

**Models**

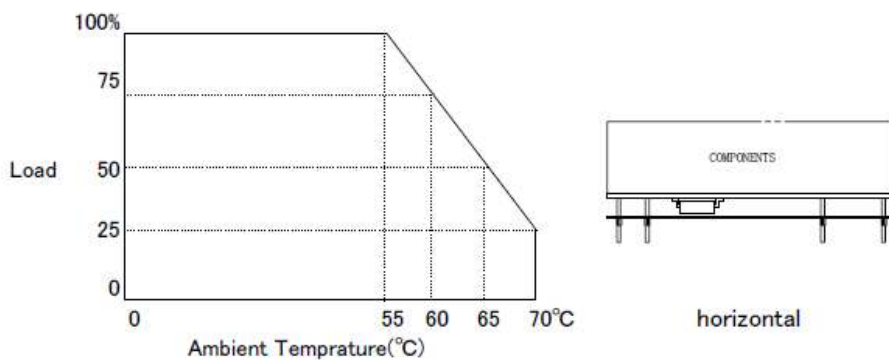
MODEL No.	Output Voltage (VDC)	Output Current (mA)		Efficiency at 100% Load (Typical)	
		100VAC	230VAC	100VAC	230VAC
KRD10F-1212	±12	42~420	50~500	79	81
KRD10F-1515	±15	35~350	42~420	81	82

**Specification**

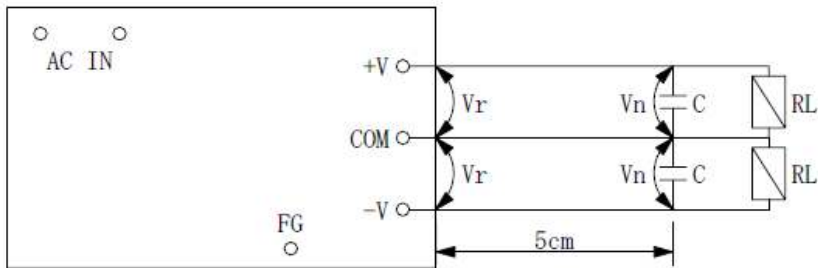
Input specification	
Input rating	100 - 230VAC (85 ~ 264VAC) 50 - 60Hz (47 ~ 63Hz)
In-rush current	0.22 - 0.16A typical (at nominal output)
Leakage current	11 / 20A typical (at 100/230VAC input)
	0.5 / 0.75mA maximum (at 100/230VAC 63Hz input)
Output specifications	
MODEL No.	KRD10F-1212      KRD10F-1515
Input regulation (85-132/170-264VAC)	20      20
Load regulation (10~100% load)	500      500
Ripple and Noise(mVmax)	150      150
Output voltage accuracy	±5%
Tempertaure coefficient	0.02%/°C maximum
Drift	(0.5% + 15mV)maximum / 8H(after 1H warm-up)
Rise-up Time	180mS typical (at 100/230VAC input)
Hold-up Time	11 / 95mS typical (at 100/230VAC input with nomial output)

Protection specifications	
Over Voltage Protection	N/A
Over Current Protection	over 105%, Automatic recovery Avoid sustained operation in over load condition.
Thermal Shutdown	Power supply, and recycle on. The power supply will resume normal operation.
Isolation specifications	
Isolation Resistance	Pri. – Sec. 100M $\Omega$ (DC 500V) Pri. – Fg. 100M $\Omega$ (DC 500V) Sec. – Fg. 100M $\Omega$ (DC 500V)
Isolation Voltage	Pri. – Sec. 3000Vac/1min (10mA) Pri. – Fg. 2000Vac/1min (10mA) Sec. – Fg. 500Vac/1min (10mA)
Environmental specification	
Operating Temp.	0 ~ +70°C (see derating curve FIG.1)
Storage Temp.	-20 ~ +85°C
Humidity	20 ~ 85%RH (No condensing.)
Safety	UL60950 CSA C22.2 No.60950 (cUL) CE (EN60950 A3 LVD) CB (IEC60950:1999,US/6301/UL)
EMI	FCC Part 15 Class B meet EN55022 Class B meet VCCI (II) meet
Shock & Vibration	
Vibration:	10 ~ 55Hz 0.5mm width/1minute cycle 3 directions each 30 minutes
Shock:	20G ( 3 directions each 3 times)
Externals size	32mm X 21.9mm X 65mm (W X H X D)
Weight	30g (TYP)

FIG.1 Derating Curve (Load vs Ambient Temp.)

