



Size: 2.52 x 1.79 x 0.92 inches 64.0 x 45.6 x 23.5 mm
Weight: 4.23oz (120g)

FEATURES

- RoHS Compliant
- Isolation Class II
- 15 Watts Output Power
- Low Ripple and Noise
- Single, Dual, and Triple Outputs
- Fully Encapsulated Plastic Case
- 4000VAC I/O Isolation
- PCB Mountable Switching Power Supply
- -25°C to +70°C Operating Temperature Range
- Optional -40°C to +70°C Operating Temperature Range
- Free Air Convection Cooling
- Protection: SCP / OCP / OVP / OTP
- Universal Input Voltage Range: 90~264VAC (120~375VDC)
- UL/cUL60601-1, IEC60601-1, EC60601-1 Medical Approvals

DESCRIPTION

The PSMTC series of medical AC/DC switching power supplies provides 15 watts of output power in a 2.52" x 1.79" x 0.92" encapsulated PCB mountable package. This series consists of single, dual, and triple output models with a universal input range of 90~264VAC (120~375VDC). Some features include low ripple and noise, -25°C to +70°C operating temperature range, and short circuit, over current, over voltage, and over temperature protection. The PSMTC series also offers an extended operating temperature range of -40°C to +70°C ("-E1" suffix). All models are RoHS compliant and have UL/cUL60601-1, IEC60601-1, and EC60601-1 medical approvals.

MODEL SELECTION TABLE

SINGLE OUTPUT MODELS

Model Number	Input Voltage	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation (0% - 100%)	Output Power	Efficiency	Maximum Capacitive Load
			Min Load	Max Load						
PSMTC-3.3S	90~264 VAC (120~375 VDC)	3.3 VDC	0%	3000mA	±2%	0.5%	1%	9.9W	75%	40,000µF
PSMTC-5S		5 VDC	0%	3000mA	±2%	0.5%	1%	15W	79%	10,000µF
PSMTC-7.35S		7.35 VDC	0%	2040mA	±2%	0.5%	1%	15W	79%	4700µF
PSMTC-9S		9 VDC	0%	1666mA	±2%	0.5%	1%	15W	80%	3000µF
PSMTC-12S		12 VDC	0%	1250mA	±2%	0.5%	1%	15W	81%	1100µF
PSMTC-15S		15 VDC	0%	1000mA	±2%	0.5%	1%	15W	82%	1000µF
PSMTC-24S		24 VDC	0%	625mA	±2%	0.5%	1%	15W	83%	820µF

DUAL OUTPUT MODELS

Model Number	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation (10% - 100%)	Cross Regulation	Output Power	Efficiency	Maximum Capacitive Load
		Min Load ⁽¹⁾	Max Load							
PSMTC-5D	Vo ₁ +5 VDC	10%	1500mA	±2%	0.5%	1% (sym. load)	5%	15W	79%	4700µF
	Vo ₂ -5 VDC		1500mA	±2%	0.5%	1% (sym. load)	5%			4700µF
PSMTC-12D	Vo ₁ +12 VDC	10%	625mA	±2%	0.5%	1% (sym. load)	3%	15W	82%	560µF
	Vo ₂ -12 VDC		625mA	±2%	0.5%	1% (sym. load)	3%			560µF
PSMTC-15D	Vo ₁ +15 VDC	10%	500mA	±2%	0.5%	1% (sym. load)	3%	15W	82%	500µF
	Vo ₂ -15 VDC		500mA	±2%	0.5%	1% (sym. load)	3%			500µF

TRIPLE OUTPUT MODELS

Model Number	Output Voltage	Output Current		Voltage Accuracy	Line Regulation	Load Regulation (10% - 100%)	Cross Regulation	Output Power	Efficiency	Maximum Capacitive Load
		Min Load ⁽¹⁾	Max Load							
PSMTC-5S12D	Vo ₁ 5 VDC	25%	2000mA	±2%	0.5%	1%	1%	15W	78%	1000µF
	Vo ₂ +12 VDC		200mA	±3%	2%	5% (sym. load)	5%			470µF
	Vo ₃ -12 VDC		200mA	±3%	2%	5% (sym. load)	5%			470µF
PSMTC-5S15D	Vo ₁ 5 VDC	25%	2000mA	±2%	0.5%	1%	1%	15W	78%	1000µF
	Vo ₂ +15 VDC		150mA	±3%	2%	5% (sym. load)	5%			600µF
	Vo ₃ -15 VDC		150mA	±3%	2%	5% (sym. load)	5%			600µF

