ECCO Electronics Technology Co.,ltd

400W DC-DC converter

Typical Performance

FEATURES

- Wide Input voltage range (2:1)
- Typical Efficiency:85%
- Switching frequency：300KHz
- Output Overcurrent protect,Short circuit protection
- input under voltage protection,output over voltage protection
- input-output isolated
- PCB Board in-line type installs
- High reliability
- Optional heat sink



3-Years Product Warranty

Technology parameter Test condition:General Nominal Line,Tc=25℃， Rated resistant load unless other wisespecified

Input Features	Min	Nom	Max	Notes
	Test condition			
Start voltage	96V(65~150Vin)			65V
	110V(82~180Vin)			82V
Input under voltage protection	96V(65~150Vin)			60V
	110V(82~180Vin)			70V
Input voltage（Vdc）	65	96	150	W 2:1
	82	110	180	W 2:1
Start time	Not capacitive load			20mS
Remote On/Off Function				
CTL	CNT Pin connect -Vin			ON
	CNT Pin left open			OFF
Output Feature				
	Test condition			

Voltage accuracy	Io=0.1...1.0xIonom,Vi=Vrated		±1.0%
Line regulation	Vimin≤Vi≤Vimax		±0.2%
Load regulation	Io=0.1...1.0xIonom,Vimin≤Vi≤Vimax,,Vi=Vrated		±0.5%
Ripple&noise	2-MHz Broadband		1%
Over current protection	Vimin≤Vi≤Vimax		120%
Peak Deviation	25% Rated Load Vary		±5.0%
Dynamic Response Setting Time			400us
Output Voltage Trim	Vimin≤Vi≤Vimax		10%
Switching frequency	Vimin≤Vi≤Vimax		300KHz

General Feature

	Test condition		
Efficiency			85% typical
Board temperature	Industry level		-25℃ ~ +55℃
Working environment temperature	Military level		-25℃ ~ +85℃
Max Board temperature	Industry level		+85℃
	Military level		+105℃
Storage temperature	Industry level		-40℃ ~ +105℃
	Military level		-50℃ ~ +105℃
Relative humidity	No condensation		5%~90%RH
Temperature coefficient			±0.02%/℃
case material			aluminium baseplate
Isolated resistance	Input-Output		100M ohm
Vibration resistance	10~55Hz		5G
Over current mode	Full input range	Protection type : Hiccup mode, recovers automatically	
Cooling		Heatsink,nature cooling	
Case material		epoxy,Aluminum base plate	
Isolated Voltage	Input-output 1500Vdc; input-FG 1500Vdc,Output-FG 500Vdc		
MTBF	MIL-HDBK-217F2		$5X10^6$Hrs

Product Nomination Method

example	L D 200 – H 48 S 12 ① ② ③ ④ ⑤ ⑥ ⑦

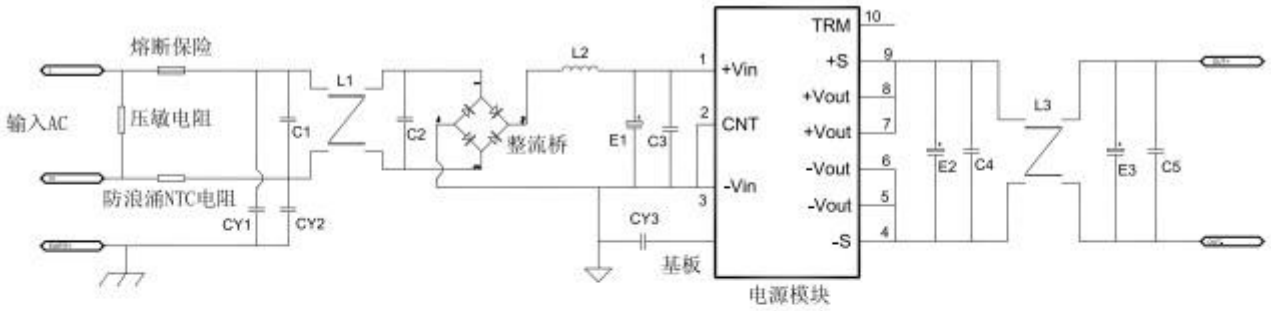
①	Wide input voltage：2：1	④	H:high voltage input
②	Power adaptation mode：D（DC-DC）	⑤	Normal input voltage
③	Output power(W)	⑥	S=Single route output
⑦	output voltage		

