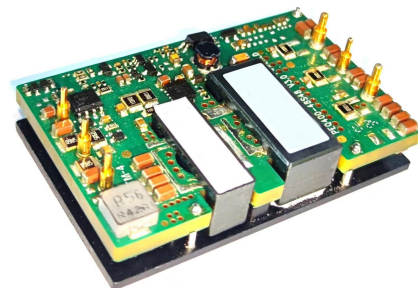


FEATURES

1. Wide input voltage range: 36-75VDC
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°C to +85°C
6. International standard pin mode
7. International standard 1/4 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
GT4848EBO-400WR3	48VDC	48	8000	91	3000
GT4848EBO-400WIR3	(36~75VDC)	48	8000	91	3000

Input Specifications

Parameter	Condition		Min	Typ	Max	Unit
Input Current	full load(V _{imin} ,I _{onm})		-	-	15000	mA
	Unloaded (V _{onm} ,I _o =0A)		-	-	200	
	Static state(V _{inm} , 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	Undervoltage starting		32	-	34	
	Undervoltage protection		30	-	34	
	Return difference		-	2	-	
Start-up Time	Nominal input voltage and constant resistance load		-	20	-	ms
Hot Plug			Unavailable			
CNT logic control	This model is negative logic: the CNT module normally outputs when the CNT is connected to low power;CNT meet high level or impending module to stop the output	Low level	-0.7	-	1.2	VDC
		High level	3.5	-	20	
		Remote control current	-	-	1	mA

Output Specifications

Parameter	Condition	Min	Typ	Max	Unit
Voltage Accuracy	Full load range	-	-	±2.9	%Vo
Line Regulation	Rated load	-	±0.2	±0.5	
Load Regulation	Vin=48V; Io=0~Inom; TA = 25 °C	-	±0.2	±0.5	
Transient Recovery Time	25% load step change, nominal input voltage	-	250	-	µs
Transient Response Deviation	25% load step change, nominal input voltage	-	±4	-	%
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)	-	200	500	mVp-p
Over-current Protection	Hiccups, the overcurrent disappears and recovers spontaneously	-	-	±10	%Io
Over-voltage Protection	Hiccups, overvoltage elimination can be self-recovery Note: can not be external perfusion voltage test	110	125	170	%Vo
Short-circuit Protection	Short-circuit fault removal is self-restoring	Sustainable, self-healing			
Over-temperature protection	Close output	110	-	130	°C
	Recovery	100	-	120	
	Return difference	-	10	-	

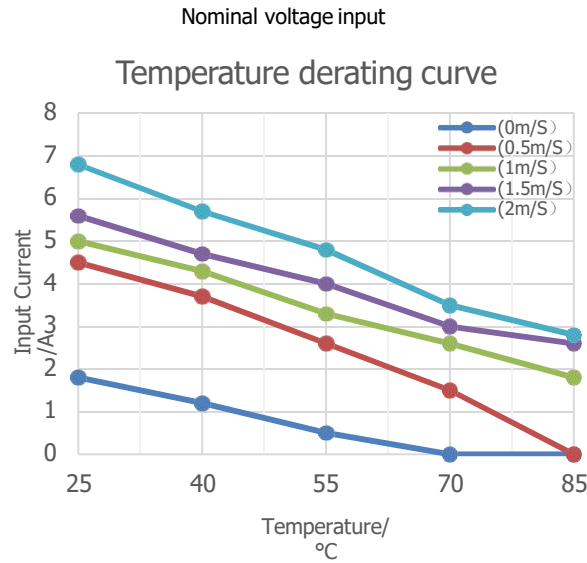
General Specifications

Parameter	Condition	Min	Typ	Max	Unit
Isolation Voltage	Input-output, rise rate 500V/s, leakage current less than 1mA/min, no breakdown, no arcing	1500	-	-	VDC
Isolating resistance	Input-output, insulation voltage 500VDC	No heat sink	20	-	MΩ
		Band heat sink	10	-	
Isolation capacitance	Input-output insulation voltage ≥2KV	-	2000	-	pF
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

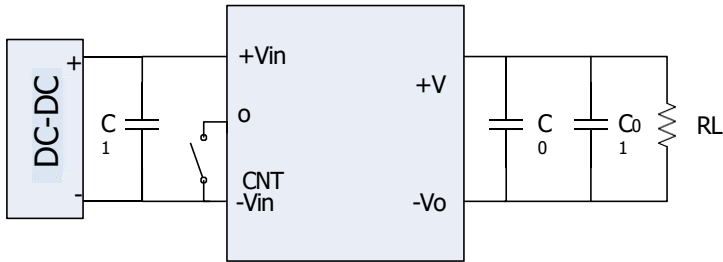
Size	57.90mm×36.80mm×13.70 mm
Weight	70.0g(Typ.)