NOTES

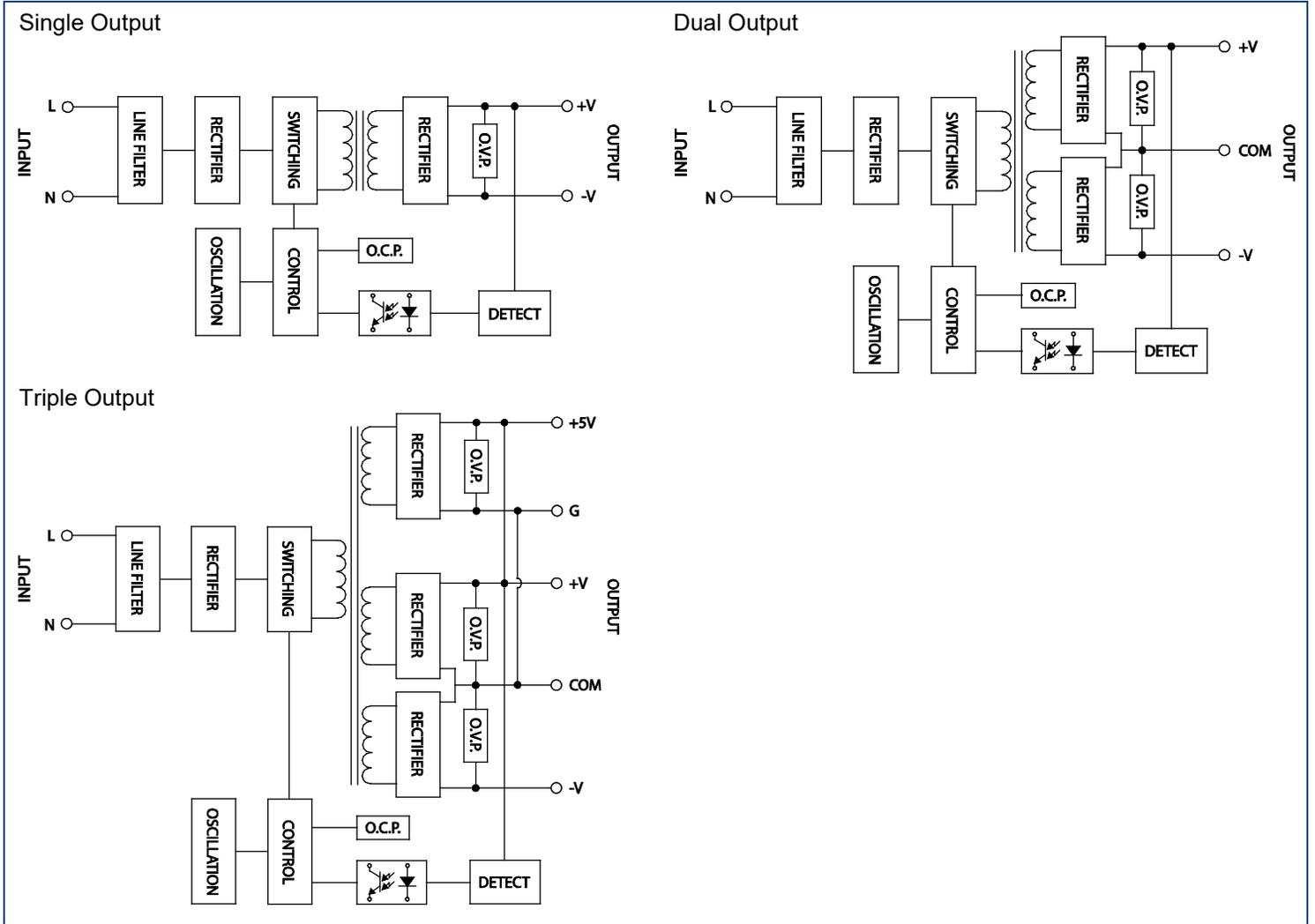
1. Some models require a minimum loading on the output to maintain specified regulations. Operation under no-load conditions will not damage these devices; however, they may not meet all listed specifications.
 2. For -40°C to +71°C extended operating temperature range please add the suffix -E1 to the model number (Ex: PSMTC-12S-E1).
 3. This product is Listed to applicable standards and requirements by UL.
- *Due to advances in technology, specifications subject to change without notice.*

