

ELXd – Dimmable for TC-F, TC-L Lamps

Electronic built-in ballasts

Casing: metal

Dimming range:

approx. 1–100% of lamp power

Power factor: ≥ 0.95 at 100% operation

DC voltage

for operation: 154–276 V (M22, M23, M24)

for operation: 176–264 V (M9)

for ignition: 198–264 V

Push-in terminals: 0.5–1 mm²

For the automatic luminaire wiring:

IDC terminals for leads H05V-U 0.5

RFI-suppressed

For luminaires of protection class I

Degree of protection: IP20

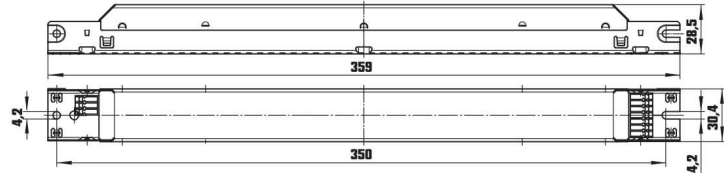
Fixing holes for screws M4

for lateral or base mounting

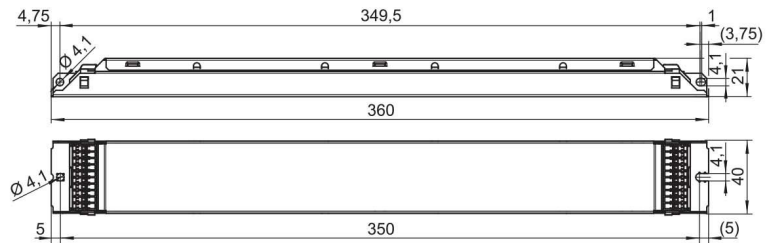
For lighting systems with
high switching frequency (> 5/day)

EOL shut down approved acc. to EN 61347 Test 2

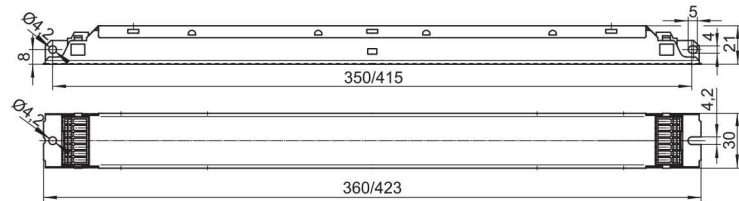
M9



M23



M22/M24



1

2

3

4

5

6

7

8

9

10

Electronic Ballasts for TC and T Lamps

ELXd – Dimmable 1–10 V for TC-F, TC-L lamps

Control voltage: DC 1–10 V

acc. to EN 60929 with earth leakage current 0.5 mA
(protected if connected to mains voltage)

