

# CompuMess Elektronik GmbH

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146-1952

When you need to  
**GET THIN,**  
nothing measures up  
to the **SERIES RTW**  
**POWER SUPPLIES**  
from **KEPCO**

50W / 100W / 150W / 300W



Model

RTW 24-13KC

300 Watts

4.72" x 1.57" x 9.84"

120mm x 40mm x 250mm

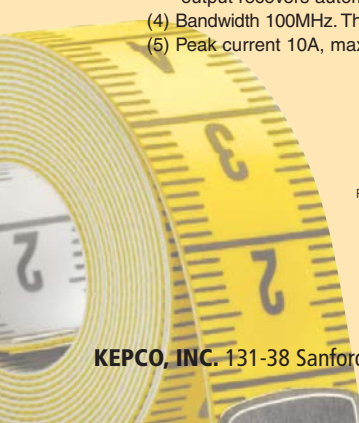
**RoHS**  
COMPLIANT

AN ISO 9001 COMPANY  
 **KEPCO**  
THE POWER SUPPLIER™  
SINCE 1946

# Nothing measures up to the **SERIES RTW POWER SUPPLIES** from **KEPCO**

RTW MODEL TABLE										
MODEL	OUTPUT VOLTAGE	SETTING TOLERANCE	ADJUSTMENT RANGE	OVP SETTING (1)	OUTPUT CURRENT	OUTPUT POWER(2)	CURRENT LIMIT SETTING (3)	RIPPLE/ RIPPLE NOISE (4)	EFFICIENCY (%) TYPICAL	
	Volts	Volts	Volts	Volts	Amps	Watts	Amps	mV p-p	100V a-c	200V a-c
<b>50 WATT MODELS</b>										
RTW 3.3-12.5K	3.3	±0.03	2.6~4.0	4.2~5.2	12.5	41.2	13.2~15.6	80/120	75	77
RTW 5-10K	5	±0.05	4.0~5.8	6.0~6.9	10	50	10.5~12.5	80/120	80	82
RTW 12-4.3K	12	±0.12	9.6~13.2	13.7~15.7	4.3	51.6	4.5~5.4	100/150	81	83
RTW 15-3.5K	15	±0.15	12.0~16.5	17.0~19.0	3.5	52.5	3.68~4.38	100/150	82	85
RTW 24-2.2K	24	±0.24	19.2~26.4	27.0~30.5	2.2	52.8	2.3~2.75	150/200	82	85
RTW 28-1.8K	28	±0.28	22.4~30.8	32.0~35.0	1.8	50.4	1.9~2.25	150/200	82	85
RTW 48-1.1K	48	±0.48	38.4~52.8	55.0~60.0	1.1	52.8	1.15~1.38	200/300	82	85
<b>100 WATT MODELS</b>										
RTW 3.3-25K	3.3	±0.03	2.6~4.0	4.2~5.2	25	82.5	26.2~33.7	80/120	79	81
RTW 5-20K	5	±0.05	4.0~5.8	6.0~6.9	20	100	21.0~25.0	80/120	83	85
RTW 12-8.4K	12	±0.12	9.6~13.2	13.7~15.7	8.4	100.8	8.82~10.5	100/150	84	86
RTW 15-6.7K	15	±0.15	12.0~16.5	17.0~19.0	6.7	100.5	7.03~9.04	100/150	85	87
RTW 24-4.2K	24	±0.24	19.2~26.4	27.0~30.5	4.2	100.8	4.42~5.25	150/200	85	87
RTW 28-3.6K	28	±0.28	22.4~30.8	32.0~35.0	3.6	100.8	3.78~4.86	150/200	85	87
RTW 48-2.1K	48	±0.48	38.4~52.8	55.0~60.0	2.1	100.8	2.2~2.62	200/300	85	88
<b>150 WATT MODELS</b>										
RTW 3.3-35K	3.3	±0.03	2.85~4.0	4.2~5.2	35	115.5	38.5~45.5	80/120	80	83
RTW 5-30K	5	±0.05	4.0~5.8	6.0~6.9	30	150	33~39	80/120	83	86
RTW 12-12K	12	±0.12	9.6~13.2	13.7~15.7	12.5	150	13.7~16.3	100/150	84	87
RTW 15-10K	15	±0.15	12.0~16.5	17.0~19.0	10	150	11~13	100/150	84	87
RTW 24-6.3K	24	±0.24	19.2~26.4	27.0~30.5	6.3(5)	151.2	10.5~13.5	150/200	86	88
RTW 28-5.4K	28	±0.28	22.4~30.8	32.0~35.0	5.4	151.2	5.94~7.02	150/200	86	88
RTW 48-3.2K	48	±0.48	38.4~52.8	55.0~60.0	3.2	153.6	3.52~4.16	200/300	86	89
<b>300 WATT MODELS</b>										
RTW 3.3-70KC	3.3	±0.03	1.8~3.6	4.0~4.6	70	231	73.5~84	80/120	83	86
RTW 5-60KC	5	±0.05	3.5~5.6	6.2~7.0	60	300	63~72	80/120	84	87
RTW 12-25KC	12	±0.12	7.2~14.4	14.8~16.8	25	300	26.3~30	100/150	83	86
RTW 15-20KC	15	±0.15	10.5~18.0	18.6~21.0	20	300	21~24	100/150	85	88
RTW 24-13KC	24	±0.24	16.8~26.4	29.8~33.6	13	312	13.7~15.6	150/200	85	88
RTW 28-11KC	28	±0.28	19.6~33.6	34.7~39.2	11	308	11.5~13.2	150/200	85	88
RTW 48-6.5KC	48	±0.48	33.6~55.0	55.5~59.9	6.5	312	6.8~7.8	200/300	86	89

