

AC-DC POWER SUPPLY UP TO 60 WATTS

EV CHARGING APPLICATIONS
PFEV60 SERIES

FEATURES

- Universal Input Range 90-305VAC, 47-63 Hz
- I/O Isolation 4300VAC
- Operating Ambient Temperature Range: -40°C to +85°C
- No Load Power Consumption < 0.1W
- 5000m Altitude Application
- Over-Voltage Category OVC III (New Edition)
- High Efficiency up to 90%
- Isolation Class II
- EMC Compliant without External Components
- Meets UL/IEC/EN 62368-1, IEC/EN 61558-1, IEC/EN 61558-2-16, IEC/EN 60335-1

SELECTION GUIDE Specifications typical at TA=25°C, nominal input voltage and rated output current unless otherwise specified.

Input Voltage Range Vac / Vdc	Output Voltage V	Output Current at Full Load mA	Maximum Output Wattage W	Efficiency %	Model Number	Max. Capacitor Load µF
90-305 / 120-430	12	5,000	60	90	PFEV60-12S	6,000
90-305 / 120-430	15	4,000	60	90	PFEV60-15S	5,000
90-305 / 120-430	24	2,500	60	90	PFEV60-24S	1,200

Input Specifications

Rated input voltage, Vac/Vdc	90-305 / 120-430	
Input frequency, Hz	47-63	
Input current, mA	1,500 Max.	115Vac
	1,000 Max.	230Vac
Inrush current, A	45 Max.	115Vac
	90 Max.	230Vac
No load power consumption, W	< 0.1	
Leakage current, mA	0.25 Max.	100-240Vac

Output Specifications

Voltage accuracy, %	±2	
Minimum load, %	0%	
Line regulation, %	±0.5% Typ.	Low Line to High Line
Load regulation, %	±1% Typ.	0-100%
Ripple & noise, mV	Full Load, measured at 20MHz of bandwidth with 0.1µF & 47µF parallel capacitor	
	120	PFEV60-12S
	150	PFEV60-15S
	240	PFEV60-24S
Hold-up time, ms	30	at 230Vac

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General Specifications

Short circuit protection,	Hiccup mode (automatic recovery)			
Over voltage protection	Zener diode clamp			
Over power protection	Auto recovery			
Isolation	Input-Output (V.AC)		4,300V	

Environmental Specifications

Operating temperature, °C	With derating	-40		85
Storage temperature, °C		-40		85
Temperature coefficient, %/°C			±0.05	
Altitude during operation, m	UL / IEC / EN 62368-1		5,000	
Humidity	95% RH			
Over voltage category	III: Compliance to EN 61558; altitude up to 2000 meters			
Vibration	IEC60068-2-6 (10~500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes)			
Shock	IEC60068-2-27			

Physical Specifications

Dimensions	2.92" x 1.85" x 0.91" (74.2 x 47.0 x 23.1 mm)
Case material	Plastic resin (flammability to UL 94V-0)
Weight g	158
Cooling method	Free air convection
Safety approval	UL / IEC / EN 62368-1
Safety meets	IEC / EN 61558-1, IEC / EN 61558-2-16, IEC / EN 60335-1
MTBF	>300,000 h @ 25°C (MIL-HDBK-217F)

EMC Specifications

Specifications	Conditions	Level
EMI conducted emissions	EN 55032	Class B
EMI radiated emissions	EN 55032	Class B
EMS Noise immunity	EN 55035	

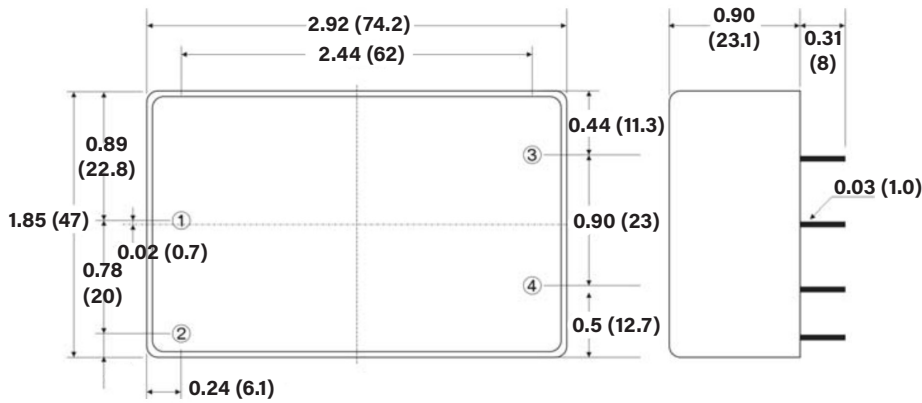
Note:

1. Double pole, neutral fusing. Disconnect mains before servicing.
2. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
3. For further information, please contact Polytron Devices.

CAUTION: This power module is not internally fused. An input line fuse must always be used.

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Mechanical Drawing



PIN #	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	+DC OUT

Note:

1. All dimensions in inches (mm)

Characteristic Curve

