

15 Watts

- Home medical IEC60601-1-11 approval
- Latest medical EMC Ed 4 IEC60601-1-2 approval
- Interchangeable input plugs
- Class II
- IP22
- EN55011 Level B conducted & radiated
- 3 Year warranty



Dimensions:

2.36 x 1.71 x 1.58" (60.0 x 43.5 x 40.2mm)

The MPT15 range of wall plug adapters are compliant home medical and latest edition 4 medical EMC standards. The units offer 15 watts of output power in a compact, encapsulated package with output voltages available between 12 and 54VDC. The MPT15 caters for customers working within global markets, accepting universal AC input and providing interchangeable mains plugs. The range is cost competitive and comes with an impressive FIDUS 3 year warranty.

Models & Ratings

SELECT YOUR CONNECTOR PG5

Model Number ⁽¹⁾	Output Power	Output voltage	Output Current	Total Regulation ⁽²⁾	Efficiency ⁽³⁾
MPT1503	7.2W	3.3V	2.18A	±5%	70%
MPT1505	12W	5V	2.4A	±5%	74%
MPT1507	12W	7V	1.71A	±5%	78%
MPT1509	13.5W	9V	1.5A	±5%	79%
MPT1512	15W	12V	1.25A	±5%	81%
MPT1515	15W	15V	1A	±5%	82%
MPT1518	15W	18V	0.83A	±5%	82%
MPT1524	15W	24V	0.62A	±5%	83%
MPT1528	15W	28V	0.53A	±3%	83%
MPT1536	15W	36V	0.41A	±3%	84%
MPT1548	15W	48V	0.31A	±3%	84%
MPT1554	15W	54V	0.27A	±3%	84%

Notes

1. Add plug indicator suffix to the part number for pre-fitted mains plug. See mechanical details pg.4. E.g. MPT1505-UK for UK plug fitted. –ALL for all plugs
2. Includes line & load regulation.
3. At full rated load and nominal input.
4. Alternative output connectors available, please see page 5 connector selector.

Key specifications

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
AC Input range	80		275	VAC	No derating
Operating temperature	-10		70	°C	Derate linearly from 100% load at 40°C to 50% load at 70°C
Efficiency	70		84	%	
Dimensions	2.36 x 1.71 x 1.58" (60.0 x 43.5 x 40.2mm)				
EMC	EN55011 Level B Conducted and Radiated. EN61000-3 and EN61000-4, harmonics, flicker, Surge, EFT, ESD, conducted and radiated. IEC60601-1-2				
Safety	ES60601-1:2005 (R2012), EN60601-1:2006 /A1:2013, IEC60601-1 Ed 3.1, CSAC22.2 No 60601-1:14, IEC60601-1-11				

Input					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Input voltage	80		275	VAC	No derating
Input frequency	47		63	Hz	
Power factor					EN61000-3-2 class A compliant
Input current			0.4	A	Low line. Full load, Vin=100VAC
			0.2		High line. Full load, Vin=240VAC
Inrush current			50	A	Low line. Full load, 25°C cool start, Vin=100VAC
			115		High line. Full load, 25°C cool start, Vin=240VAC
No load input power	0.2		0.3	W	0.2W on 3V version
Earth leakage current					Class II construction

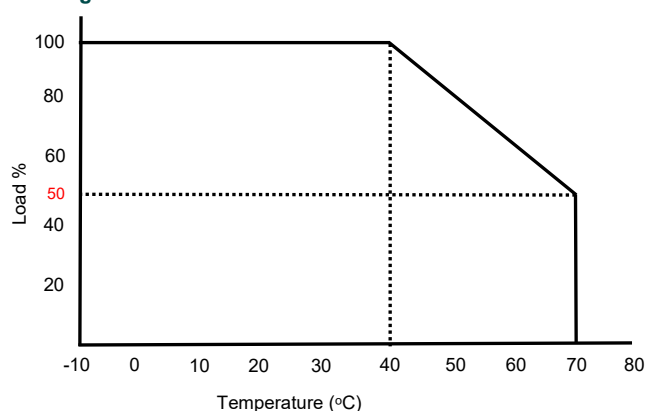
Output					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	3.3		54	VDC	
Total regulation	±3		±5	%	Includes line & load regulation. See models and rating table.
Line regulation			1	%	Full load, Vin=100 to 120VAC. Line regulation is defined by changing ±10% of input voltage from nominal line at rated load
Minimum load	0			%	
Time of Transient response			4	ms	Full load, Vin=110VAC
Ripple & Noise	3.3V output 66mVp-p, 5V output 68mVp-p, 7V output 70mVp-p, 9V output 90mVp-p, 12V output 100mVp-p, 15 and 18V outputs 120mVp-p, 24 and 28V outputs 130mVp-p and 36-54V outputs 140mVp-p.			mVp-p	All models measured with 0.47uF capacitor. 20 MHz bandwidth.
Hold up time	10			ms	
Overload protection	110		150	%	
Short circuit protection					Automatic recovery

General					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	70		84	%	See models & Ratings table
Isolation	4000			VAC	Input to output
Power density			2.4	W/In ³	
MTBF	100			KHrs	As per MIL-HDBK-217F, 25°C GB
Weight		165		g	

Environmental

Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-10		70	°C	De-rate linearly from 100% load at 40°C to 50% load at 70°C
Storage temperature	-40		85	°C	
Cooling					Convection cooled
Temperature coefficient			±0.04	%/°C	
Humidity	0		95	% RH	Non-condensing
Vibration	10		500	Hz	5G. 10min/1cycle, 60 mins along x,y, z axes

