DESCRIPTIONS DC/DC Converter



RoHS

3 Years Warranty

FEATURES

- Ultra-wide input voltage range of 200 - 1100VDC
- High I/O isolation test voltage of 4000VAC
- Operating ambient temperature range: -40℃ to +70℃
- High efficiency, low ripple & noise
- Input under-voltage protection, reverse input voltage protection, output short circuit, over-current, over-voltage protection
- High reliability, long lifespan

APPLICATIONS

- Photovoltaic substation
- High voltage frequency conversion

Selection Guide

Certification	Part No.	Output Power	Nominal Output Voltage and Current (Vo/Io)	Output Voltage Adjustable Range(V)	Efficiency at 600VDC (%) Typ.	Capacitive Load (μF) Max.
--	DPV120-11B-12	90W	12V/7.500A	/	84	3000
	DPV120-11B-15	100W	15V/6.670A	/	85	2500
	DPV120-11B-24	120W	24V/5.000A	/	87	2000
	DPV120-11B-26		26V/4.616A	26-28	87	1700
	DPV120-11B-28		28V/4.286A	26-28	87	1450
	DPV120-11B-48		48V/2.500A	/	89	680

Note: The product picture is for reference only. For details, please refer to the actual product.

Specifications

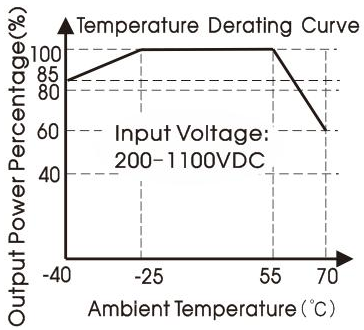
Specifications	Item	Operating Conditions	Min.	Typ.	Max.	Unit
Input Specifications	Input Voltage Range		200	--	1100	VDC
	Input Current	250VDC	--	--	0.75	A
		600VDC	--	--	0.3	
	Inrush Current	600VDC	--	--	85	
		1000VDC	--	--	160	
	Input Under-voltage Protection	Lockout activation range	165	--	185	VDC
		Lockout deactivation range	180	--	200	
	External Input Fuse		5A/1000VDC, required			
	Hot Plug		Unavailable			
Output Specifications	Output Voltage Accuracy	Full load range	--	±2	--	%
	Line Regulation	Full load	--	±1	--	
	Load Regulation	0% - 100% load	--	±2	--	
	Ripple & Noise*	20MHz bandwidth (peak-to-peak value)	--	--	300	mV
	Temperature Coefficient		--	±0.02	--	%/℃
	Short Circuit Protection		Hiccup, continuous, self-recovery			
	Over-current Protection		≥110%Io, hiccup, self-recovery			
	Over-voltage Protection	12V output	≤20VDC			
		15V output	≤20VDC			
		24V/26V output	≤30VDC			
		28V output	≤35VDC			
		48V output	≤60VDC			
	Minimum Load		0	--	--	%
	Hold-up Time	Room temperature, Full load, 600VDC input	--	1.5	--	ms
		Room temperature, Full load, 1100VDC input	--	10	--	
General Specifications	Isolation Test: Input - output	Electric Strength Test for 1min., leakage current ≤8mA	4000	--	--	VAC
	Isolation Test: Input - PE	Electric Strength Test for 1min., leakage current ≤10mA	2500	--	--	
	Isolation Test: Output - PE		2500	--	--	
	Operating Temperature		-40	--	+70	℃
	Storage Temperature		-40	--	+85	
	Storage Humidity		--	--	95	%RH
	Power Derating	-40℃ to -25℃	1.0	--	--	%/℃
		+55℃ to +70℃	2.66	--	--	
		200VDC-250VDC	0.4	--	--	%/VDC
		1000VDC-1100VDC	0.2	--	--	
		2000m-5000m	10	--	--	%/Km
	Switching Frequency		--	65	--	kHz
	MTBF	MIL-HDBK-217F@25℃	≥ 300,000 h			
Mechanical Specifications	Case Material	Metal				
	Dimensions	144.50 x 105.00 x 40.00mm				
	Weight	485g (Typ.)				

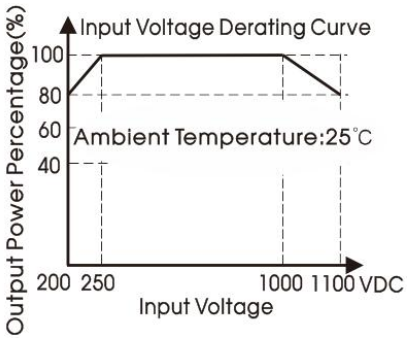
	Cooling method	Free air convection
Note: * The " Tip and barrel method " is used for ripple and noise test.		

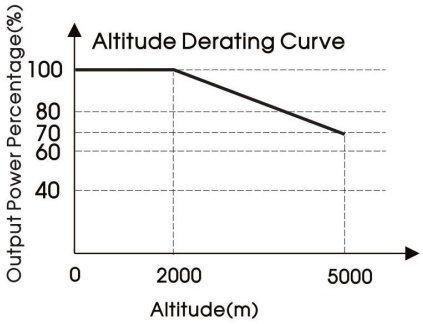
Electromagnetic Compatibility (EMC)

