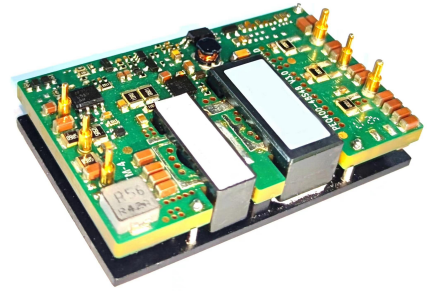


## FEATURES

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	-	

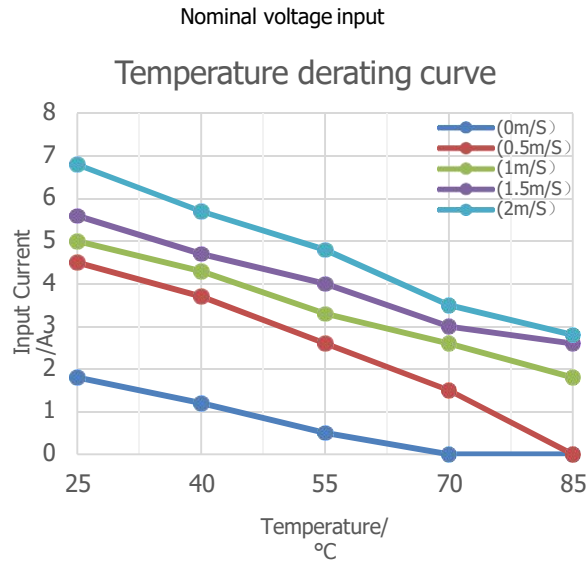
## General Specifications

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

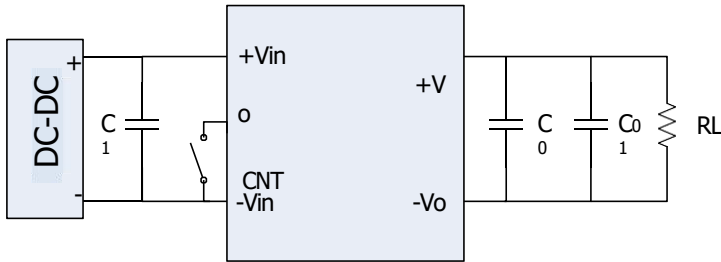
<b>Size</b>	57.90mm×36.80mm×13.70 mm
<b>Weight</b>	70.0g(Typ.)

### Characteristic Curves



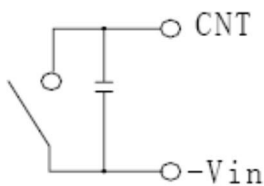
### Design References

#### 1. Application circuit

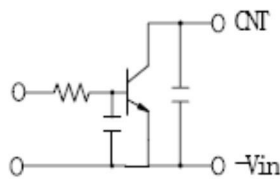


Bit number	Specification parameter
C1	470μF/100V Electrolytic capacitor
Co	100μF/100V Electrolytic capacitor
Co1	1μF/100V Chip capacitor

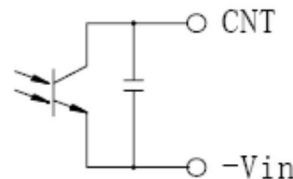
#### 2. Several ways of CNT remote control (This model is negative logic control)



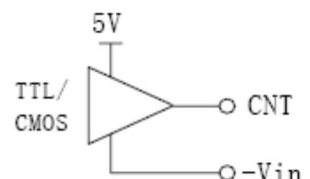
Switch control mode



Transistor control mode



Isolation control mode

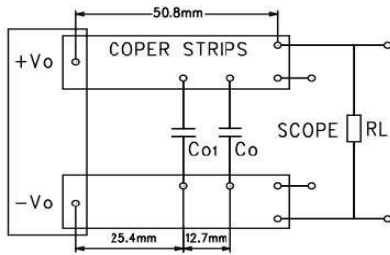


TTL/CMOS control mode

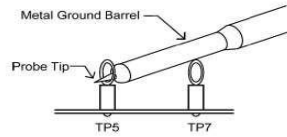
CNT working state of converter:

