



AC/DC LH10~30 Series

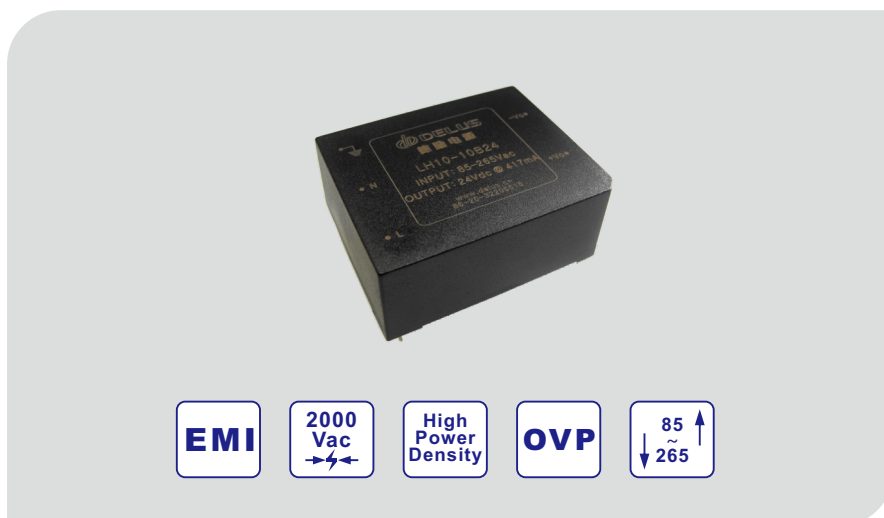


Features

- ◆ Operating temperature: -10 to +70°C
- ◆ 220Vac input
- ◆ 5V/9V/12V/15V/24V/48V
±5V/±12V/±15V output
- ◆ Efficiency up to 84%
- ◆ Ultra low noise & ripple
- ◆ Excellent EMC performance
- ◆ 100% burn-in
- ◆ No external heat sink
- ◆ Continuous short circuit protection
- ◆ RoHS/CE compliance
- ◆ With 3 years warranty

General Description

LH10~30 series AC/DC converter has wide input voltage range, high efficiency, high reliability, security, isolation and other characteristics, widely used in industrial and civilian facilities.



Input Specifications

Item	Test Conditions	Min	Typ	Max	Units
Input Frequency			47~63Hz		
Input Voltage Range			85~265Vac		

Output Specifications

Item	Test Conditions		Min	Typ	Max	Units
Output Power	Ta=-10-+55°C				30	W
Input Variation				±0.1	±0.5	%
Load Variation	10%-100% load			±1	±5	
Output Voltage Accuracy	100% load	Master		±1	±3	
		Slave		±3	±5	
Ripple & Noise	DC-20MHz bandwidth				1%Vout	mVp-p
Start Delay Time	100% load			1		S
Transient Recovery Time	25% load step change				200	uS
The Overshoot Rate			±5%(ΔVo1/Vo1)			
Short Circuit Protection			Continuous, Automatic Recovery			

Isolation Specifications

Item	Test Conditions	Min	Typ	Max	Units
Isolation Resistance	Test at 500Vac	100			MΩ
Isolation Voltage I/O	Tested for 1S and 1 mA max	2000			Vac
Isolation Voltage out1/out2	Tested for 1S and 1 mA max	500			Vac

Common Specification

Item	Test Conditions	Min	Typ	Max	Units
Operating Temperature	Ta>55°C derating	-10		+70	°C
Maximum Case Temp				90	
Storage Temperature		-40		+105	
Lead Temperature	1.5mm from case for 10 seconds			+300	
Storage Humidity				85	%
Case Material		Black plastic (UL94V-0)			
Install		PCB			

