FEATURES：

- Wide input range
- Continuous short-circuit protection,self recover
- I/O isolation voltage 1.5KV
- Working temperature：-40℃～+85℃
- No additional components required
- Stable performance and high reliability (MTBF:2X10^{5}Hrs)
- Industry standard pin-out
- Metal case
- DIP package

Selection Guide

Part No.	INPUT		OUTPUT				CapacitiveLoad(μF)
	Norminal (Vdc)	Range (Vdc)	Voltage (V1dc)	current (mA)	Voltage (V2dc)	current (mA)	
LD12-12S05	12	9-18	5	2400			
LD12-12S09			9	1330			
LD12-12S12			12	1000			
LD12-12S15			15	800			
LD12-12S18			18	667			
LD12-12S24			24	500			
LD12-12S28			28	429			
LD12-12S48			48	250			
LD12-12D3V3			+3.3	1200	-3.3	1200	
LD12-12D05			+5	1200	-5	1200	
LD12-12D09			+9	660	-9	660	
LD12-12D12			+12	500	-12	500	
LD12-12D15			+15	400	-15	400	
LD12-12D24			+24	250	-24	250	
LD12-18S05	18	9-36	5	2400			
LD12-18S09			9	1330			
LD12-18S12			12	1000			
LD12-18S15			15	800			
LD12-18S18			18	667			
LD12-18S24			24	500			
LD12-18S28			28	429			
LD12-18S48			48	250			
LD12-18D3V3			+3.3	1200	-3.3	1200	
LD12-18D05			+5	1200	-5	1200	
LD1218□D09			+9	660	-9	660	
LD12-18D12			+12	500	-12	500	
LD12-18D15			+15	400	-15	400	
LD12-18D24			+24	250	-24	250	

LD12-24S05			5	2400			
LD12-24S09			9	1330			
LD12-24S12	24	18-36	12	1000			
LD12-24S15			15	800			
LD12-24S18			18	667			
LD12-24S24			24	500			
LD12-24S28			28	429			
LD12-24S48			48	250			
LD12-24D3V3			+3.3	1200	-3.3	1200	
LD12-24D05			+5	1200	-5	1200	
LD12-24D09			+9	660	-9	660	
LD12-24D12			+12	500	-12	500	
LD12-24D15			+15	400	-15	400	
LD12-24D24			+24	250	-24	250	
LD12-36S05			5	2400			
LD12-36S09			9	1330			
LD12-36S12			12	1000			
LD12-36S15	36	18-72	15	800			
LD12-36S18			18	667			
LD12-36S24			24	500			
LD12-36S28			28	429			
LD12-36S48			48	250			
LD12-36D3V3			+3.3	1200	-3.3	1200	
LD12-36D05			+5	1200	-5	1200	
LD12-36D09			+9	660	-9	660	
LD12-36D12			+12	500	-12	500	
LD12-36D15			+15	400	-15	400	
LD12-36D24			+24	250	-24	250	
LD12-48S05			5	2400			
LD12-48S09			9	1330			
LD12-48S12			12	1000			
LD12-48S15			15	800			
LD12-48S18			18	667			
LD12-48S24			24	500			
LD12-48S28			28	429			
LD12-48S48			48V	250			
LD12-48D3V3			+3.3	1200	-3.3	1200	
LD12-48D05			+5	1200	-5	1200	
LD12-48D09			+9	660	-9	660	
LD12-48D12			+12	500	-12	500	
LD12-48D15			+15	400	-15	400	
LD12-48D24			+24	250	-24	250	

LD12-110S05	48	36-72	5	2400			
LD12-110S09			9	1330			
LD12-110S12			12	1000			
LD12-110S15			15	800			
LD12-110S18			18	667			
LD12-110S24	110	40-160	24	500			
LD12-110S28			28	429			
LD12-110S48			48	250			
LD12-110D3V3			+3.3	1200	-3.3	1200	
LD12-110D05			+5	1200	-5	1200	
LD12-110D09			+9	660	-9	660	
LD12-110D12			+12	500	-12	500	
LD12-110D15			+15	400	-15	400	
LD12-110D24			+24	250	-24	250	

customized accepted ,pls contact sales for details

Input Specifications

	Input Voltage Range（Vdc）	Nom(Vdc)	Max（Vdc）
Input Voltage	9-18	12	18
	9-36	18	36
	18-36	24	36
	18-72	36	72
	36-72	48	72
	40-160	110	160
Hot Plug	Unavailable		

Output Specifications

Item	Typ	Max	Test Conditions
Voltage Accuracy	±1%	±2%	0-100% load
Line Regulation	±0.2%	±0.5%	Input voltage variation from low to high at full load
Load Regulation	±0.5%	±1%	5%-100% load
Ripple&Noise	60mVp-p	80mVp-p	20MHz bandwidth, 5%-100% load
Startup delay time	50ms	-	
Over-voltage Protection	-	160%Vo	110%Vo(Min)
Over-current Protection	-	200%Io	110%Io(Min)
Short-circuit Protection	Continuous, self-recovery		

