

168W DC to DC Converter

The VPK168-106 of DC to DC Converter provide 168 Watts of continuous output power. All units pass burn-in test at full load condition.

RoHS2
2011/65/EU



FEATURES:

- * Wide Operating Voltage 60 to 118 VDC
- * Single Output
- * C.C. Mode + C.V. Mode
- * Constant Current: 12A
- * Constant Voltage: 14V
- * Built-in OR-ing diode
- * Protection: Output OVP, OLP, OTP, Input/Output reverse polarity protection
- * 3 year warranty

APPLICATIONS:

- * Outdoor installations
- * DC-DC converter for EV

GENERAL SPECIFICATION:

- * **Short Circuit Protection:** Latch
- * **Cooling:** Free Air Convection
- * **Protection Classes:** Class II
- * **Waterproof Rating:** IP67
- * **Note:** It is normal for a little water to run in, the product can still operate without abnormality.

Electrical Characteristics:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
V _{in}	Input Operate Voltage Range	Detail to see Fig.1	60		118	VDC
P _o	Output Power Range	See Rating Chart			168	W
I _{il}	Low Line Input Current	Full Load, V _{in} =60VDC		3.5		A
I _{ih}	High Line Input Current	Full Load, V _{in} =118VDC		3.1		A
η	Efficiency	Full Load, V _{in} =110VDC, Detail to see Rating Chart	See Rating Chart			
ΔV _{oi}	Line Regulation	Full Load, V _{in} =70VDC	0.5		1	%
ΔV _{oL}	Load Regulation	V _{in} =110VDC, 10~90% Load Change at Condition			5	%
T _c	Temperature Coefficient	Full load, V _{in} =70~110VDC			±0.04	%/°C
HV	Dielectric Withstanding Voltage (P-S)	Primary to Secondary			1500	VAC
EMI	EMC Emission	Meet UN R10			B	Class

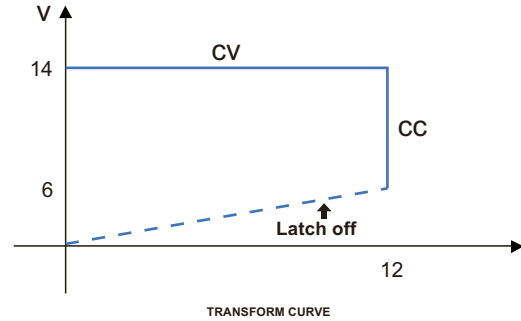
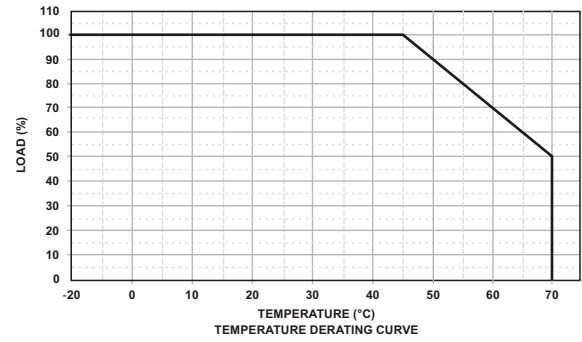
Environmental:

Symbol	Characteristic	Condition	Min.	Typ.	Max.	Unit
T _o	Operating Temperature	Detail to see Fig.2 (Derate linearly from 100% load at 45°C to 50% load at 70°C)	-20		70	°C
T _s	Storage Temperature	10 ~ 95% RH	-40		85	°C
H _o	Operating Humidity	non-condensing	0		95%	RH
H _s	Storage Humidity		0		95%	RH
ESDa	Electro Static Discharge	Air Discharge, ISO10605			15	kV
ESDc	Electro Static Discharge	Contact Discharge, ISO10605			20	kV
MTBF	Mean Time Between Failure	Operating Temperature at V _{in} =100VDC/I _o =7A@25°C, Calculated per MIL-HDBK-217F	100k			h

