

FEATURES

- Isolation Class II
- Regulated Outputs
- Low Ripple & Noise
- Universal Input Range
- 6 Mechanical Options Available
- Fully Encapsulated Plastic Case
- Switching Power Module for PCB Mounting
- -40°C to +71°C Operating Temperature Available
- UL60601-1 / IEC60601-1 / EC60601-1 Medical Safety Approvals
- Over Current, Over Voltage, Over Temperature, and Short Circuit Protected



DESCRIPTION

The PSMTC series of AC/DC medical power supplies offers 15 watts in an encapsulated design. This series has single, dual, and triple output models with a universal input range. Some features include low ripple and noise, regulated outputs, high efficiency, and -40°C to +71°C operating temperature option. All supplies are over current, over voltage, over temperature, and short circuit protected. This series is ideal for PCB mounting and has 6 mechanical options available. Please call factory for ordering details.

SPECIFICATIONS: PSMTC Series	
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted. We reserve the right to change specifications based on technological advances.	
INPUT SPECIFICATIONS	
Input Voltage Range	90 ~ 264VAC or 100 ~ 375VDC
Input Frequency	47 ~ 440Hz
Input Current (full load)	220mA max @ 115VAC 118mA max @ 230VAC
Inrush Current (< 2ms)	10A max @ 115VAC 20A max @ 230VAC
Leakage Current	0.1mA max @ 115VAC 0.2mA max @ 230VAC
OUTPUT SPECIFICATIONS	
Output Voltage	See Table
Output Power	15 Watts max.
Voltage Accuracy	See Table
Line Regulation (typical)	See Table
Load Regulation	See Table
Output Current	See Table
Minimum Load	See Table
Ripple & Noise (See Note 3)	1% of Vout
Maximum Capacitive Load	330 - 23,000µF depending on model
Hold-Up Time	20ms min.
PROTECTION	
Over Current Protection	Above 105% rated output power
Over Voltage Protection	Zener diode clamp
Short Circuit Protection	Hiccup mode, indefinite (automatic recovery)
Over Temperature Protection	100°C
Input External Fuse Recommendation	2.0A slow blow type
GENERAL SPECIFICATIONS	
Switching Frequency	132KHz
Efficiency	See Table
Isolation Voltage	4000VAC (input to output)
Isolation Resistance	100MΩ (input to output)
ENVIRONMENTAL SPECIFICATIONS	
Operating Temperature	-25°C to +70°C (Max. Case Temperature +95°C) -40°C to +71°C (add suffix "- E1" to the part number)
Storage Temperature	-40°C to +100°C
Humidity	95% RH
Cooling	Free air convection
Temperature Coefficient	0.01%/°C
MTBF	200,000 ~ 400,000 hours @ 25°C
PHYSICAL SPECIFICATIONS	
Case Material	Plastic resin with fiberglass (flammability to UL 94V-0)
Weight	120g
Dimensions	2.52(L) x 1.79(W) x 0.92(H) inches 64.0(L) x 45.6(W) x 23.5(H) mm
Warranty	3 years
SAFETY & EMC	
Approvals	UL / cUL / CB
EMI / PFI Conducted	EN 55011 class B
EMC Standards	EN60601-1-2
ESD Susceptibility	EN60601-1-2
Radiated Susceptibility	EN60601-1-2
EFT / Burst	EN60601-1-2
Surge	EN60601-1-2
Conducted Susceptibility	EN60601-1-2
Safety Approvals	UL60601-1 / IEC60601-1

