MPT40 SERIES

40W EXTERNAL

DIMENSIONS:

3.66 x 1.97 x 1.55″
(93 x 50 x 39.3mm)

CONNECTOR CUSTOMISATION | **CLASS II** | **60601-1**

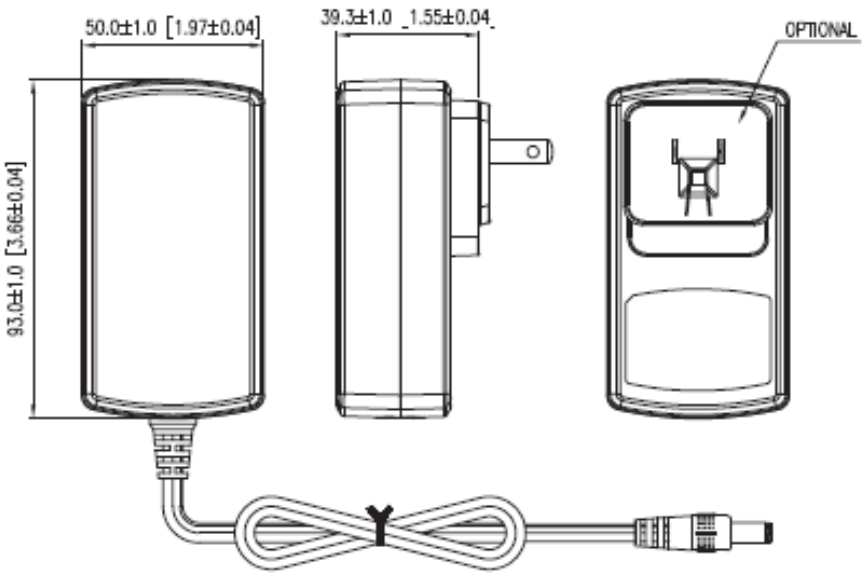
Part numbers

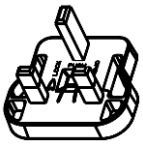
MPT	40	12	-	UK
Series	Power (W)	Output voltage		Options
		05 = 05VDC 07 = 07VDC 09 = 09VDC 12 = 12VDC 15 = 15VDC 19 = 19VDC 24 = 24VDC 30 = 30VDC 36 = 36VDC 48 = 48VDC		-UK -US -AU -EU -ALL

Key specifications

Input range	Safety certification	Efficiency	Environmental performance
80-275VAC	UL/IEC/EN 60601-1	<88%	Operational: -20 to 70°C

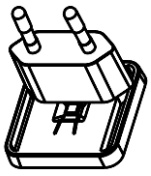
Mechanical





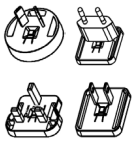
UK—add suffix '-UK'

USA—add suffix '-US'



EU—add suffix '-EU'

Australia —add suffix '-AU'



ALL — add suffix 'ALL'

Notes
1. All dimensions in mm (inches) 2. Output connector - barrel female plug: OD:5.5mm, ID: 2.1mm, L: 11mm. Other connectors available for production. Contact sales for details. 3. 5 - 9V AWG14 1200mm output cable. 12 - 19V AWG16 1200mm output cable. 24 - 48V AWG18 1200mm output cable.

Weight	225g

Models & Ratings

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

1. For UK plug -UK, US plug -US, for EU plug -EU, for AU plug -AU, for all plugs -ALL
2. Includes line and load regulation.
3. At full rated load and nominal input
4. Alternative output connectors available. See page 6 connector selector

Input

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Input voltage	80		275	VAC	See derating curve on page 5
Input frequency	47		63	Hz	
Power factor					EN61000-3-2 class A compliant
Input current (rms)	0.54		0.93	A	0.54A at 240VAC, high line, full load 0.93A at 100VAC, low line, full load
Inrush current	115		270	A	115A at 100VAC, low line, full load, 25°C cool start 270A at 240VAC, high line, full load, 25°C cool start
No load input power		0.1		W	
Leakage current					Class II construction

Output

Parameter	Min	Typical	Max	Unit	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			%	
Transient response			4	mS	Full load, Vin=110VAC
Ripple & noise	5V, 7V, 9V, 12V		100	mVp-p	All models measured with 0.47uF capacitor. 20 MHz bandwidth
	15V, 19V, 24V, 30V		120		
	36V, 48V		200		
Hold up time	8			mS	At full load

Protections

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Overload					Automatic recovery
Short circuit					Automatic recovery

Safety

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Safety standards	UL/IEC/EN 60601-1				
Isolation	Input to Output: 4000			VAC	
Power density			3.58	W/In^3	

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			

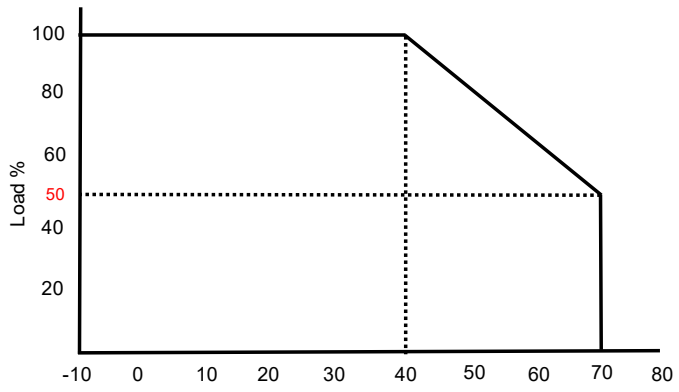
EMC: Immunity

	Standard	Test level	Criteria	Notes/Conditions
ESD	EN61000-4-2	4	A	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
PFMF	EN61000-4-8	4	A	30A/m
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	-20		70	°C	See derating curve below
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/1 cycle, 60 mins along x, y, z axes
MTBF	200			kHrs	As per MIL-HDBK-217F, 25°C GB

Derating curve



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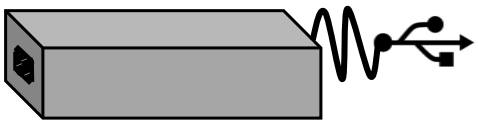
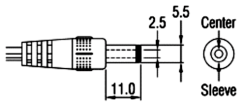
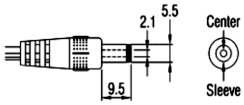
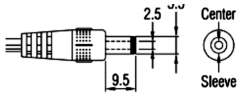
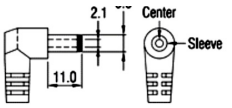
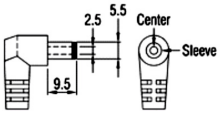
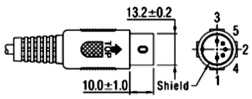
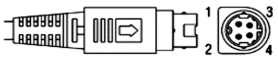
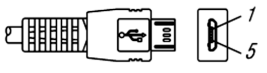
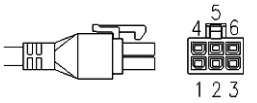


The MPT40 series is available with an range of output connectors, allowing customers to use the connector that best fits their industry and product.

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

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
	Modern recognisable	Micro USB male			All models except 5V
	Locking unique	Molex 43025-0600 or CVILUX CP35006S0010			All models

28th March 2024