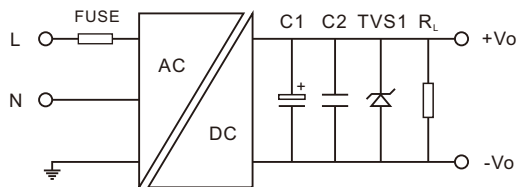
LH10~30 Series

10~30w, 220Vac input, isolated & regulated output ac-dc converter

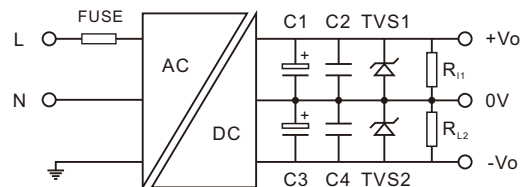


Typical Applications

LHxx-xxBxx (single output)



LHxx-xxAxx (dual output)



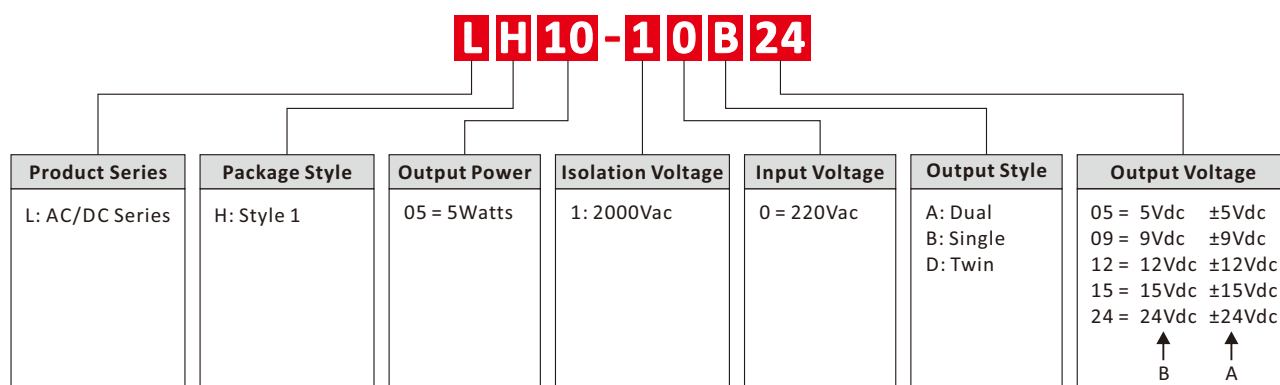
Parameter Description

Model	C1	C2	FUSE	TVS1	Vout	C1, C3	C2, C4	FUSE	TVS1, TVS2
LH10-10B05	330uF	0.1uF	1A/250V	P6KE6.8A	LH10-10A05	120uF	0.1uF	1A/250V	P6KE6.8A
LH10-10B12	120uF			P6KE16A	LH10-10A12	68uF			P6KE16A
LH10-10B15	68uF			P6KE20A	LH10-10A15	47uF			P6KE20A
LH10-10B24	68uF			P6KE33A	LH10-10A24	10uF			P6KE33A
LH10-10B48	47uF			P6KE62A					
LH15-10B05	680uF	0.1uF	1A/250V	P6KE6.8A	LH15-10A05	470uF	0.1uF	1A/250V	P6KE6.8A
LH15-10B12	220uF			P6KE16A	LH15-10A12	220uF			P6KE16A
LH15-10B15	220uF			P6KE20A	LH15-10A15	120uF			P6KE20A
LH15-10B24	68uF			P6KE33A	LH15-10A24	47uF			P6KE33A
LH15-10B48	47uF			P6KE62A					
LH20-10B05	330uF	0.1uF	1A/250V	P6KE6.8A	LH20-10A05	470uF	0.1uF	1A/250V	P6KE6.8A
LH20-10B12	220uF			P6KE16A	LH20-10A12	220uF			P6KE16A
LH20-10B15	220uF			P6KE20A	LH20-10A15	120uF			P6KE20A
LH20-10B24	220uF			P6KE33A	LH20-10A24	47uF			P6KE33A
LH20-10B48	47uF			P6KE62A					
LH20-10B05	330uF	0.1uF	1A/250V	P6KE6.8A	LH20-10A05	470uF	0.1uF	1A/250V	P6KE6.8A
LH20-10B12	220uF			P6KE16A	LH20-10A12	220uF			P6KE16A
LH20-10B15	220uF			P6KE20A	LH20-10A15	120uF			P6KE20A
LH20-10B24	220uF			P6KE33A	LH20-10A24	47uF			P6KE33A
LH20-10B48	47uF			P6KE62A					

