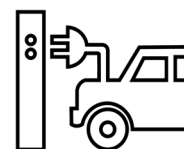


AC-DC POWER SUPPLY UP TO 40 WATTS

EV CHARGING APPLICATIONS
PFEV40 SERIES



FEATURES

- Universal Input Range 90-305VAC, 47-440 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/EN61558-1, 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	5	7,000	35	87	PFEV40-5S	8,000
90-305 / 120-430	12	3,333	40	90	PFEV40-12S	6,000
90-305 / 120-430	15	2,666	40	90	PFEV40-15S	5,000
90-305 / 120-430	24	1,666	40	89	PFEV40-24S	1,200
90-305 / 120-430	48	833	40	89	PFEV40-48S	820

PFEV40 SERIES

Input Specifications			Output Specifications		
Rated input voltage, Vac/Vdc	90-305 / 120-430		Voltage accuracy, %	±2	
Input frequency, Hz	47-440		Minimum load, %	0%	
Input current, mA	1,000 Max.	115Vac	Line regulation, %	±0.5% Typ.	Low Line to High Line
	500 Max.	230Vac	Load regulation, %	±1% Typ.	0-100%
Inrush current, A	60 Max.	115Vac	Ripple & noise, mV	Full Load, measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor	
	100 Max.	230Vac		120	PFEV40-5S, PFEV40-12S
No load power consumption, W	< 0.1			150	PFEV40-15S
				240	PFEV40-24S
Leakage current, mA	0.25 Max.	(00-240Vac)		480	PFEV40-48S
			Hold-up time, ms	30	at 230Vac

General Specifications					
Over current protection, %					
Short circuit protection,	Hiccup mode (automatic recovery)				
Over voltage protection	Zener diode clamp				
Over temperature protection					
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				

PFEV40 SERIES

Physical Specifications

Dimensions	2.52" x 1.8" x 0.93" (64.1 x 45.6 x 23.5 mm)
Case material	Plastic resin (flammability to UL 94V-0)
Weight g	125
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

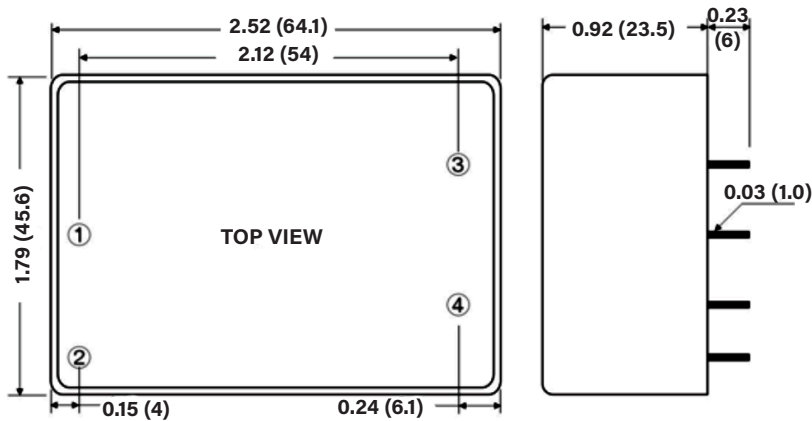
Specifications	Conditions	Level
EMI conducted emissions	EN 55032	Class B
EMI radiated emissions	EN 55032	Class B
EMS Noise immunity	EN 55035	

Note:

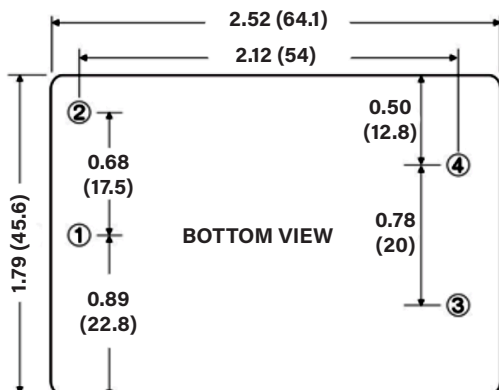
1. Double pole, neutral fusing. Disconnect mains before servicing.
2. The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m(6500ft).
3. For further information, please contact Polytron Devices.

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

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)

PFEV40 SERIES

Characteristic Curve

