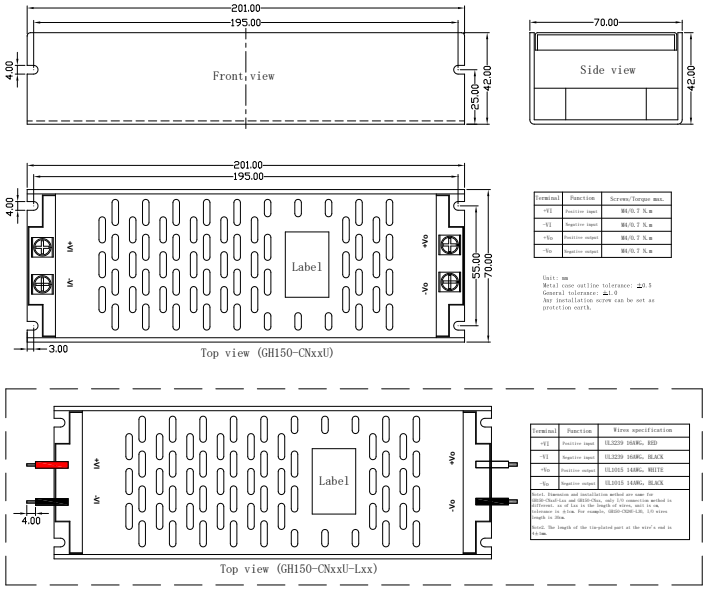


GH150-CNxxU(-Lxx)

DC-DC Power Supply Module

Ultra wide input, isolated single output

Product Characteristics

- Ultra wide input voltage range, 100-1000VDC
- Input reversed polarity protection, input UVP
- Standard, CE (EN62477-1)
- Output protection, OCP and SCP
- Input and output isolation, 4000VAC
- No minimum load requirement
- Applications: energy storage system, photovoltaic power station, other high voltage input industrial equipment

Model Selection Table

Model	Dimensions (L*W*H)	Rated power	Rated output voltage/current		Typical efficiency （Vin=500VDC）
			Vo	Io	
GH150-CN12U	201*70*42mm	100W	12V	8330mA	80%
GH150-CN15U			15V	6670mA	82%
GH150-CN24U		150W	24V	6250mA	83%
GH150-CN28U			28V	5350mA	85%
GH150-CN32U			32V	4680mA	86%
GH150-CN48U			48V	3120mA	86%

Note: Adding suffix of “-Lxx” means the module has input and output wires, and “xx” is the length with unit of cm, please reference to the related description in the dimension drawing.

Input Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Input voltage range	DC input	100VDC	500VDC	1000VDC
Input current	Vin = 1000VDC, output full load	-	300mA	-
Surge current	Vin = 500VDC	-	40A	-
Input UVP	Input under voltage trigger point	-	75VDC	-
	Input under voltage released point	-	85VDC	-
Input reversed polarity protection	If input polarity is reversed, the PSU should not be damaged	Available		
External input fuse		Required		

Output Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Voltage accuracy		-	±2%	-
Line regulation	100%Io	-	±1.5%	-
Load regulation	10%-100%Io	-	±1.5%	-
Ripple and noise*	20MHz bandwidth (Peak-peak value)	-	300mV	-
OCP	Output over current protection	≥110%Io, Self recovery		
SCP	Output short circuit protection	Self recovery		
Minimum load		0	-	-
Start-up delay time		-	3s	-
Hold-up time		-	10ms	-
Hot plug		Prohibited		
Paralleled working		Prohibited		

