

ELXc – Warm Start for TC-F, TC-L Lamps

Electronic built-in ballasts

Casing: metal

Power factor: > 0.96

DC voltage

for operation: 176–264 V

for ignition: 198–264 V

(ELXc 180.866, 280.538: DC voltage cannot be reduced to 176 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

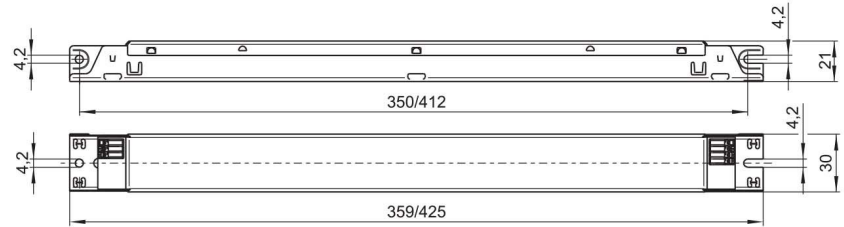
Degree of protection: IP20

For lighting systems with

high switching frequency (> 5/day)

EOL shut down approved acc. to EN 61347 Test 2

M10/M11



- 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%	Energy 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	ELXc 140.862	188140	220–240	A2	–15 to 55	max. 70	M10	19.0	109.0
2x18	TC-F/L	2G10/2G11	2 x 16.0	ELXc 240.863	188616	220–240	A2 BAT	–15 to 55	max. 70	M10	35.0	105.3
24	TC-F/L	2G10/2G11	1 x 22.0	ELXc 140.862	188140	220–240	A2	–15 to 55	max. 70	M10	27.0	109.0
2x24	TC-F/L	2G10/2G11	2 x 22.0	ELXc 240.863	188616	220–240	A2 BAT	–15 to 55	max. 70	M10	51.0	106.8
36	TC-F/L	2G10/2G11	1 x 32.0	ELXc 140.862	188140	220–240	A2	–15 to 55	max. 70	M10	35.0	101.0
2x36	TC-F/L	2G10/2G11	2 x 32.0	ELXc 240.863	188616	220–240	A2 BAT	–15 to 55	max. 70	M10	71.0	98.7
40	TC-L	2G11	1 x 40.0	ELXc 140.862	188140	220–240	A2	–15 to 55	max. 70	M10	46.0	104.0
2x40	TC-L	2G11	2 x 40.0	ELXc 240.863	188616	220–240	A2 BAT	–15 to 55	max. 70	M10	89.0	103.6
55	TC-L	2G11	1 x 55.0	ELXc 180.866	188144	220–240	A2 BAT	–15 to 55	max. 70	M10	62.0	107.3
2x55	TC-L	2G11	2 x 50.0	ELXc 254.865	188618	220–240	A2 BAT	–15 to 50	max. 70	M10	112.0	92.9
			2 x 55.0	ELXc 280.538	188619	220–240	A2 BAT	–15 to 50	max. 70	M11	120.0	100.0
80	TC-L	2G11	1 x 80.0	ELXc 180.866	188144	220–240	A2 BAT	–15 to 55	max. 70	M10	87.0	97.6
2x80	TC-L	2G11	2 x 80.0	ELXc 280.538	188619	220–240	A2 BAT	–15 to 50	max. 70	M11	175.0	100.0

Circuit diagrams see pages 220–223

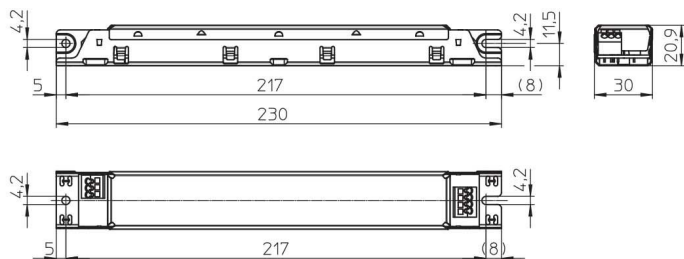
ELXc – Warm Start for T5 and T8 Lamps

Electronic built-in ballasts
 Casing: metal
 Power factor: ≥ 0.95
 RFI-suppressed
 For luminaires of protection class I