For use with open- or closed-loop control units

T5 TC BUILT-IN 1–10 V
 T8 INDEPENDENT DALI/PUSH

Lamp				Electronic ballast							System	
Output W	Type	Base	Power consumption W	Type	Ref. No.	Voltage AC 50, 60 Hz V±10%	Energie efficiency	Ambient temperature t _a (°C)	Casing temperature t _c (°C)	Casing	Output W	Luminous factor %
18	TC-F/L	2G10/2G11	1 x 16.0	ELXd 118.718	188873	220–240	EEL=A1	10 to 50	max. 70	M9	18.0	94.0
2x18	TC-F/L	2G10/2G11	2 x 16.0	ELXd 218.719	188874	220–240	EEL=A1	10 to 50	max. 70	M9	36.0	90.6
24	TC-F/L	2G10/2G11	1 x 22.0	ELXd 118.718	188873	220–240	EEL=A1	10 to 50	max. 70	M9	27.0	96.6
			1 x 23.0	ELXd 124.607	188336	220–240	A1 BAT	10 to 50	max. 75	M22	26.0	100.0
2x24	TC-F/L	2G10/2G11	2 x 22.0	ELXd 218.719	188874	220–240	EEL=A1	10 to 50	max. 70	M9	52.0	100.8
			2 x 23.0	ELXd 224.608	188337	220–240	A1 BAT	10 to 50	max. 75	M24	49.0	100.0
3x24	TC-F/L	2G10/2G11	3 x 24.0	ELXd 324.623	188597	220–240	A1 BAT	10 to 50	max. 75	M23	73.4	100.0
4x24	TC-F/L	2G10/2G11	4 x 24.0	ELXd 424.624	188598	220–240	A1 BAT	10 to 50	max. 75	M23	97.6	100.0
36	TC-F/L	2G10/2G11	1 x 32.0	ELXd 136.720	188875	220–240	A1 BAT	10 to 50	max. 70	M9	37.3	93.5
2x36	TC-F/L	2G10/2G11	2 x 32.0	ELXd 236.721	188876	220–240	EEL=A1	10 to 50	max. 70	M9	72.0	92.6
40	TC-L	2G11	1 x 38.0	ELXd 139.609	188338	220–240	A1 BAT	10 to 50	max. 75	M22	42.0	100.0
2x40	TC-L	2G11	2 x 38.0	ELXd 239.610	188339	220–240	A1 BAT	10 to 50	max. 75	M24	82.0	100.0
55	TC-L	2G11	1 x 51.0	ELXd 158.722	188877	220–240	EEL=A1	10 to 50	max. 70	M9	56.0	92.5
			1 x 54.0	ELXd 154.611	188340	220–240	A1 BAT	10 to 50	max. 75	M22	59.0	100.0
2x55	TC-L	2G11	2 x 54.0	ELXd 254.612	188341	220–240	A1 BAT	10 to 50	max. 75	M24	115.0	100.0
80	TC-L	2G11	1 x 80.0	ELXd 180.613	188342	220–240	A1 BAT	10 to 50	max. 75	M22	88.0	100.0

Circuit diagrams see pages 220–223

ELXd – Dimmable with push key or DALI for TC-F, TC-L lamps

Complete implementation of the DALI-standard:
addressable, memory store for scenes and groups,
revertive information communication, physical and
RND-selection, standardized lamp characteristic
Low-power design ensures very low standby
power consumption
standby power consumption: ≤ 0.2 W

T5 TC BUILT-IN 1–10 V
 T8 INDEPENDENT DALI/PUSH

Lamp				Electronic ballast							System	
Output W	Type	Base	Power consumption W	Type	Ref. No.	Voltage AC 50, 60 Hz V±10%	Energie efficiency	Ambient temperature t _a (°C)	Casing temperature t _c (°C)	Casing	Output W	Luminous factor %
24	TC-F/L	2G10/2G11	1 x 23.0	ELXd 124.600	188329	220–240	A1 BAT	10 to 50	max. 75	M22	26.0	100.0
2x24	TC-F/L	2G10/2G11	2 x 23.0	ELXd 224.601	188330	220–240	A1 BAT	10 to 50	max. 75	M24	49.0	100.0
3x24	TC-F/L	2G10/2G11	3 x 23.0	ELXd 324.626	188600	220–240	A1 BAT	10 to 50	max. 75	M23	73.4	100.0
4x24	TC-F/L	2G10/2G11	4 x 23.0	ELXd 424.628	188602	220–240	A1 BAT	10 to 50	max. 75	M23	97.6	100.0
40	TC-L	2G11	1 x 38.0	ELXd 139.602	188331	220–240	A1 BAT	10 to 50	max. 75	M22	42.0	100.0
2x40	TC-L	2G11	2 x 38.0	ELXd 239.621	188350	220–240	A1 BAT	10 to 50	max. 75	M24	82.0	100.0
55	TC-L	2G11	1 x 54.0	ELXd 154.603	188332	220–240	A1 BAT	10 to 50	max. 75	M22	59.0	100.0
2x55	TC-L	2G11	2 x 54.0	ELXd 254.604	188333	220–240	A1 BAT	10 to 50	max. 75	M24	115.0	100.0
80	TC-L	2G11	1 x 80.0	ELXd 180.605	188334	220–240	A1 BAT	10 to 50	max. 75	M22	88.0	100.0