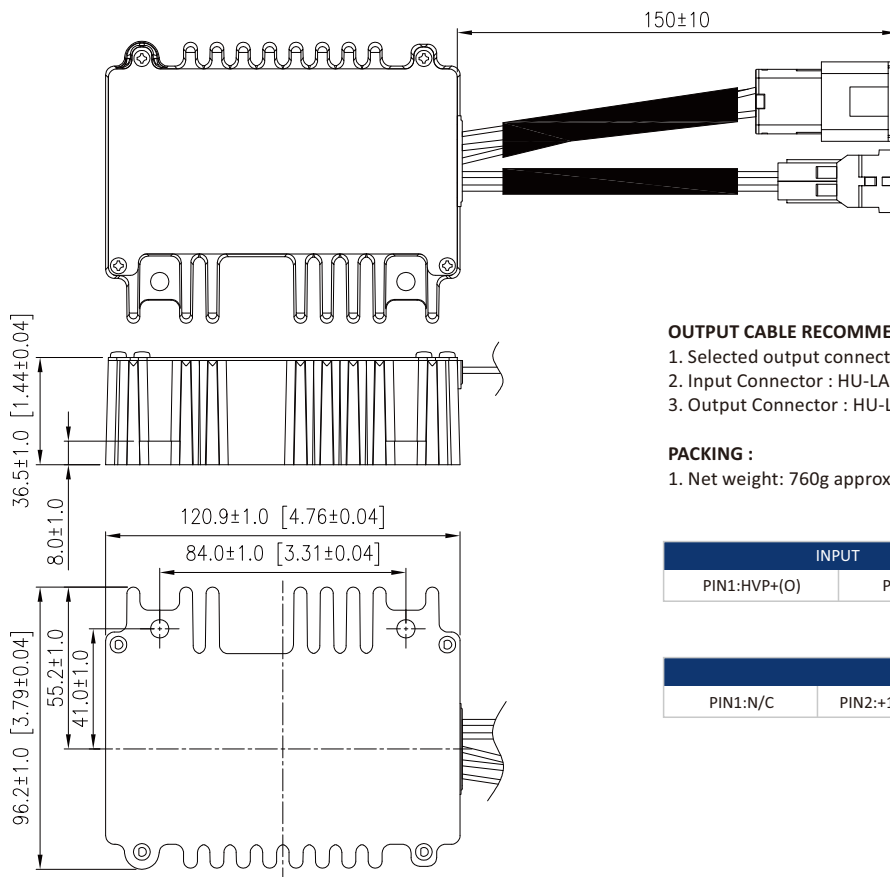
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SPECIFICATION NOTE :

- Output can provide up to peak load when the power supply starts up. Continuous staying in more than rated load is not allowed.
- At factory, in 60% rated load condition, each output is checked to be within voltage accuracy.
- Line regulation is defined by changing $\pm 10\%$ of input voltage from nominal line at rated load.
- Load regulation is defined by changing $\pm 40\%$ of measured output load from 60% rated load.
- The ripple is measured from peak to peak with a bandwidth-limit of 20MHz (Measured at the output connector with a 0.1uF ceramic capacitor and a 47uF electrolytic capacitor).
- Efficiency is measured at rated load, and nominal line.



MECHANICAL DIMENSIONS: (UNIT: mm)



OUTPUT CABLE RECOMMEND :

- Selected output connectors and wire, please refer to Appendix.
- Input Connector : HU-LANE#3HMA2ASL
- Output Connector : HU-LANE#6616324BSS

PACKING :

- Net weight: 760g approx.

INPUT	
PIN1:HVP+(O)	PIN2:HVP-(Y)

OUTPUT			
PIN1:N/C	PIN2:+14V(R/B)	PIN3:GND(G)	PIN4:Enable(B/L)

Rating Chart:

MODEL NO.	Current	Enable		Setting Voltage Range (Factory setting, can't be adjusted)	Maximum Output Power	Ripple & Noise	Total Regulation	Typ. Efficiency
	I _{max}	DC Voltage	I _{min}	DC Voltage				
	(A)	(V _{in})	(A)	(V _o)				
VPK168-106	12	5~16 VDC	1.25mA	14	168	200	±5	88