

FEATURES

1. Wide input voltage range: 36-75VDC
2. High efficiency up to 94.5%
3. I/O isolation test voltage 1.5k VDC
4. Input under-voltage protection, output short-circuit, over-current, over-voltage, over-temperature protection
5. Operating ambient temperature range -40°C to +85°C
6. International standard pin mode
7. International standard 1/8 brick



3 years
Warranty

Selection Guide

Product Model	Input Voltage (Range) VDC	Output Voltage VDC	Output Current @Full Load mA	Output Efficiency Min/Typ %	Capacitive Load (Max) μF
GT4812EBO-240WR3	48 (36~75VDC)	12	20000	94.5	8000
GT4812EBO-240WIR3		12	20000	94.5	8000
GT4812EBO-240WHR3		12	20000	94.5	8000

Input Specifications

Parameter	Condition	Min	Typ	Max	Unit
Input Current	full load(V_{min} , I_{onom})	-	-	8000	mA
	Unloaded (V_{onom} , $I_o=0A$)	-	-	150	
	Static state(V_{inom} , CNT turns off the output)	-	-	25	
Surge Voltage	36 to 75VDC Input series	-	-	80	VDC
Start-up Voltage	36 to 75VDC Input series	-	-	36	
Under-voltage Protection	Undervoltage starting	32	-	36	
	Undervoltage protection	30	-	34	
	Return difference	-	2.5	-	
Start-up Time	Nominal input voltage and constant resistance load	-	20	50	ms
Hot Plug		Unavailable			
CNT logic control	Low level	-0.7	-	1.5	VDC
	High level	3.5	-	20	
	Remote control current	-	-	2	mA

Output Specifications

Parameter	Condition	Min	Typ	Max	Unit
Voltage Accuracy	Full load range	-	-	±3	%Vo
Line Regulation	Rated load	-	-	±0.4	
Load Regulation	Vin=48V; Io=0~Inom; TA = 25 °C	-	-	±0.5	
Transient Recovery Time	25% load step change, nominal input voltage	-	-	200	µs
Transient Response Deviation	25% load step change, nominal input voltage	-	-	±5	%
Temperature Coefficient	Full load	-	-	±0.02	%/°C
Ripple & Noise①	The output is connected with 10µF tantalum capacitor and 1µF ceramic capacitor. The output capacitance is 50mm to 70mm away from the module pin. When Ta<-5 ° C, it is recommended to add a 220, µF electrolytic capacitor (ESR≤100 mΩ)	-	70	150	mVp-p
Over-current Protection	Hiccups, the overcurrent disappears and recovers spontaneously	110	-	150	%Io
Over-voltage Protection	Hiccups, overvoltage elimination can be self-recovery Note: can not be external perfusion voltage test	115	-	132	%Vo
Short-circuit Protection	Short-circuit fault removal is self-restoring	Sustainable, self-healing			
Over-temperature protection	Close output (self-recovery)	110	-	135	°C
	Return difference	100	-	120	

General Specifications

Parameter	Condition	Min	Typ	Max	Unit
Isolation Voltage	Input-output, rise rate 500V/s, leakage current less than 3.5mA/min, no breakdown, no arcing	1500	-	-	VDC
Isolating resistance	Input-output, insulation voltage 500VDC	No heat sink	20	-	MΩ
		Band heat sink	10	-	
Operating Temperature		-40	-	+85	°C
Storage Temperature		-40	-	+125	
Storage Humidity	Non-condensing	5	-	95	%RH
Pin Soldering Resistance Temperature	Wave soldering (welding time: 5~10s)	-	-	+260	°C
	Manual welding (welding time: 3~5s)	-	-	+425	
MTBF	Ta=25°C, Telcordia SR-332	-	2000	-	K hours

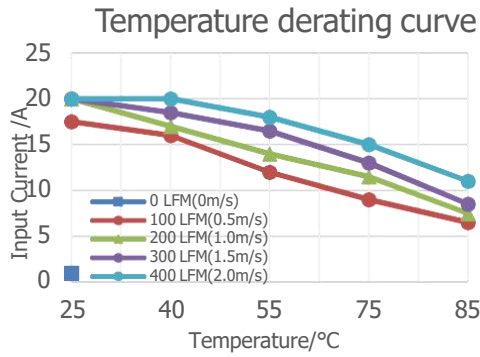
Mechanical Specifications

Size	No heat sink	57.94mm×22.81mm×10.90mm
	With type I heat sink	57.94mm×22.81mm×13.50mm
	With type H heat sink	57.94mm×22.81mm×22.00mm
Weight	No heat sink	28.0g(Typ.)
	With type I heat sink	40.0g(Typ.)
	With type H heat sink	60.0g(Typ.)

