



PXI series - 28V i/p 300V/700V o/p 10W High Voltage DC-DC Converters

Outline Product Specification

FEATURES

- High Reliability & Small Size
- External Shut Down
- Output Over Current & Short Circuit Protection
- Input to Output Isolated
- Metal-Sealed, Suitable for PCB Mount.



The PXI28300S-10M/I & PXI28700S-10M/I Series of high voltage DC-DC converter is a power supply module with small package and high reliability.

The output voltage is separately 300V_{DC} and 700V_{DC}, and the output power is 10W.

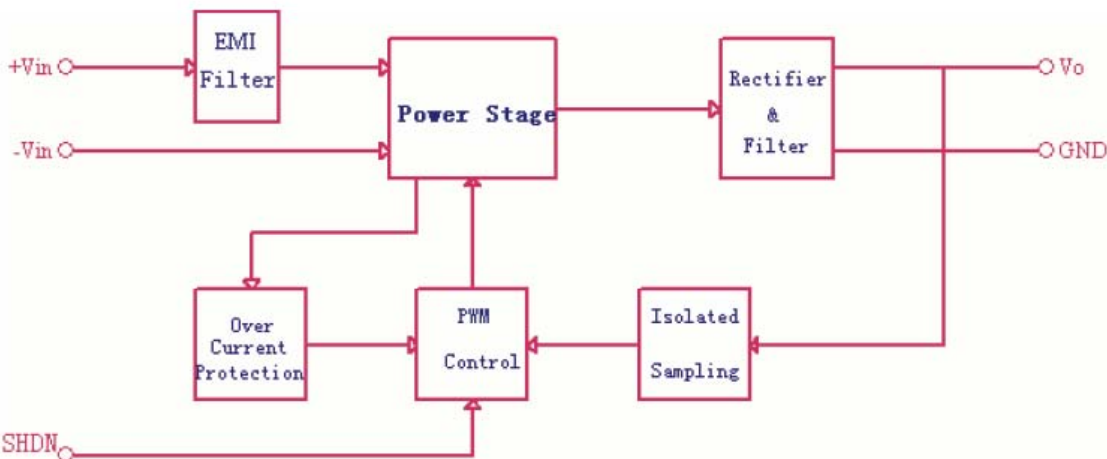
The conductive interference is reduced by Built-in LC filters. Internal high capacitance ceramic capacitors in the output loop can suppress the output voltage ripple effectively.

The rated input voltage is 28V_{DC}, and the input voltage ranges from 20V_{DC} to 29V_{DC}.

ABSOLUTE MAXIMUM RATINGS

Input Voltage:	20V _{DC} to +29V _{DC}
Pin-Solder Temp (10s):	300°C
Storage Temp:	-40°C to +65°C (M/I)
Output Current:	36mA/16mA
Operating Temp (Ambient):	-35°C to +60°C (M/I)

BLOCK DIAGRAM





THE MAIN CHARACTERISTICS

Input Characteristics							
	Min	Typ	Max	Units			
Input Voltage	20	28	29	V			
No Load Power Dissipation	-	-	3	W			
Efficiency (Full Load)	-	70	-	%			
Output Characteristics							
	PXI28300S-10M/I			PXI28700S-10M/I			Units
	Min	Typ	Max	Min	Typ	Max	
Output Current	-	0.033	-	-	0.014	-	A
Output Voltage Accuracy	285	300	315	675	700	725	Vout
Load Regulation	-	0.5	1	-	0.5	1	%
Line Regulation	-	0.5	1	-	0.5	1	%
Ripple Voltage $V_{RMS}(20MHz)$ ^① (Full Load)	-	-	0.2	-	-	0.2	%Vout
Temperature Drift	-	50	100	-	50	100	ppm/°C
Long Term Stability	-	0.01	-	-	0.01	-	%Vout /h
Short Circuit Current (Output)	-	-	0.65	-	-	0.50	A
Start-up Delay	-	15	-	-	20	-	ms
Shutdown Recovery Time	-	15	-	-	20	-	ms

NOTE:

1. Using tip and barrel measurement.
2. Add 3uF/500V ceramic capacitor to the output of PXI28300S-10M/I
Add 3uF/1000V ceramic capacitor to the output of PXI28700S-10M/I



APPLICATION NOTE

External Shut Down

The SHDN pin is used to achieve the function of External Shut Down. When the pin is left unconnected, the converter will output the high voltage; When the pin is connected to Vin-(the ground of input), the high voltage output is turn off.