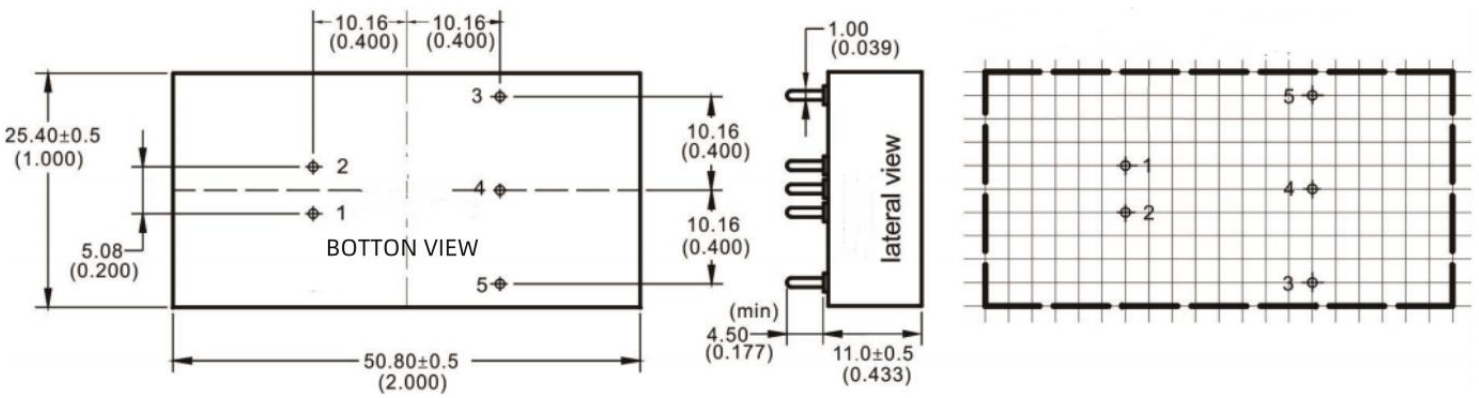
Gerneral Specifications

Switching Frequency	280KHz(Typ)	PWM mode
MTBF	2X10^{5}Hrs	MIL-HDBK-217F@25℃
Isolation（Input-Output）	1.5KVDC	
Operating Temperature	-40～+85℃	
Storage Temperature	-55～+125℃	

Storage Humidity	5-95%RH	Non-condensing
Cooling Method	Free air convection	
Case Material	Aluminum alloy	
Weight	15g（Typ）	

**Unless specified, otherwise all other parameters are tested under the following conditions: nominal input voltage, pure resistive load, 25℃ room temperature environment.

Dimensions and Recommended Layout

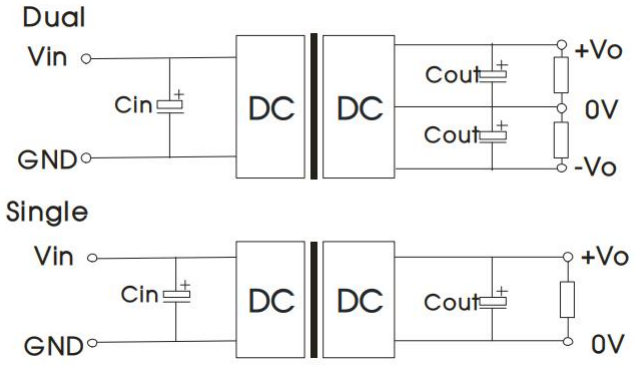


Unit:mm(inch)

Pins

Pin	Single	Dual	
1	-Vin	-Vin	
2	+Vin	+Vin	
3	+Vo	+Vo	
4	No Pin	COM	
5	-Vo	-Vo	

Recommended Circuit



Recommended input and output capacitor values				
Vin	Cin	Cout		
5	100uF/16V			
12	100uF/25V			
24	10uF/50V-47uF/50V			
48	10uF/100V-47uF/100V			

Noted

1. The product should be used within the specified range; otherwise, it may cause permanent damage to the product.
2. If the product operates beyond its load range, it cannot be guaranteed that all performance indicators of the product comply with those in this manual.
3. Unless otherwise specified, all the above data were measured at Ta=25℃, humidity <75%, input nominal voltage and output rated load (pure resistance load).
4. The above are all performance indicators of the product models listed in this manual. Some indicators of non-standard models may exceed the above requirements. For specific situations, you can directly contact our technical personnel.
5. Product specification changes will not be notified separately. Please pay attention to the latest manual published on our company's official website.

*The final interpretation right of the product belongs to ECCO ELECTRONICS.