MTC30 Series

30 W Medical Switching Power Module for PCB Mounting

CoolPower Solutions

KEY FEATURES

- Switching Power Module for PCB Mountable
- Fully Encapsulated Plastic Case
- Isolation Class II
- <0.1W No Load Input Power
- Very Small 1.77" x 2.52" x 0.92 " Package
- Screw Terminal and Din Rail Kit For Optional
- CE, CB, UL, cUL Approval
- 3-Year Product Warranty



E308218 (Pending)

ELECTRICAL SPECIFICATIONS

All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Model No. (Single Output)		MTC30-5S	MTC30-12S	MTC30-15S	MTC30-24S
Max Output Wattage (W)		25W	30W	30W	30W
Input	Voltage (Note1)	90-264 VAC or 120-370 VDC			
	Frequency (Hz)	47-440 Hz			
	Current (Full load)	600 mA max. (115 VAC) / 400 mA max. (230 VAC)			
	Inrush Current (<2ms)	30 A max. (115 VAC) / 60 A max. (230 VAC)			
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)			
	No Load Input Power (<240 VAC)	<0.1W			
	External Fuse (recommend)	3.15 A slow blow type			
Output	Voltage (V.DC.)	5V	12V	15V	24V
	Voltage Accuracy	±2%			
	Current (mA) max	5000	2500	2000	1250
	Line Regulation (LL-HL) (typ.)	±0.5%			
	Load Regulation (10-100%) (typ.)	±1%			
	Maximum Capacitive Load (at 230 VAC)	6800uF	1600uF	1200uF	470uF
	Ripple & Noise (max.) (Note2)	100mVp-p	150mVp-p	150mVp-p	240mVp-p
	Efficiency (at 230 VAC)	84%	89%	87%	86%
	Hold-up Time	10 ms min.			
Protection	Over Power Protection	Hiccup technique, auto-recovery			
	Over Voltage Protection	Zener diode clamp			
	Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)			
Isolation	Input-Output (V.AC)	4000V			
Environment	Operating Temperature	-40°C…+80°C			
	Storage Temperature	-40°C…+90°C			
	Temperature Coefficient	±0.05%/°C			
	Altitude During Operation	5000m			
	Humidity	up to 95% RH			
	MTBF	>250,000 h @ 25°C (MIL-HDBK-217F)			
	Atmospheric Pressure	70 kPa to 106 kPa			
Physical	Dimension (L x W x H)	2.52 x 1.77 x 0.92 Inches (64.0 x 45.0 x 23.5 mm) Tolerance ±0.5 mm			
	Case Material	Plastic resin with Fiberglass (flammability to UL 94V-0)			
	Weight	130 g (Pending)			
	Cooling Method	Free air convection			

Cool Power Solutions Oy
Vanha Rajamäentie 173
FI-05200 Rajamäki
FINLAND

Tel: +358-9-2906 1990
Fax: +358-9-2906 1991

Email: info@cps.fi
Web: www.cps.fi

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ELECTRICAL SPECIFICATIONS

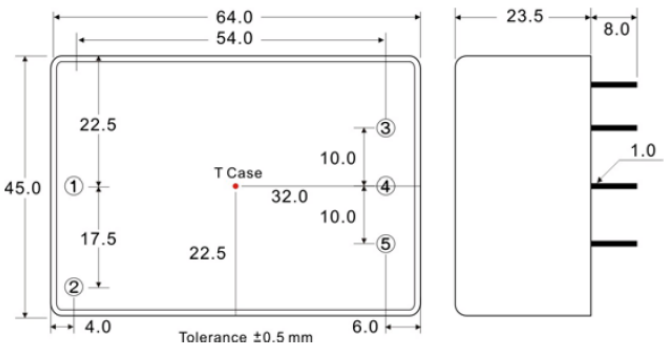
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Model No. (Single Output)		MTC30-5S	MTC30-12S	MTC30-15S	MTC30-24S
Safety	Approval	cUL/UL 60950-1, ANSI/AAMI ES 60601-1: 2005, 1st Edition and CAN/CSA-C22.2 No. 60601-1:08, 2nd Edition, 2XMOPP (Pending)			
EMC	Conducted and radiated EMI	EN55011 (Pending)			
	ESD	EN61000-4-2 air ± 8kV , Contact ± 4kV (Pending)			
	Radiated Immunity	EN61000-4-3 10V/m (Pending)			
	Fast Transient	EN61000-4-4 ± 2kV (Pending)			
	Surge	EN61000-4-5 ±1kV (Pending)			
	Conducted Immunity	EN61000-4-6 10Vrms (Pending)			
	PFMF	EN61000-4-8 30A/m (Pending)			
	Dips	EN61000-4-11 30% 10ms (Pending)			
	Interruption	EN61000-4-11 >95% 5000ms (Pending)			

NOTE

1. **This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other the ones listed in this datasheet.**
2. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
3. Safety approvals cover frequency 47-63 Hz.
4. That “natural convection” is about 20LFM but is not equal to still air (0 LFM).
5. It's recommended to add Varistor 14S471K at L / N input side in parallel.
6. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

MECHANICAL DIMENSION (Top View)