TECHNICAL SPECIFICATIONS: PSMTC SERIES

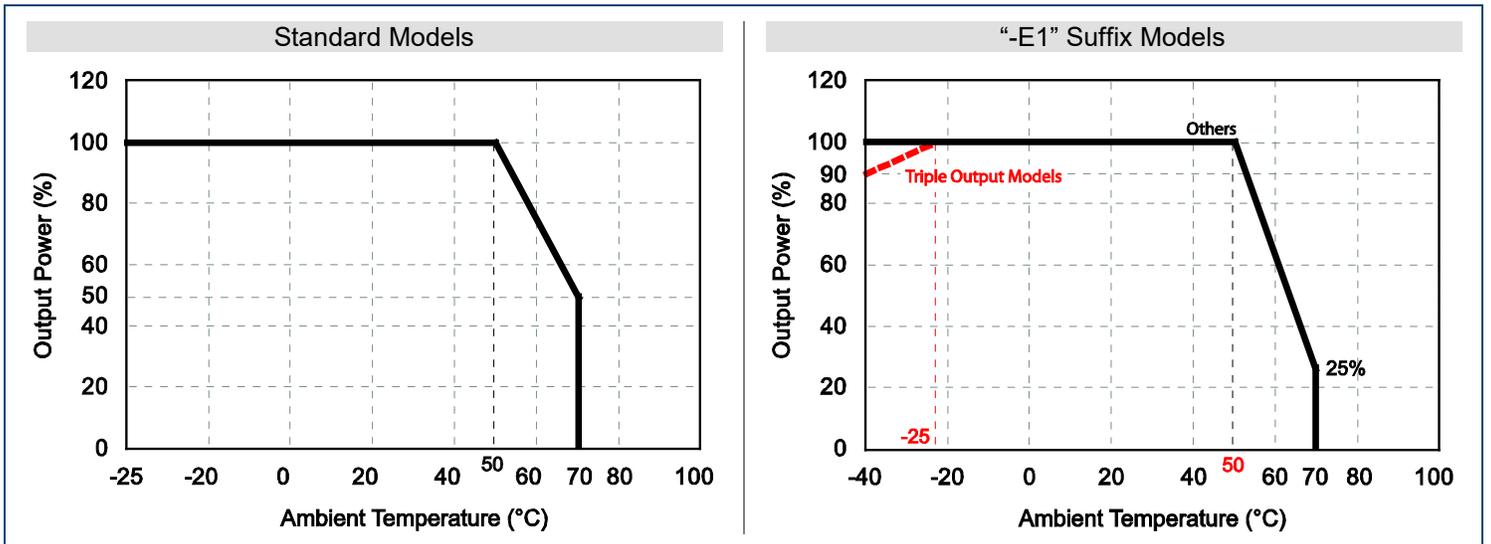
All specifications are based on 25°C, Nominal Input Voltage, and Maximum Output Current unless otherwise noted.
 We reserve the right to change specifications based on technological advances.

