FEATURES

1. Wide input voltage range (2:1)
2. High efficiency up to 91%
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℃ to +85℃
6. International standard pin mode
7. International standard 1/8 brick

RoHS CE 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
GT4805EBO-50WR3	48VDC （36~75VDC）	5	10000	92	6800
GT4805EBO-50WIR3		5	10000	92	6800
GT4812EBO-50WR3		12	4200	91	1000
GT4812EBO-50WIR3		12	4200	91	1000

Input Specifications

Parameter	Condition		Min	Typ	Max	Unit
Input Current	full load(Vimin，Vonom,Ionom)	5V output	-	-	1800	mA
		12V output	-	-	2000	
	Unloaded (Vonom,Io=0A)		-	-	100	
	Static state(Vinom，CNT turns off the output)		-	-	10	
Surge Voltage	36 to 75VDC Input series		-	-	80	VDC
Start-up Voltage	36 to 75VDC Input series		-	-	36	
Under-voltage Protection			31	33	-	
Start-up Time	Nominal input voltage and constant resistance load	5V output	-	12	30	ms
		12V output	-	15	25	
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	5V output	-	-	±16	%Vo
		12V output	-	-	±1	
Line Regulation	Rated load	5V output	-	±0.2	±0.5	
		12V output	-	±0.2	±0.4	
Load Regulation	Vin=48V；Io=0～Inom；TA = 25 ºC	5V output	-	±0.5	±1	
		12V output	-	±0.3	±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)		-	50	150	mVp-p
Output fine-tuning(Trim)	Input voltage range	5V output	-20	-	+10	%
		12V output	-10	-	+10	
Over-current Protection	Input voltage range	5V output	120	130	160	%Io
		12V output	114	130	169	
Over-voltage Protection	Input voltage range	5V output	115	118	124	%Vo
		12V output	115	120	127	
Short-circuit Protection	Short-circuit fault removal is self-restoring		Sustainable, self-healing			
Over-temperature protection	Close output (self-recovery)		110	120	130	°C
	Return difference		-	20	-	

General Specifications

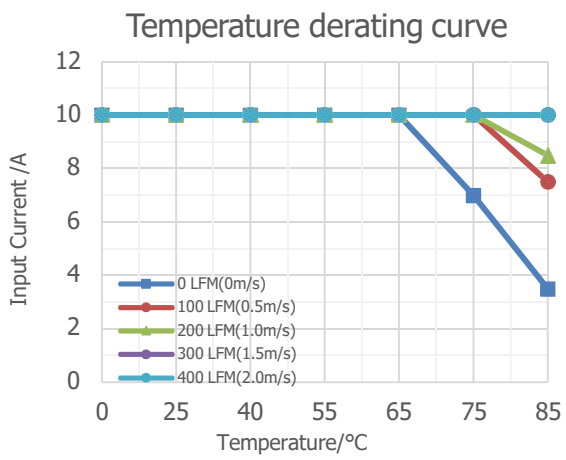
Parameter	Condition	Min	Typ	Max	Unit
Isolation Voltage	Input-output, leakage current less than 1mA, test time 1 minute	1500	-	-	VDC
Operating Temperature		-40	-	+85	°C
Storage Temperature		-55	-	+125	
Storage Humidity	Non-condensing	5	-	95	%RH
Pin Soldering Resistance Temperature	Wave soldering (welding 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 × 9.80mm
	With type I heat sink	57.94mm × 22.81mm × 12.70mm
Weight	No heat sink	20.0g(Typ.)
	With type I heat sink	40.0g(Typ.)

