

## MPF60 SERIES



60W EXTERNAL

DIMENSIONS:



3.56 x 1.32 x 2.30"  
(90.5 x 33.5 x 58.5mm)



IP42

LEVEL VI  
EFFICIENCY

2 X MOPP

5000M OPERATION

HOME MEDICAL  
IEC60601-1-11

INTERCHANGEABLE  
AC BLADES

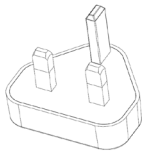
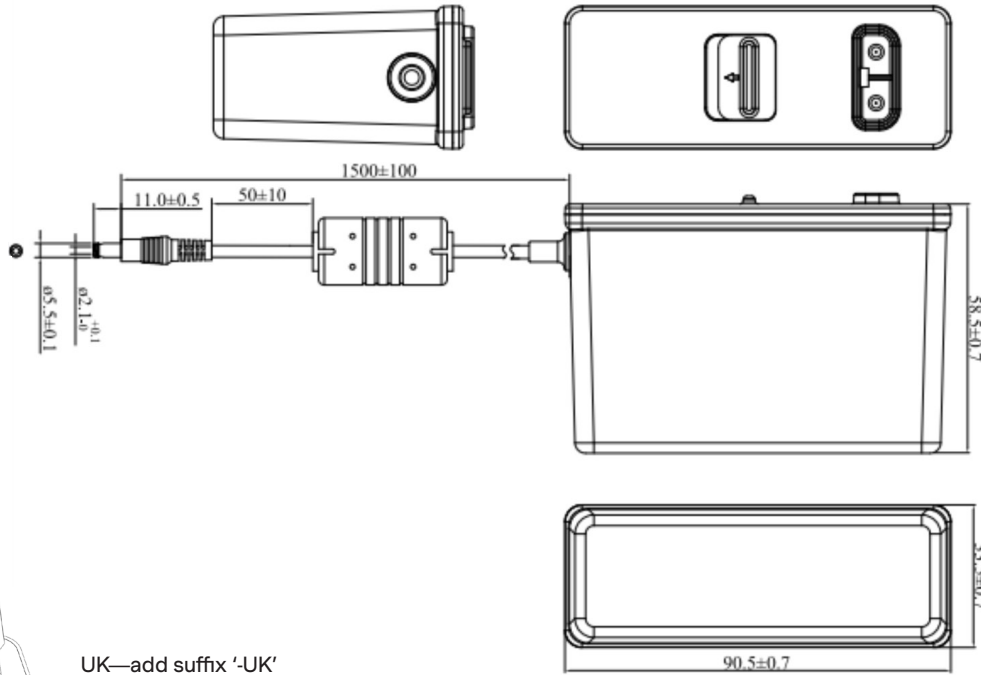
### Part numbers

MPF	60	12	-	UK
Series	Power (W)	Output voltage		Options
		12 = 12VDC 15 = 15VDC 19 = 19VDC 24 = 24VDC		-UK -US -AU -EU -ALL

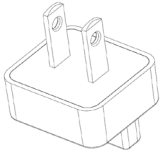
### Key specifications

Input range	Safety certification	Efficiency	Environmental performance
90-264VAC	UL/IEC/EN 60601-1 IEC/EN 60601-1-11  Designed to meet UL/IEC/EN 62368-1	89%	Operational: 0 to 70°C

### Mechanical



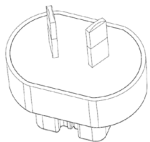
UK—add suffix '-UK'



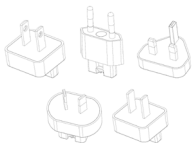
USA—add suffix '-US'



EU—add suffix '-EU'



Australia —add suffix '-AU'



ALL — add suffix 'ALL'

#### Notes

1. All dimensions in mm
2. Output cable UL1185 18AWG 1.5M
3. Centre positive

#### Weight

220g



### Models & Ratings

Model Number <sup>(1)</sup>	Output Power	Output voltage	Output current
MPF6012-ALL	60W	12V	5A
MPF6015-ALL	60W	15V	4A
MPF6019-ALL	60W	19V	3.15A
MPF6024-ALL	60W	24V	2.5A

1. For UK plug -UK, US plug -US, for EU plug -EU, for AU plug -AU, for all plugs -ALL



### Input

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Input voltage	90		264	VAC	
Input frequency	47		63	Hz	
Power factor					EN61000-3-2 class A compliant
Input current (rms)			1.7	A	1.7A at 90VAC, low line, full load
No load input power			0.21	W	



### Output

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Set point tolerance		±5		VDC	
Load regulation			±5	%	10-90%: load change
Line regulation			±2	%	
Minimum load	0			%	
Hold up time	10			mS	At full load 115VAC
Noise and Ripple		200		mV pk-pk	All models measured with 0.1uF ceramic and 10uF electrolytic capacitor. 20 MHz bandwidth