SPECIFICATION	TEST CONDITIONS	Min	Typ	Max	Unit
INPUT SPECIFICATIONS					
Input Voltage	AC input voltage range	90		264	VAC
	DC input voltage range	120		375	VDC
Input Frequency		47		440	Hz
Input Current	At 115VAC and full load			220	mA
	At 230VAC and full load			118	
Inrush Current (<2ms)	Standard Models	At 115VAC		10	A
		At 230VAC		20	
	-E1 Suffix Models	At 115VAC		23	A
		At 230VAC		46	
External Fuse (recommended)		2.0A slow blow type			
OUTPUT SPECIFICATIONS					
Output Voltage		See Table			
Voltage Accuracy		See Table			
Line Regulation	Low Line to High Line	See Table			
Load Regulation		See Table			
Cross Regulation		See Table			
Output Power				15	W
Output Current		See Table			
Minimum Load		See Table			
Ripple & Noise	Measured at 20MHz BW with 0.1µF and 47µF capacitors in parallel			1	%Vo
Max Capacitive Load		See Table			
Hold-Up Time		20			ms
Temperature Coefficient			±0.01		%/°C
PROTECTION					
Short Circuit Protection		Hiccup mode, indefinite (auto-recovery)			
Over Voltage Protection		Zener diode clamp			
Over Current Protection		Above 105% rated output power			
Over Temperature Protection			100		°C
GENERAL SPECIFICATIONS					
Efficiency		See Table			
Switching Frequency			132		KHz
Isolation Voltage (Input to Output)		4000			VAC
Earth Ground Leakage Current	At 115VAC and full load			0.1	mA
	At 230VAC and full load			0.2	
Enclosure Leakage Current	At 240VAC, 63Hz, and full load			0.055	mA
	At 264VAC, 63Hz, and full load			0.06	
ENVIRONMENTAL SPECIFICATIONS					
Operating Temperature	Standard Models	-25		+70	°C
	-E1 Suffix Models	-40		+70	
Case Temperature				+95	°C
Storage Temperature		-40		+85	°C
Humidity				95	% RH
Cooling		Free air convection			
MTBF	At 25°C	200,000		400,000	hours
PHYSICAL SPECIFICATIONS					
Weight		4.23oz (120g)			
Case Material	Flammability to UL 94V-0	Plastic resin + fiberglass			
Dimensions (L x W x H)		2.52 x 1.79 x 0.92 inch (64.0 x 45.6 x 23.5 mm)			
SAFETY & EMC					
Class II		To IEC / EN 60536			
EMI		EN55011 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		UL/cUL60601-1 ⁽³⁾ , IEC60601-1, EC60601-1, CB			
Approvals		ANSI/AAMI ES 60601-1: 2005, 1st Edition and CAN/CSA-C22.2 No. 60601-1:08, 2nd Edition, MOPP			