OUTPUT VOLTAGE / CURRENT RATING CHARTS

SINGLE OUTPUT MODELS								
Model Number	Output Voltage	Voltage Set Accuracy	Output Current		Line Regulation	Load Regulation (1 - 100%)	Output Power	Efficiency
			Min Load	Full Load				
PSMTC-3.3S	3.3 VDC	±2%	0%	3000mA	0.5%	1%	9.9W	74%
PSMTC-5S	5 VDC	±2%	0%	3000mA	0.5%	1%	15W	78%
PSMTC-7.35S	7.35 VDC	±2%	0%	2040mA	0.5%	1%	15W	79%
PSMTC-9S	9 VDC	±2%	0%	1666mA	0.5%	1%	15W	79%
PSMTC-12S	12 VDC	±2%	0%	1250mA	0.5%	1%	15W	81%
PSMTC-15S	15 VDC	±2%	0%	1000mA	0.5%	1%	15W	81%
PSMTC-24S	24 VDC	±2%	0%	625mA	0.5%	1%	15W	83%

DUAL OUTPUT MODELS										
Model Number	Output Voltage	Voltage Set Accuracy	Output Current		Line Reg	Load Reg (10-100%)	Cross Reg	Output Power	Efficiency	
			Min Load	Full Load						
PSMTC-5D	Output 1	+5 VDC	±2%	10%	1500mA	0.5%	1% (sym. load)	5%	15W	78%
	Output 2	-5 VDC			1500mA					
PSMTC-12D	Output 1	+12 VDC	±2%	10%	625mA	0.5%	1% (sym. load)	3%	15W	80%
	Output 2	-12 VDC			625mA					
PSMTC-15D	Output 1	+15VDC	±2%	10%	500mA	0.5%	1% (sym. load)	3%	15W	81%
	Output 2	-15 VDC			500mA					

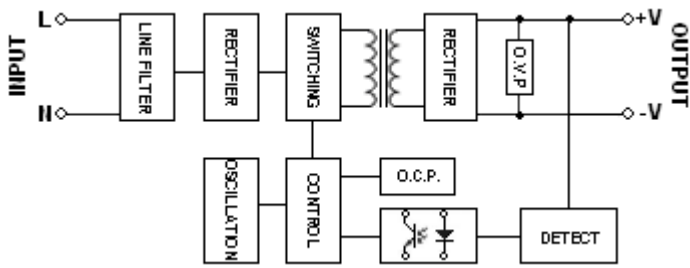
TRIPLE OUTPUT MODELS											
Model Number	Output Voltage	Voltage Set Accuracy	Output Current ⁽²⁾		Line Reg	Load Reg (25-100%)	Cross Reg	Output Power	Efficiency		
			Min Load	Full Load							
PSMTC-5S12D	Output 1	+5 VDC	±2%	25%	2000mA	0.5%	1%	1%	15W	78%	
	Output 2	+12 VDC			200mA	2%	5% (sym. Load)				5%
	Output 3	-12 VDC			200mA	2%	5% (sym. Load)				5%
PSMTC-5S15D	Output 1	+5 VDC	±2%	25%	2000mA	0.5%	1%	1%	15W	78%	
	Output 2	+15 VDC			150mA	2%	5% (sym. Load)				5%
	Output 3	-15 VDC			150mA	2%	5% (sym. Load)				5%

NOTES

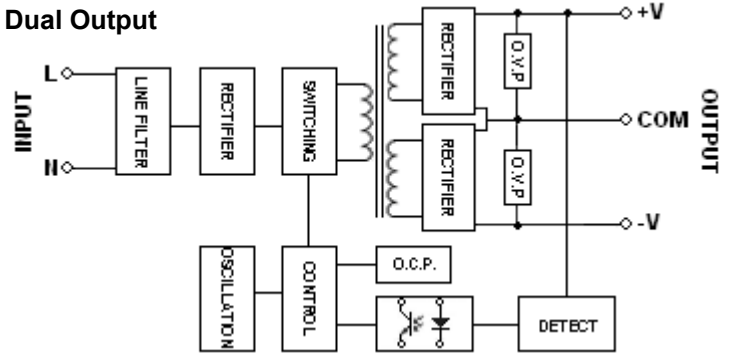
1. For -40°C to +71°C operation add the suffix “-E1” to the part number (Ex: PSMTC-5S-E1).
2. Mechanical version options available (see pages 4-6). Please call factory for ordering details.
3. Ripple & Noise is measured at 20MHz bandwidth with a 0.1µF and 47µF capacitors in parallel.