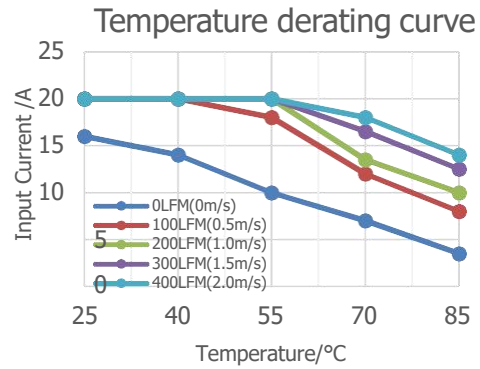
Characteristic Curves

Nominal voltage input

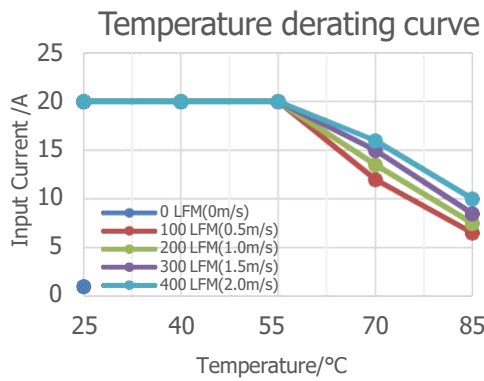
No heat sink



With type I heat sink

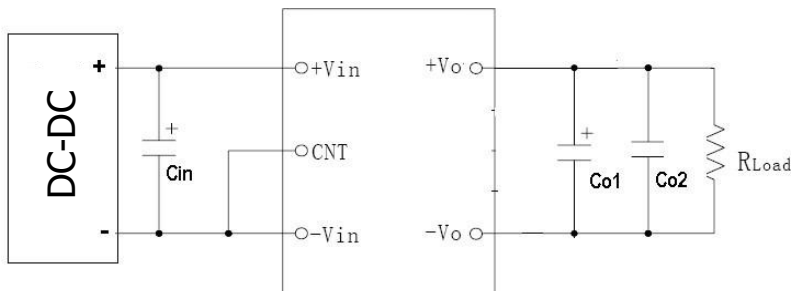


With type H heat sink



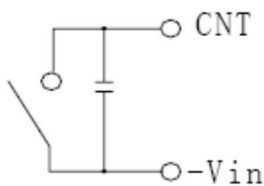
Design References

1. Application circuit

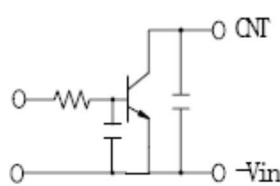


Bit number	Specification parameter
Cin	220μF/100V Electrolytic capacitor
Co1	220μF /25V Electrolytic capacitor
Co2	1μF/25V X7R Chip capacitor

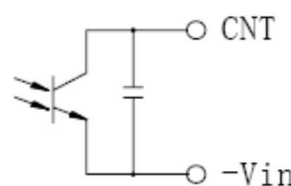
2. Several ways of CNT remote control



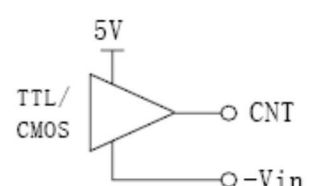
Switch control mode



Transistor control mode



Isolation control mode



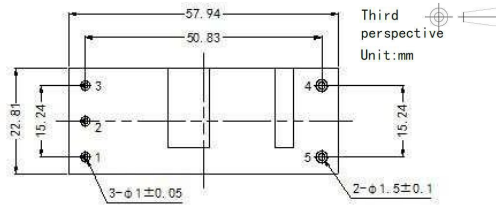
TTL/CMOS control mode

CNT working state of converter:

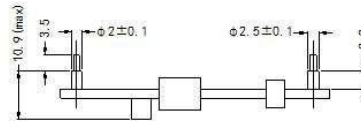
Control mode	CNT low level (-0.7Vdc~1.2Vdc)	CNT high level (3.5Vdc~20Vdc)	CNT suspension
Negative logic control	Output start	Output off	Output off
Positive logic control	Output off	Output start	Output start

Dimensions and Recommended Layout

No heat sink

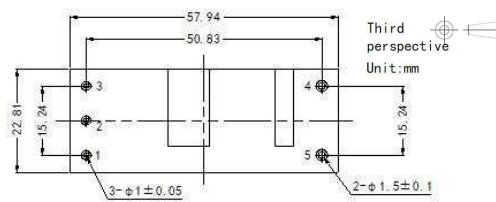


Bottom view

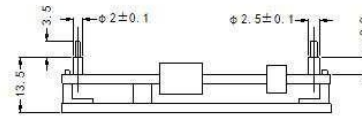


Side view

With type I heat

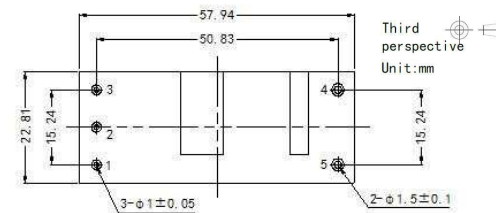


Bottom view

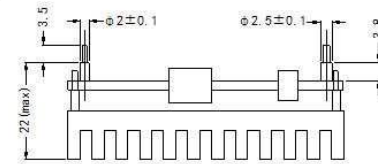


Side view

With type H heat



Bottom view



Side view

Note:

Size unit: mm

Terminal diameter tolerance: $\pm 0.10\text{mm}$

Unmarked tolerance: $\pm 0.50\text{mm}$

Pin definition

Pin	Mark	Implication
1	+Vin	Input negative
2	CNT	Remote control foot
3	-Vin	Input positive
4	-Vo	Output negative
5	+Vo	Output positive

Note:

1. If the product works under the minimum required load, it cannot guarantee that the performance of the product complies with all the performance indicators in this manual;
2. The maximum capacitive load is tested under the input voltage range and full load condition;
3. Unless otherwise stated, all indexes in this manual are measured at $T_a=25^\circ\text{C}$, humidity $<75\%\text{RH}$, nominal input voltage and rated output load;
4. All index testing methods in this manual are based on the enterprise standards of the company;
5. Our company can provide product customization, specific needs can directly contact our technical staff;