POWER SUPPLIES SERIES E12

High quality plug-in power supplies

FEATURES:

- compact design
- reliable and powerful
- compliant with Energy Star Compliance Level VI and ErP Ecodesign (Ecoproject)
- high power output
- no load power consumption under 100 mW

APPLICATIONS:

- consumer electronics
- telecommunication devices
- electronic office equipment
- hardware
- home and building automation system
- audio-visual equipment
- cash registers and vending machines

E12 is a series of small and efficient plug-in power supplies with universal application. Its design is based on high-quality electronic components that allow for continuous, long-term operation. It is reliable, fully protected and stable. Provides high efficiency and excellent specification. 5 years warranty included.

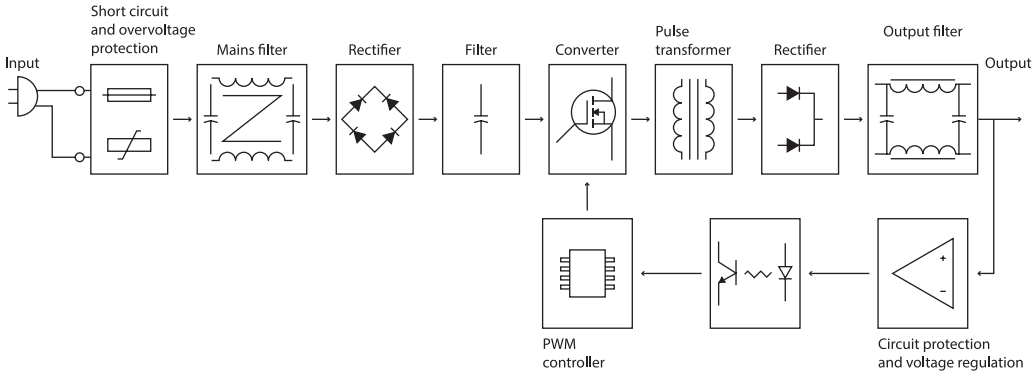
TECHNICAL SPECIFICATION

Group	Parameter	E12-1005	E12-0808	E12-0909	E12-1212	E12-1224	Conditions
Input	Rated input voltage	100-240 VAC					
	Input voltage range	90-264 VAC					
	Mains frequency range	50-60 Hz					
	AC current (max.)	0.4 A					At 100 VAC
	Inrush current (max.)	70 A	50 A	80 A	70 A	50 A	At 240 VAC
	No load power consumption	90 mW	0,1 W	0,1 W	75 mW	0.1 W	
	Input leakage current (max.)	0.2 mA	0.2 mA	0.1 mA	0.15 mA	0.2 mA	At 240 VAC
	Power factor correction	No					
	Power factor (typ.)	0.5	0.47	0.43	0.5	0.47	
Output	Rated output voltage	5 V	7.5 V	9 V	12 V	24 V	
	Rated output power	10 W	7.5 W	9 W	12 W	12 W	
	Rated output current	2 A	1 A	1 A	1 A	0.5 A	
	Energy efficiency	80%	80.3%	81.3%	84%	83%	At 230 VAC
	Energy conversion efficiency at 10% load	77%	68%	76%	78%	77%	
	Energy efficiency class	DoE Level VI, ErP					
	Line regulation	±2%	±1%			±2%	
	Load regulation	±5%	±3%			±5%	
	Ripples and noise	120 mVp-p	150 mVp-p	120 mVp-p	120 mVp-p	150 mVp-p	At 100 VAC
	Minimal output current required	No					
	Hold up time (max.)	3 ms					At 100 VAC
	DC voltage rise time (max.)	30 ms					At 100 VAC
	Turn on delay time (max.)	1 s					At 100 VAC
Environmental	Working temperature range	-10 to +40°C					
	Working humidity range	5% to 95% RH					40°C
	Storage temperature range	-10°C to +85°C					
	Cooling method	Free air circulation					
Protection	Input: overvoltage (OVP), undervoltage (UVP)	OVP, UVP					
	Output: overcurrent (OCP), short circuit (SCP), overvoltage (OVP)	OCP (120-135%)	OCP (110-140%)	OCP (120-150%)	OCP (115-135%)	OCP (110-140%)	
	Output overvoltage protection	Yes, 10 V	Yes, 12 V	Yes, 15 V	Yes, 19 V	Yes, 36 V	
	Transient voltage protection	Yes					MOV protection
	Thermal protection	Yes					
	Automatic recovery on fault remove	Yes					
Safety and EMC	Withstand isolation voltage	3 kVAC					Input to output, 5 mA, 1 min
	Isolation resistance (min.)	100 MΩ					500 VDC
	Isolation class	2					
	Safety compliance	EN62368-1:2020+A11:2020					
	EMC compliance	EN55032 Class B, EN61000-4-2 (8/6 kV), -4-4 & -4-5 (1 kV)					
	Marking	CE, UKCA, RoHS					

