

MTC-E1 SERIES
15 Watts
KEY FEATURES

- Switching Power Modules for PCB Mounting
- Fully Encapsulated Plastic Case
- Universal Input Range 90-264VAC, 47-440 Hz
- Regulated Output
- Low Ripple and Noise
- Isolation Class II
- UL60601-1 / IEC60601-1 / EN60601-1 Medical Safety Approvals
- 3-Year Product Warranty


ELECTRICAL SPECIFICATIONS

Model No. (Single Output)		MTC-3.3S -E1	MTC-5S -E1	MTC-7.35S -E1	MTC-9S -E1	MTC-12S -E1	MTC-15S -E1	MTC-24S -E1
Max output wattage (W)		9.9W	15W	15W	15W	15W	15W	15W
Output	Voltage (V.DC.)	3.3V	5V	7.35V	9V	12V	15V	24V
	Current (mA) max	3000	3000	2040	1666	1250	1000	625
	Voltage set accuracy	±2%	±2%	±2%	±2%	±2%	±2%	±2%
	Line regulation (max.)	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%	0.5%
	Load regulation (0-100%) (max.)	1%	1%	1%	1%	1%	1%	1%
	Minimum load	0%	0%	0%	0%	0%	0%	0%
	Efficiency (Typ)	75%	79%	79%	80%	81%	82%	83%
	Maximum Capacitive Load (at 230 VAC)	40000 uF	10000 uF	4700 uF	3000 uF	1100 uF	1000 uF	820 uF

Model No. (Dual Output)		MTC-5D-E1		MTC-12D-E1		MTC-15D-E1	
Max output wattage (W)		15W		15W		15W	
Output		Output 1	Output 2	Output 1	Output 2	Output 1	Output 2
	Voltage (V.DC.)	+5V	-5V	+12V	-12V	+15V	-15V
	Current (mA) max	1500	1500	625	625	500	500
	Voltage set accuracy	±2%		±2%		±2%	
	Line regulation (max.)	0.5%		0.5%		0.5%	
	Load regulation (10-100%) (max.)	1% (symmetric load)		1% (symmetric load)		1% (symmetric load)	
	Cross regulation	5%		3%		3%	
	Minimum load	10%		10%		10%	
	Efficiency (Typ)	79%		82%		82%	
	Maximum Capacitive Load (at 230 VAC)	±4700 uF		±560 uF		±500 uF	

Model No. (Triple Output)		MTC-5S12D-E1			MTC-5S15D-E1	
Max output wattage (W)		15W			15W	
Output		Output 2	Output 3	Output 1	Output 2	Output 3
	Voltage (V.DC.)	+12	-12	5	+15	-15
	Current (mA) max	200	200	2000	150	150
	Voltage set accuracy	±5%		±3%	±5%	
	Line regulation (max.)	2%		0.5%	2%	
	Load regulation (10-100%) (max.) (symmetric load)	5%		1%	5%	
	Cross regulation	5%		1%	5%	
	Minimum load	25%			25%	
	Efficiency (Typ)	78%			78%	
	Maximum Capacitive Load (at 230 VAC)	±470 uF		10000 uF	±600 uF	

ELECTRICAL SPECIFICATIONS

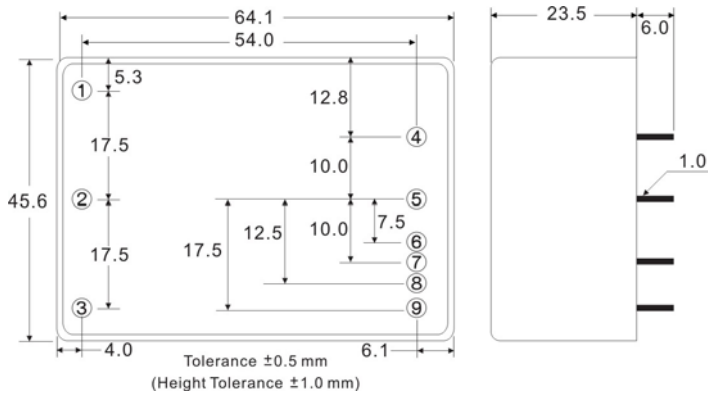
All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