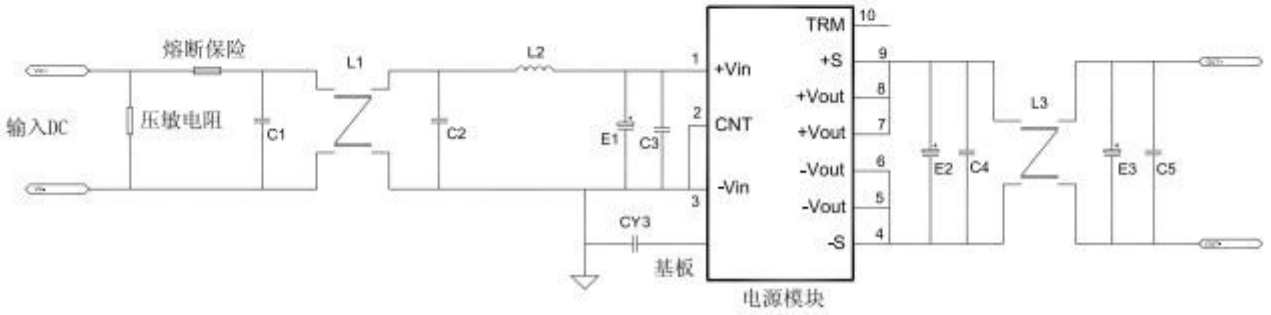
Product Program

PART #	Input voltage range	Output voltage / current				
		VO1		VO2		Typical Efficiency
		V	A	V	A	%
LD400H-96S12	96V(65~150V)	12V	33.3A			89
LD400H-96S15		15V	26.7A			89
LD400H-96S24		24V	16.7A			89
LD400H-96S28		28V	14.3A			89
LD400H-96S48		48V	8.3A			89
LD400H-110S12	110V(82-180V)	12V	33.3A			89
LD400H-110S15		15V	26.7A			89
LD400H-110S24		24V	16.7A			89
LD400H-110S28		28V	14.3A			89
LD400H-110S48		48V	8.3A			89

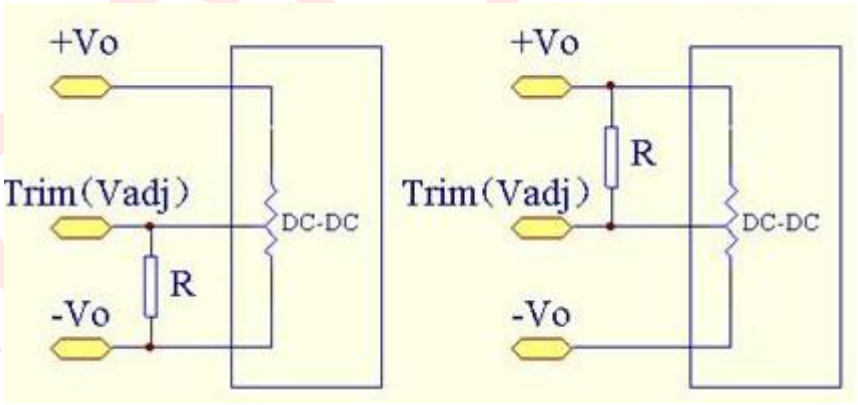
Recommended Circuit

Rated voltage	Fuse	voltage dependent resistor	rectifier bridge	NTC	C1C2C3	CY1CY2CY3	E1
110V	20A	300V	40A	4Ω/Φ20	105/200V	472/3KV	1000μF/200V
220V	10A	560V	20A	5Ω/Φ20	105/400V	472/3KV	1000μF/400V



