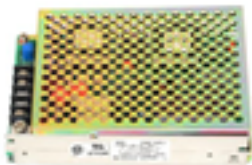


Kepco FAK 12-4.2K
Power Supply



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FAK MODEL TABLE

MODEL	OUTPUT VOLTS	ADJUSTMENT RANGE (VOLTS)	OVP SETTING (VOLTS)	OUTPUT CURRENT AMPS 0-50°C	CURRENT LIMIT (AMPS)	SWITCHING RIPPLE mV		NOISE (spike) mV max
						typ	max	
15 WATT MODELS								
FAK 5-3K	5	4.5-5.5	N/A	0-3.0	3.3~5.0 ⁽¹⁾	30	60	<120
FAK 12-1.3K	12	10.8-13.2	N/A	0-1.3	1.4~2.3 ⁽¹⁾	30	70	<190
FAK 15-1K	15	13.5-16.5	N/A	0-1.0	1.1~2.0 ⁽¹⁾	30	70	<220
FAK 24-0.7K	24	21.6-26.4	N/A	0-0.7	0.8~1.4 ⁽¹⁾	30	80	<310
25 WATT MODELS								
FAK 5-5K	5	4.5-5.5	6.0~6.9	0-5.0	5.5~7.5 ⁽¹⁾	30	70	<120
FAK 12-2.1K	12	10.8-13.2	13.7~15.7	0-2.1	2.3~3.3 ⁽¹⁾	30	70	<190
FAK 15-1.7K	15	13.5-16.5	17.0~19.0	0-1.7	1.9~2.8 ⁽¹⁾	30	70	<220
FAK 24-1.1K	24	21.6-26.4	27.0~30.5	0-1.1	1.2~1.8 ⁽¹⁾	30	80	<310
50 WATT MODELS								
FAK 5-10K	5	4.5-5.5	6.0~6.9	0-10.0	10.5~12.0 ⁽²⁾	25	50	<120
FAK 12-4.2K	12	10.8-13.2	13.7~15.7	0-4.2	4.4~5.1 ⁽²⁾	25	50	<190
FAK 15-3.4K	15	13.5-16.5	17.0~19.0	0-3.4	3.6~4.1 ⁽²⁾	25	50	<220
FAK 24-2.1K	24	21.6-26.4	27.0~30.5	0-2.1	2.2~2.6 ⁽²⁾	25	60	<310

(1) Foldback type characteristic.

(2) Square type or Rectangular type characteristic.

FAK INPUT CHARACTERISTICS

SPECIFICATION		RATING			CONDITION
		15W	25W	50W	
a-c Voltage	nom	120V a-c			Single phase
	range	85-132V a-c			
d-c Voltage	range	110-170V d-c (2)			Polarity insensitive
Brown-out voltage	min	80V a-c/105V d-c (2)			Ripple, source and load effect increase
Frequency	nom	50-60Hz			Single phase
	range	47-440Hz (1)			
EMI		FCC			Conducted Class B
Soft-start circuit		Thermistor limiter			
Leakage current	max	0.5mA UL method			120V a-c, 50-60Hz
Start-up time	max	100msec			From turn-on until d-c output reaches nominal
Hold-up time	typ	30msec			120V a-c
	min	20msec			100V a-c
Power OK		Green LED			
INPUT CURRENT					
a-c current	typ	0.28A	0.50A	0.9A	120V a-c rms
	max	0.35A	0.65A	1.1A	
Fuse value		2.0A	2.5A	3.15A	250V type 5x20mm
Initial turn-on surge, first half cycle		22A	43A	43A	120V a-c rms
Efficiency	typ	70%	70%	75%	Max load, nominal input
Circuit type		Flyback	Flyback	Forward converter	
Switching frequency	typ	70KHz	50KHz	260KHz	Nominal load

(1) At 440Hz the leakage current exceeds the UL safety specification.

(2) Safety approval is valid for a-c operation only.

FAK GENERAL SPECIFICATIONS

SPECIFICATION	RATING/DESCRIPTION	CONDITION
Temperature	0-71°C (see Fig. 1)	Operating
	-40°C to +85°C	Storage
Humidity	95% RH	Non condensing, operating & storage
Shock	20g, 3 axes (11msec ±5msec pulse duration)	Non operating, 3 shocks each axis
Vibration	5-10Hz: 10mm amplitude 3 axes	Non operating, 1 hour each axis
	10-55Hz: 2g, 3 axes	
Isolation Output to case	500V d-c, 100MΩ	25°C, 65% RH
Enclosure	Optional metal	
Type of construction	PC card, L-chassis	
Cooling	Convection	
Withstand Input to output voltage Input to case	2KV a-c for 1 minute	25°C, 65% RH
	2KV a-c for 1 minute	
Safety	UL 478	Recognized
	CSA EB 1402B	Certified