Input	Voltage	90-264 VAC or 120-375 VDC
	Frequency (Hz)	47-440 Hz
	Current (Full load)	292 mA max. (115 VAC) / 188 mA max. (230 VAC)
	Inrush current (<2ms)	10 A max. (115 VAC) / 20 A max. (230 VAC)
	Leakage Current	< 0.1mA / 264 VAC (Touch Current)
	External fuse (recommend)	2.0 A slow blow type
Output	Ripple & Noise	1% of Vout
	Hold-up time	20 ms min.
Protection	Over current protection	Above 105% rated output power
	Over voltage protection	Zener diode clamp
	Short circuit protection	Hiccup mode (automatic recovery)
	OTP	100°C
Isolation	Input-Output (V.AC)	4000V
Environment	Operating temperature (Note 3)	-40°C...+70°C (Case Temperature max. +95°C)
	Storage temperature	-40°C...+85°C
	Temperature coefficient	0.01%/°C
	Altitude During Operation	5000m
	Humidity	95% RH
	MTBF	200,000 h~400,000 h @ 25°C
	Atmospheric Pressure	540 hPa to 1060 hPa
Physical	Dimensions (L x W x H)	2.52 x 1.8 x 0.93 Inches (64.1 x 45.6 x 23.5 mm) Tolerance ±0.5 mm, Height Tolerance ±1 mm
	Case Material	Plastic resin (flammability to UL 94V-0)
	Weight	120 g
	Cooling method	Free air convection
Safety	Approval	cUL / UL Standard: ANSI/AAMI ES 60601-1: 2005 , CAN/CSA-C22.2 No. 60601-1:08 CB Standard: IEC 60601-1:2005 (Third Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint)
EMC	Conducted and radiated EMI	EN55011 Conducted & Radiated Class B
	EMS	EN60601-1-2 4th edition

NOTE

1. Ripple & Noise are measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.
2. It's recommended to add Varistor 14S471K at L / N input side in parallel.
3. Due to varying customer application conditions, the product is tested for maximum operating temperature under full load only. For other regulatory requirements, please contact ARCH.
4. Please refer to our PDF file "AC-DC Application" on our website: www.archcorp.com.tw

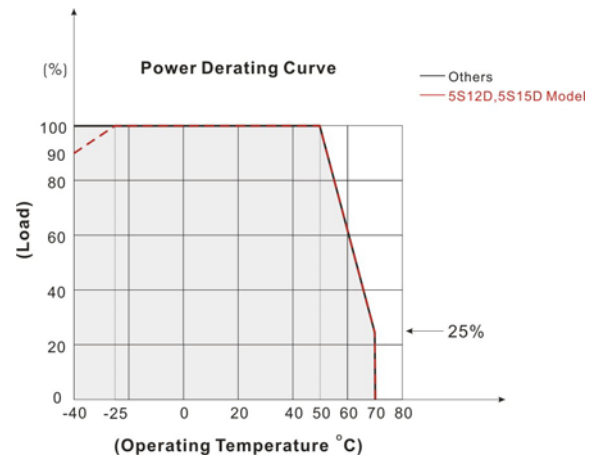
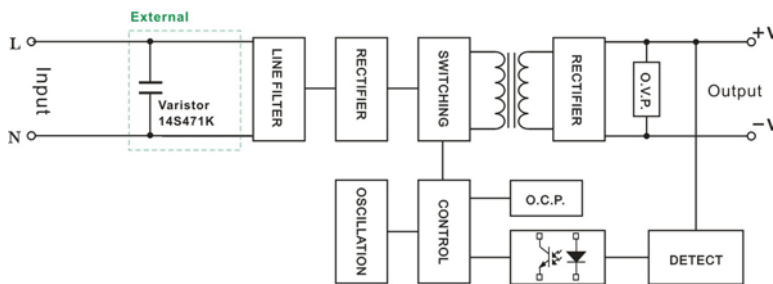
MECHANICAL DIMENSIONS (Top View)



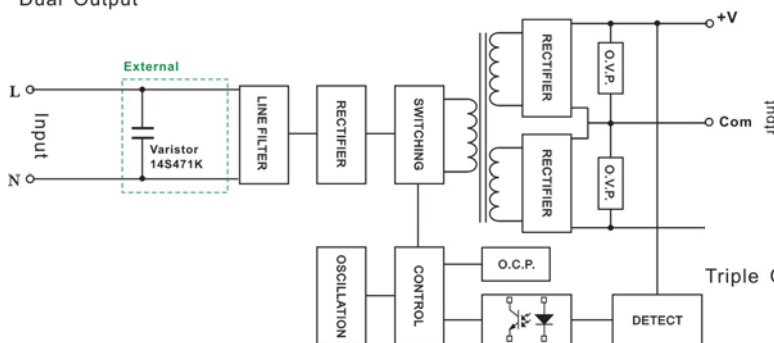
PIN#	Single	Dual	Triple
1	NO PIN	NO PIN	NO PIN
2	AC IN (L)	AC IN (L)	AC IN (L)
3	AC IN (N)	AC IN (N)	AC IN (N)
4	-DC OUT	-DC OUT	+5V RTN
5	NO PIN	COMMON	+5V OUT
6	NO PIN	NO PIN	-DC OUT
7	+DC OUT	+DC OUT	NO PIN
8	NO PIN	NO PIN	COMMON
9	NO PIN	NO PIN	+DC OUT

BLOCK DIAGRAM

Single Output



Dual Output



Triple Output

