

KLS-F Series

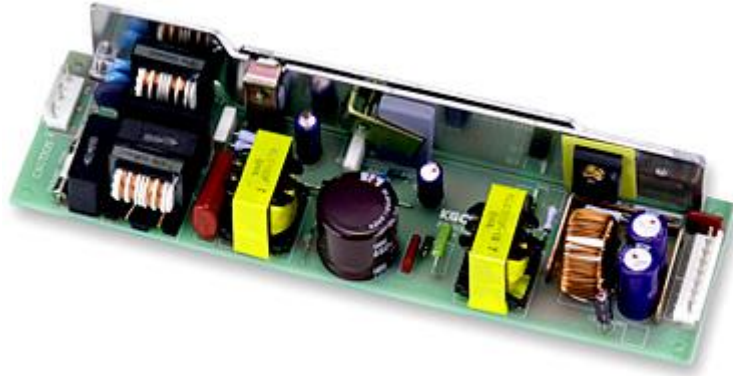
KGCOMP
PRODUCTS

Models

General Specification

Block Diagram

Operation Manual



2 years
Warranty

Features

- LOW COST
- UNIVERSAL INPUT
- HIGH RELIABILITY

Safety



Models

Type	MODEL	Output Voltage (V)	Output Current (A)	Dimensions (WxHxD mm)
10W	KLS10F-05	5	0-2.0	50x18x105
	KLS10F-12	12	0-0.9	
	KLS10F-15	15	0-0.7	
	KLS10F-24	24	0-0.5	
15W	KLS15F-05	5	0-3.0	50x18x125
	KLS15F-12	12	0-1.3	
	KLS15F-15	15	0-1.0	
	KLS15F-24	24	0-0.7	
30W	KLS30F-05	5	0-6.0	55x23x133
	KLS30F-12	12	0-2.5	
	KLS30F-15	15	0-2.0	
	KLS30F-24	24	0-1.3	
50W	KLS50F-05	5	0-10	55x23x195
	KLS50F-12	12	0-4.3	
	KLS50F-15	15	0-3.5	
	KLS50F-24	24	0-2.1	
75W	KLS75F-05	5	0-15	55x29x222
	KLS75F-12	12	0-6.3	
	KLS75F-15	15	0-5	
	KLS75F-24	24	0-3.2	
100W	KLS100F-05	5	0-20	62x32x222
	KLS100F-12	12	0-8.5	
	KLS100F-15	15	0-6.7	
	KLS100F-24	24	0-4.3	
150W	KLS150F-05	5	0-30	75x37x222
	KLS150F-12	12	0-12.5	
	KLS150F-15	15	0-10	
	KLS150F-24	24	0-6.3	

*KLS series does not have chassis and cover.

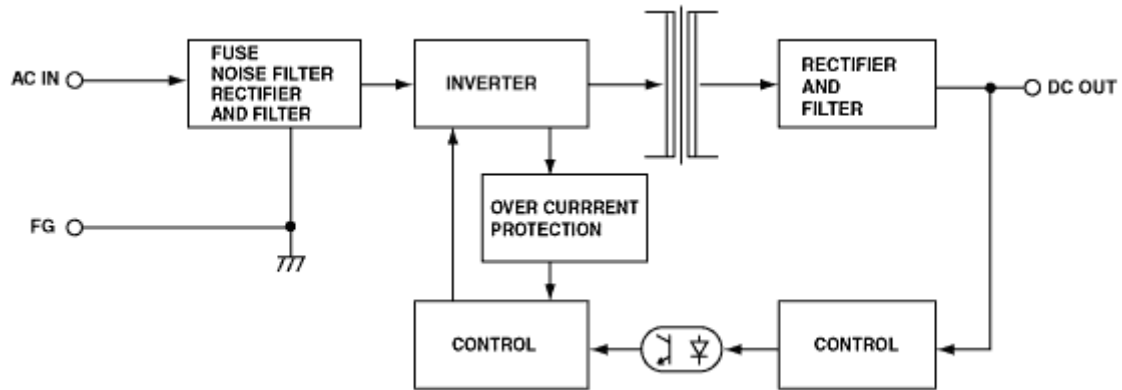
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GENERAL SPECIFICATION