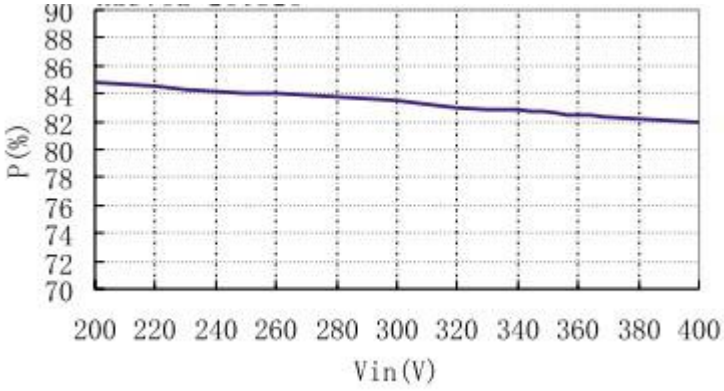


TRIM

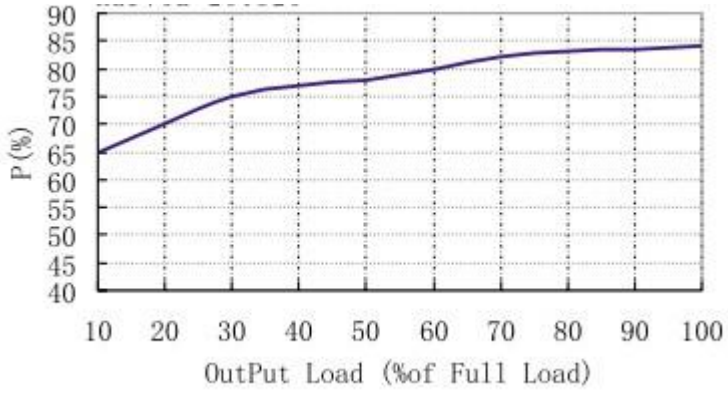


Raise output voltage **Low output voltage**

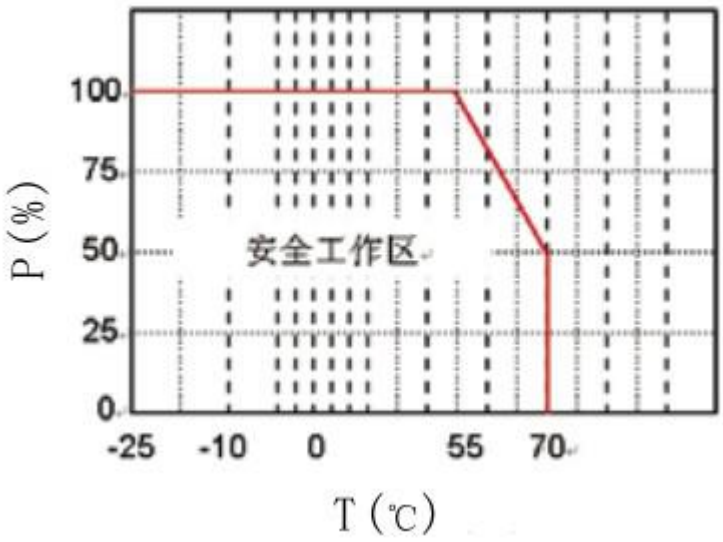
Input voltage--Efficiency



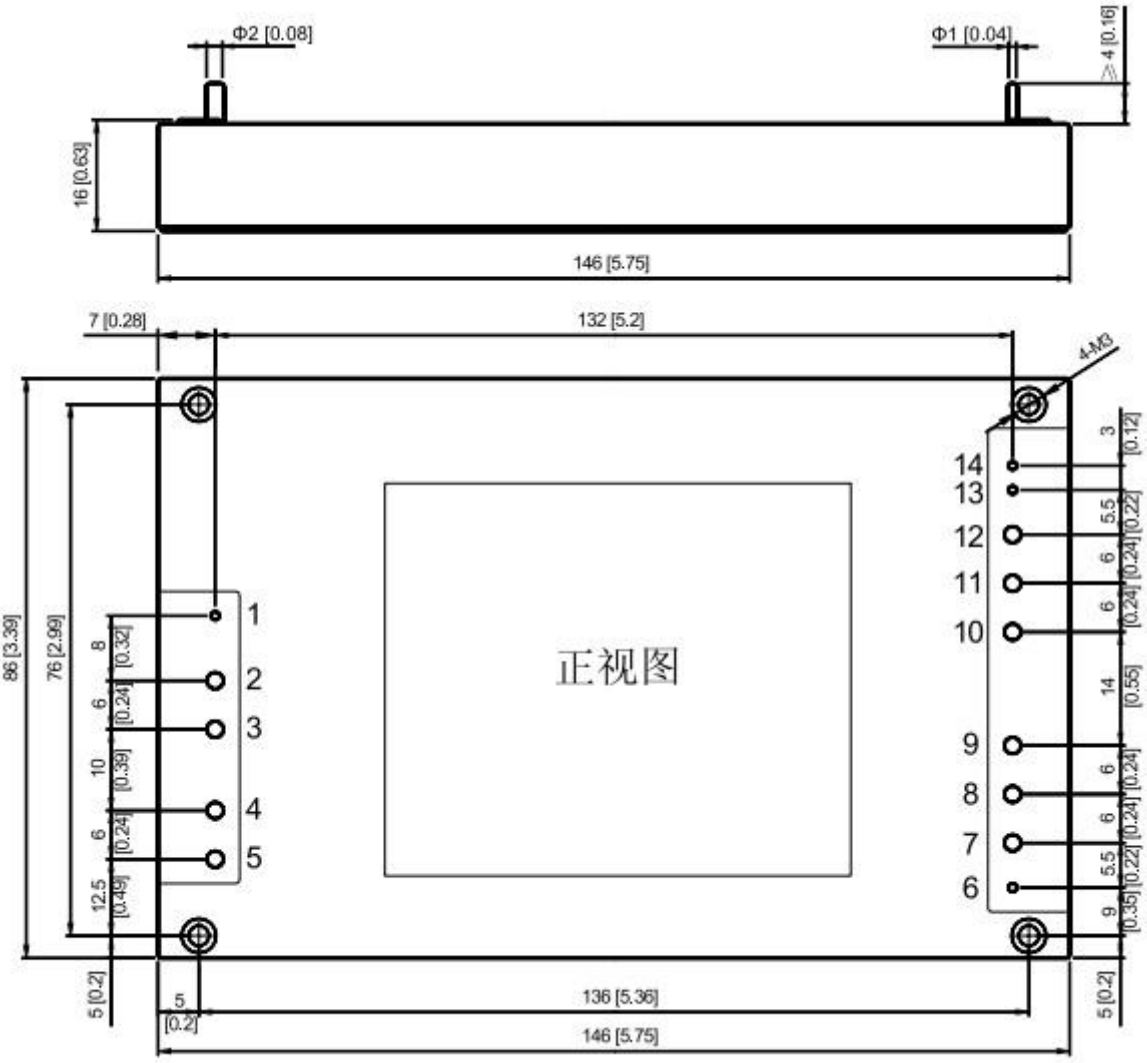
Output Load--Efficiency



Temperature Curve



Mechanical Dimension



BOTTON VIEW

Unit:mm(inch)

Tolerance:±0.2mm(±0.008inch)

Mechanical Data

WATT	L x W x H	Packing No.
400W	146*86*16mm	

Pin Assignment

Pin	1	2	3	4	5	6	7	8	9	10	11	12	13	14
Single O/P	CTL	-Vin	-Vin	+Vin	+Vin	+S	+Vout	+Vout	+Vout	-Vout	-Vout	-Vout	-S	TRIM

*Note：The power modules such as the definition of the pin does not match with the hand book,please refer to the actual item.