



# HF-Essential II for TL5/TL-D

HF-E 236 TL-D II 220-240V 50/60Hz

Essentially smart and reliable HF-Essential II is the most cost-effective solution for reliable operation of a fluorescent lamp. It is also the ideal entry-level product for electromagnetic system users who want to take advantage of the benefits provided by electronic ballasts. The cost-saving and reliable HF-Essential II is energy efficiency class A2, and its robust design meets all relevant international safety and performance standards. HF-Essential II is the ideal choice for a broad range of new construction and retrofit applications within the commercial sector, including general surface mounting and office lighting, parking garages, warehouses and other applications.

## Product data

### • General Characteristics

Rated Lamptype	TL-D II
Rated Number of Lamps	2 piece
Rated Ballast-Lamp Power	36
Line Voltage	220-240 V
Line Frequency	50/60 Hz
Housing	L 211x40x28.7
Energy Efficiency Index	A2
Lifetime 90% surv.@Tcaselife	30000 hr

### • Operating Characteristics

Automatic restart	Yes
Preheat time	1.4 s
Operating frequency *	44.9 kHz
Mains voltage safety (AC)	184-276V
Mains voltage performance (AC)	220-240V
Inrush current Peak	20 (max) A
Inrush current Width	0.37 ms
Earth leakage current	0.5 (max) mA
Power losses gear	8.4 W
Ballast Lumen Factor	0.95 -
PowerFactor 100% output power	0.97 -
Overvoltage protection 320Vac	48 hr
Overvoltage protection 350Vac	2 hr
Max ballast on MCB(16A type B)	16 x

Crestfactor	1.8 -
Hum and Noise level	< 30 dB(A)

### • Wiring Characteristics

Cable-Cap output-wires mutual	150 (max) pF
Conn.type input terminals	Insert
Conn.type output terminals	Insert
Max. cable length	0.75 m
Hot Wires	
Striplength	8.0-9.0 mm
Dual fixture Master/Slave	Possible, lamp wires 0.75m max. length [Master/Slave operation possible]
Wcs Input terminals	0.50-1.50 mm <sup>2</sup>
Wcs Output terminals	0.50-1.50 mm <sup>2</sup>
Cable-Cap hot out-wires-earth	150 (max) pF
Cable-Cap cold out-wires-earth	150 (max) pF

### • System Chars on driver level

Lamp Power on TL-D	30.07/29.95
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### • Temperature Characteristics

F-marking	No
T-case life	80 C
T-case maximum	80 (max) C
T-ambient	-10 (min), 50 (max) C
T-storage	-20 (min), 50 (max) C

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## • Product Dimensions

Length A1	211.0 mm
Fixing Hole Distance	198.0 mm
Length A2	
Width B1	39.6 mm
Height C1	28.7 mm
Fixing Hole Diameter	4.2 mm
D1	

## • Approval & Application Chars

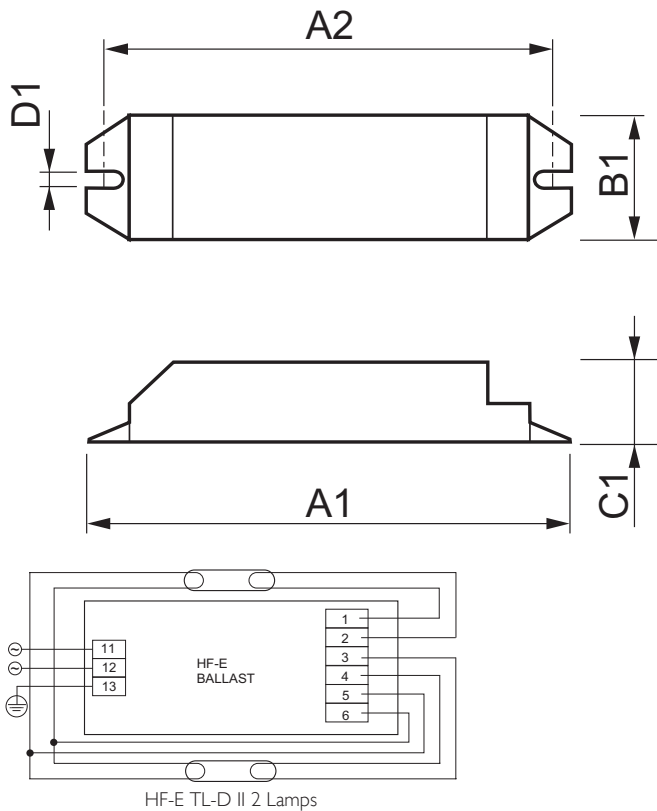
EMI 9kHz .. 30 MHz	EN 55015
Vibrations	IEC 60068-2-6:2007-Fc
Bumps	IEC 60068-2-29 Eb
Approval marks	CE / KEMA / CB / RoHs
CE marking	Yes
ENEC certificate	No
C-Tick certificate	No
CCC certificate	No

PSB certification	No
TISI marking	No
SIRIM approval	No
CB Certificate	Yes

## • Product Data

Order code	913713041166
Full product code	913713041166
Full product name	HF-E 236 TL-D II 220-240V 50/60Hz
Order product name	HF-E 236 TL-D II 220-240V 50/60Hz
Pieces per pack	1
Packing configuration	20
Packs per outerbox	20
Bar code on pack - EAN1	8718291770589
Bar code on outerbox - EAN3	8718291770596
Logistic code(s) - 12NC	913713041166
Net weight per piece	0.155 kg

## Dimensional drawing



## HF-E 236 TL-D II 220-240V 50/60Hz

Product	A1 (Norm)	A2 (Norm)	B1 (Norm)	C1 (Norm)	D1 (Norm)
HF-E 236 TL-D II 220-240V 50/60Hz	211.0	198.0	39.6	28.7	4.2



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data subject to change