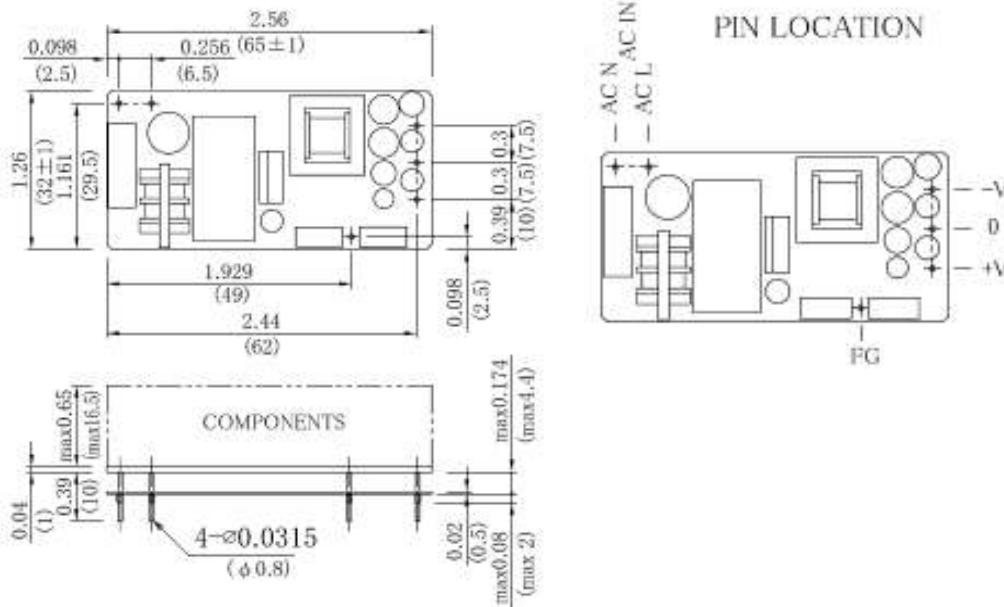


Measurement circuit  
(Dual)

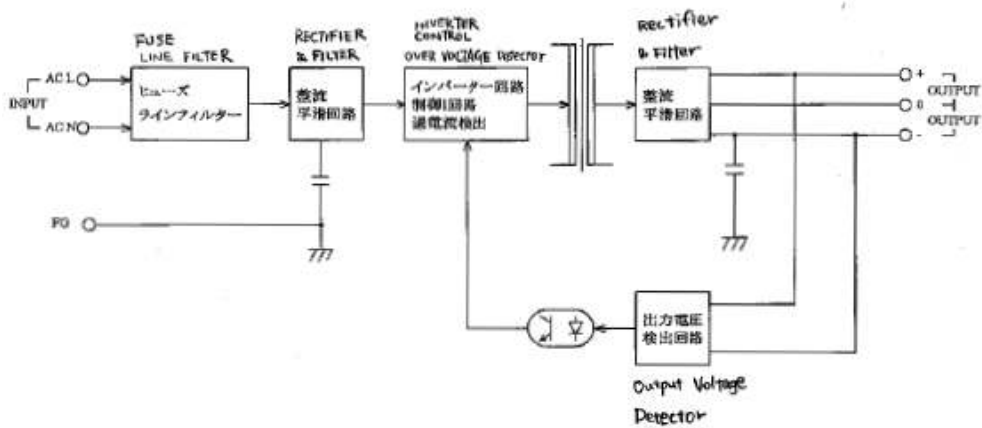


Vr: Measure point of line/load regulation and output voltage.  
 Vn: Measure point of ripple and noise.(Bayonet tip probe used)  
 C : 0.1uF film capacitor  
 It provides for this specifications at 25°C.