Over Current & Short Circuit Protection

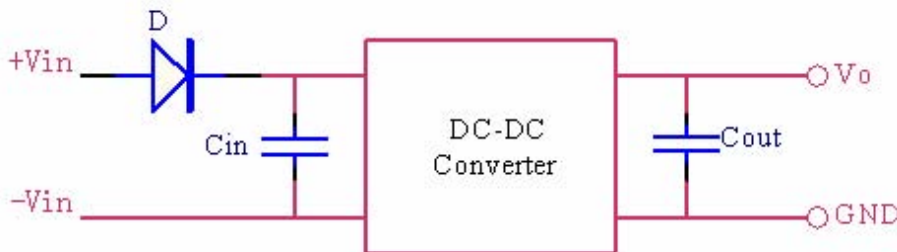
PXI28300S-10M/I & PXI28700S-10M/I Series high voltage DC/DC converter has the function of Over Current & Short Circuit Protection. When the converter is under either condition, it will be automatically in the mode of Current Protection. When the condition is removed, the converter will be automatically restored.

Ripple Voltage Suppress

When the output voltage ripple can't be satisfied in your applications, it can still be suppressed by adding capacitors between the output Vo+ and Vo- pins. Ensure that the rated voltage of the capacitors is higher than the output voltage of the converters. And large capacitance can be accomplished with several capacitors in parallel.

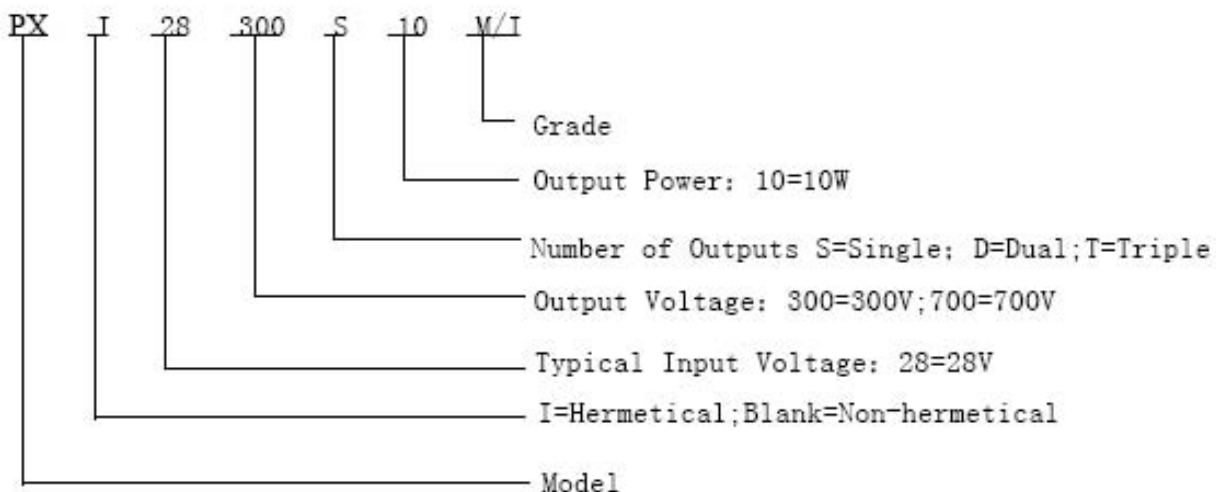
Reverse Polarity Protection:

