FEATURES

1. Wide input voltage range: 36-75 VDC
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
GT4803EBO-100WR3	48 （36~75VDC）	3.3	15000	92	10000
GT4803EBO-100WIR3		3.3	20000	90	10000
GT4805EBO-100WR3		5	20000	92	4000
GT4805EBO-100WIR3		5	20000	92	4000
GT4812EBO-100WR3		12	8333	91	3300
GT4812EBO-100WIR3		12	8333	91	3300

Input Specifications

Parameter	Condition		Min	Typ	Max	Unit
Input Current	Full load(Vimin，Vonom,Ionom)	3.3V output	-	-	2400	mA
		5V output	-	-	3600	
		12V output	-	-	3400	
	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	Close output (self-recovery)	3.3V/12V output	31	33	34	
		5V output	30	32	34	
Start-up Time	Nominal input voltage and constant resistance load	3.3V output	-	12	20	mS
		5V output	-	12	30	
		12V output	-	15	25	
CNT logic control	Low level		-0.7	-	1.2	VDC
	High level		3.5	-	20	
	Remote control current		-	-	2	mA

Output Specifications

Parameter	Condition		Min	Typ	Max	Unit
Voltage Accuracy	Full load range	3.3V output	-	-	±1.2	%
		5V output	-	-	±1.6	
		12V output	-	-	±1	
Line Regulation	Rated load	3.3V/5V output	-	±0.2	±0.5	
		12V output	-	±0.2	±0.4	
Load Regulation	Vin=48V；Io=0～Inom；TA = 25 ºC	3.3V/5V output	-	±0.5	±1	
		12V output	-	±0.3	±0.5	
Transient Recovery Time	25% load step change, nominal input voltage	3.3V output	-	50	100	μs
		5V /12V output	-	-	200	
Transient Response Deviation	25% load step change, nominal input voltage	3.3V output	-	±3	±5	%
		5V/12V output	-	-	±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)	3.3V output	-	60	80	mVp-p
		5V output	-	50	80	
		12V output	-	50	100	
Trim	Input voltage range	3.3V/5V output	-20	-	+10	%
		12V output	-10	-	+10	
Over-current Protection	Input voltage range	3.3V output	120	147	170	%Io
		5V output	110	125	145	
		12V output	110	127	157	
Over-voltage Protection	Input voltage range	3.3V output	115	118	121	%Vo
		5V output	115	118	123	
		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)	3.3V/5V output	110	118	130	°C
		12V output	110	120	130	
	Return difference		-	20	-	

General Specifications

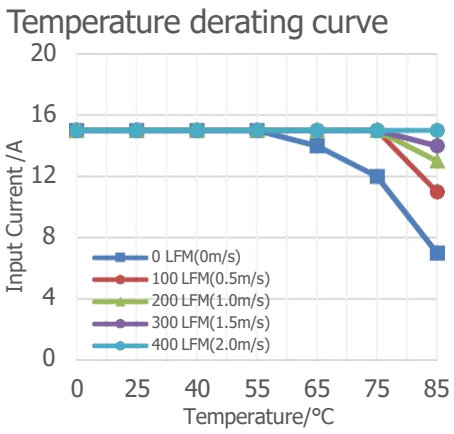
Parameter	Condition	Min	Typ	Max	Unit
Isolation Voltage	Input-output, leakage current less than 1mA, test time 1 minute	1500	-	-	VDC
Operating Temperature		-40	-	+85	°C
Storage Temperature		-55	-	+125	
Storage Humidity	Non-condensing	5	-	95	%RH
MTBF	Ta=25°C，Telcordia SR-332	-	2000	-	K hours

Mechanical Specifications

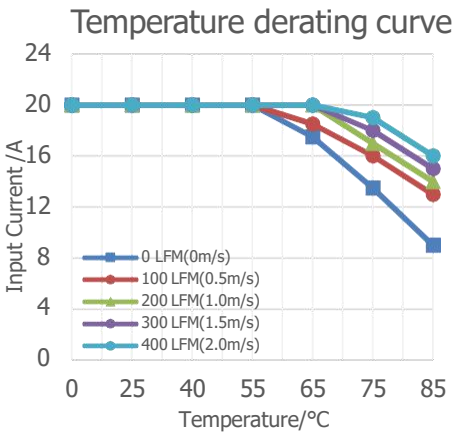
Size	No heat sink	57.94mm × 22.81mm × 9.80mm
	With type I heat sink	57.94mm × 22.81mm × 12.70mm
Weight	No heat sink	20.0g(Typ.)
	With type H heat sink	40.0g(Typ.)