BLOCK DIAGRAMS

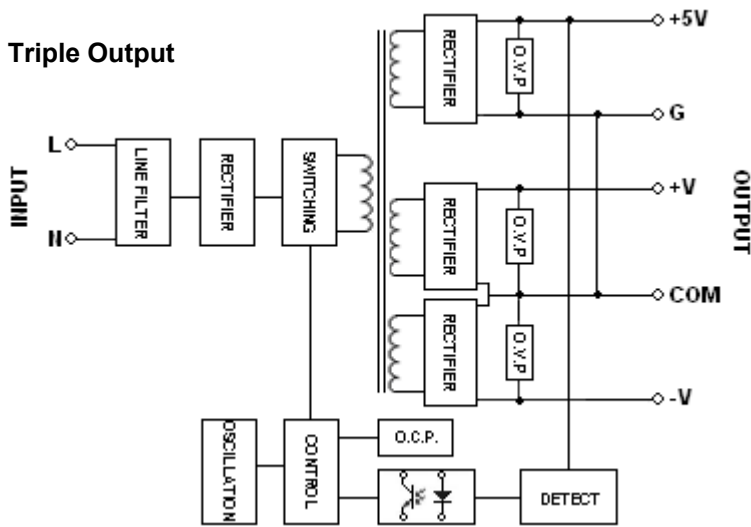
Single Output



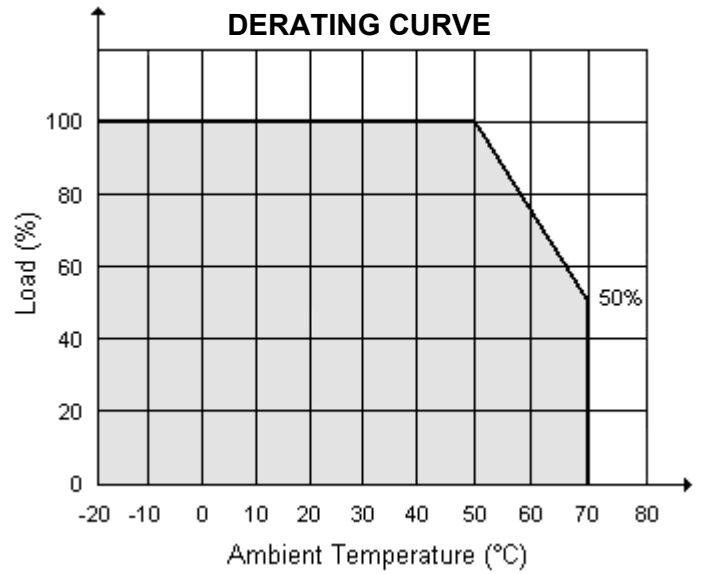
Dual Output



Triple Output

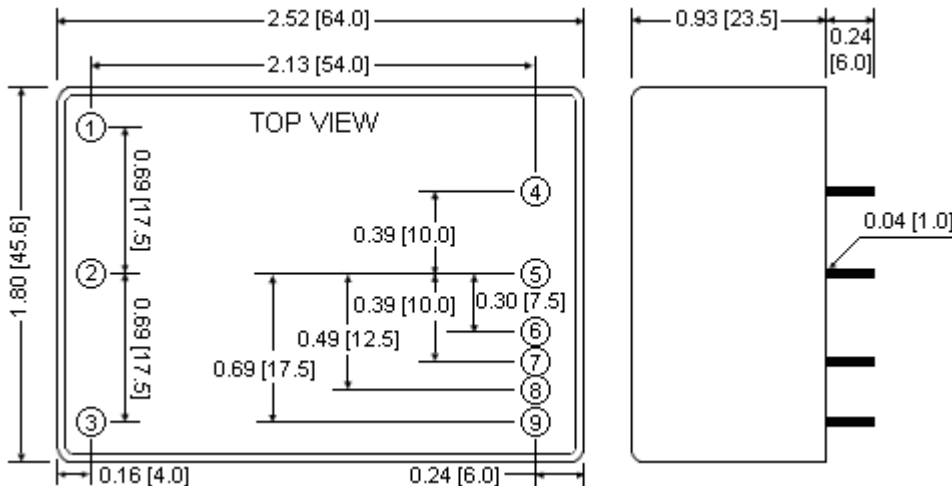


DERATING CURVE



MECHANICAL DRAWING

Unit: inches [mm]