Remark:

Output filtering capacitors C1, C3 are electrolytic capacitors, it is recommended to use high frequency and low impedance electrolytic capacitors. For capacitance and current of capacitor please refer to manufacture's datasheet, voltage derating of capacitor should be 80% or above. C2,C4 are use to filter high frequency noise, suggest choose 0.1μF.
TVS is recommended to protect post-circuits (when the circuit is abnormal).

Selection Guide



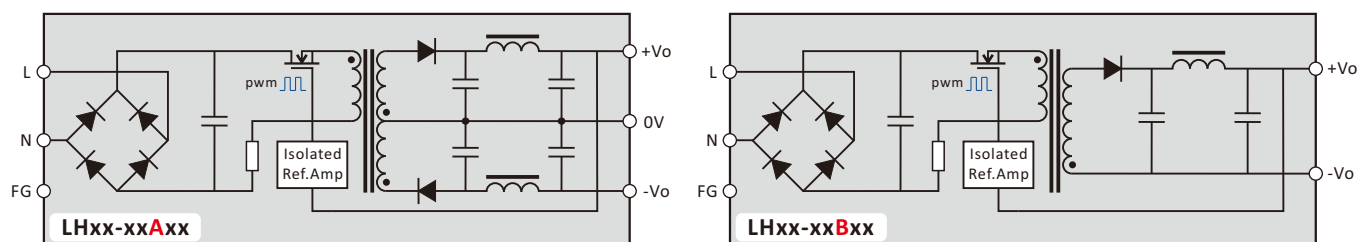
LH10~30 Series

10~30w, 220Vac input, isolated & regulated output ac-dc converter



Product Program										
Model	Input		Output				Eff (%)	Certificate	Pin-Out Config.	Order Status
	Voltage(Vac)		Voltage(Vdc)	Current(mA)		Ripple (mVp-p)				
	Nominal	Range	Nominal	Max	Min					
LH10-10B05	220	85-265	5	2000			76		LH10	ok
LH10-10B12			12	833			79		LH10	ok
LH10-10B15			15	667			80		LH10	ok
LH10-10B24			24	417			84		LH10	ok
LH10-10B48			48	208					LH10	no
LH10-10A05			±5	±1000			76		LH10	ok
LH10-10A12			±12	±417			79		LH10	ok
LH10-10A15			±15	±333			80		LH10	ok
LH10-10A24			±24	±208						
LH15-10B05	220	85-265	5	3000			76		LH15	ok
LH15-10B12			12	1250			79		LH15	ok
LH15-10B15			15	1000			80		LH15	ok
LH15-10B24			24	625			84		LH15	ok
LH15-10B48			48	313						no
LH15-10A05			±5	±1500			76		LH15	ok
LH15-10A12			±12	±625			79		LH15	ok
LH15-10A15			±15	±500			80		LH15	ok
LH15-10A24			±24	±313						
LH20-10B05	220	85-265	5	4000			76		LH20	ok
LH20-10B12			12	1667			79		LH20	ok
LH20-10B15			15	1333			80		LH20	ok
LH20-10B24			24	833			84		LH20	ok
LH20-10B48			48	417					LH20	no
LH20-10A05			±5	±2000			76		LH20	ok
LH20-10A12			±12	±833			79		LH20	ok
LH20-10A15			±15	±667			80		LH20	ok
LH20-10A24			±24	±417					LH20	no
LH30-10B05	220	85-265	5	6000			76		LH30	ok
LH30-10B12			12	2500			79		LH30	ok
LH30-10B15			15	2000			80		LH30	ok
LH30-10B24			24	1250			84		LH30	ok
LH30-10B48			48	625					LH30	no
LH30-10A05			±5	±3000			76		LH30	ok
LH30-10A12			±12	±1250			79		LH30	ok
LH30-10A15			±15	±1000			80		LH30	ok
LH30-10A24			±24	±625					LH30	no