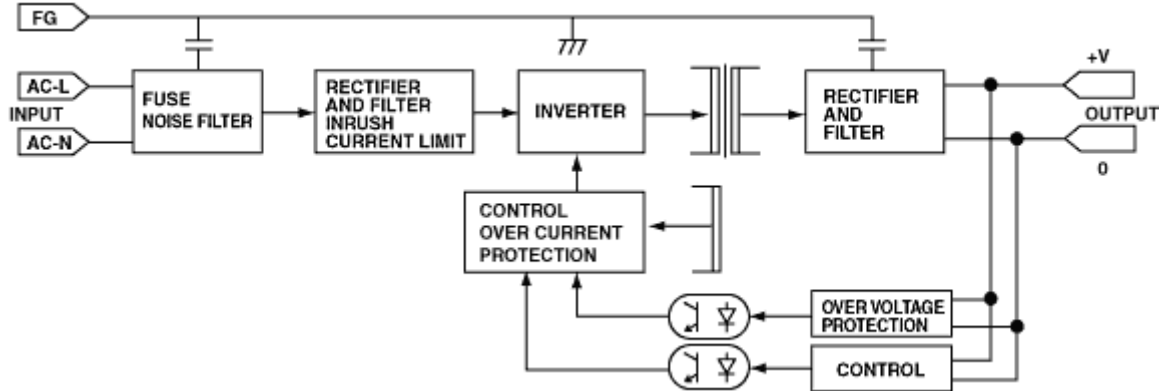
Input Specification	AC Input	100VAC-230VAC (85VAC to 264VAC)	
	Frequency	50-60Hz (47 to 63Hz)	
General Specification	Operating Temperature	-10 deg C to +60 deg C	
	Storage Temperature	-20 deg C to +75 deg C	
	Operating Temperature Humidity	30to 85%Rh	
	Isolation Resistance	Primary-Secondary-earth DC500V	100MOhm
		Primary to FG DC500V	100MOhm
		Secondary to FG DC500V	100MOhm
	Isolation Voltage	Primary-Secondary-earth Cut off current10mA	3000VAC
Primary to FG		2000VAC (10W,15W,30,50W)	
Cut off current10mA		1500VAC (75W,100W,150W)	
Secondary to FG• @ Cut off current• @10mA		500VAC	
Environment	Leakage Current	0.5mA or less	
	Vibration	Amplitude 0.5mm 10Hz 1minute X,Y,Z30 minute	
	Impact	20G (once each X,Y,Z axis)	
	Cooling Method	Convention	
Safety	Safety 10W, 15W, 30W	UL 1950 THIRD EDITION, CAN/CSA C22.2, No. 950-95	
	Safety 50W, 75W, 100W, 150W	UL 60950 THIRD EDITION, CAN/CSA C22.2, No.60950-00 THIRD EDITION	

Block Diagram

KLS10F, KLS15F



KLS30F, KLS50F, KLS750F, KLS100F, KLS150F



Operation Manual

1. Input Voltage

This power supply operate within an input voltage range of 85VAC - 264VAC.

Caution should be taken not to apply an input voltage other than 85VAC - 264VAC.

2. Inrush Current

These power supplies are equipped with an inrush current protection circuit, but when multiple power supply units are in use, care must be exercised in the selection of switches, etc.

Inrush protection circuit will not activate when recycle is short, longer the recycle duration the better.

Note: Standard specifications is the maximum value at cold start.