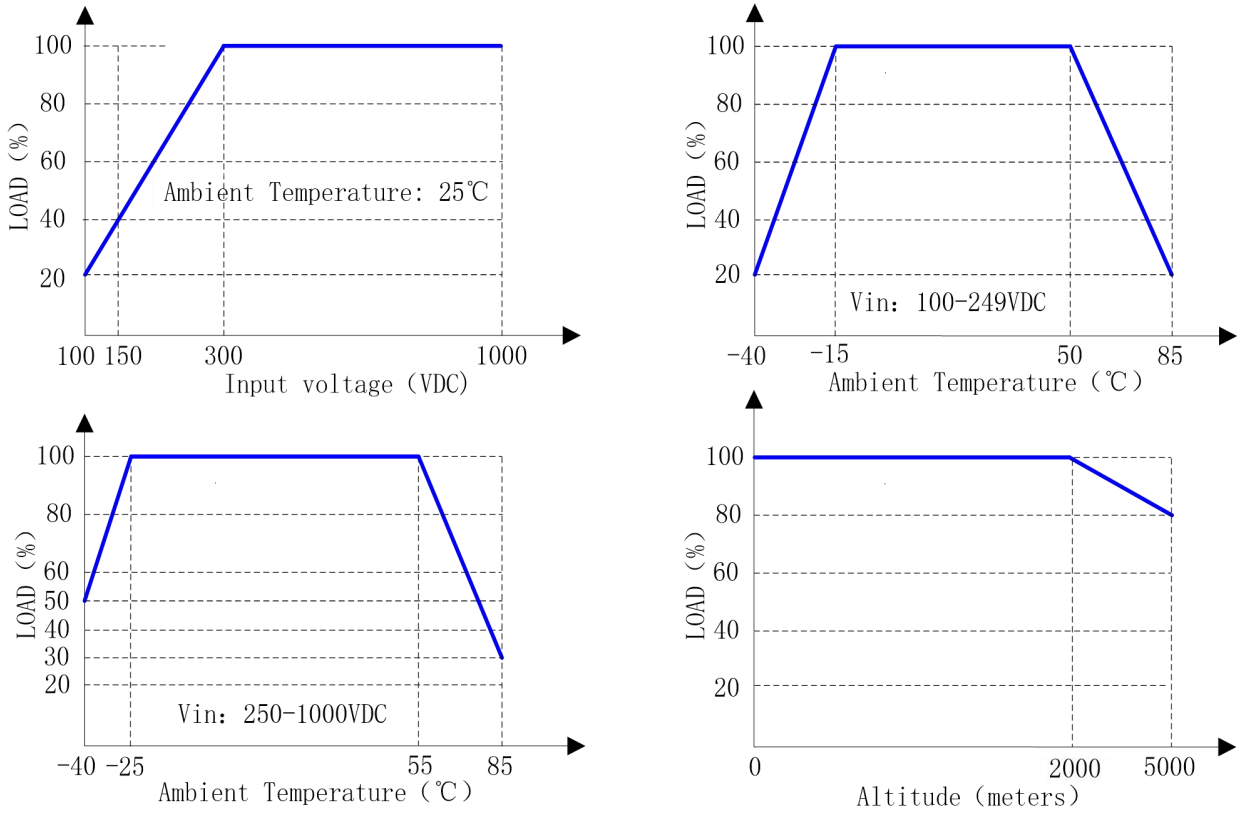
Remark*: Oscilloscope probe should be connected with the paralleled combination of a 10uF high frequency low resistance electrolytic capacitor and a 0.1uF ceramic capacitor.

General Characteristics

Item	Test Condition / Description	MIN	TYP	MAX
Working temperature		-40℃	-	+85℃
Storage temperature		-40℃	-	+85℃
Storage humidity		-	-	95%RH
Switching frequency		-	65kHz	-

Isolation voltage	Input to output, 60s, ≤5mA	4000VAC	-	-
	Input to metal case, 60s, ≤5mA	2000VAC	-	-
	Output to metal case, 60s, ≤5mA	2000VAC	-	-
MTBF	MIL-HDBK-217F@25℃	215000h	-	-
Weight		-	680g	-
Cooling method	Natural air cooling (forced air cooling is recommended.)			

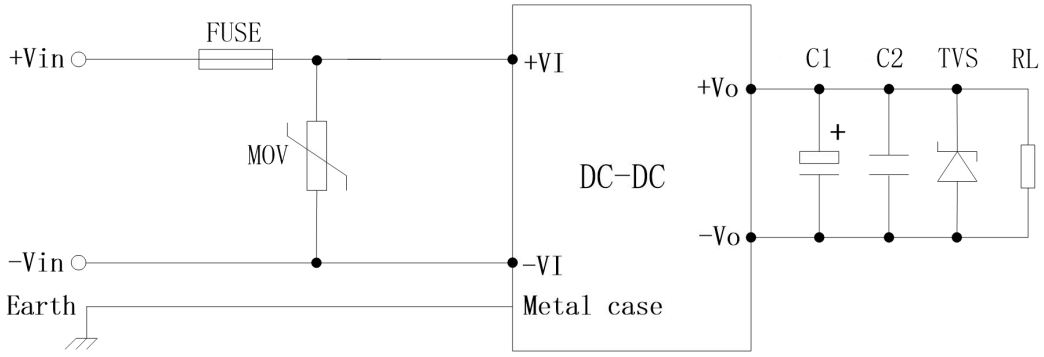
Derating Curves



Comment: Derating should be considered base on temperature, input voltage and altitude.

Application Notes

1. Application circuit recommendation



2. Input part recommendation

Component	Function and description	Recommendation
FUSE	Cut off fault circuit	Required, 4A, time lag type is preferred
MOV	Absorb surge energy	Varistor,142KD14

3. Output part recommendation

Output voltage	C1	C2	TVS	RL
12V	680μF/25V	1μF/50V	1.5KE18CA	User load
15V	680μF/25V	1μF/50V	1.5KE20CA	
24V	470μF/35V	1μF/50V	1.5KE30CA	
28V	470μF/35V	1μF/50V	1.5KE36CA	
32V	220μF/50V	1μF/50V	1.5KE39CA	
48V	100μF/63V	1μF/100V	1.5KE62CA	

Remarks：

a. C1: Output filter electrolytic capacitor, high frequency low resistance electrolytic capacitor is recommended.

b. C2: Ceramic capacitor to suppress high frequency noise.

c. TVS: Transient suppression diode to protect post-stage circuit (user load).

Notes：

- If not specified, the test condition is ambient temperature 25℃, humidity < 75%, input voltage 500VDC and output rated load.
- All parameters listed in the data sheet are tested according to the company's enterprise standards.
- Guangzhou Guantu Electronic Technology Co., Ltd. has the right of final interpretation of the copyright and product.
- This version is 2025.01 A0. The specification may be changed without notice.
- GTL POWER can provide product customization service, please contact us or visit ***http://www.gtl-power.com*** and provide more detail technical requirements.