

MDT60 SERIES



60W EXTERNAL

DIMENSIONS:



5.17 x 2.18 x 1.46"
(131.3 x 55.4 x 37mm)



**CONNECTOR
CUSTOMISATION**

CLASS I or II

2 x MOPP

EN5011 LEVEL B

IEC/ EN60601-1

C8 / C14 INLET

Part numbers

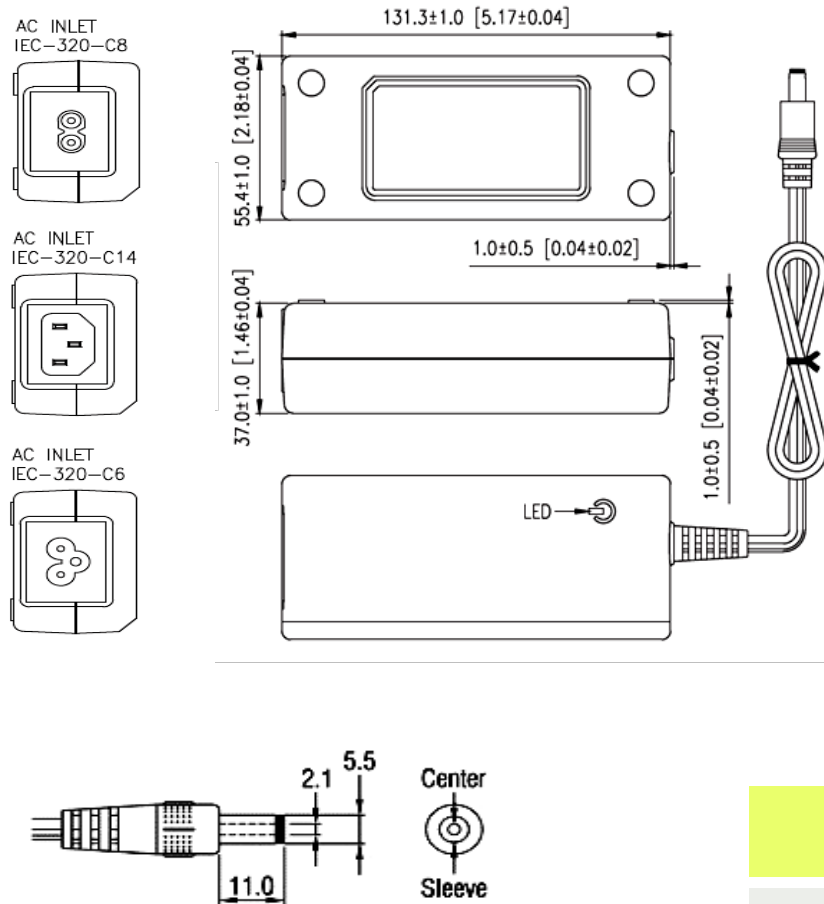
MDT	60	12	-	C2
Series	Power (W)	Output voltage		Options
		12 = 12VDC 15 = 15VDC 18 = 18VDC 24 = 24VDC 30 = 30VDC 36 = 36VDC 48 = 48VDC		-C2 = -C8 Inlet -C6 = Class I -C14

Key specifications

Input range	Safety certification	Efficiency	Environmental performance
80-275VAC	UL/IEC/EN 60601-1	<89%	Operational: -10 to 70°C

MDT60 SERIES

Mechanical



Notes

1. All dimensions in mm (inches)
2. 12V-18V AWG16 output cable 1219.2mm. 24V-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. Class I models: IEC-320-C14 and IEC-320-C6. Class II models: IEC-320-C8.
5. Negative DC output is floating and not tied to AC earth.

Weight

Min	Max
330g	380g

MDT60 SERIES



Models & Ratings

Model Number ⁽¹⁾	Output Power	Output voltage	Output current	Efficiency
MDT6012-C2	63W	12V	5.25A	88.8%
MDT6015-C2	63W	15V	4.20A	89%
MDT6018-C2	63W	18V	3.50A	87.5%
MDT6024-C2	63W	24V	2.62A	87%
MDT6030-C2	63W	30V	2.10A	87%
MDT6036-C2	63W	36V	1.75A	87.5%
MDT6048-C2	63W	48V	1.31A	89%

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

2. Replace with C14 for Class I version, with IEC-320-C14 input inlet

3. Replace with -C6 for Class I version, with IEC-320-C6 input inlet

4. Optional output connectors available. See page 6.



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)	0.72		1.62	A	0.72A at 240VAC, high line, full load 1.62A at 100VAC, low line, full load
Inrush current	42		85	A	Vin=230VAC 85A, Vin=115VAC42A
No load input power			0.5	W	

MDT60 SERIES

Output

Parameter	Min	Typical	Max	Unit	Notes/Conditions
Output voltage	12		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	12V - 24V		100	mVp-p	All models measured with 0.47uF capacitor. 20 MHz bandwidth
	30V		110		
	36V		130		
	48V		150		
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	Input to output: 4000			VAC	Input to ground: 1500 Class I versions only
Power density			3.8	W/In³	

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			

MDT60 SERIES

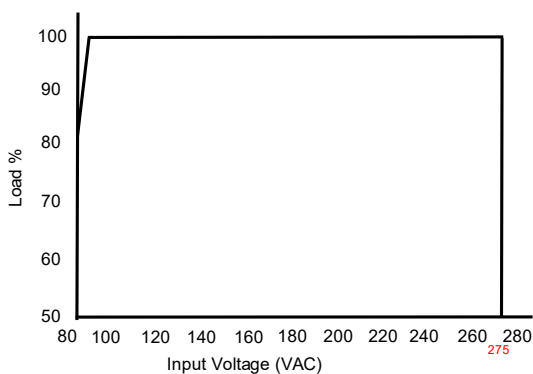
EMC: Immunity

	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		

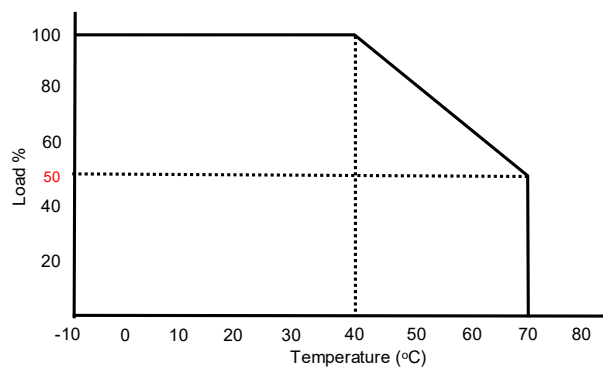
Environmental

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

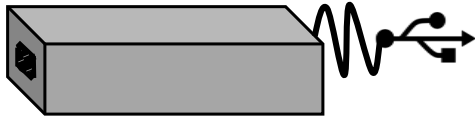
Input Voltage Derating Curve



Temperature Derating Curve



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The MDT60 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
	Locking unique	Molex 43025-0600 or CVILUX CP35006S0010			All models

21st March 2024