Characteristic Curves



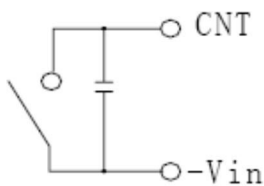
Design References

1. Application circuit

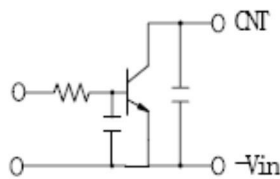


Bit number	Specification parameter
C1	470μF/100V Electrolytic capacitor
Co	100μF/100V Electrolytic capacitor
Co1	1μF/100V Chip capacitor

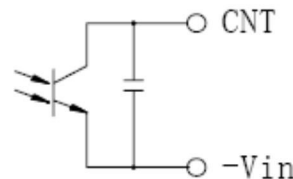
2. Several ways of CNT remote control (This model is negative logic control)



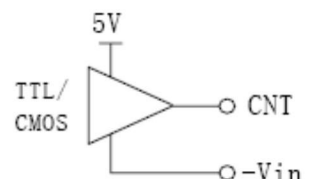
Switch control mode



Transistor control mode



Isolation control mode

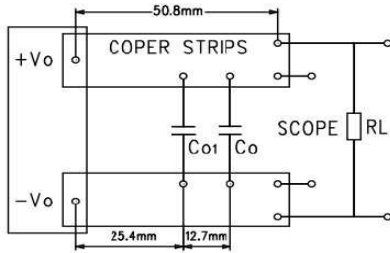


TTL/CMOS control mode

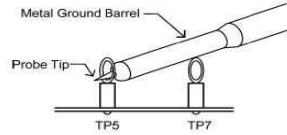
CNT working state of converter:

Control mode	CNT low level ($-0.7V_{dc} \sim 1.2V_{dc}$)	CNT high level ($3.5V_{dc} \sim 20V_{dc}$)	CNT suspension
Negative logic control	Output start	Output off	Output off
Positive logic control	Output off	Output start	Output start

3. Ripple noise test



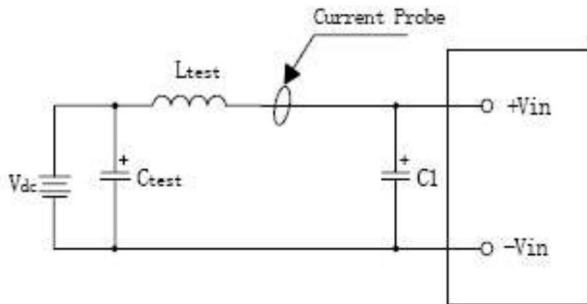
Output ripple and noise test diagram



Oscilloscope probe test method diagram

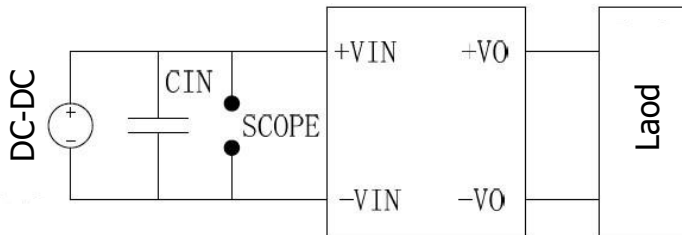
Bit number	Specification parameter
C0	1uF/100V Ceramic capacitor
C01	10uF/100V Electrolytic capacitor, capacitance (ESR≤100 mΩ)
Scilloscope 20MHZ bandwidth limit	

4. Input reflection ripple current test diagram



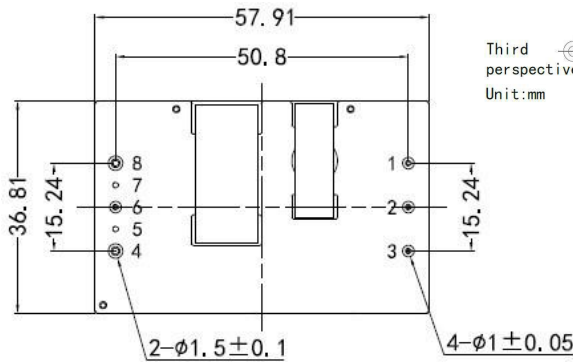
Bit number	Specification parameter
Ltest	12μH@100kHz
Ctest	220μF/100V, ESR<0.1Ω@20°C/100kHz, Electrolytic capacitors with high frequency characteristics are recommended
C1	220μF/100V, ESR<0.1Ω@20°C/100kHz
Scilloscope 20MHZ bandwidth limit	

5. Input reflection ripple voltage test diagram



Bit number	Specification parameter
CIN	100uF/100V Electrolytic capacitor
Oscilloscope with full bandwidth	

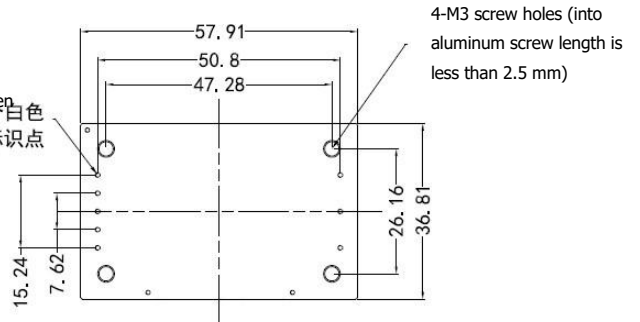
Dimensions and Recommended Layout



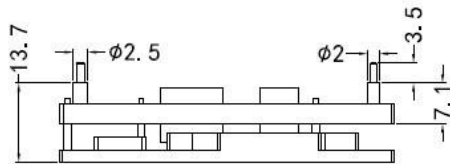
Bottom view



Eight white screen marking points
八个白色丝印标识点



Top 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	NP	No pin
6	Trim	Voltage regulating terminal
7	NP	No pin
8	+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;