



# HF-Matchbox Red

## HF-M RED 109 SH TL/PL-S 230-240V

HF-Matchbox Red is an affordable, reliable, compact, lightweight and high-frequency ballast for use with system wattages below 25 W in combination with TL mini, TL-D, TL5 and TL5c, PL-T/C, and PL-L/S lamps. The HF-M Red range has a robust design, meets all relevant international safety and performance standards and has an energy efficiency index (CELMA EEI ) of A2.

### Product data

General Information	
Lamp type	TL/PL-S
Number of lamps	1 piece/unit
Number of products on MCB (16 A type B) (nom.)	159
Automatic restart	Yes
Operating and Electrical	
Input Voltage	230 to 240 V
Input frequency	50 to 60 Hz
Power factor 100% load (nom.)	0.64
Ignition time (max.)	0.45 s
Mains voltage performance (AC)	-8%~+6%
Mains voltage safety (AC)	-10%~+10%
Power losses (nom.)	1.7 W
Wiring	
Connector type input terminals	Insert
Colour input terminals	Black
Colour output terminals	Grey
Connector type output terminals	Insert
Cable length from device to lamp	1.50 m

Cable length hot-wiring	0.30 m
Wire strip length	8.0-9.0 mm
Input terminal cross section	0.50-1.50 mm <sup>2</sup>
Output terminal cross section	0.50-1.50 mm <sup>2</sup>

System characteristics	
Rated ballast-lamp power	9 W
System power on PL-S	8.2 W
Rated lamp power on PL-S	9 W
Power loss on PL-S	1.7 W
Lamp power on PL-S	6.5 W
Lamp power on TL	5.3 W
Rated lamp power on TL	9 W
System power on TL	7 W

Temperature	
T-ambient (max.)	40 °C
T-ambient (min.)	-10 °C
T-Case maximum (max.)	75 °C

## HF-Matchbox Red

### Mechanical and Housing

Housing	SH
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### Emergency Operation

Battery voltage lamp ignition	194-254 V
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### Approval and Application

IP classification	IP 20 [ Ingress Protection 20]
Approval marks	F-Marking CE marking ENEC certificate CB Certificate

### Product Data

Full product code	871150093142930
Order product name	HF-M RED 109 SH TL/PL-S 230-240V
EAN/UPC – product	8711500931429
Order code	93142930
SAP numerator – quantity per pack	1
Numerator – packs per outer box	50
Material no. (12 NC)	913700422866
Net Weight (Piece)	0.034 kg

## Dimensional drawing

A2

Product	D1	C1	C2	A1	A2	B1
HF-M RED 109 SH	4.4 mm	22.0	10.0	80.0	70.0	40.0
TL/PL-S 230-240V		mm	mm	mm	mm	mm

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