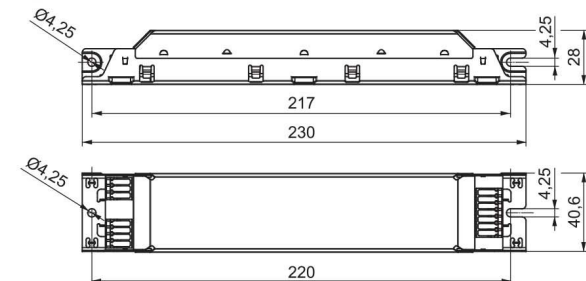
Degree of protection: IP20
 For lighting systems with
 high switching frequency ($> 5/\text{day}$)



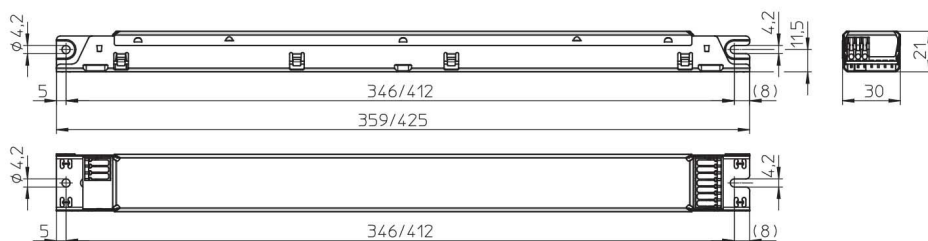
M6



M8



M10/M11



ELXc – Warm Start for T5 and T8 Lamps

DC voltage

for operation: 176–264 V

for ignition: 198–264 V

(ELXc 135.856, 235.857, 149.858,

154.864, 180.866, 280.538:

DC voltage cannot be reduced to 176 V)

Push-in terminals: 0,5–1 mm²

For the automatic luminaire wiring:

IDC terminals for leads H05V-U 0.5

EOL shut down approved

acc. to EN 61347 Test 2 (for T5)

EOL shut down (for T8)

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

Lamp				Electronic ballast							System	
Output	Type	Base	Power consumption	Type	Ref. No.	Voltage AC	Energy efficiency	Ambient temperature	Casing temperature	Casing	Output	Luminous factor
W			W			50, 60 Hz		t _a (°C)	t _c (°C)		W	%
For T5 lamps – Casing: M8, M10 and M11												
14	T5	G5	1 x 14.0	ELXc 135.856	188093	220–240	A2 BAT	–15 to 55	max. 70	M10	17.0	110.7
2x14	T5	G5	2 x 14.0	ELXc 235.857	188094	220–240	A2 BAT	–15 to 55	max. 70	M10	33.4	107.0
3x14	T5	G5	3 x 14.0	ELXc 414.868	188438	220–240	A2 BAT	–15 to 55	max. 70	M8	48.0	105.4
4x14	T5	G5	4 x 14.0	ELXc 414.868	188438	220–240	A2 BAT	–15 to 55	max. 70	M8	63.0	102.3
21	T5	G5	1 x 21.0	ELXc 135.856	188093	220–240	A2 BAT	–15 to 55	max. 70	M10	24.0	107.4
2x21	T5	G5	2 x 21.0	ELXc 235.857	188094	220–240	A2 BAT	–15 to 55	max. 70	M10	50.2	110.6
24	T5	G5	1 x 22.5	ELXc 140.862	188140	220–240	A2 BAT	–15 to 55	max. 70	M10	27.0	114.0
2x24	T5	G5	2 x 22.5	ELXc 240.863	188616	220–240	A2 BAT	–15 to 55	max. 70	M10	51.0	107.4
3x24	T5	G5	3 x 22.5	ELXc 424.223	183039	220–240	A2 BAT	–15 to 55	max. 75	M8	78.0	103.7
4x24	T5	G5	4 x 22.5	ELXc 424.223	183039	220–240	A2 BAT	–15 to 55	max. 75	M8	101.7	103.5
28	T5	G5	1 x 28.0	ELXc 135.856	188093	220–240	A2 BAT	–15 to 55	max. 70	M10	32.0	104.9
2x28	T5	G5	2 x 28.0	ELXc 235.857	188094	220–240	A2 BAT	–15 to 55	max. 70	M10	60.6	106.2
35	T5	G5	1 x 35.0	ELXc 135.856	188093	220–240	A2 BAT	–15 to 55	max. 70	M10	39.5	102.7
2x35	T5	G5	2 x 35.0	ELXc 235.857	188094	220–240	A2 BAT	–15 to 55	max. 70	M10	74.5	102.5
39	T5	G5	1 x 38.0	ELXc 140.862	188140	220–240	A2 BAT	–15 to 55	max. 70	M10	43.0	107.0
2x39	T5	G5	2 x 38.0	ELXc 240.863	188616	220–240	A2 BAT	–15 to 55	max. 70	M10	82.0	97.9
49	T5	G5	1 x 49.0	ELXc 149.858	188095	220–240	A2 BAT	–15 to 55	max. 70	M10	54.0	102.5
2x49	T5	G5	2 x 49.0	ELXc 249.859	188617	220–240	A2 BAT	–15 to 50	max. 70	M10	113.0	106.6
54	T5	G5	1 x 54.0	ELXc 154.864	188142	220–240	A2 BAT	–15 to 55	max. 65	M10	59.0	101.1
2x54	T5	G5	2 x 54.0	ELXc 254.865	188618	220–240	A2 BAT	–15 to 50	max. 70	M10	119.0	106.0
80	T5	G5	1 x 80.0	ELXc 180.866	188144	220–240	A2 BAT	–15 to 55	max. 70	M10	87.0	97.6
2x80	T5	G5	2 x 80.0	ELXc 280.538	188619	220–240	A2 BAT	–15 to 50	max. 70	M11	175.0	97.2
For T8 lamps – Casing: M8												
3x18	T8	G13	3 x 16.0	ELXc 418.204	188744	220–240	A2 BAT	–15 to 55	max. 70	M8	56.0	100.8
4x18	T8	G13	4 x 16.0	ELXc 418.204	188744	220–240	A2 BAT	–15 to 55	max. 70	M8	71.5	98.9
3x36	T8	G13	3 x 32.0	ELXc 336.214	188595	220–240	A2 BAT	–15 to 50	max. 65	M8	105.0	99.4