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



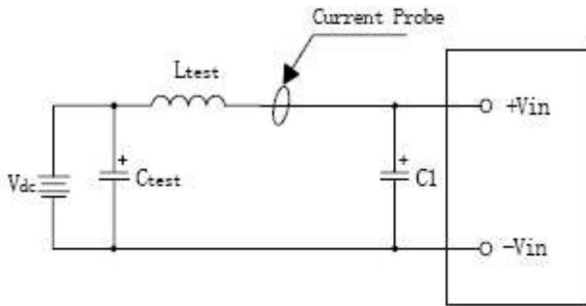
Output ripple and noise test diagram



Oscilloscope probe test method diagram

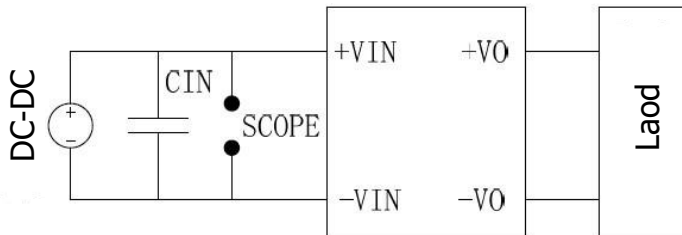
Bit number	Specification parameter
C0	1uF/100V Ceramic capacitor
C01	10uF/100V Electrolytic capacitor, capacitance (ESR≤100 mΩ)
Scilloscope 20MHZ bandwidth limit	

### 4. Input reflection ripple current test diagram



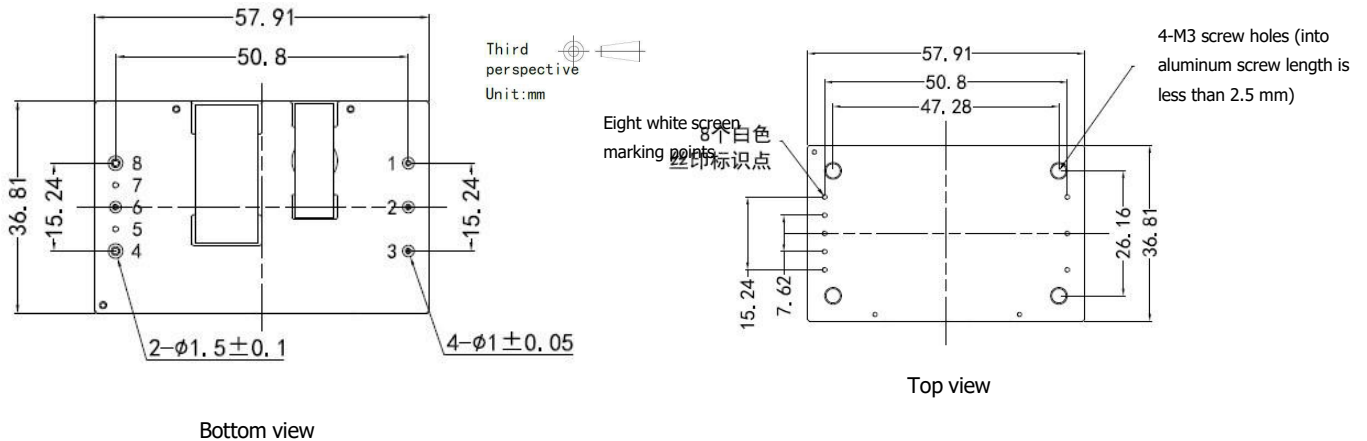
Bit number	Specification parameter
Ltest	12μH@100kHz
Ctest	220μF/100V, ESR<0.1Ω@20°C/100kHz, Electrolytic capacitors with high frequency characteristics are recommended
C1	220μF/100V, ESR<0.1Ω@20°C/100kHz
Scilloscope 20MHZ bandwidth limit	

### 5. Input reflection ripple voltage test diagram



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

### Dimensions and Recommended Layout



#### 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:

Size unit: mm

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

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

#### 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;