Circuit diagrams see pages 220–223

ELXd – Dimmable for M9 T5 and T8 Lamps

Electronic built-in ballasts

Casing: metal

Power factor: ≥ 0.95 at 100% operation

DC voltage

for operation: 154–276 V (M22, M23, M24)

for operation: 176–264 V (M9)

for ignition: 198–264 V

For the automatic luminaire wiring:

IDC terminals for leads HO5V-U 0.5

RFI-suppressed

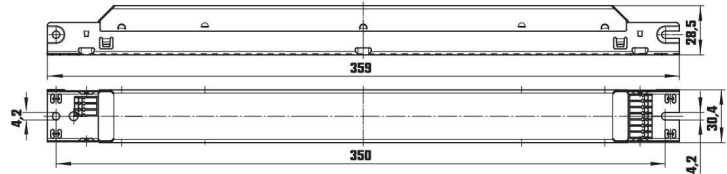
For luminaires of protection class I

Degree of protection: IP20

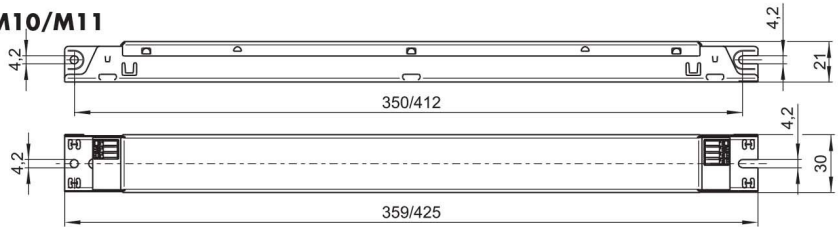
For lighting systems with

high switching frequency ($> 5/\text{day}$)

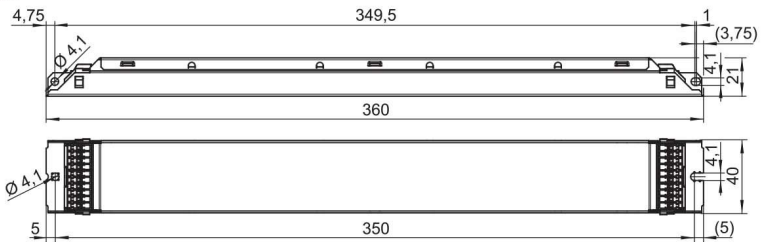
Suitable for use in luminaires for emergency lighting systems acc. to VDE 0108



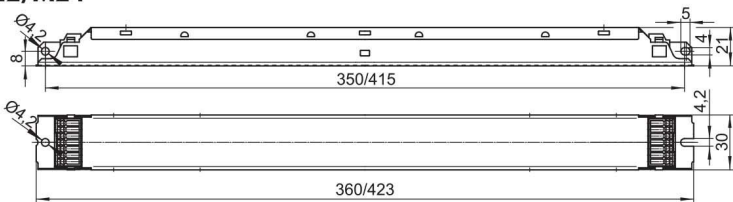
M10/M11



M23



M22/M24



1

2

3

4

5

6

7

8

9

10

ELXd – Dimmable 1–10 V with lamp detection

Dimming range:

approx. 1–100% of lamp power

(*3–100%: ELXd 135.823, 235.735, 118.718, 218.719, 136.720, 236.721, 158.722, 258.723)

Control voltage: DC 1–10 V acc. to EN 60929

with earth leakage current 0.5 mA

(protected if connected to mains voltage)

For use with open- or closed-loop control units

Push-in terminals: 0.5–1 mm²

EOL shut down approved

acc. to EN 61347 Test 2 (for T5)

EOL 2 shut down (for T8)



