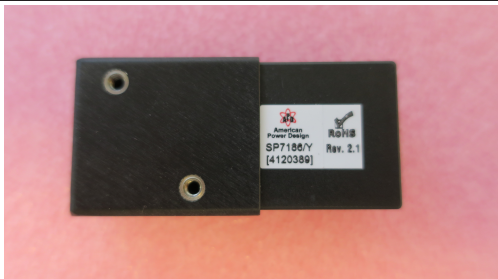




# SP7186, Prop., 10W, PROPORTIONAL, SPECIFICATION SHEET



**Standard Model Number : SP7186**

**RoHs Model Number : SP7186/Y**

*Standard Model is NOT RoHs Compliant*

## ELECTRICAL SPECIFICATIONS

Input Voltage .....	0 to 15Vdc	Input Filter .....	Low ESR Capacitor
Output Voltage .....	0V to 3kVdc	No Load Input current .....	< 200mA
Output Current .....	3.33mA	Full Load Input current .....	< 900mA
Voltage Accuracy .....	+/- 3% (Full Load)	Fault Output .....	Logic 1 (Fault Condition)
Line Regulation .....	Proportional	Logic Shutdown .....	Logic 0 (On)
Load Regulation .....	< +/- 35%	Short Circuit Protection .....	Continuous
Output Ripple .....	< 2% P-P	Switching Frequency .....	125 kHz
Start-up Voltage .....	< 0.7Vdc	Output Isolation .....	2,500 Vdc
5Vdc Input +/-5% .....	<20 mA	Input / Output Capacitance .....	< 60pF
		Guaranteed Start-up Load .....	>2mA CCL
		Output Current Limit .....	< 50mA

## GENERAL SPECIFICATIONS

Temp. Stability .....	+/- 0.02%/°C	Derating .....	None
Temp. (Operating , Case) .....	-25 to +85°C	Cooling .....	Free-Air Convection
Temp. (Storage) .....	-55 to +100°C		
Humidity .....	0 to 95% (Non-Condensing)		

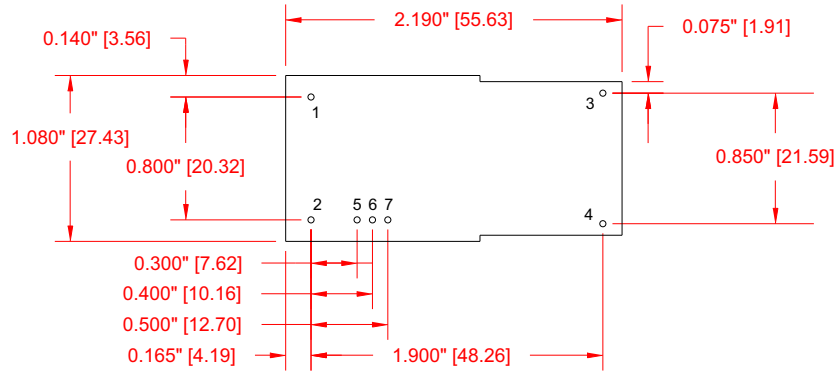
## PHYSICAL SPECIFICATIONS

Dimensions .....	1.08 x 2.19 x 0.50 inches	Case Material .....	Black Metal / Phenolic
Weight .....	3.4 Oz		

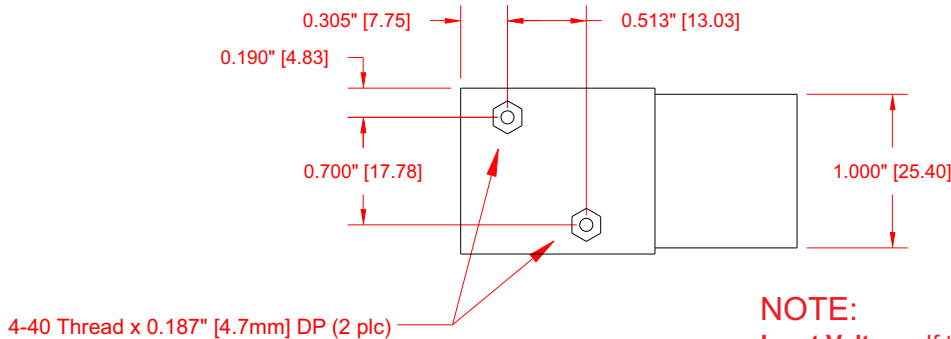
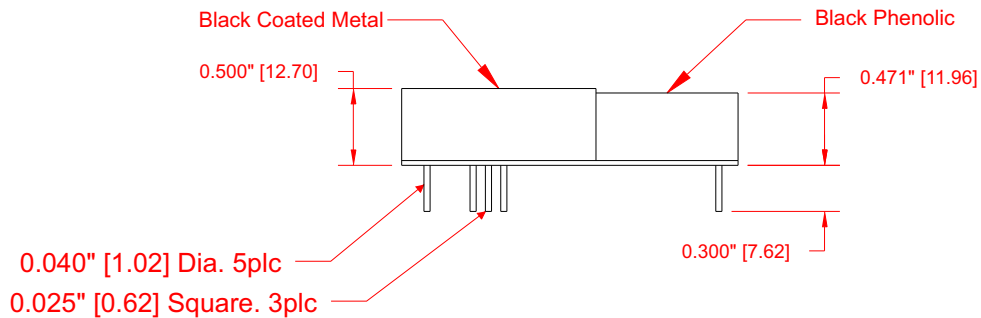


"The best high voltage design solution"

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**Bottom View**



**NOTE:**

**Input Voltage:** If the input voltage exceeds 16.5Vdc the converter will automatically shut down and a fault signal (TTL high) will be present on the Fault Output (pin 5).

**Temperature:** If the temperature exceeds 90°C, the converter will automatically shut down and a fault signal (TTL high) will be present on the Fault Output (pin 5).

**Reset Fault:** Once the fault condition is cleared the converter will automatically restart. However, the fault signal will remain set (TTL high) until the 5V input (pin 6) is toggled low for >250ms.

PIN #	FUNCTION	PIN #	FUNCTION
1	+ Input	5	Fault Output
2	- Input	6	+5V Input
3	+ Output	7	On/Off
4	- Output		



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### APPLICATION NOTES

#### CLEANING AGENTS

In order to avoid possible damage, any penetration of cleaning fluids must be prevented, since the power supplies are not hermetically sealed.

#### NUCLEAR AND MEDICAL APPLICATIONS

American Power Design products are not designed, intended for use in, or authorized for use as critical components in life support systems, equipment used in hazardous environments, or nuclear control systems without the express written consent of American Power Design, Inc.

#### SAFETY REQUIREMENTS

The converters are designed to meet North American and International safety regulatory requirements per UL 60950-1/CSA 22.2 No. 60950-1-07 Second Edition, IEC 60950-1:2005, and EN 60950-1:2006. Basic Insulation is provided between input and output. To comply with safety agencies requirements, an input line fuse (2A SB) must be used external to the converter.

If one input fuse is used for a group of modules, the maximum fuse rating should not exceed 20A.

#### WARRANTY

All products manufactured by American Power Design, Inc. (APD) are warranted to be free of defects due to material or workmanship for a period of one year from date of shipment. At our option, APD will repair or replace any non-conforming product.

APD expressly disclaims any liability for consequential or incidental damages resulting from the use or misuse of its products by the purchaser or others.

This warranty is in lieu of all warranties expressed or implied, including the warranties of merchantability. No other warranties, obligations, or liabilities are expressed or implied.

All products being returned for repair require a return material authorization(RMA) assigned by APD prior to return shipment.