Derating curve



EMC: Emissions

	Standard	Test level	Criteria	Notes & Conditions
Conducted	EN55011	B		
Radiated	EN55011	B		
Harmonic current	EN61000-3-2	Class A		
Voltage flicker	EN61000-3-3			

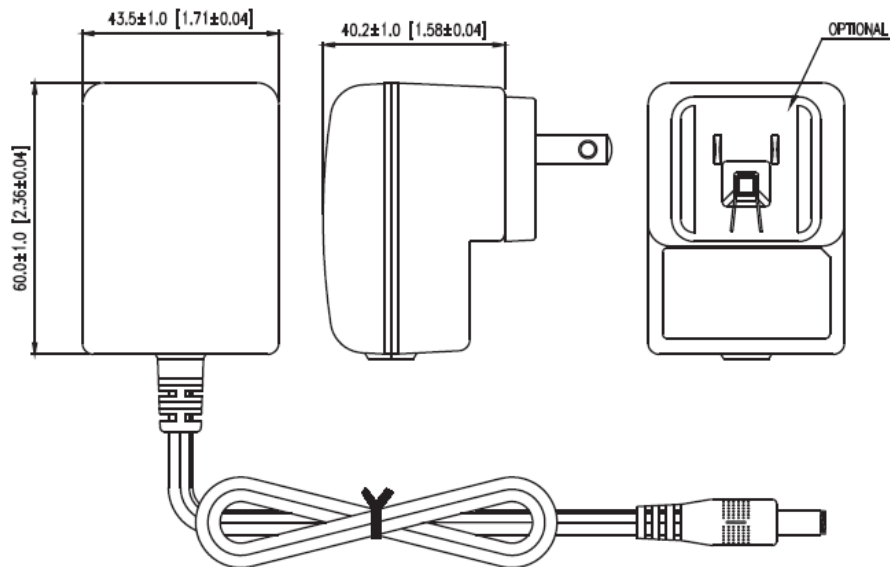
EMC: Immunity

	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	3	A	8kV contact, 15kV air
Radiated	EN61000-4-3		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	2kV L/N to GND, 1kV L to N both at 0°, 90°, 180°, 270°
Conducted	EN61000-4-6		A	3/6Vrms, 1KHz 80 AM Modulation 150KHz-80MHz
Power frequency magnetic field	EN61000-4-8		A	30A/m
Voltage Dips / Interruptions	EN61000-4-11	100% for 0.5 & 1 cycle, 30% for 25/30 cycles, interrupt 250/300 cycles -performance criteria B,C,C		

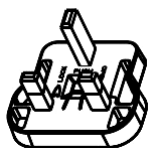
Safety Approvals

	Safety standard	Notes & Conditions
UL	ES60601-1:2005 (R2012), CSAC22.2 No 60601-1:14	
CB	IEC60601-1 Ed 3.1, IEC60601-1-11	
TUV	EN60601-1:2006 /A1:2013	
CE		EMC 2014/30/EU, 2011/65/EU RoHS and 2014/35/EU Low voltage directives
CCC		China Compulsory Certification
PSE		PSE safety Japan
Equipment protection class		Class II

Mechanical Details



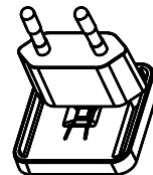
Mains plug options



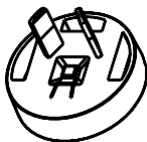
UK—add suffix '-UK'



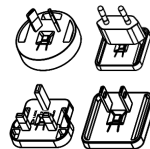
USA—add suffix '-US'



EU—add suffix '-EU'



Australia —add suffix '-AU'



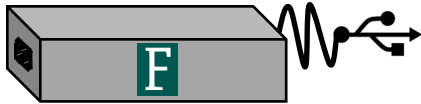
ALL — add suffix 'ALL'

Notes

1. All dimensions in mm (inches)
2. Output connector : Barrel female plug: OD: 5.5mm, ID: 2.1mm, L: 11mm. Other available for production, contact sales
3. For 3.3-9V models use AWG18 4ft output cable. 12-28V models use AWG20 4ft. 36-54V models use AWG22 4ft.

MPT15 Series

Connector Selector



The MPT15 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

MPT15 SERIES - [CONNECTOR SELECTOR]

	Universal Simple	5.5mm/2.5mm Straight Barrel Jack (11mm length)			All models	-P01N
	Universal Simple	5.5mm/2.1mm Straight Barrel Jack (9.5mm length)			All models	-P01J
	Universal Simple	5.5mm/2.5mm Straight Barrel Jack (9.5mm length)			All models	-P01M
	Compact Tidy	5.5mm/2.1mm Right Angle Jack (11mm length)			All models	-P02K
	Compact Tidy	5.5mm/2.5mm Right Angle Jack (9mm length)			All models	-P02M
	Friction locking	DIN-5 plug Friction locking Male			All models	-P05B
	Friction locking	DIN-4 plug friction locking Male			All models	-P09B
	Modern Recognisable	Micro USB Male			All models accept 5V	-P88D
	Locking Unique	Molex 43025-0600 or CVILUX CP35006S0010			All models	-P35C

Still can't find your ideal connector? Contact sales for assistance
+44 (0)1183 420 730 sales@fiduspower.com