Lamp				Electronic ballast							System	
Output W	Type	Base	Power consumption W	Type	Ref. No.	Voltage AC 50, 60 Hz V±10%	Energy efficiency	Ambient temperature t _a (°C)	Casing temperature t _c (°C)	Casing	Output W	Luminous factor %

T5 lamps – Casing: M10, M22, M23 and M24

14	T5	G5	1 x 14.0	ELXd 135.823	188717*	220–240	A1 BAT	10 to 55	max. 65	M10	17.0	99.5
				ELXd 124.607	188336	220–240	A1 BAT	10 to 50	max. 75	M22	16.0	100.0
2x14	T5	G5	2 x 13.6	ELXd 235.735	183059*	220–240	A1 BAT	10 to 50	max. 70	M11	33.4	98.7
				ELXd 224.608	188337	220–240	A1 BAT	10 to 50	max. 75	M24	31.0	100.0
3x14	T5	G5	3 x 14.0	ELXd 324.623	188597	220–240	A1 BAT	10 to 50	max. 75	M23	45.3	100.0
4x14	T5	G5	4 x 14.0	ELXd 424.624	188598	220–240	A1 BAT	10 to 50	max. 75	M23	60.4	100.0
21	T5	G5	1 x 21.0	ELXd 135.823	188717*	220–240	A1 BAT	10 to 55	max. 65	M10	24.0	99.0
				ELXd 139.609	188338	220–240	A1 BAT	10 to 50	max. 75	M22	23.0	100.0
2x21	T5	G5	2 x 20.5	ELXd 235.735	183059*	220–240	A1 BAT	10 to 50	max. 70	M11	47.0	95.1
				ELXd 239.610	188339	220–240	A1 BAT	10 to 50	max. 75	M24	45.0	100.0
24	T5	G5	1 x 23.0	ELXd 124.607	188336	220–240	A1 BAT	10 to 50	max. 75	M22	26.0	100.0
2x24	T5	G5	2 x 23.0	ELXd 224.608	188337	220–240	A1 BAT	10 to 50	max. 75	M24	50.0	100.0
3x24	T5	G5	3 x 23.0	ELXd 324.623	188597	220–240	A1 BAT	10 to 50	max. 75	M23	73.4	100.0
4x24	T5	G5	4 x 23.0	ELXd 424.624	188598	220–240	A1 BAT	10 to 50	max. 75	M23	97.6	100.0
28	T5	G5	1 x 28.0	ELXd 135.823	188717*	220–240	A1 BAT	10 to 55	max. 65	M10	32.0	98.6
				ELXd 154.611	188340	220–240	A1 BAT	10 to 50	max. 75	M22	31.0	100.0
2x28	T5	G5	2 x 27.3	ELXd 235.735	183059*	220–240	A1 BAT	10 to 50	max. 70	M11	62.1	97.6
				ELXd 254.612	188341	220–240	A1 BAT	10 to 50	max. 75	M24	61.0	100.0
35	T5	G5	1 x 35.0	ELXd 135.823	188717*	220–240	A1 BAT	10 to 55	max. 65	M10	38.0	95.0
				ELXd 180.613	188342	220–240	A1 BAT	10 to 50	max. 75	M22	38.0	100.0
2x35	T5	G5	2 x 33.9	ELXd 235.735	183059*	220–240	A1 BAT	10 to 50	max. 70	M11	76.9	96.7
				ELXd 249.614	188343	220–240	A1 BAT	10 to 50	max. 75	M24	75.0	100.0
				ELXd 280.630	188604	220–240	A1 BAT	10 to 50	max. 75	M24	75.0	100.0
39	T5	G5	1 x 38.0	ELXd 139.609	188338	220–240	A1 BAT	10 to 50	max. 75	M22	42.0	100.0
2x39	T5	G5	2 x 38.0	ELXd 239.610	188339	220–240	A1 BAT	10 to 50	max. 75	M24	82.0	100.0
49	T5	G5	1 x 49.0	ELXd 180.613	188342	220–240	A1 BAT	10 to 50	max. 75	M22	54.0	100.0
2x49	T5	G5	2 x 49.0	ELXd 249.614	188343	220–240	A1 BAT	10 to 50	max. 75	M24	104.0	100.0
				ELXd 280.630	188604	220–240	A1 BAT	10 to 50	max. 75	M24	104.0	100.0
54	T5	G5	1 x 54.0	ELXd 154.611	188340	220–240	A1 BAT	10 to 50	max. 75	M22	59.0	100.0
2x54	T5	G5	2 x 54.0	ELXd 254.612	188341	220–240	A1 BAT	10 to 50	max. 75	M24	115.0	100.0
80	T5	G5	1 x 80.0	ELXd 180.613	188342	220–240	A1 BAT	10 to 50	max. 75	M22	88.0	100.0
2x80	T5	G5	2 x 80.0	ELXd 280.630	188604	220–240	A1 BAT	10 to 50	max. 75	M24	165.0	100.0