Tolerance: ±0.5mm

PIN CONNECTION			
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

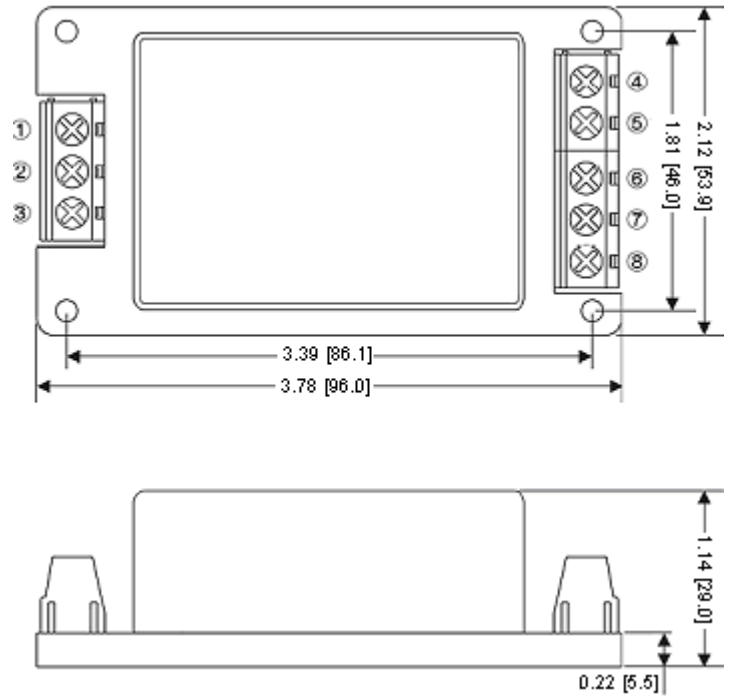
SCREW TERMINAL
(To order call factory)

PSMTC-A2



PIN CONNECTION			
PIN	SINGLE	DUAL	TRIPLE
1	AC IN (L)	AC IN (L)	AC IN (L)
2	NO CONNECT	NO CONNECT	NO CONNECT
3	AC IN (N)	AC IN (N)	AC IN (N)
4	NO CONNECT	NO CONNECT	+5V RTN
5	-DC OUT	-DC OUT	+5V OUT
6	NO CONNECT	COMMON	-DC OUT
7	+DC OUT	+DC OUT	COMMON
8	NO CONNECT	NO CONNECT	+DC OUT

Unit: inches [mm]