- (1) An overvoltage shuts down the output. Recover by recycling a-c input (30 second delay required before resetting).
- (2) See rating curves for temperature and input voltage derating.
- (3) Square type for 50W and 300W models; hiccup mode operation for 100W and 150W models. After the cause of overcurrent is removed, output recovers automatically.
- (4) Bandwidth 100MHz. The ripple and noise values tabulated are valid when the output is derated as shown in rating curves from 40°C to 71°C.
- (5) Peak current 10A, maximum duration 10 seconds.





Series RTW

Kepco's RTW series are RoHS compliant, general-purpose, L-chassis, single-output power supplies. They are available in 50, 100, 150 and 300 watt power levels. Their small size and very low profile allows the RTW to be fitted into small spaces. They feature full safety compliance to international standards and have suppressed both conducted and radiated EMI to FCC Class B levels. Power Factor Correction (PFC) is standard, with the input power factor typically equal to 0.99. This minimizes the potential for the introduction of distortion on the a-c mains as the power supply's input conduction takes place over the entire a-c cycle.

A green power-on LED provides visual evidence of operation. An isolated remote ON-OFF control is built-in, as is remote error sensing. (A 4-wire Kelvin connection on the load reduces the losses in the d-c load wires.) RTW may be operated in series for increased output voltage. The output of the 50W and 300W models is current limited with a "square type" current limit circuit. The 100 and 150W models have a "hiccup" mode, in which the power supply periodically checks to determine if the overload has been removed and when it senses that it has, the output voltage is automatically restored. Output voltages are user-adjustable. Current limit is factory set. When an overvoltage is detected, the output voltage shuts down. Reset by using  $\pm$ RC terminals. An interval of 30 seconds before restarting is required if input power is switched off.

Only the 300W models with the suffix "KC" include an aluminum cover. The 50, 100 and 150W models are open frame with an optional factory installed cover (add suffix "C" to the model number).

FOR FULL SPECS VISIT

[www.kepcopower.com/rtw.htm](http://www.kepcopower.com/rtw.htm)

## RTW GENERAL SPECIFICATIONS

SPECIFICATION		RATING/DESCRIPTION	CONDITION
Temperature	Operating	-10 to +50°C	See power rating plot for operation at reduced power up to 71°C, Fig. 1 & 2
	Start Up	-20 to -10°C	
	Storage	-30 to +75°C	
Humidity	Operating/Storage	10 to 95% RH	Non-condensing
Vibration	5-10Hz	10mm amplitude	Sweep time 10 min., 1 hour each axis
	10-200Hz	2G	Non-operating
Shock	Acceleration	20G (300W: 60G)	Orientation A 3 shocks each axis
	Acceleration	60G	Orientation B,C 3 shocks each axis
	Duration	11±5 ms	Non-operating
Safety		UL 60950-1 First Ed, CSA 22.2 No 60950-1	Ambient temperature 50°C max
		TÜV EN60950-1:2001 Assistance for DEN-AN	
		CE marked per LVD73/23/EEC and 93/68/EEC (2)	
Conducted and Radiated Noise		FCC Class B; VCCI Class B EN55011-B EN55022-B	
Input Harmonics	Current	EN61000-3-2	
Withstand Voltage	Input to output	3.0kV a-c for 1 minute	Cutout current 10 mA (1)
	Input to ground	2.0kV a-c for 1 minute	Cutout current 10 mA (1)
	Output to ground	500V a-c for 1 minute	Cutout current 10 mA (1)
Dimensions HxWxD	50W	82mm x 22mm x 124mm 3.23" x .87" x 4.88"	
	100W	82mm x 25mm x 160mm 3.23" x .98" x 6.3"	
	150W	92mm x 30mm x 180mm 3.62" x 1.18" x 7.09"	
	300W	120mm x 40mm x 250mm 4.72" x 1.57" x 9.84"	
Weight	50W	0.25 kg, 0.55 lbs.	
	100W	0.38 kg, 0.838 lbs.	
	150W	0.52 kg, 1.15 lbs.	
	300W	1.2 kg, 2.65 lbs.	

