

## MDT30 SERIES



30W EXTERNAL

DIMENSIONS:



4.21 x 1.85 x 1.17"  
(107 x 47 x 29.6mm)



CONNECTOR  
CUSTOMISATION

CLASS II

2 x MOPP

EN5011 LEVEL B

IEC/ EN60601-1

C8 / C18 INLET

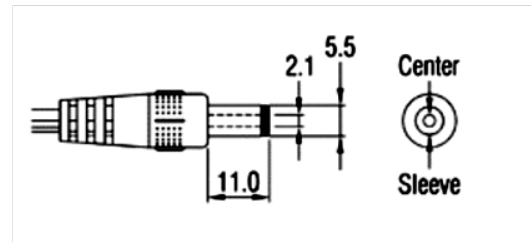
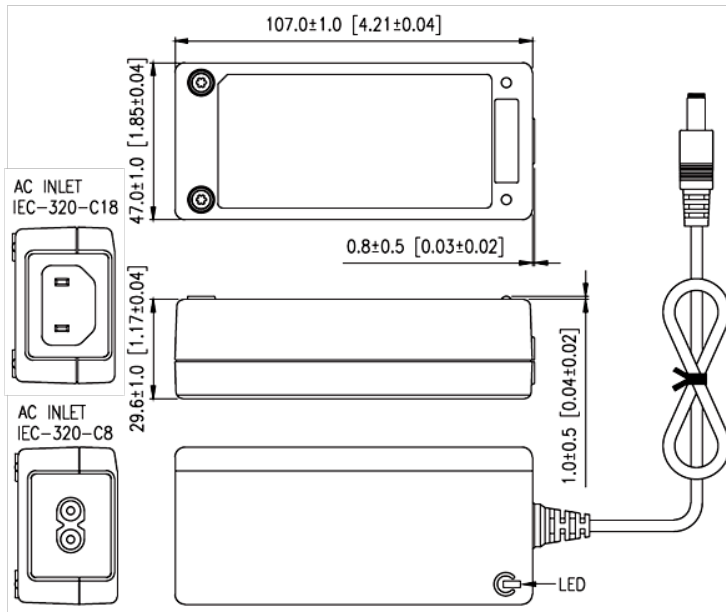
### Part numbers

MDT	30	12	-	C2
Series	Power (W)	Output voltage		Options
		05 = 05VDC 07 = 07VDC 09 = 09VDC 12 = 12VDC 15 = 15VDC 18 = 18VDC 24 = 24VDC 30 = 30VDC 36 = 36VDC 48 = 48VDC		-C2 = -C8 inlet -C18

### Key specifications

Input range	Safety certification	Efficiency	Environmental performance
80-275VAC	UL/IEC/EN 60601-1	<86%	Operational: -10 to 70°C

### Mechanical



#### Notes

1. All dimensions in mm (inches)
2. 5V-9V AWG16 output cable 1219.2mm. 12V-48V AWG18 output cable 1828.8mm
3. Output connector barrel female plug, OD: 5.5mm, ID: 2.1mm, L:11mm. Other connectors available for production. Contact sales for details.
4. IEC-320-C8 input inlet for -C2 version. IEC-320-C18 input inlet for C18 version.

#### Weight

Min	Max
265g	280g

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### Models & Ratings

Model Number <sup>(1)</sup>	Output Power	Output voltage	Output current	Efficiency
MDT3005-C2	20W	5V	4.00A	80%
MDT3007-C2	23W	7V	3.28A	80%
MDT3009-C2	27W	9V	3.00A	81%
MDT3012-C2	30W	12V	2.50A	81%
MDT3015-C2	30W	15V	2.00A	83%
MDT3018-C2	30W	18V	1.66A	83%
MDT3024-C2	30W	24V	1.25A	85%
MDT3030-C2	30W	30V	1.00A	85%
MDT3036-C2	30W	36V	0.83A	86%
MDT3048-C2	30W	48V	0.62A	86%

1.-C2 stands for Class II version, with IEC-320-C8 input inlet.  
 2. Replace with -C18 for class II version, with IEC-320-C18 input inlet

3. Optional DC output connectors available. See page 6 connector selector  
 4. For UK/ US/ EU mains power cable please order UK -C14/8, US -C14/8 or EU -C14/8 separately (C14 fits C18)



