



EB-CERTALUME TLD

EEL = A3

Definition

Compact, lightweight, high-frequency electronic ballasts for TLD fluorescent lamps, for applications with 220V mains voltage.

Description

- Up to 20% reduction in energy consumption at equal luminous flux compared with conventional gear
- Flicker-free, rapid start, no ignitor needed
- Safe & reliable, up to 25,000hrs longer life
- Automatic stop circuit is activated in case of lamp failure
- EMI CISPR 15 compliance, lower electromagnetic interference
- Lower Harmonic, GB 17625.1 compliance

Applications

Typical areas of application include:

- Department stores, shops, supermarkets, convenient stores and public areas
- Industrial premises, office buildings
- Corridors, lighting boxes

Ideal for areas with low switching frequency (maximum 3 times aday)

Philips quality

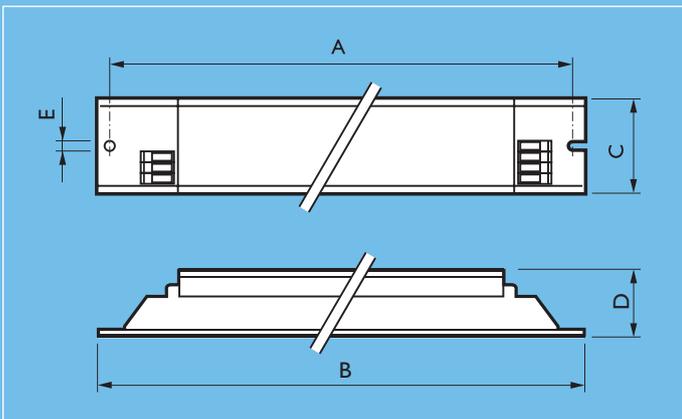
This implies optimum quality regarding

- System supplier
As manufacturers of lamps and electronic control gear, Philips ensures that, from the earliest development stage, optimum lamp/ballast performance is maintained.
- TIS compliance

Compliances and approvals

- RFI < 30MHz CISPR 15
- Harmonic GB 17625.1
- Safety GB 19510.4, GB 19510.1
- Quality standard ISO 9001
- Environmental standard ISO 14001
- TIS

Dimensions in mm



Type	A	B	C	D	E
EB-CertaLume 118 TLD 220V	140	150	40	28	4.2
EB-CertaLume 218 TLD 220V	140	150	40	28	4.2
EB-CertaLume 136 TLD 220V	140	150	40	28	4.2
EB-CertaLume 236 TLD 220V	200	210	40	30	4.2

Technical data in relation to energy saving

Lamp	Qty. of Lamps	Ballast	System Power W	Lamp Power W	Ballast Losses W	Wiring Diagram fig.
TLD 18W	1	EB-CertaLume 118 TLD 220V	18	16	2	1
TLD 18W	2	EB-CertaLume 218 TLD 220V	36	16	4	2
TLD 36W	1	EB-CertaLume 136 TLD 220V	36	32	4	1
TLD 36W	2	EB-CertaLume 236 TLD 220V	72	32	8	2

Lamp	Qty. of Lamps	Ballast	Power factor	Ballast Lumen Factor	THD	Oper Freq KHz
TL-D 18W	1	EB-CertaLume 118 TLD 220V	> 0.95	0.95	< 25%	> 42
TL-D 18W	2	EB-CertaLume 218 TLD 220V	> 0.95	0.92	< 25%	> 42
TL-D 36W	1	EB-CertaLume 136 TLD 220V	> 0.95	0.95	< 25%	> 42
TL-D 36W	2	EB-CertaLume 236 TLD 220V	> 0.95	0.95	< 25%	> 42

Technical data for installation

Mains operation

Rated mains voltage	220 V
With tolerance for safety: +10% -10%	198 - 242 V
With tolerance for performance	165 - 253 V
Mains frequency	50/60 Hz

Hum and noise level < 30dB at 1m distance

Permitted humidity is tested according to IEC 61347-2-3.
Note: that no moisture or condensation may enter the ballast.

Earth leakage current < 0.7 mA per ballast

Ignition time < 1.6 s

Over voltage protection 48 hrs at 276 V AC

Cable capacity max, 120 pF between lamp wires and earth

Dual fixture: master-slave operation possible, in general max 2m length of lamp wires between ballast and lamp

Automatic restart after lamp replacement no, manual restart required

Insulation resistance test 500V DC from Line/Neutral to Earth (not between line and Neutral)
Note: Ensure that the Neutral is reconnected again after above mentioned test is carried out and before the installation is put into operation.

