

40 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



The MPT40 range of wall plug adaptors are compliant with home medical and latest edition 4 medical EMC standards. The units offer 40 watts of output power in a compact, encapsulated package with output voltages available between 5 and 48VDC. The MPT40 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.

Dimensions:

3.66 x 1.97 x 1.55" (93.0 x 50.0 x 39.3mm)

Models & Ratings

SELECT YOUR CONNECTOR PG5

Model Number ⁽¹⁾	Output Power	Output voltage	Output Current	Total Regulation ⁽²⁾	Efficiency ⁽³⁾
MPT4005	30W	5V	6.00A	±5%	85%
MPT4007	30W	7V	4.28A	±5%	87%
MPT4009	35W	9V	3.88A	±5%	87%
MPT4012	40W	12V	3.33A	±5%	88%
MPT4015	40W	15V	2.66A	±5%	88%
MPT4019	40W	19V	2.10A	±5%	88%
MPT4024	40W	24V	1.66A	±3%	88%
MPT4030	40W	30V	1.33A	±3%	88%
MPT4036	40W	36V	1.11A	±3%	88%
MPT4048	40W	48V	0.83A	±3%	88%

Notes

1. Add plug indicator suffix to the part number for pre-fitted mains plug. See mechanical details pg.4. E.g. MPT4005-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	100% load at 95VAC then 80% load at 80VAC
Operating temperature	-20		70	°C	Derate linearly from 100% load at 40°C to 50% load at 70°C
Efficiency	85		88	%	
Dimensions	3.66 x 1.97 x 1.55" (93.0 x 50.0 x 39.3mm)				
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				

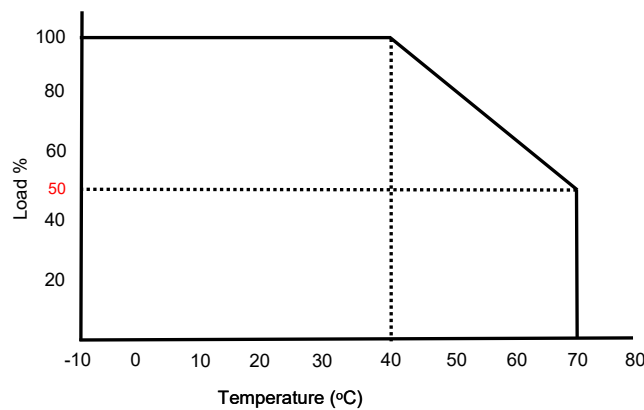
Input					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Input voltage	80		275	VAC	100% load at 95VAC then 80% load at 80VAC
Input frequency	47		63	Hz	
Power factor					EN61000-3-2 class A compliant
Input current			0.93	A	Low line. Full load, Vin=100VAC
			0.54		High line. Full load, Vin=240VAC
Inrush current			115	A	Low line. Full load, 25°C cool start, Vin=100VAC
			270		High line. Full load, 25°C cool start, Vin=240VAC
No load input power		0.1		W	
Earth leakage current					Class II construction

Output					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Output voltage	5		48	VDC	
Total regulation	±3		±5	%	Includes line & load regulation. See models and rating table.
Line regulation	0.5		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	5-12V outputs 100mVp-p, 15-30V outputs 120mVp-p, 36-48V outputs 200mVp-p			mVp-p	All models measured with 0.47uF capacitor. 20 MHz bandwidth.
Hold up time	8			ms	
Overload protection					Automatic recovery
Short circuit protection					Automatic recovery

General					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Efficiency	85		88	%	See models & Ratings table
Isolation	4000			VAC	Input to output. 2x MOPP
Power density			3.58	W/in ³	
MTBF	200			kHrs	As per MIL-HDBK-217F, 25°C GB
Weight		225		g	

Environmental					
Parameter	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating temperature	-20		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

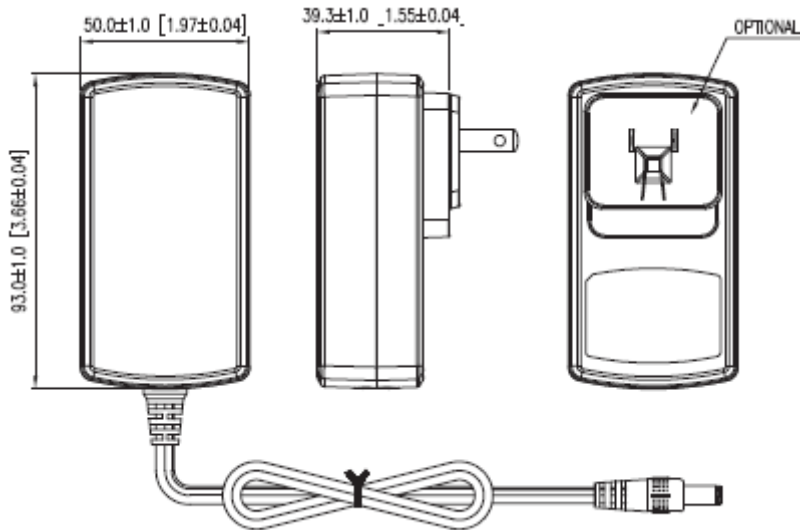


EMC: Emissions				
	Standard	Test level	Criteria	Notes & Conditions
Conducted	EN55011	B		
Radiated	EN55011	B		
Harmonic current	EN61000-3-2	Class A		
Voltage flicker	EN61000-3-3			

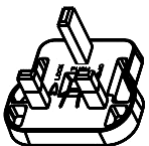
EMC: Immunity				
	Standard	Test level	Criteria	Notes & Conditions
ESD	EN61000-4-2	4	A	8kV contact, 15kV air
Radiated	EN61000-4-3	3	A	3-28V/m, 80MHz-2700MHz, 1kHz 80% AM Modulation
EFT	EN61000-4-4	3	A	2kV 100kHz
Surges	EN61000-4-5	Installation Class 3	A	1kV L to N both at 0°,90°,180°,270°
Conducted	EN61000-4-6	2	A	3/6Vrms, 1kHz 80 AM Modulation 150kHz-80MHz
Power frequency magnetic field	EN61000-4-8	4	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 A,A,B		

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



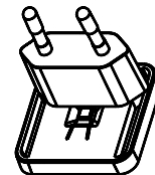
Mains plug options



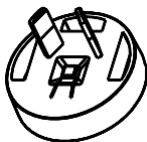
UK—add suffix '-UK'



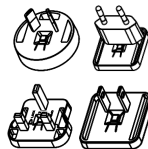
USA—add suffix '-US'



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 5-9V models use AWG14 1200mm output cable. 12-19V models use AWG16 1200mm. 24-48V models use AWG18 1200mm.

Connector Selector



The MPT40 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

MPT40 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