Circuit diagrams see pages 220–223

ELXc EffectLine – Warm start

Warm start for T5 and T8 lamps – Casing: M6, M8 and M10

DC voltage

for operation: 176–264 V

for ignition: 198–264 V

(not possible for T8)

Push-in terminals with lever opener: 0.5–1.5 mm²

EOL shut down approved

acc. to EN 61347 Test 2 (for T5)

EOL shut down (for T8)

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

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

For T5 lamps – Casing: M6 and M10

14	T5	G5	1 x 14.3	ELXc 135.220	188921	220–240	A2 BAT	–15 to 55	max. 70	M6	17.0	104.8
2x14	T5	G5	2 x 14.3	ELXc 235.221	188922	220–240	A2 BAT	–15 to 55	max. 70	M10	34.5	101.9
21	T5	G5	1 x 20.4	ELXc 135.220	188921	220–240	A2 BAT	–15 to 55	max. 70	M6	23.3	106.9
2x21	T5	G5	2 x 21.4	ELXc 235.221	188922	220–240	A2 BAT	–15 to 55	max. 70	M10	48.3	104.9
28	T5	G5	1 x 26.7	ELXc 135.220	188921	220–240	A2 BAT	–15 to 55	max. 70	M6	29.9	107.5
2x28	T5	G5	2 x 28.7	ELXc 235.221	188922	220–240	A2 BAT	–15 to 55	max. 70	M10	62.1	109.0
35	T5	G5	1 x 32.6	ELXc 135.220	188921	220–240	A2 BAT	–15 to 55	max. 70	M6	36.5	103.0
2x35	T5	G5	2 x 35.6	ELXc 235.221	188922	220–240	A2 BAT	–15 to 55	max. 70	M10	78.2	100.8

For T8 lamps – Casing: M8

18	T8	G13	1 x 16.0	ELXc 136.207	188704	220–240	A2 BAT	–20 to 55	max. 60	M8	18.4	105.0
2x18	T8	G13	2 x 16.0	ELXc 236.208	188705	220–240	A2 BAT	–20 to 50	max. 60	M8	35.2	106.0
36	T8	G13	1 x 32.0	ELXc 136.207	188704	220–240	A2 BAT	–20 to 55	max. 60	M8	35.4	97.0
2x36	T8	G13	2 x 32.0	ELXc 236.208	188705	220–240	A2 BAT	–20 to 50	max. 60	M8	69.7	98.0
58	T8	G13	1 x 50.0	ELXc 158.209	188706	220–240	A2 BAT	–20 to 50	max. 60	M8	52.6	106.0
2x58	T8	G13	2 x 50.0	ELXc 258.210	188707	220–240	A2	–20 to 50	max. 65	M8	109.9	105.0