3. Overcurrent Protection

KLS10/KLS15/KLS30

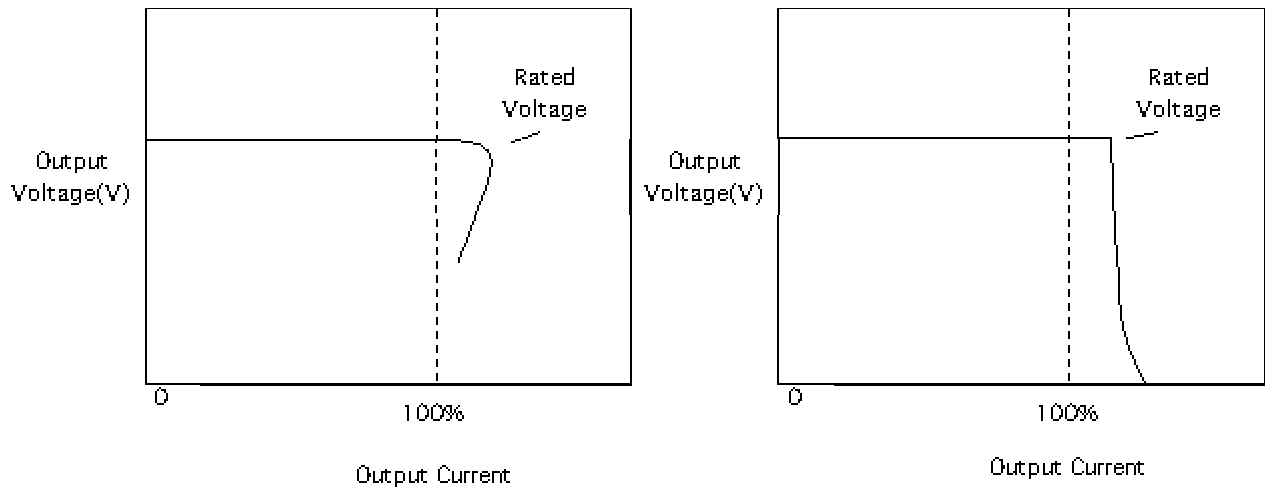
Overcurrent Protection:

These units incorporate an overcurrent protection circuit (If output current exceeds more than 110% of the rated output of the power supply, the overcurrent protection will activate and output voltage will drop). This protection circuit will protect the power supply for up to under 1 minute in overcurrent condition or output short mode . Damage to the power supply can be expected if overcurrent or short mode condition remains over 1 minute.

KLS50/KLS75/KLS100/KLS150

Overcurrent Protection:

If output current exceeds more than 110% of the rated output of the power supply, the overcurrent protection will activate and output voltage will drop. The power supply will function normally once the overcurrent condition has been removed. Do not use in overcurrent condition or short mode.



4. Overvoltage Protection

When output voltage becomes greater than regulated output voltage, the overvoltage protection will activate.

The 10W, 15W models utilize Zener limiter for overvoltage protection.

Caution should be taken to assure that voltage is not adjusted greater than recommended +2.5% (10W, 15W, 30W), +10% (50W, 75W, 100W, 150W) tolerance level.

The 30W, 50W, 75W, 100W, 150W models uses inverter circuit for overvoltage protection.

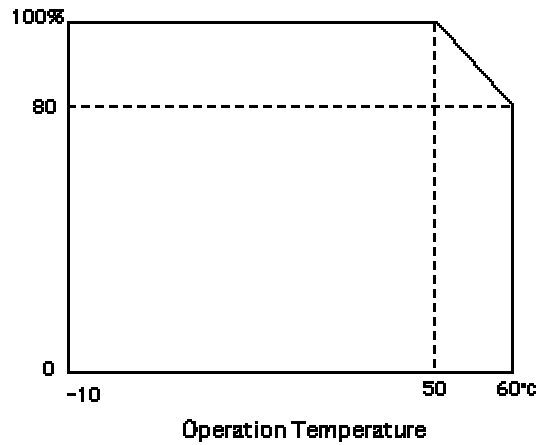
If overvoltage protection activates, turn off the power supply for approx 1.5 minute; check power supply, and recycle on. The power supply will resume normal operation.