Mains current at 220V

Ballast	Input current A
EB-CertaLume 118 TLD 220V	0.09
EB-CertaLume 218 TLD 220V	0.17
EB-CertaLume 136 TLD 220V	0.17
EB-CertaLume 236 TLD 220V	0.34

Inrush current

Ballast	Max. quantity of ballast per Miniature Circuit Breaker Type B16A
EB-CertaLume 118 TLD 220V	18
EB-CertaLume 218 TLD 220V	18
EB-CertaLume 136 TLD 220V	18
EB-CertaLume 236 TLD 220V	18

Notes:

1. Data is based on a mains supply with an impedance of 400mΩ, under worst case conditions. With an impedance of 800mΩ the number of ballasts can be increased by 10%.
2. Measurements will be verified in real installations; therefore data is subject to change.
3. In some cases the maximum number of ballasts is not determined by the MCB but by the maximum electrical load of the lighting installation.
4. Note that the maximum number of ballasts is given when these are all switched on at the same moment, i.e. by a wall switch.
5. Measurements were carried out on single-pole MCB's. For multi-pole MCB's, it is advised to reduce the number of ballasts by 20%.
6. The maximum number of ballasts which can be connected to one Residual Current Detector of 30mA is 30.

Technical data for design and mounting EB-E ballasts in fixtures

Temperatures

Temperatures range to ignite lamp with ignition aid	-10°C to 50°C
Max t _{case}	65°C

Lifetime	25,000 hrs (T _{case} = 60°C)
Failure rate	< 0.4% per 1000 hrs

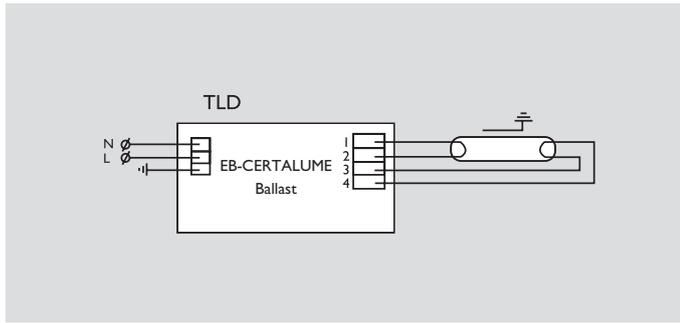


Fig. 1

Connection wiring is greatly simplified by the use of insert contacts with push buttons.

Wire cross-section:

On the mains side: 0.5 - 1.5mm²
 On the lamp side: 0.5 - 1.5mm²

Strip length: 9 - 10mm

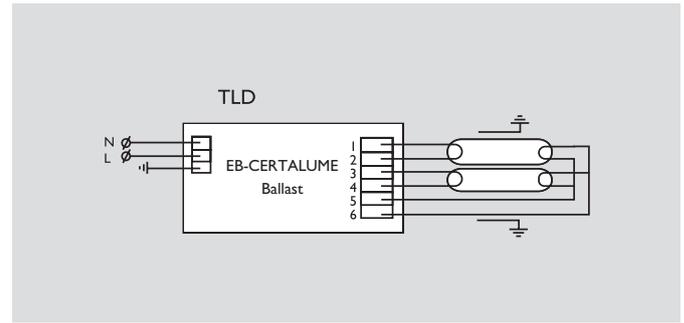


Fig. 2

Wiring diagrams

Caution:

After finishing system installation, please check carefully before you turn the power on.

1. Check whether lamp, ballast model and wiring are compatible according to Philips EB-E Certalume datasheet.
2. Be sure the ground terminal of ballast are connected with metal luminaries or batten and earthed.
3. Keep wires to terminals 1,2 & 3,4 short.

Ordering and packing data

Ballast	Ordering Number	Weight	Bulk packing		Dimensions	Weight		Pallet packing
			Qty.			Gross	carton / ballast	
		kg	pcs		cm	kg		pcs
EB-CertaLume 118 TLD 220V	9137 131 99014	0.08	20		30 x 20 x 7	2.0		120/2400
EB-CertaLume 136 TLD 220V	9137 131 99214	0.09	20		30 x 20 x 7	2.2		120/2400
EB-CertaLume 218 TLD 220V	9137 131 99114	0.09	20		30 x 20 x 7	2.1		120/2400
EB-CertaLume 236 TLD 220V	9137 131 99314	0.13	20		42 x 21 x 7	3.1		80/1600