Circuit diagrams see pages 220–223

ELXc EffectLine II – Warm start

Warm start for T8 lamps – Casing: M8

DC voltage

for operation: 176–264 V

(DC voltage can be reduced to 176 V for 2 hours)

for ignition: 198–264 V

Push-in terminals with lever opener: 0.5–1.5 mm²

EOL 2 shut down

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

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

18	T8	G13	1 x 16.0	ELXc 136.216	188912	220–240	A2 BAT	–20 to 55	max. 65	M8	19.8	105.7
2x18	T8	G13	2 x 16.0	ELXc 236.217	188913	220–240	A2 BAT	–20 to 60	max. 70	M8	38.0	101.6
36	T8	G13	1 x 32.0	ELXc 136.216	188912	220–240	A2 BAT	–20 to 55	max. 65	M8	34.4	97.5
2x36	T8	G13	2 x 32.0	ELXc 236.217	188913	220–240	A2 BAT	–20 to 60	max. 70	M8	71.9	110.6
58	T8	G13	1 x 50.0	ELXc 158.218	188914	220–240	A2 BAT	–20 to 60	max. 65	M8	56.0	100.8
2x58	T8	G13	2 x 50.0	ELXc 258.219	188915	220–240	A2	–20 to 55	max. 70	M8	110.0	101.0

Circuit diagrams see pages 220–223

ELXc – Warm Start New T5 EffectLine

Electronic built-in ballasts

Casing: metal

Push-in terminals with lever opener: 0.5–1 mm²

RFI-suppressed

For luminaires of protection class I

Degree of protection: IP20

For lighting systems with

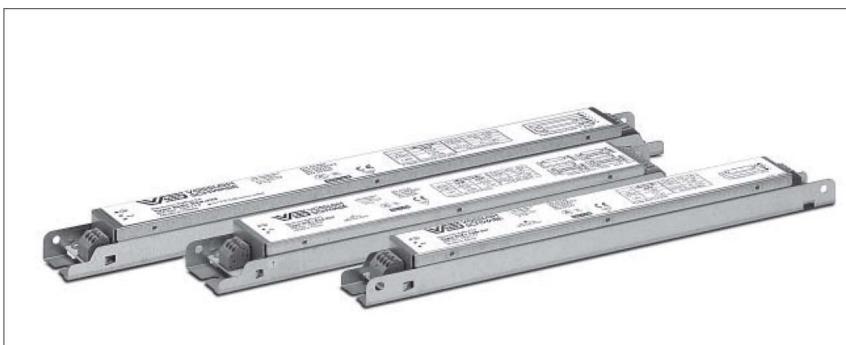
high switching frequency (> 5/day)

Automatic restart after lamp has been changed

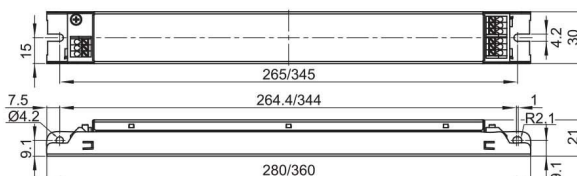
Suitable for use in luminaires for emergency

lighting systems acc. to VDE 0108

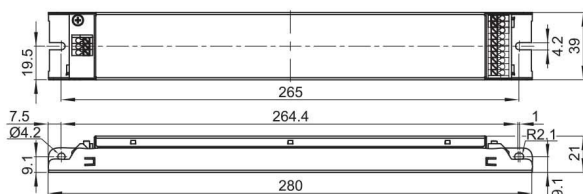
EOL shut down approved acc. to EN 61347 Test 1