T8 lamps – Casing: M9

18	T8	G13	1 x 16.0	ELXd 118.718	188873*	220–240	EEL=A1	10 to 50	max. 70	M9	21.0	102.1
2x18	T8	G13	2 x 16.0	ELXd 218.719	188874*	220–240	EEL=A1	10 to 50	max. 70	M9	41.5	104.6
36	T8	G13	1 x 32.0	ELXd 136.720	188875*	220–240	A1 BAT	10 to 50	max. 70	M9	37.3	101.6
2x36	T8	G13	2 x 32.0	ELXd 236.721	188876*	220–240	EEL=A1	10 to 50	max. 70	M9	72.0	98.9
58	T8	G13	1 x 50.0	ELXd 158.722	188877*	220–240	A1 BAT	10 to 50	max. 70	M9	55.0	101.3
2x58	T8	G13	2 x 50.0	ELXd 258.723	188878*	220–240	EEL=A1	10 to 50	max. 75	M9	109.0	96.5

Circuit diagrams see pages 220–223

ELXd – Dimmable with push key or DALI with lamp detection

Dimming range:

approx. 1–100% of lamp power

PUSH: dimmable with usual push key

DALI: poles are not polarity sensitive
(protected if connected to mains voltage)
for use with DALI compatible control units

Push-in terminals: 0.5–1 mm²

EOL shut down approved

acc. to EN 61347 Test 2 (for T5)

EOL 2 shut down (for T8)

standby power consumption: ≤ 0.2 W

Complete implementation of the DALI-standard:
addressable, memory store for scenes and groups,
revertive information communication, physical and
RND-selection, standardized lamp characteristic
Low-power design ensures very low standby
power consumption
Compatible with IEC 62386