(1) Temperature: 15°C to 35°C and humidity: 10% to 85% RH.

(2) Standards do not apply for d-c input.

FIGURE 1

Output Power vs. Ambient Temperature  
50, 100 and 150W Models Without Cover

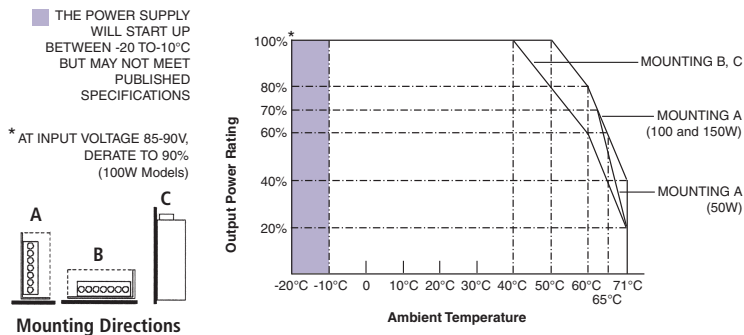
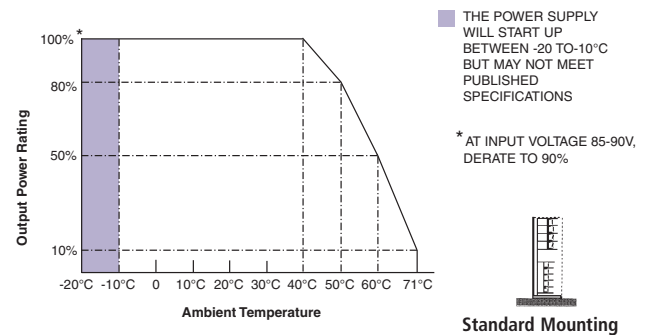


FIGURE 2

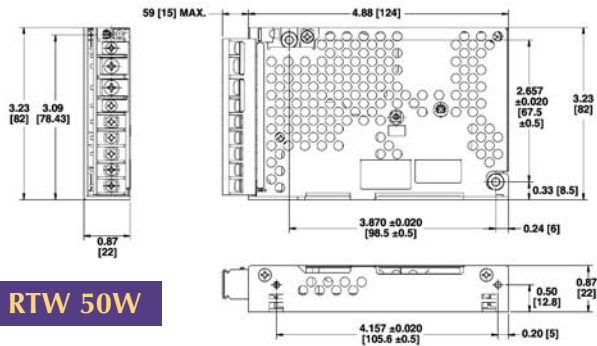
Output Power vs. Ambient Temperature  
300W Model With Cover



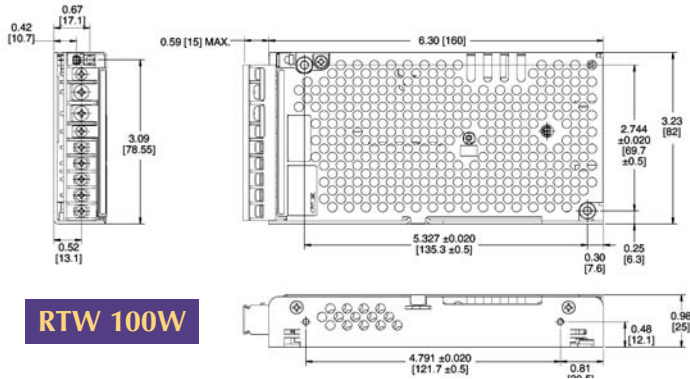


## OUTLINE DIMENSIONAL DRAWINGS (Shown with covers)

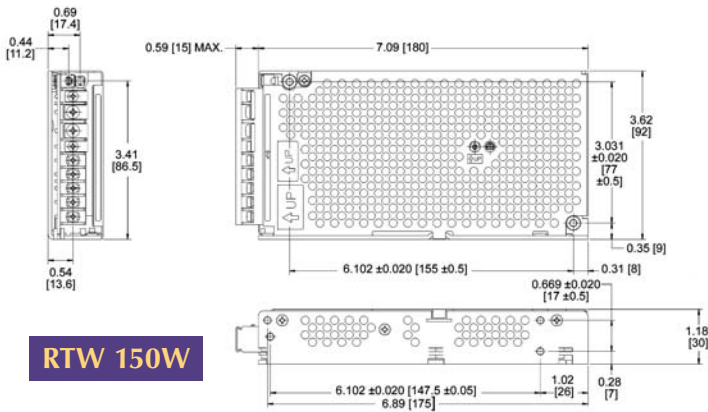
Dimensions are in inches. Dimensions in parentheses are in millimeters.