Functional Diagram



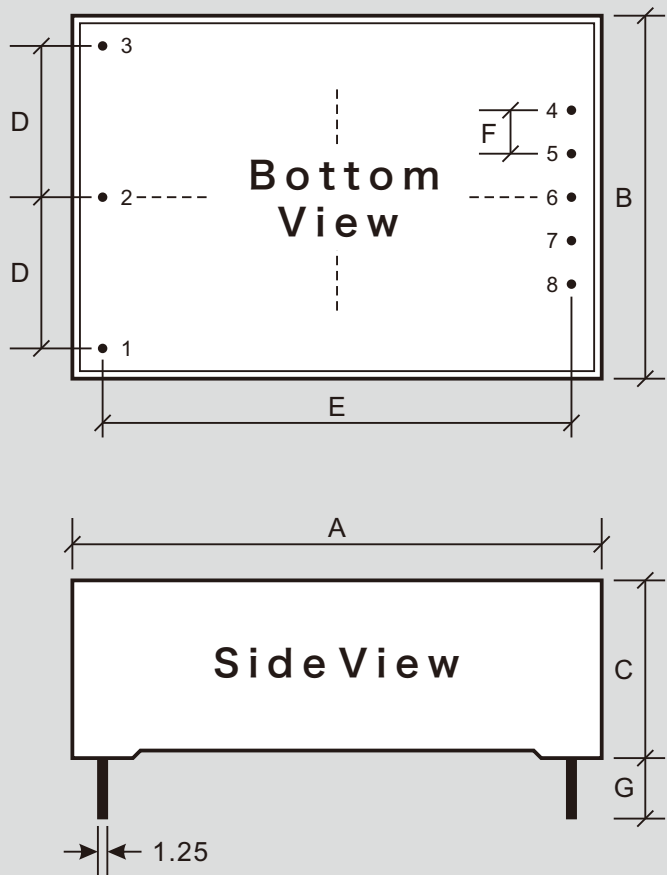
LH10~30 Series

10~30w, 220Vac input, isolated & regulated output ac-dc converter



Outline Dimensions

First Angle Proj



Pin	Single	Dual		
1				
2	AC(N)-	AC(N)-		
3	AC(L)+	AC(L)+		
4	+Vo	+Vo		
5	no pin	no pin		
6	no pin	0V		
7	no pin	no pin		
8	0V	-Vo		

No.	LH10	LH15	LH20	LH30
A	55.0±0.5	62.0±0.5	72.0±0.5	72.0±0.5
B	45.0±0.5	45.0±0.5	50.0±0.5	50.0±0.5
C	22.0±0.5	22.0±0.5	23.5±0.5	23.5±0.5
D	17.5±0.2	17.5±0.2	20.5±0.2	20.5±0.2
E	47.0±0.2	54.0±0.2	62.0±0.2	62.0±0.2
F	5.0±0.2	5.0±0.2	5.75±0.2	5.75±0.2
G	5.0±0.2	5.0±0.2	5.0±0.2	5.0±0.2

File Release Notes

DBN-502 Technical Data Sheet Version



No.	Version	Data	Description
1	V0	2011/11/01	First release
2	A/0	2016/07/01	Fixed an wrong and change document version
3			
4			
5			

1. All data in addition to particular things, are Ta = 25°C, humidity<75%, nominal input voltage and output measured at rated load;
2. Non-standard models with some of the following indicators may be different from the specific circumstances of the Secretary to direct contact with me;
3. In the use of this manual, if some of them do not quite understand terms please refer to our <<DC/DC Converter Application Guide>>;
4. The Company focused on technological improvements, product specifications and parameter updates without notice, to pay attention to the latest information on website.

All Delus Corporation's products are manufactured, assembled and tested utilizing ISO9001 quality systems.
For information regarding Delus Corporation and its products please see website: www.delus-power.com

Delus Guangzhou Electronic Technology CO.,LTD

Tel: +86-20-32206616 Fax: +86-20-32206658 Mail: service@delus.cn