T5 TC BUILT-IN 1-10 V
 T8 INDEPENDENT DALI/PUSH

Lamp				Electronic ballast							System	
Output W	Type	Base	Power con- sumption W	Type	Ref. No.	Voltage AC 50, 60 Hz V±10%	Energy efficiency	Ambient temperature t _a (°C)	Casing temperature t _c (°C)	Casing	Output W	Luminous factor %
For T5 lamps – Casing: M10, M11, M22, M23 and M24												
14	T5	G5	1 x 13.7	EIXd 135.724	188932	220–240	A1 BAT	10 to 50	max. 65	M10	16.4	102.6
			1 x 14.0	EIXd 124.600	188329	220–240	A1 BAT	10 to 50	max. 75	M22	16.0	100.0
2x14	T5	G5	2 x 13.6	EIXd 235.725	188933	220–240	A1 BAT	10 to 50	max. 70	M11	33.4	96.7
			2 x 14.0	EIXd 224.601	188330	220–240	A1 BAT	10 to 50	max. 75	M24	31.0	100.0
3x14	T5	G5	3 x 14.0	EIXd 324.626	188600	220–240	A1 BAT	10 to 50	max. 75	M23	45.3	100.0
4x14	T5	G5	4 x 14.0	EIXd 424.628	188602	220–240	A1 BAT	10 to 50	max. 75	M23	60.4	100.0
21	T5	G5	1 x 20.7	EIXd 135.724	188932	220–240	A1 BAT	10 to 50	max. 65	M10	24.3	102.7
			1 x 21.0	EIXd 139.602	188331	220–240	A1 BAT	10 to 50	max. 75	M22	23.0	100.0
2x21	T5	G5	2 x 20.5	EIXd 235.725	188933	220–240	A1 BAT	10 to 50	max. 70	M11	47.0	97.6
			2 x 21.0	EIXd 239.621	188350	220–240	A1 BAT	10 to 50	max. 75	M24	45.0	100.0
24	T5	G5	1 x 23.0	EIXd 124.600	188329	220–240	A1 BAT	10 to 50	max. 75	M22	26.0	100.0
2x24	T5	G5	2 x 23.0	EIXd 224.601	188330	220–240	A1 BAT	10 to 50	max. 75	M24	50.0	100.0
3x24	T5	G5	3 x 23.0	EIXd 324.626	188600	220–240	A1 BAT	10 to 50	max. 75	M23	73.4	100.0
4x24	T5	G5	4 x 23.0	EIXd 424.628	188602	220–240	A1 BAT	10 to 50	max. 75	M23	97.6	100.0
28	T5	G5	1 x 27.8	EIXd 135.724	188932	220–240	A1 BAT	10 to 50	max. 65	M10	32.0	104.1
			1 x 28.0	EIXd 154.603	188332	220–240	A1 BAT	10 to 50	max. 75	M22	31.0	100.0
2x28	T5	G5	2 x 27.3	EIXd 235.725	188933	220–240	A1 BAT	10 to 50	max. 70	M11	62.1	95.1
			2 x 28.0	EIXd 254.604	188333	220–240	A1 BAT	10 to 50	max. 75	M24	61.0	100.0
35	T5	G5	1 x 34.7	EIXd 135.724	188932	220–240	A1 BAT	10 to 50	max. 65	M10	40.0	107.5
			1 x 35.0	EIXd 180.605	188334	220–240	A1 BAT	10 to 50	max. 75	M22	38.0	100.0
2x35	T5	G5	2 x 33.9	EIXd 235.725	188933	220–240	A1 BAT	10 to 50	max. 70	M11	76.9	98.7
			2 x 35.0	EIXd 280.631	188605	220–240	A1 BAT	10 to 50	max. 75	M24	74.0	100.0
				EIXd 249.606	188335	220–240	A1 BAT	10 to 50	max. 75	M24	75.0	100.0
39	T5	G5	1 x 38.0	EIXd 139.602	188331	220–240	A1 BAT	10 to 50	max. 75	M22	42.0	100.0
2x39	T5	G5	2 x 38.0	EIXd 239.621	188350	220–240	A1 BAT	10 to 50	max. 75	M24	82.0	100.0
49	T5	G5	1 x 49.0	EIXd 180.605	188334	220–240	A1 BAT	10 to 50	max. 75	M22	54.0	100.0
2x49	T5	G5	2 x 49.0	EIXd 280.631	188605	220–240	A1 BAT	10 to 50	max. 75	M24	101.0	100.0
				EIXd 249.606	188335	220–240	A1 BAT	10 to 50	max. 75	M24	104.0	100.0
54	T5	G5	1 x 54.0	EIXd 154.603	188332	220–240	A1 BAT	10 to 50	max. 75	M22	59.0	100.0
2x54	T5	G5	2 x 54.0	EIXd 254.604	188333	220–240	A1 BAT	10 to 50	max. 75	M24	115.0	100.0
80	T5	G5	1 x 80.0	EIXd 180.605	188334	220–240	A1 BAT	10 to 50	max. 75	M22	88.0	100.0
2x80	T5	G5	2 x 80.0	EIXd 280.631	188605	220–240	A1 BAT	10 to 50	max. 75	M24	165.0	100.0

Circuit diagrams see pages 220–223