5. Output Voltage Adjustment (Option)

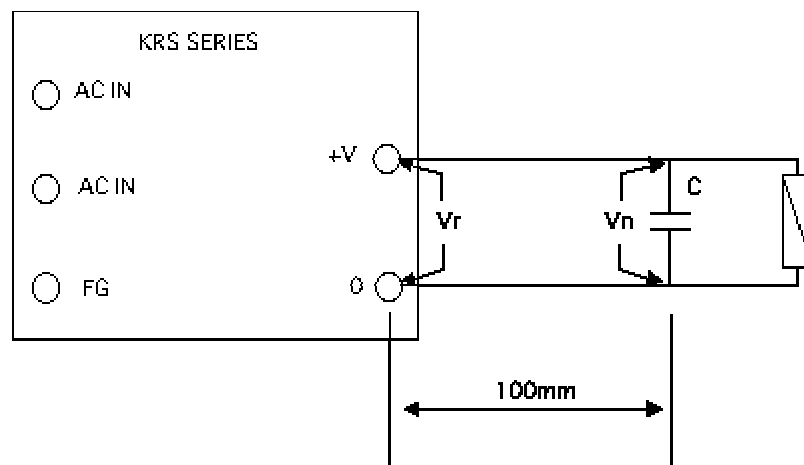
The output voltage can adjusted +-2.5% (10W, 15W, 30W), +-10% (50W, 75W, 100W, 150W) by adjusting trim pot on the PCB (Option). Turning the trim pot clockwise, will increase the output voltage. Turning the trim pot counterclockwise will decrease the output voltage. The output voltage can be adjusted greater than rated 2.5% or 10%, but the limitations are set by built-in overvoltage protection circuit. To adjust the output voltage, turn the trim pot counterclockwise, then gradually turn the trim pot clockwise.

6. Operation Temperature and Output Capability

The range of temperature over which a power supply can be operated safely is critical to the overall life of the power supply. Operate the power supply in safe ambient condition by considering the necessary convection or forced air cooling requirement.



7. Ripple and Noise



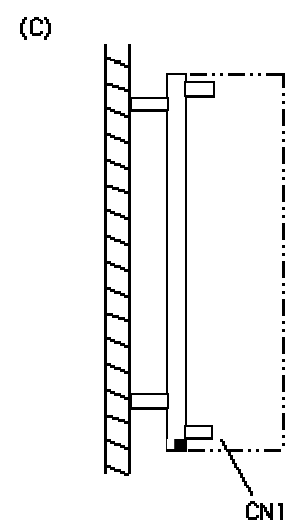
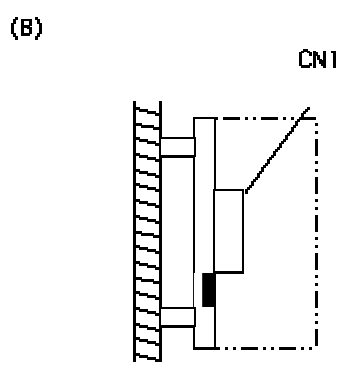
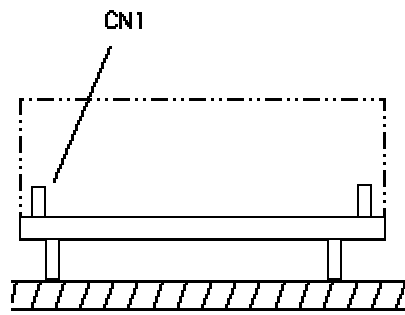
Vr: Testing point of output voltage, output regulation.

Vn: Testing point of ripple/noise (using bayonet probe).

C: 0.1 uF film capacitor with 47 uF electrolyte capacitor.
(KLS10F, 15F, 30F)

C: 0.1 uF film capacitor with 100 uF electrolyte capacitor.
(KLS50F, 75F, 100F, 150F)

8. Mounting of Power Supply



9. Series and Parallel Operation

KLS10/KLS15/KLS30

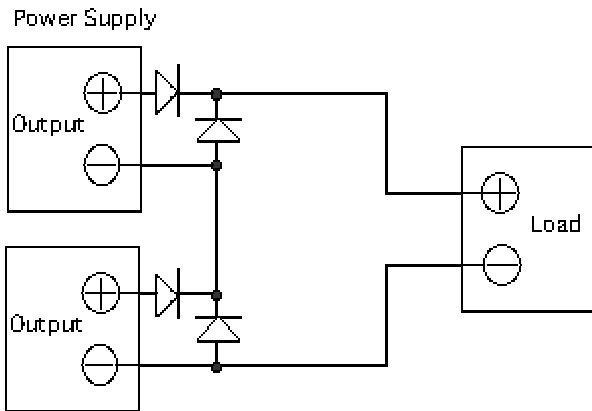
These power supplies can be used in series operation. In order for this system to work, the applied output current should be same or lower than rated output of the smaller power supply.