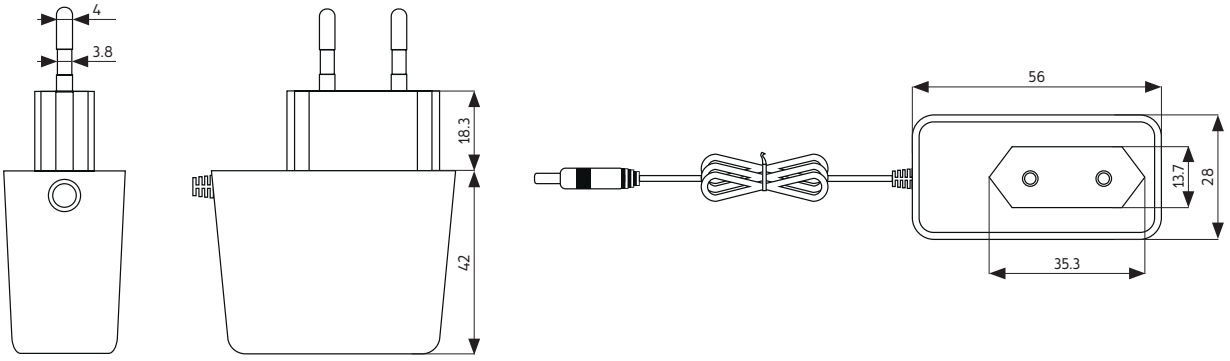
Mechanical and features	Enclosure	Black ABS plastic					
	Dimension	56 × 28 × 42 mm					
	Weight	80 g	68 g	72 g	70 g	80 g	
	Output connector	DC Jack 2.1 × 5.5 × 10 mm					Plus in the middle
	Input connector	EU plug					
	Output cable	1.5 m	1.2 m	1.2 m	1.5 m	1.5 m	
	Single package	85 x 80 x 30 mm					
	Packing	472 x 310 x 290 mm					105 items
	Manufacturing	China					
	Warranty	5 years					
	MTBF	100 000 h					

Notes:
Unless otherwise stated, all parameters are specified at 230 VAC input voltage, 50 Hz, ambient temperature 25℃ and relative humidity 70% for rated load output. The values of parameters related to the output voltage regulation is measured from low to high line or for load changes from 0 to 100%, respectively. The power supply is considered as an independent unit, but the final equipment still need to reconfirm that the whole system complies with the EMC directives. If the PSU is installed in the final device as a subassembly, the tests should be repeated to verify that the system has been met compliance. Detailed technical data are available on request.

BLOCK DIAGRAM



MECHANICAL SPECIFICATION

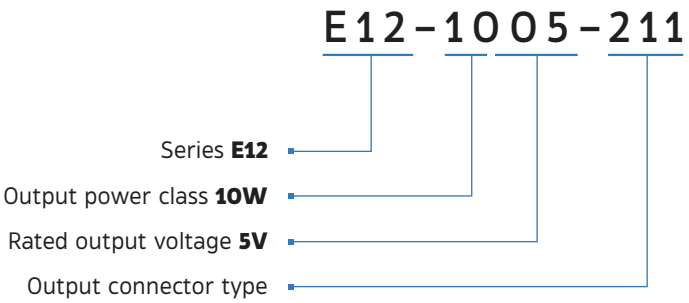


PRODUCT LABEL

Legend to the label icons:

- II safety class: no grounding is required, no dangerous voltage even in an emergency situation will appear on output
- power supply intended for indoor use only
- high efficiency supply with small power consumption at no load, meeting requirements of 6th level rating Energy Star Compliance and European ErP regulations
- polarization: plus in the middle, minus outside
- the product must not be disposed of in normal waste containers

MARKING SYSTEM

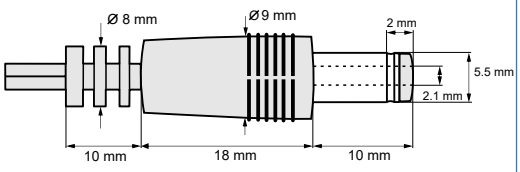


Standard output connector DC Jack 2.1 × 5.5 × 10 mm (plus in the middle)

21 – Plug type DC – DC Jack 2.1 × 5.5 × 10 mm

1 – Plug shape DC and polarization – Straight plug, plus in the middle 

STANDARD OUTPUT DC 211 CONNECTOR

Index	Type	Size inside [mm]	Size outside [mm]	Clamp type	Technical drawing	Explanatory picture
211	Straight	2.10	5.50	F 		

VARIANTS OF OUTPUT DC CONNECTORS

Type and plug size

00	None
07	0.7 / 2.35 mm
08	0.8 / 3.0 mm
10	1.1 / 3.0 mm
11	1.1 / 3.5 mm
13	1.3 / 3.45 mm
15	1.5 / 5.5 mm
40	1.7 / 4.0 mm
48	1.7 / 4.8 mm

17	1.7 / 5.5 mm
21	2.1 / 5.5 mm
25	2.5 / 5.5 mm
30	3.0 / 5.5 mm
J2	Jack 2.5 mm
UA	USB-A
UM	USB micro
UC	USB Type C

Plug shape and polarization

0	None
1	Straight
2	Angled
3	Straight (CN – reversed polarization)
4	Angled (CN – reversed polarization
6	Socket
7	Socket (CN – reversed polarization)