### 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)	0.4		0.6	A	0.4A at 240VAC, high line, full load 0.6A at 100VAC, low line, full load
Inrush current			67	A	High line, full load, 25°C cool start, max current Vin=230VAC, min current Vin=100VAC
No load input power			0.3	W	

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### Output

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Output voltage	5		48	VDC	
Total regulation	±3		±5	%	Includes set accuracy & load regulation. ≤18V: ±5%, 24-48V: ±3%
Line regulation			1	%	Changing ±10% input voltage from nominal line at rated load
Load regulation			5	%	Changing ±40% from 60% rated load
Minimum load	0			%	
Transient response			4	mS	Full load, Vin=110VAC
Ripple & noise	5V		50	mVp-p	All models measured with 0.47uF capacitor. 20 MHz bandwidth
	7V		60		
	9V		80		
	12V - 48V		100		
Hold up time	12			mS	

### Protections

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Overload	110			150	Automatic recovery
Over Voltage	112			132	Crowbar mode
Short Circuit					Automatic recovery

### Safety

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Safety standards	UL/IEC/EN 60601-1				
Isolation	4000			VAC	
Power density			3.3	W/In <sup>3</sup>	

### 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			

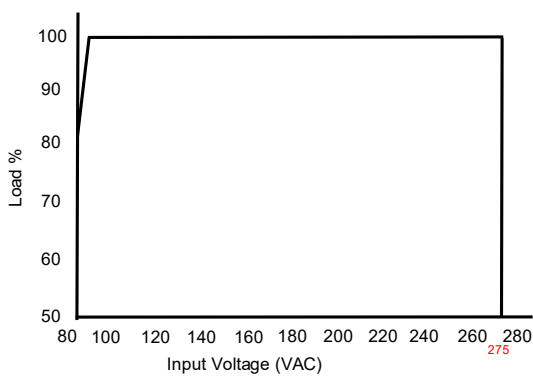
### EMC: Immunity

	Standard	Test level	Criteria	Notes/Conditions
ESD	EN61000-4-2	3	A	Contact: 8kV, Air: 15kV
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	Line to Ground 2kV, Line to Neutral 1kV at 0°, 90°, 180°, 270°
Conducted	EN61000-4-6		A	3/6Vrms, 1KHz 80 AM Modulation 150KHz-80MHz
PFMF	EN61000-4-8		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: B,C,C		

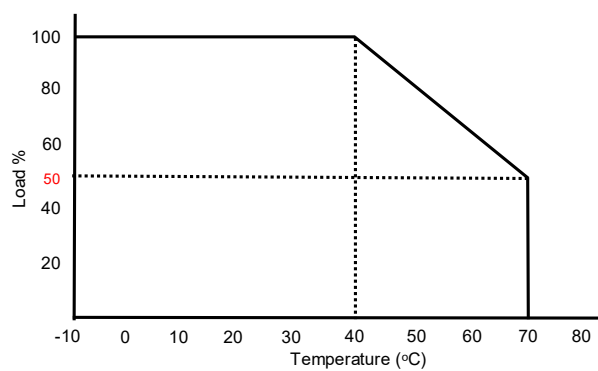
### Environmental

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Operating temperature	-10		70	°C	See derating curve below
Storage temperature	-40		85	°C	
Cooling					Convection cooled
Temperature coefficient			±0.04	%/°C	
Humidity			95	% RH	Non-condensing
Vibration	10		500	Hz	5G, 10min/1 cycle, 60 mins along x, y, z axes
MTBF	100			kHrs	As per MIL-HDBK-217F, 25°C GB

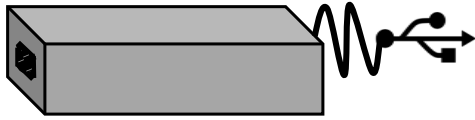
Input Voltage Derating Curve



Temperature Derating Curve



## MDT30 SERIES



The MDT30 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 tight to enclosure	5.5mm/2.1mm right angle jack (11mm length)			All models
	Compact tight to enclosure	5.5mm/2.5mm right angle jack (9mm length)			All models
	Simple durable	DIN-5 plug male			All models
	Locking perfect for AV	Kycon plug locking male			All models
	Modern recognisable	Micro USB male			18V - 48V models only