(a) Operation over 12V output

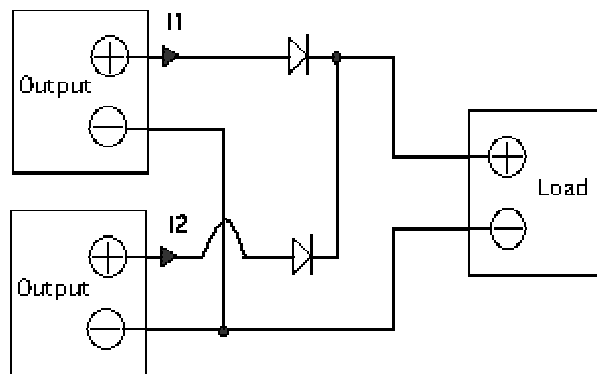
*A schottky-diode is recommended. Rated forward current of diode should be greater than the load current. Reverse voltage resistance should be higher than output voltage.

These power supplies can be used in parallel operation as shown below.





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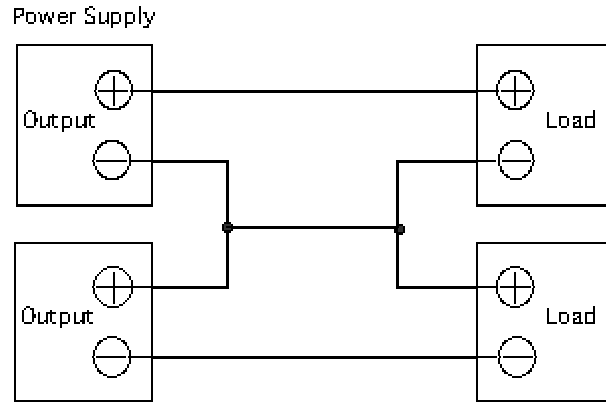
In order for the two power supplies to share the load accurately, it is important that both output voltage remain identical under all load and line conceives. This is necessary to prevent any unbalanced current sharing.

KLS50F, 75F, 100F, 150F

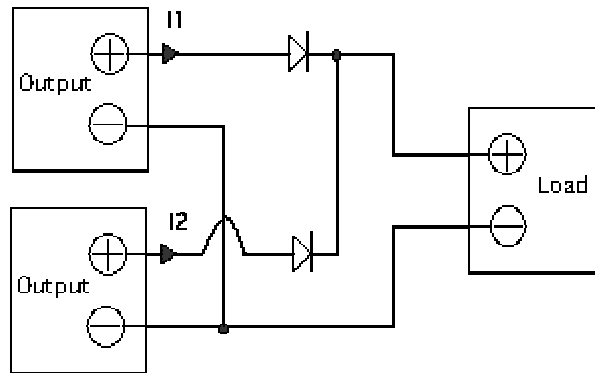
These power supplies can be used in series operation. In order for this system to work, the applied output current should be same or lower than rated output of the smaller power supply.

(a)

These power supplies can be used in parallel operation as shown below.



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In order for the two power supplies to share the load accurately, it is important that both output voltage remain identical under all load and line conditions. This is necessary to prevent any unbalanced current sharing.

10. Grounding

When you set power supply, please connect input FG contact to earth of your product. Please use metal SEM screw with washer and spring washer.

11. Others

- Using too large of capacitor on your load may prevent the power supply from providing the rated output voltage. Please consider load capacitance in your application.
- We offers a three year warranty and we will repair or replace the power supply at no charge to the customer, provided the power supply has not been determined damaged or defective as a direct

or nuclear control systems.

- Input fuse prevents secondary trouble. Don't try to change fuse. If fuse blows, contact your sales representative immediately.