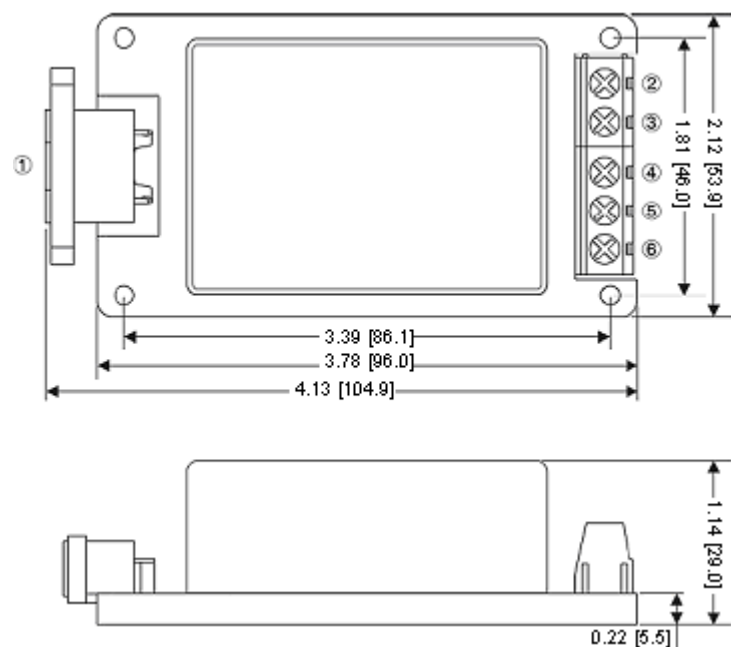


PSMTC-A3



PIN CONNECTION			
PIN	SINGLE	DUAL	TRIPLE
1	AC IN	AC IN	AC IN
2	NO CONNECT	NO CONNECT	+5V RTN
3	-DC OUT	-DC OUT	+5V OUT
4	NO CONNECT	COMMON	-DC OUT
5	+DC OUT	+DC OUT	COMMON
6	NO CONNECT	NO CONNECT	+DC OUT

Unit: inches [mm]



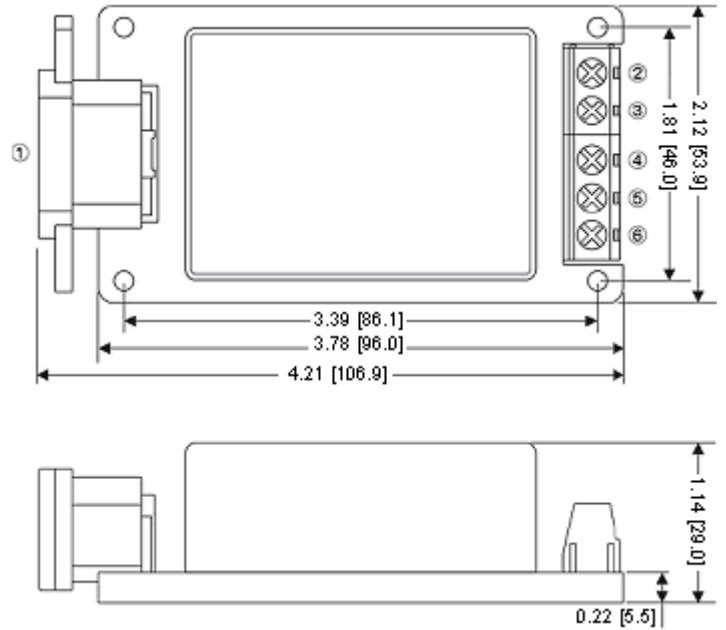
PSMTC-A4



Connector

PIN CONNECTION			
PIN	SINGLE	DUAL	TRIPLE
1	AC IN	AC IN	AC IN
2	NO CONNECT	NO CONNECT	+5V RTN
3	-DC OUT	-DC OUT	+5V OUT
4	NO CONNECT	COMMON	-DC OUT
5	+DC OUT	+DC OUT	COMMON
6	NO CONNECT	NO CONNECT	+DC OUT

Unit: inches [mm]