M7.1 / M10.2



M7.2



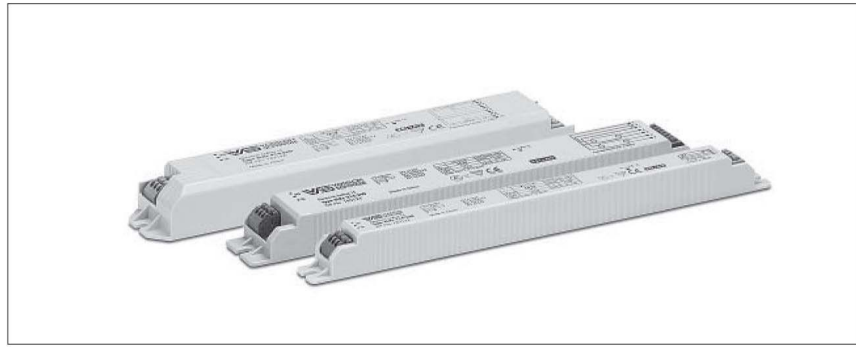
- T5 TC BUILT-IN 1-10 V
- T8 INDEPENDENT DALI/PUSH

Lamp				Electronic ballast							System			
Output W	Type	Base	Power consumption W	Type	Ref. No.	Voltage AC 50, 60 Hz V±10 %	Energy efficiency	Power factor	Ambient temperature t _a (°C)	Casing temperature t _c (°C)	Casing L mm	W mm	Output W	Luminous factor %
14	T5 HE	G5	1 x 14.0	ELXc 228.229	183111	220–240	EEL=A2	> 0.90	0 to 50	max. 75	M7.1	280 30	16,5	100
				ELXc 135.231	183113	220–240	EEL=A2	> 0.90	0 to 50	max. 75	M7.1	280 30	16,5	100
2x14	T5 HE	G5	2 x 14.0	ELXc 228.229	183111	220–240	EEL=A2	> 0.92	0 to 50	max. 75	M7.1	280 30	31,0	100
3x14	T5 HE	G5	3 x 14.0	ELXc 414.227	183109	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.2	280 39	48,0	100
4x14	T5 HE	G5	4 x 14.0	ELXc 414.227	183109	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.2	280 39	63,0	100
21	T5 HE	G5	1 x 21.0	ELXc 228.229	183111	220–240	EEL=A2	> 0.90	0 to 50	max. 75	M7.1	280 30	24,0	100
				ELXc 135.231	183113	220–240	EEL=A2	> 0.92	0 to 50	max. 75	M7.1	280 30	24,0	100
2x21	T5 HE	G5	2 x 21.0	ELXc 228.229	183111	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	47,5	100
24	T5 HO	G5	1 x 24.0	ELXc 239.233	183115	220–240	EEL=A2	> 0.90	0 to 50	max. 75	M7.1	280 30	28,0	100
2x24	T5 HO	G5	2 x 24.0	ELXc 239.233	183115	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	53,5	100
3x24	T5 HO	G5	3 x 24.0	ELXc 424.228	183110	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.2	280 39	76,0	100
4x24	T5 HO	G5	4 x 24.0	ELXc 424.228	183110	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.2	280 39	100,0	100
28	T5 HE	G5	1 x 28.0	ELXc 228.229	183111	220–240	EEL=A2	> 0.92	0 to 50	max. 75	M7.1	280 30	31,0	100
				ELXc 135.231	183113	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	32,0	100
2x28	T5 HE	G5	2 x 28.0	ELXc 228.229	183111	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	61,0	100
				ELXc 328.230	183112	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.2	280 39	61,0	100
3x28	T5 HE	G5	3 x 28.0	ELXc 328.230	183112	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.2	280 39	94,0	100
35	T5 HE	G5	1 x 35.0	ELXc 135.231	183113	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	38,0	100
2x35	T5 HE	G5	2 x 35.0	ELXc 235.232	183114	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M10.2	360 30	74,0	100
39	T5 HO	G5	1 x 39.0	ELXc 239.233	183115	220–240	EEL=A2	> 0.92	0 to 50	max. 75	M7.1	280 30	43,5	100
2x39	T5 HO	G5	2 x 39.0	ELXc 239.233	183115	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	83,0	100
49	T5 HO	G5	1 x 49.0	ELXc 149.234	183116	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	51,0	100
2x49	T5 HO	G5	2 x 49.0	ELXc 249.235	183117	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M10.2	360 30	108,0	100
54	T5 HO	G5	1 x 54.0	ELXc 254.236	183118	220–240	EEL=A2	> 0.92	0 to 50	max. 75	M7.1	280 30	58,0	100
2x54	T5 HO	G5	2 x 54.0	ELXc 254.236	183118	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	113,0	100
80	T5 HO	G5	1 x 80.0	ELXc 180.237	183119	220–240	EEL=A2	> 0.95	0 to 50	max. 75	M7.1	280 30	86,0	100