Electromagnetic Compatibility (EMC)	Emissions	CE	CISPR32/EN55032 CLASS A (See Fig.1 for recommended circuit)	
		RE	CISPR32/EN55032 CLASS A (See Fig.1 for recommended circuit)	
	Immunity	ESD	IEC/EN61000-4-2 Contact ±6KV/Air ±8KV	Perf. Criteria B
		RS	IEC/EN61000-4-3 10V/m	perf. Criteria A
		EFT	IEC/EN61000-4-4 ±2KV	perf. Criteria B
		Surge	IEC/EN61000-4-5 line to line ±1KV/line to ground±2KV	perf. Criteria B
		CS	IEC/EN61000-4-6 10Vr.m.s	perf. Criteria A

Product Characteristic Curve

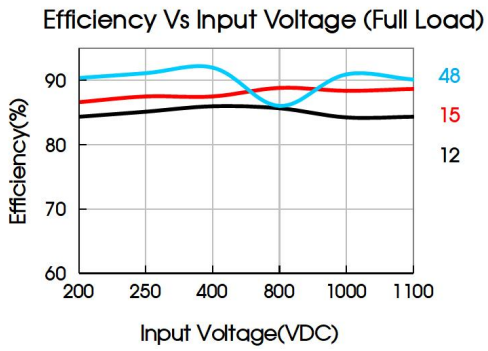


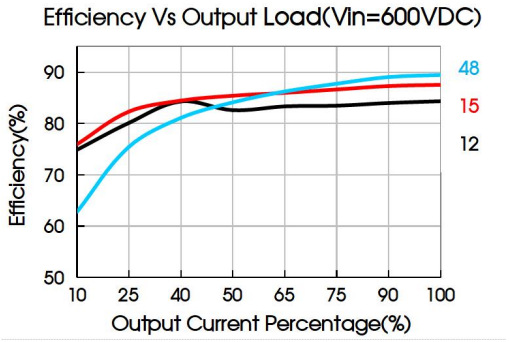




Note: ① With an input between 200-250VDC or 1000-1100VDC, the output power must be derated as per temperature derating curves;

② This product is suitable for applications using natural air cooling.





Design Reference

1. EMC compliance recommended circuit

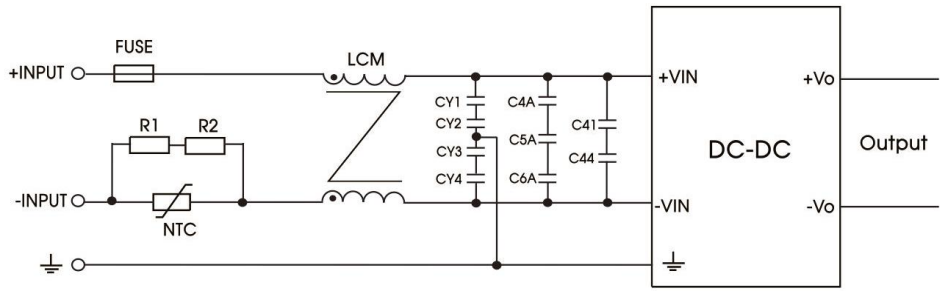
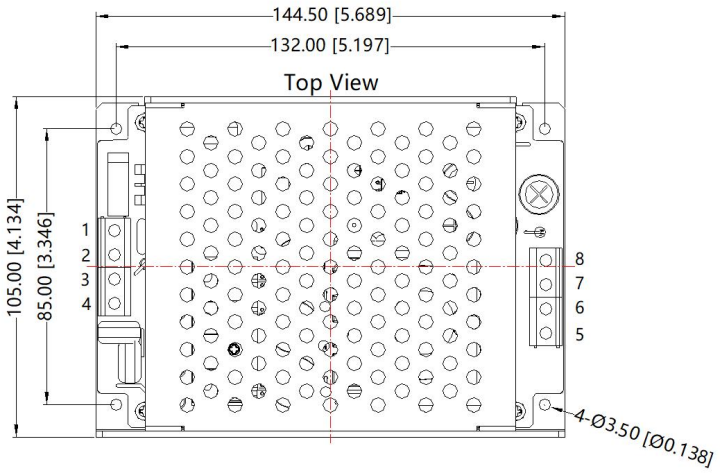


Fig. 1

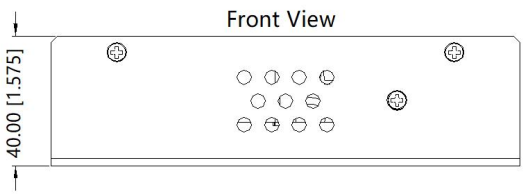
Component	Recommended value
R1, R2	DIP Resistor12Ω/2W
FUSE	5A/1000VDC
NTC	5Ω/3.6A/11D
LCM	Min: 693uH, Typ: 750μH
CY1, CY2, CY3, CY4	Y1/472M/400VAC
C4A, C5A, C6A	Film Capacitance 225K/450V
C41, C44	Ceramic Capacitor 472Z/1000V

Dimensions and Recommended Layout

THIRD ANGLE PROJECTION



Pin-Out	
Pin	Function
1	+Vin
2	NC
3	-Vin
4	PE
5,6	-Vo
7,8	+Vo



Note:
Unit : mm[inch]
Wire range : 24~12AWG
Tightening torque:Max 0.4N·m
General tolerances : ±1.00[±0.039]

Note:

1. Unless otherwise specified, parameters in this datasheet were measured under the conditions of Ta=25℃, humidity<75% with nominal input voltage and rated output load;
2. All index testing methods in this datasheet are based on our company corporate standards;
3. We can provide product customization service, please contact our technicians directly for specific information;
4. Products are related to laws and regulations: see "Features" and "EMC";
5. Our products shall be classified according to ISO14001 and related environmental laws and regulations, and shall be handled by qualified units.