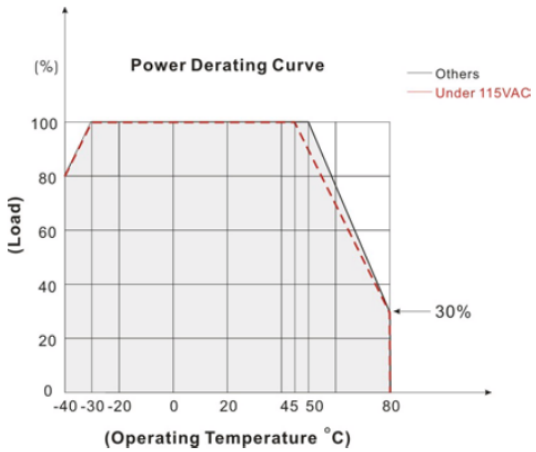
PIN#	Single
1	AC IN (N)
2	AC IN (L)
3	-DC OUT
4	NO PIN
5	+DC OUT

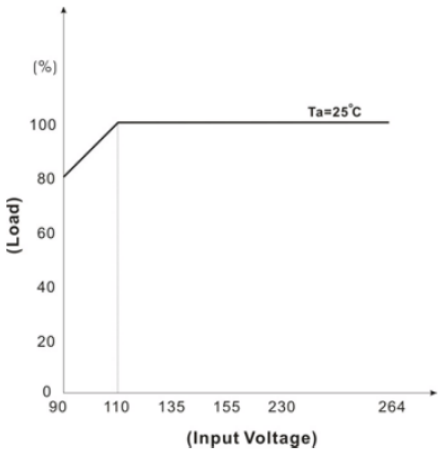
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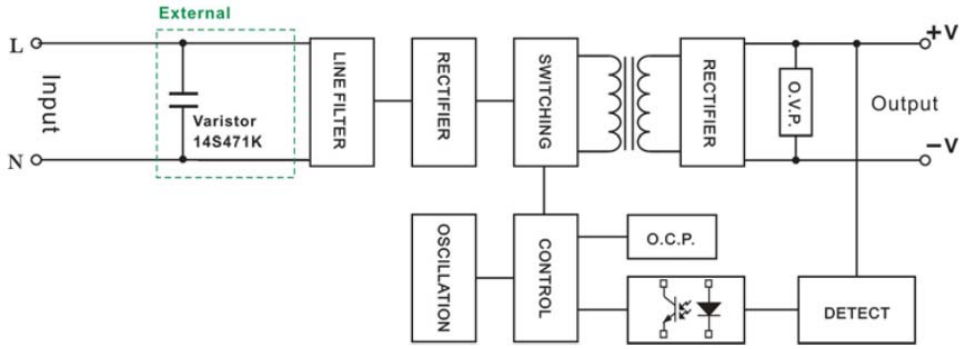
DERATING





BLOCK DIAGRAM

Single Output



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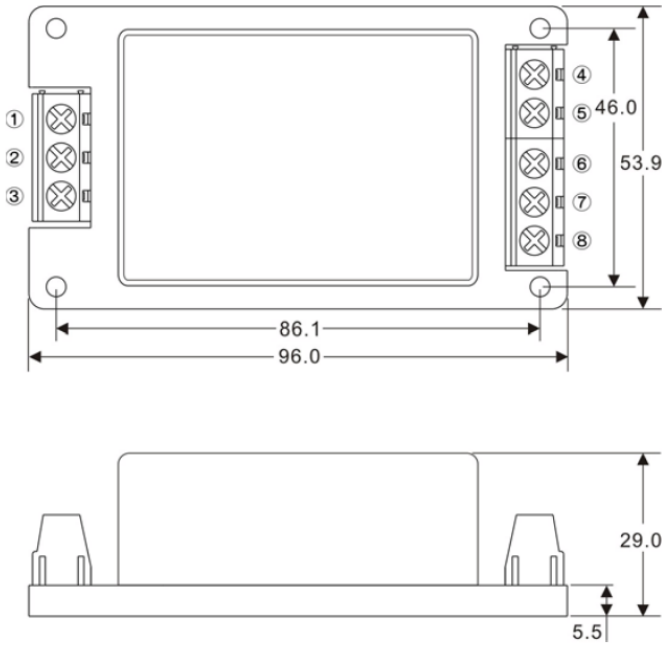
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SCREW TERMINAL

MTC30-A2



PIN#	Single
1	AC IN (N)
2	NO CONNECT
3	AC IN (L)
4.	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT

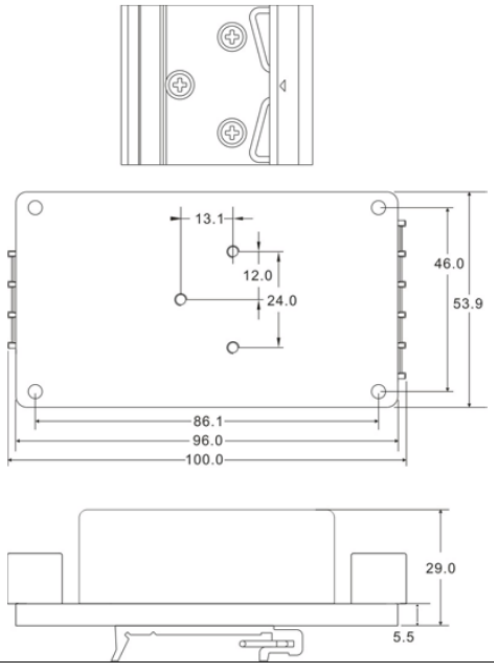


Din Rail Kit

MTC30-A2-DN







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