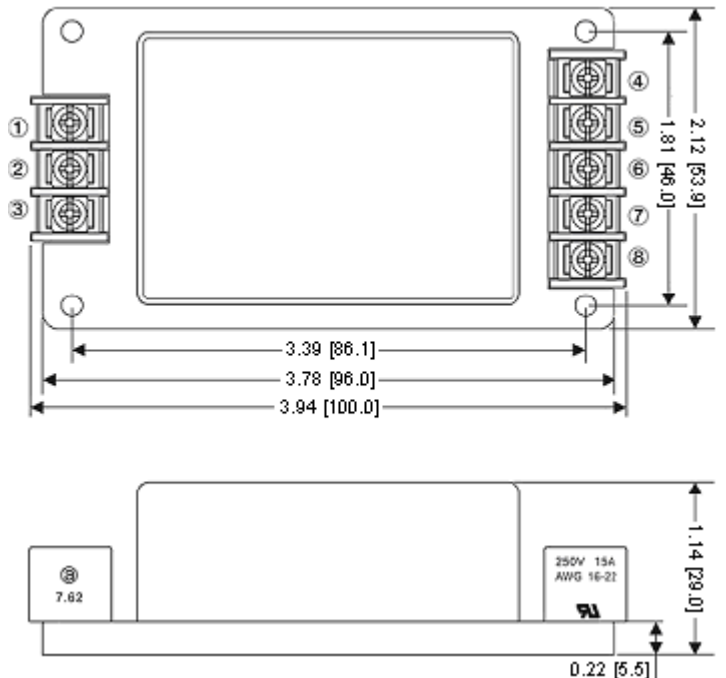


PSMTC-A5



PIN CONNECTION			
PIN	SINGLE	DUAL	TRIPLE
1	AC IN (L)	AC IN (L)	AC IN (L)
2	NO CONNECT	NO CONNECT	NO CONNECT
3	AC IN (N)	AC IN (N)	AC IN (N)
4	NO CONNECT	NO CONNECT	+5V RTN
5	-DC OUT	-DC OUT	+5V OUT
6	NO CONNECT	COMMON	-DC OUT
7	+DC OUT	+DC OUT	COMMON
8	NO CONNECT	NO CONNECT	+DC OUT

Unit: inches [mm]



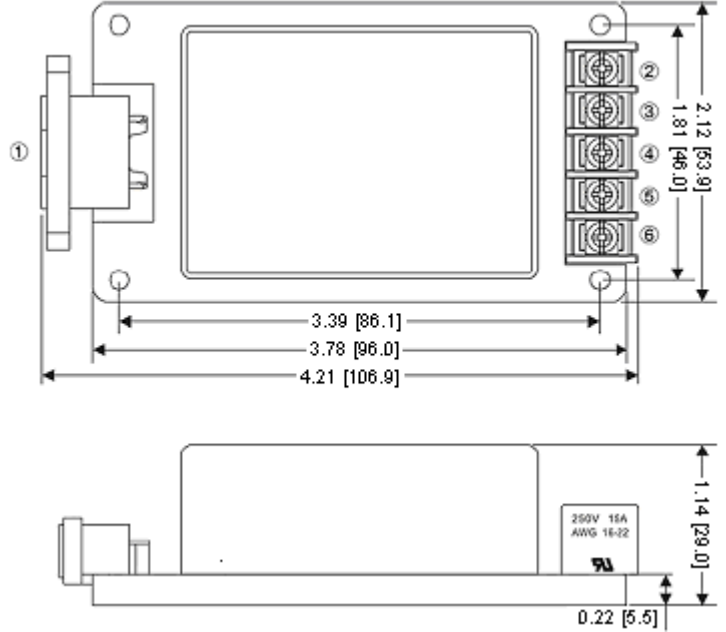
PSMTC-A6



Connector

PIN CONNECTION			
PIN	SINGLE	DUAL	TRIPLE
1	AC IN	AC IN	AC IN
2	NO CONNECT	NO CONNECT	+5V RTN
3	-DC OUT	-DC OUT	+5V OUT
4	NO CONNECT	COMMON	-DC OUT
5	+DC OUT	+DC OUT	COMMON
6	NO CONNECT	NO CONNECT	+DC OUT

Unit: inches [mm]



PSMTC-A7



Connector

PIN CONNECTION			
PIN	SINGLE	DUAL	TRIPLE
1	AC IN	AC IN	AC IN
2	NO CONNECT	NO CONNECT	+5V RTN
3	-DC OUT	-DC OUT	+5V OUT
4	NO CONNECT	COMMON	-DC OUT
5	+DC OUT	+DC OUT	COMMON
6	NO CONNECT	NO CONNECT	+DC OUT

Unit: inches [mm]