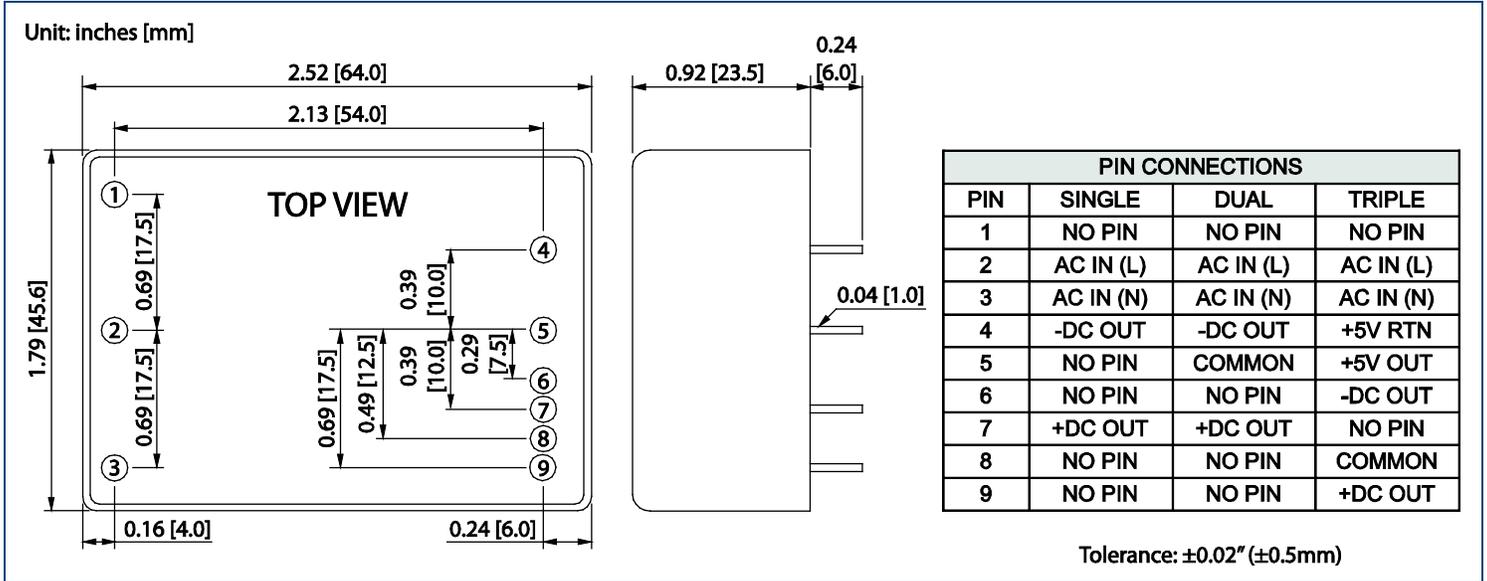
BLOCK DIAGRAMS



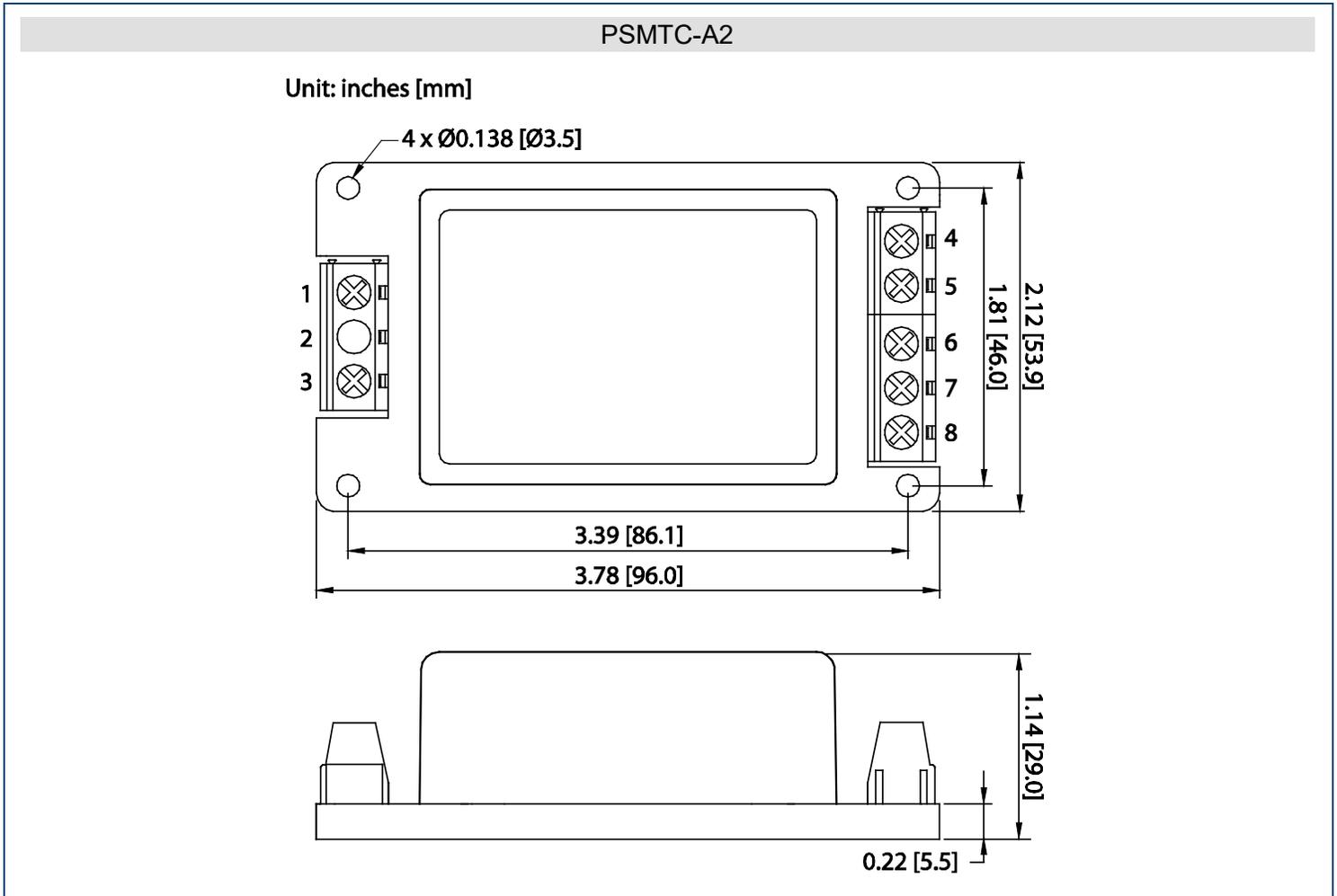
DERATING CURVES



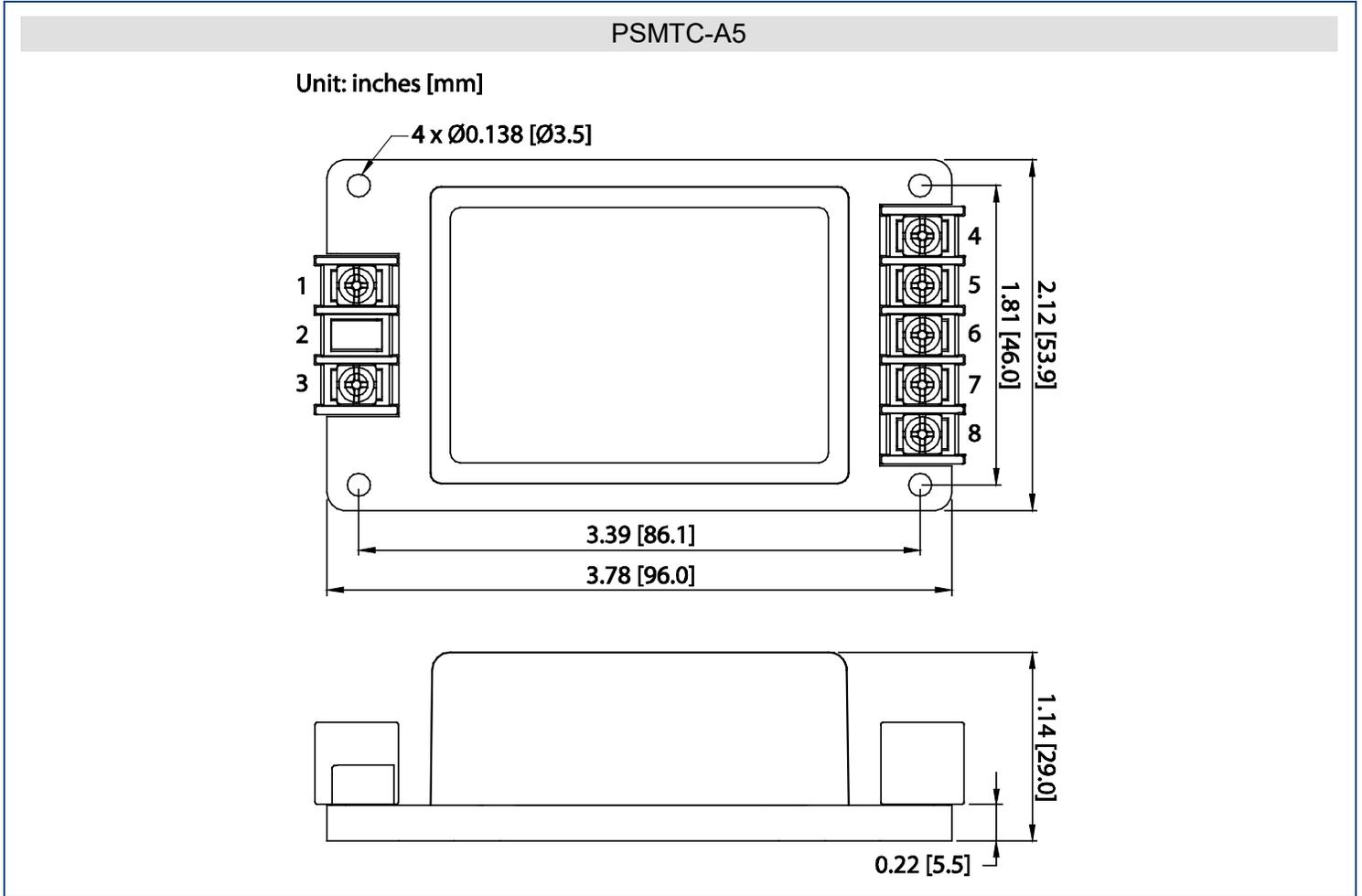
MECHANICAL DRAWING



SCREW TERMINAL OPTIONS



SCREW TERMINAL OPTIONS



COMPANY INFORMATION

Wall Industries, Inc. has created custom and modified units for over 50 years. Our in-house research and development engineers will provide a solution that exceeds your performance requirements on-time and on budget. Our ISO9001: 2015 certification is just one example of our commitment to producing a high quality, well-documented product for our customers.

Our past projects demonstrate our commitment to you, our customer. Wall Industries, Inc. has a reputation for working closely with its customers to ensure each solution meets or exceeds form, fit and function requirements. We will continue to provide ongoing support for your project above and beyond the design and production phases. Give us a call today to discuss your future projects.

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