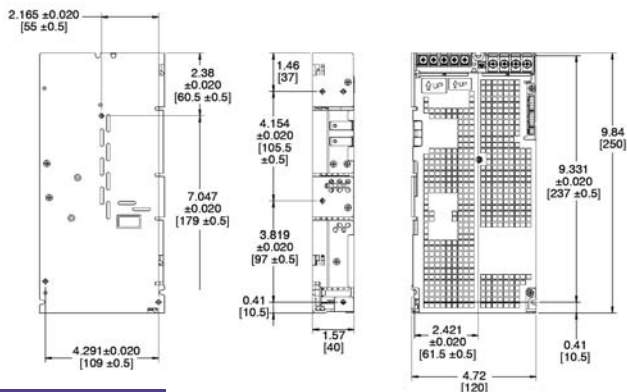
**RTW 50W**



**RTW 100W**



**RTW 150W**



**RTW 300W**



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**KEPCO**<sup>®</sup>  
 THE POWER SUPPLIER™  
 SINCE 1946



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## RTW INPUT CHARACTERISTICS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
Input Voltage Nominal	100 to 120V a-c, 200 to 240V a-c	0~100% load, -10 to 71°C
Input Voltage Range	85~265V a-c	0~100% load, -10 to 71°C
	120~370V d-c	Safety ratings not applicable for d-c input
Frequency	nom 47~66 Hz	0~100% load, -10 to 71°C
	range 47-440Hz <sup>(1)</sup>	
Input Current (50W)	max 0.7A (0.6A for the 3.3V model)	100-120V a-c
	max 0.4A (0.3A for the 3.3V model)	200-240V a-c
Input Current (100W)	max 1.5A (1.1A for the 3.3V model)	100-120V a-c
	max 0.75A (0.55A for the 3.3V model)	200-240V a-c
Input Current (150W)	max 1.9A (5V-48V models) 2.7A (24V model) 1.6A (3.3V model)	100-120V a-c
	max 1.0A (5V-48V models) 1.1A (24V model) 0.85A (3.3V model)	200-240V a-c
Input Current (300W)	max 4A (3.6A for the 3.3V model)	100-120V a-c
	max 2A (1.8A for the 3.3V model and 3A for the 24V models)	200-240V a-c
Surge Current	14A typ (15A, 300W models, 20A max)	100V a-c, 100% load, 25°C
	28A typ (30A, 300W models, 40A max)	200V a-c, 100% load, 25°C

(1) At 400Hz and above, the leakage current exceeds the UL safety specification.

## RTW OUTPUT CHARACTERISTICS

SPECIFICATION	RATING/DESCRIPTION	CONDITION		
Source Effect	typ 0.1%	a-c 85~132 or 170~265V a-c		
	max 0.2%			
Load Effect	typ 0.2%	0 to 100% load		
	max 0.4%			
Temperature Effect	typ 0.5%	-10 to +71°C		
	max 1.0%			
Combined Effect	typ 0.9%	Source, Load, Temperature		
	max 1.8%			
Time Effect (drift)	typ 0.2%	0.5 - 8 hours		
	max 0.5%			
Remote Error Sensing	3.3V 0.15V max 5.0V 0.25V max 12~48V 0.4V max	Per load wire		
Transient Recovery max Characteristic	± 4%	50% to rated output; transient time>50µsec		
Recovery Time max	1 ms			
Start Up Time	<b>50-100W</b>	<b>150W</b>	<b>300W</b>	100V a-c
	typ 400 ms	220 ms	220 ms	
	max 500 ms	300 ms	350 ms	
	typ 200 ms	120 ms	120 ms	
Hold Up Time	max 300 ms	200 ms	200 ms	240V a-c
	typ 30 ms	30 ms	40ms	
	min 20 ms	20 ms	20 ms	
	typ 10 ms	40 ms	40ms	
min 7 ms	25 ms	25 ms		
Acceptable Output Capacitor	10,000 µF	Start up time is affected		

Some model specifications vary. Please consult website or factory for more detailed information.