Characteristic Curves

3.3V output, No heat sink



Nominal voltage input 3.3V output, With type I heat sink



5V output, No heat sink

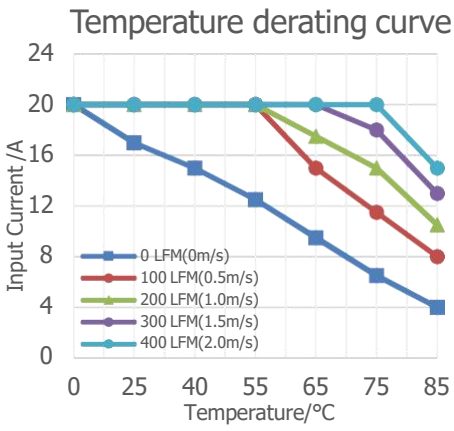


Figure 1

Design References

Application circuit

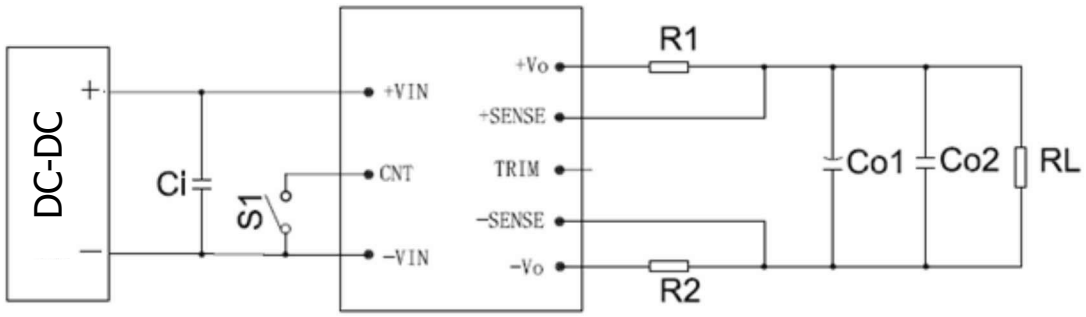


Figure 2

Vout (VDC)	Ci	Co1	Co2
3.3	100μF/100V	470μF/25V	1μF/25V
5	150μF/100V	100μF/16V	
12	100μF/100V	220μF/25V	

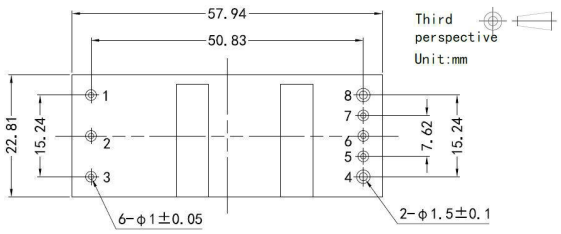
Note:

1, The output can be connected to the appropriate amount of electrolytic capacitors according to customer demand, but the maximum capacity of each can not exceed 10000uF

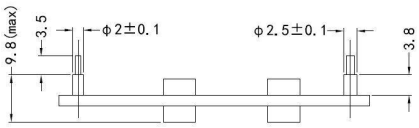
2, This model is negative logic control, that is, S1 switch short-circuited for normal power output, S1 switch off for output off.

Dimensions and Recommended Layout

No heat sink



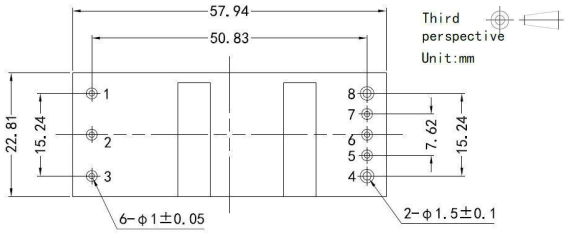
Bottom view



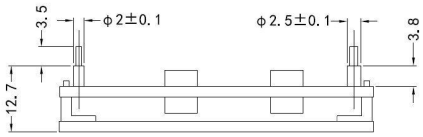
Side view

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:

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;