

# Models

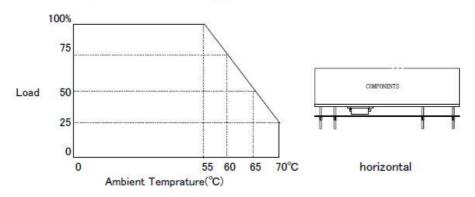
MODEL No.	Output Voltage	Output Current (mA)		Effeciency at 100% Load (Typical)	
	(VDC)	100VAC	230VAC	100VAC	230VAC
KRD10F-1212	±12	42~420	50~500	79	81
KRD10F-1515	±15	35~350	42~420	81	82

## Specification

Input specification					
	100 - 230VAC (85 ~ 264VAC)				
Input rating	50 - 60Hz (47 ~ 63Hz)				
	0.22 - 0.16A typical (at nominal output)				
In-rush current	11 / 20A typical (at 100/230VAC input)				
Leakage current	0.5 / 0.75mA maximum (at 100/230VAC 63Hz input)				
Output specifications					
MODEL No.	KRD10F-1212	KRD10F-1515			
Input regulation	20	20			
(85-132/170-264VAC)					
Load regulation	500	500			
(10 <b>~</b> 100% load)	300	300			
Ripple and Noise(mVmax)	150	150			
Output voltage accuracy	±5%				
Tempertaure coeffecient	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)				

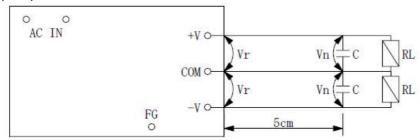
Protection specifications					
Over Voltage Protection	N/A				
Over Current Protection	over 105%, Automatic recovery				
Over Gurrent Protection	Avoid sustained operation in over load condition.				
Thermal Shutdown	Power supply, and recycle on.				
Thermal Shutdown	The power supply will resume normal operation.				
Isolation specifications					
	Pri.— Sec. 100M Ω (DC 500V)				
Isolation Resistance	Pri. – Fg. $100M\Omega$ (DC $500V$ )				
	Sec.— Fg. 100MΩ (DC 500V)				
	Pri.— Sec. 3000Vac/1min (10mA)				
Isolation Voltage	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 <b>~</b> +85°C				
Humidity	20 ~ 85%RH (No condensing.)				
	UL60950				
Safetv	CSA C22.2 No.60950 (cUL)				
Safety	CE (EN60950 A3 LVD)				
	CB (IEC60950:1999,US/6301/UL)				
	FCC Part 15 Class B meet				
EMI	EN55022 Class B meet				
	VCCI(II) meet				
Shock & Vibration					
Vibration :	10 ∼ 55Hz 0.5mm width/1minute cycle				
VIBRACIOIT.	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)



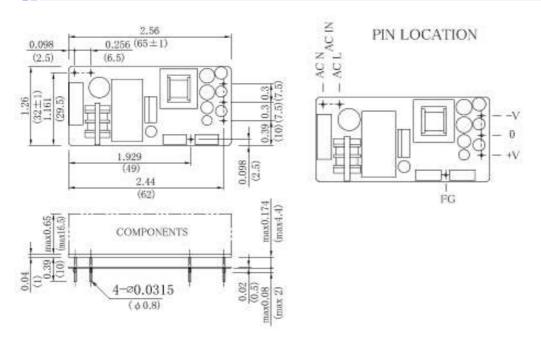
Vr: Measure point of line/load regulation and output voltage.

Vn: Measure point of ripple and noise.(Bayonet tip probe used)

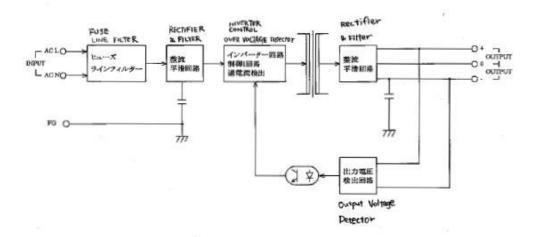
C: 0.1uF film capacitor

It provides for this specifications at 25°C.

## External View

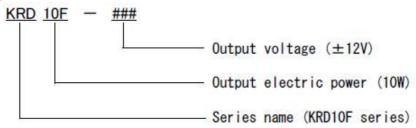


## Block Diagram



#### 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°C-255°C (within five seconds)

Hand solder: 350°C±10°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.

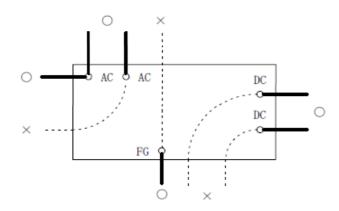
#### **Directions**

 $\bigstar$  The short-circuit leaving for a long time doesn't cause the breakdown and do not do, please.

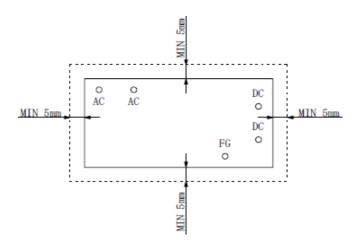
 $\,\,\,\,\,\,\,\,\,\,$  Please note that there is a case to cause a defective start when a mass capacitor (about 10,000  $\mu$  F) is connected with the load edge.

☆ 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.



 $\Rightarrow$  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 lessin the vertical direction as shown in the figure below.