External View

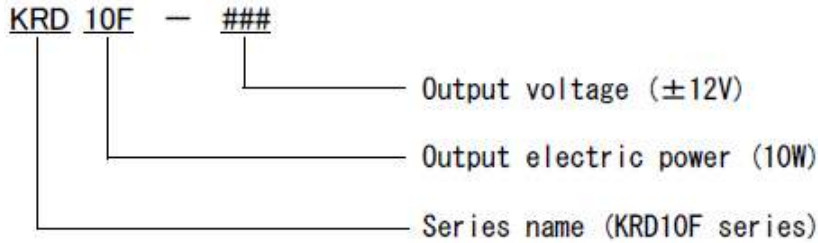


Block Diagram



## Operation Manual

### Explanation of model name



### Amends

After it delivers it, I will repair three years free of charge for an emergency breakdown. However, because handling is careless, it becomes for a fee.

### Soldering condition

Dip:  $240^{\circ}\text{C}$ – $255^{\circ}\text{C}$  (within five seconds)

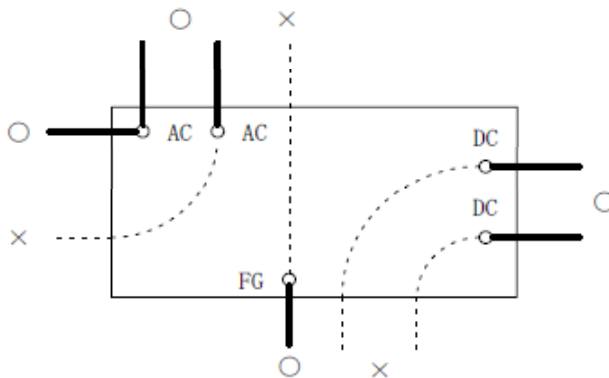
Hand solder:  $350^{\circ}\text{C} \pm 10^{\circ}\text{C}$  (within three seconds)

### Others

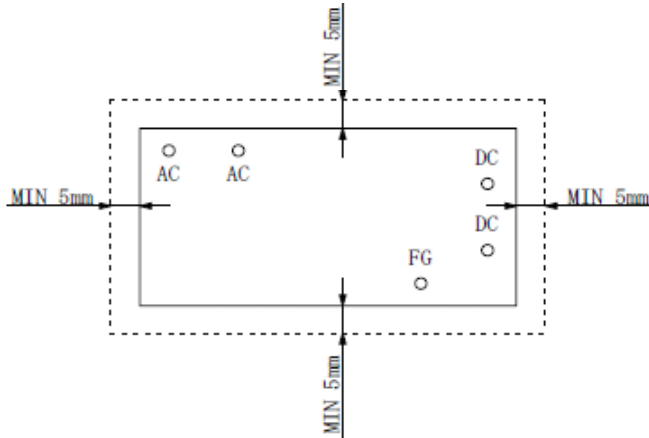
This series is designed in our standard power supply for the general electronic equipment building in. Please do not use it for the equipment (medical equipment, aircraft, and nuclear power control system, etc.) by which the malfunction and the breakdown of the power supply threaten the human body and the life directly.

### Directions

- ☆ The short-circuit leaving for a long time doesn't cause the breakdown and do not do, please.
- ☆ Please note that there is a case to cause a defective start when a mass capacitor (about  $10,000 \mu\text{F}$ ) is connected with the load edge.
- ☆ The input fuse prevents secondary destruction due to the breakdown of the power supply, and it doesn't operate normally in the exchange only of the fuse. Please request the repair to the agency or our company when the input fuse fuses.
- ☆ Please arrange it to separate the pattern from this power supply so that the voltage of the noise terminal might become large if it arranges it so that the pattern of the AC input line may pass under this power-supply unit. Moreover, please arrange it to separate the pattern from this power supply so that the output noise might become large if it arranges it so that the pattern of the DC output may pass under this power-supply unit.



☆ Please secure 5mm or more from the power supply when you arrange the pattern and parts (The chassis is included) that become different potential around the power supply. Please insert the insulating paper between those when becoming less than 5mm.



☆ It is likely to make an internal connection disconnected when the stress more than the necessity is added to the I/O pin of the power supply. Please adjust the stress to 2kgf or less by horizontal direction by 1kgf or less in or less in the vertical direction as shown in the figure below.