### Protections

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Overload	120		200	%	Automatic recovery
Short circuit					Automatic recovery
Over voltage	120		150	%	Automatic recovery

### Safety

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Safety standards	UL/IEC/EN 60601-1, IEC/EN 60601-1-11				Designed to meet IEC/EN 62368-1
Isolation	Input to Output: 4000			VAC	2 x MOPP
Touch current			100	uA	At 264VAC
Insulation resistance			10	M Ω	At 500VDC

### EMC: Emissions

	Standard	Test level	Criteria	Notes/Conditions
Conducted	EN55032	B		
Radiated	EN55032	B		
Harmonic current	EN61000-3-2	Class A		
Voltage flicker	EN61000-3-3			

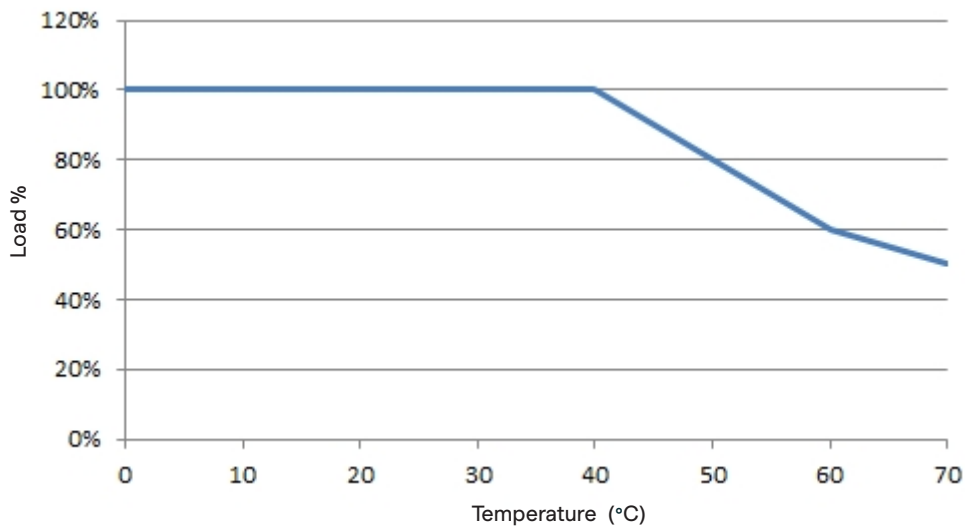
### EMC: Immunity

	Standard	Test level	Criteria	Notes/Conditions
ESD	EN61000-4-2	4	A	Contact: ±8kV, Air: ±15kV
Radiated	EN61000-4-3	3	A	3-28V/m, 80MHz-2700MHz, 1KHz 80% AM modulation
EFT	EN61000-4-4	3	A	±2kV, 100KHz
Surges	EN61000-4-5	Installation class 3	A	Line to Ground ±2kV, Line to Neutral ±1kV at 0°, 90°, 180°, 270°
Conducted	EN61000-4-6	2	A	3/6Vrms, 1KHz 80 AM Modulation 150KHz-80MHz
Dips and interruptions	EN61000-4-11	100% for 0.5 & 1 cycle, 30% for 25/30 cycles, interrupt 250/300 cycles. Perf criteria: A,A,B		

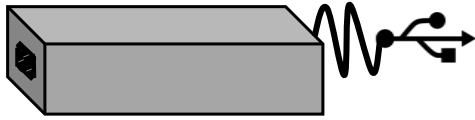
### Environmental

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Operating temperature	0		70	°C	See derating curve
Storage temperature	-5		60	°C	Storage humidity 5-90%
Humidity	10		90	% RH	Non-condensing
IP rating			42		
Cooling					Convection cooled
Operating altitude			5000	m	
MTBF	100			kHrs	As per MIL-HDBK-217F, 25°C

Derating Curve



## MPF60 SERIES



The MPF60 series is available with an range of output connectors, allowing customers to use the connector that best fits their industry and product.

- Rapid prototypes for evaluation
- Available for high & low volume applications

### Connector Selector

Pin Configuration	Feature	Description	Image	Drawing	Applicable to
	Universal simple	5.5mm/2.5mm straight barrel jack (11mm length)			All models
	Universal simple	5.5mm/2.1mm straight barrel jack (9.5mm length)			All models
	Universal simple	5.5mm/2.5mm straight barrel jack (9.5mm length)			All models
	Compact tidy	5.5mm/2.1mm right angle jack (11mm length)			All models
	Compact tidy	5.5mm/2.5mm right angle jack (9mm length)			All models
	Friction locking	DIN-5 plug friction locking male			All models
	Friction locking	DIN-4 plug friction locking male			All models
	Locking unique	Molex 43025-0600 or CVILUX CP35006S0010			All models