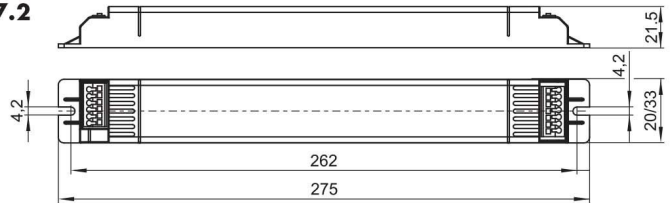
Preliminary data | Circuit diagrams see pages 220–223

ELXc – ECO EffectLine Warm Start for T5 and T8 Lamps

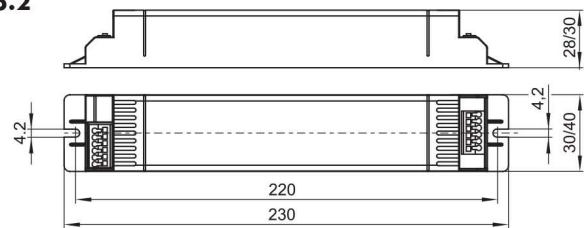
Electronic built-in ballasts
 Casing: PC, white
 Push-in terminals with lever opener: 0.5–1.5 mm²
 RFI-suppressed
 For luminaires of protection class I
 Degree of protection: IP20
 For lighting systems with
 high switching frequency (> 5/day)
 EOL shut down approved acc. to EN 61347 Test 1
 (for T5 lamps); EOL shut down (for T8 lamps)



K7.1 / K7.2



K5.1 / K5.2



- 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 %	Energy efficiency	Power factor	Ambient temperature t _a (°C)	Casing temperature t _c (°C)	Casing	W mm	H mm	Output W	Luminous factor %
For T5 lamps															
14	T5 HE	G5	1 x 14.8	ELXc 114.238	183122	220–240	A2	> 0.95	0 to 50	max. 75	K7.1	20	21.5	17.0	100
2x14	T5 HE	G5	2 x 14.5	ELXc 214.240	183124	220–240	A2	> 0.95	0 to 50	max. 75	K7.2	33	21.5	33.0	100
4x14	T5 HE	G5	4 x 14.0	ELXc 414.242	183126	220–240	A2	> 0.95	0 to 50	max. 75	K5.2	40	30	64.0	100
28	T5 HE	G5	1 x 28.5	ELXc 128.239	183123	220–240	A2	> 0.95	0 to 50	max. 75	K7.1	20	21.5	31.5	100
2x28	T5 HE	G5	2 x 26.5	ELXc 228.241	183125	220–240	A2	> 0.95	0 to 50	max. 75	K7.2	33	21.5	59.0	95
For T8 lamps															
18	T8	G13	1 x 15.5	ELXc 118.243	183127	220–240	A2	> 0.95	-15 to 50	max. 70	K5.1	30	28	18.5	98
2x18	T8	G13	2 x 15.5	ELXc 218.246	183130	220–240	A2	> 0.96	-15 to 50	max. 70	K5.1	30	28	35.0	98
4x18	T8	G13	4 x 15.5	ELXc 418.249	183133	220–240	A2	> 0.98	-15 to 50	max. 70	K5.2	40	30	69.0	97
36	T8	G13	1 x 30.5	ELXc 136.244	183128	220–240	A2	> 0.96	-15 to 50	max. 70	K5.1	30	28	34.0	95
2x36	T8	G13	2 x 31.0	ELXc 236.247	183131	220–240	A2	> 0.98	-15 to 50	max. 70	K5.2	40	30	68.0	97
58	T8	G13	1 x 48.0	ELXc 158.245	183129	220–240	A2	> 0.96	-15 to 50	max. 70	K5.1	30	28	53.5	96
2x58	T8	G13	2 x 49.5	ELXc 258.248	183132	220–240	A2	> 0.98	-15 to 50	max. 80	K5.2	40	30	107.0	100

Preliminary data | Circuit diagrams see pages 220–223