Reverse Polarity Protection is easily achieved by placing a diode in series with the input to the converter. (Figure Below)



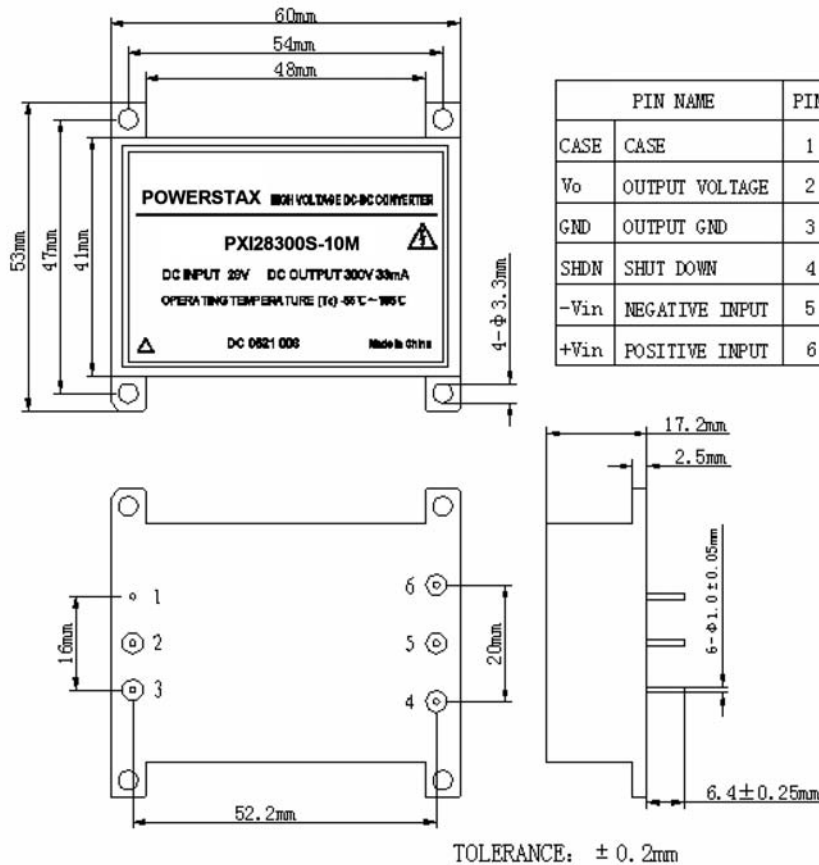
LONG TIME SHORT CIRCUIT WORK IS PROHIBITED

Ordering Information



MECHANICAL SPECIFICATIONS

Mechanical Characteristics			Units
Weight	≤ 100		g
Size(L×W×D)	60×41×17.2		mm
Isolation Characteristics			
Isolation(Min)	WKI28300S-10M/I	WKI28700S-10M/I	単位
Input to Output Capacitance	0.012	0.012	μ F
Insulation Resistance	300	300	M Ω
Environmental			
ESS	-40℃~+60℃	10 Cycles	(M)
Stabilization Bake	+125℃	24h	(M)
Burn-in	+65℃(Ambient, Full Load)	160h(M) / 48h(I)	
Hermeticity Testing	Fine Leak, Method 1014, Cond. A	Gross Leak, Method 1014, Cond. C	(M/I)
High&Low Temperature Test	High Temp: +60℃,Low Temp: -35℃.		(M/I)
Vibration	For detailed information, refer to factory's test report.		
Shock	50g (Half-sine wave, Triaxial, Three times each axial, remain 8ms~11ms)		
Depression (Altitude)	0.04KPa (45000m)		



Exceeding absolute maximum ratings may cause permanent damage and may reduce reliability. Information and specifications contained in this data sheet are believed to be correct at the time of publication. However, Powerstax accept no responsibility for consequences arising from printing errors or inaccuracies. Specifications are subject to change without notice.