF (3000m)	0.9 µF (3000m) EUD61NP: 0.3 µF (1000m)	–	0.3 µF (1000m)	0.06 µF (200m)	0.9 µF (3000m)	0.3 µF (1000m)
Max. parallel capacitance (approx. length) of central control lead at 230 V AC	–	0.9 µF (3000m)	–	–	0.3µF (1000m)	–	0.9 µF (3000m)	–

* 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) 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 capacative (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 ESL and LED no wound (inductive) transformer must be dimmed. [6] Increase of capacity for dimmable energy saving lamps ESL and dimmable 230 V LED lamps see page 9-8. [7] Only 1 fan motor may be connected. [8] For 12 V halogen and LED lamps. [9] 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.

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