Characteristic Curves

Nominal voltage input ,5V output



Nominal voltage input ,12V output

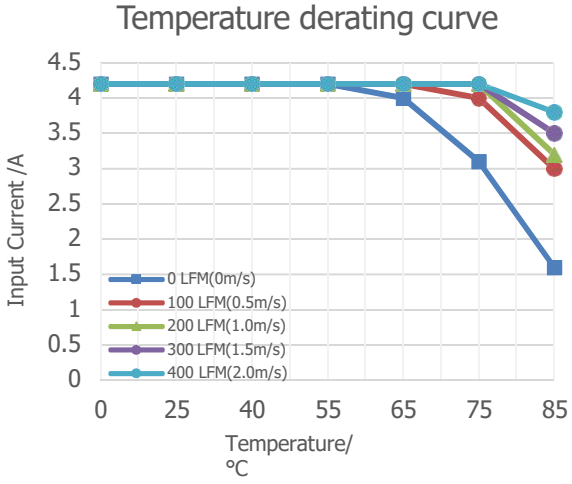


Figure 1

Design References

1. Application circuit

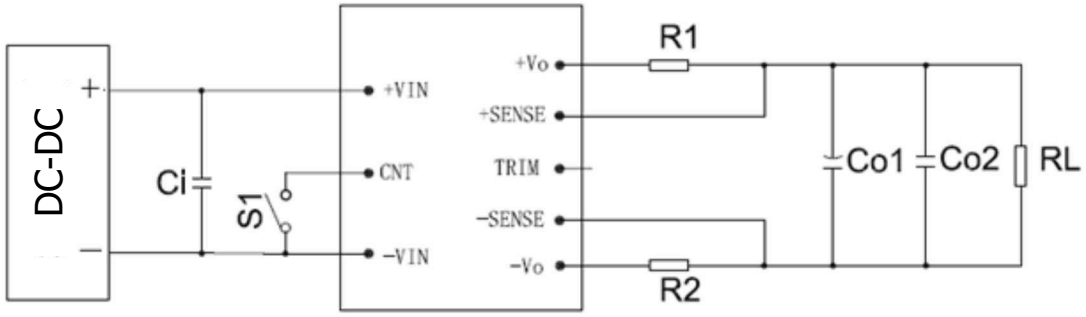


Figure 2

Vout (VDC)	Ci	Co1	Co2
5	100μF/100V	470μF/25V	1μF/25V
12		220μF/25V	

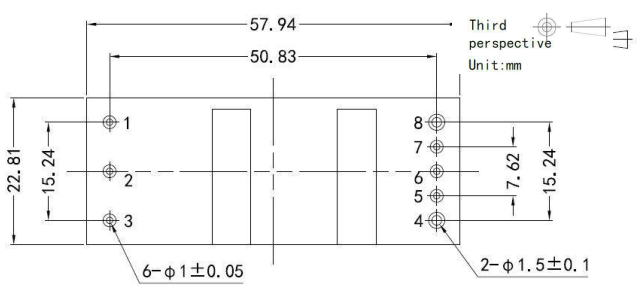
Note: 1. R1 and R2 are the equivalent resistors on the output line.

2. The output can be connected to the appropriate amount of electrolytic capacitors according to customer demand, but the maximum capacity of each channel cannot exceed 1000uF;

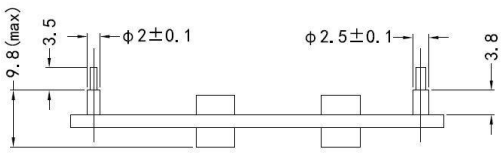
3. This model is a negative logic control, that is, the S1 switch is short-circuited for normal power output, and the S1 switch is disconnected for output off.

Dimensions and Recommended Layout

No heat sink



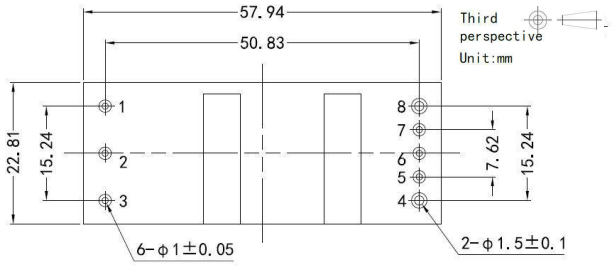
Bottom view



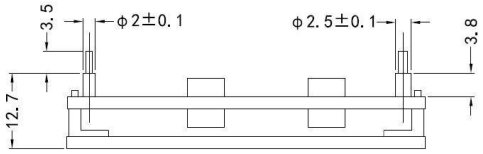
Side view

Figure 3

With type I heat sink



Bottom view



Side view

Figure 4

Note:

Size unit: mm

Terminal diameter tolerance: ±0.10mm

Unmarked tolerance: ±0.50 mm

Pin definition

Pin	Mark	Implication
1	-Vin	Input negative
2	CNT	Remote control foot
3	+Vin	Input positive
4	+Vo	Output positive
5	+SENSE	Positive remote control terminal
6	Trim	Voltage regulating terminal
7	-SENSE	Negative remote control terminal
8	-Vo	Output minus
Note: The positioning holes on the aluminum baseplate are ∅3mm. It is recommended that the screw length be locked into the power supply not more than 2mm.		

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 Ta=25℃, humidity <75%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;