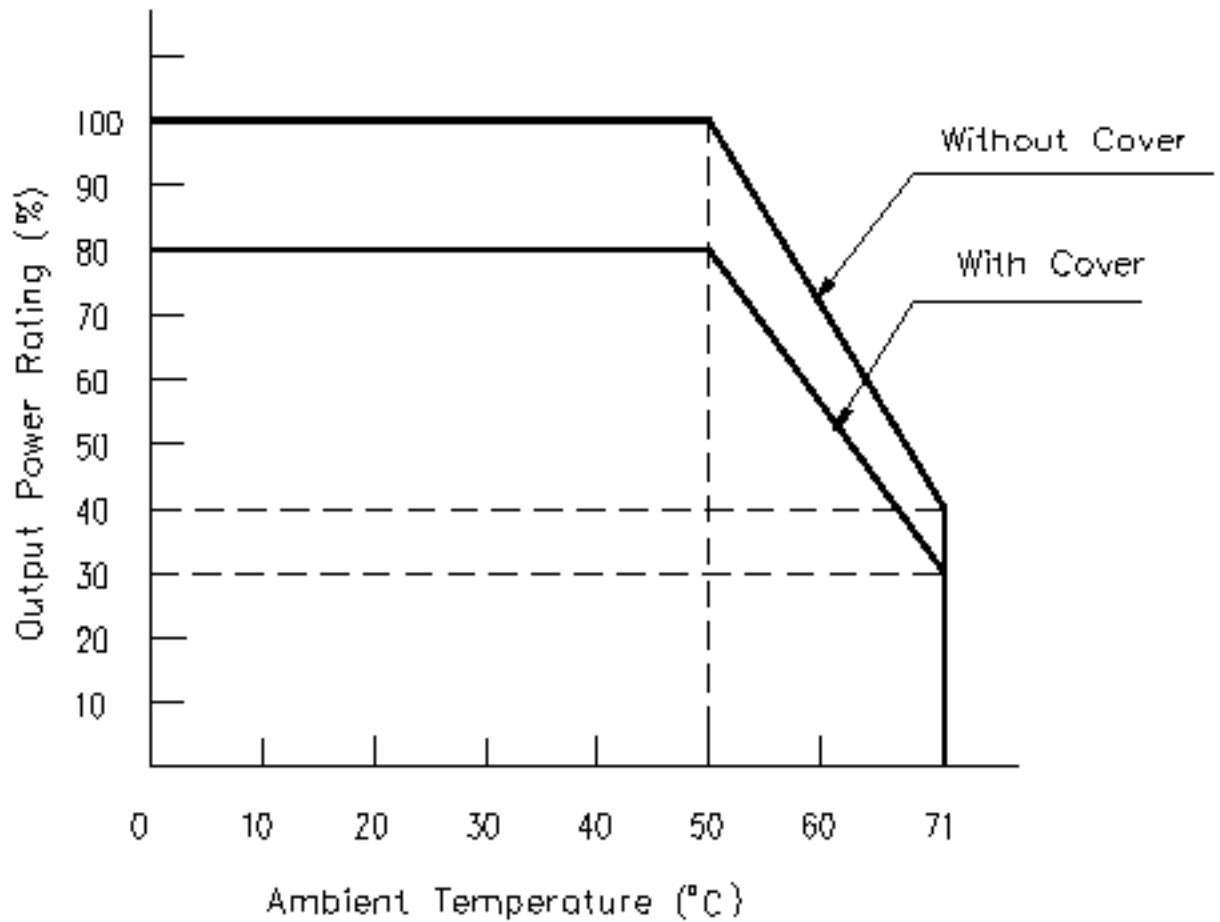


FIGURE 1. OUTPUT POWER VS. AMBIENT TEMPERATURE

FAK OUTPUT CHARACTERISTICS

SPECIFICATION		RATING	CONDITION
Source Effect	typ	1.0%	85-132V a-c
	max	2.0%	
Load Effect	typ	1.2%	10% to 100% load
	max	3.0%	
Temperature Effect	typ	0.6%	Nominal input, rated load
	max	2.0%	
Combined Effect	typ	1.0%	Source, load and temperature
	max	3.0%	
Time Effect (drift)	typ	0.1%	0.5-8.5 hr, max load 25°C
	max	0.5%	
Recovery Characteristic	excursion	<4%	Step load 50-100%, rise time > 50µs
	recovery	1msec	To within 1%

OPEN FRAME DIMENSIONS (HxWxD)

- 15W:
 ○ inches: 0.79 x 2.76 x 3.74
 ○ mm: 20 x 70 x 95
- 25W inches
 ○ 0.98 x 2.76 x 4.53
 ○ mm: 25 x 70 x 115
- 50W inches
 ○ 0.98 x 3.74 x 5.12
 ○ mm: 25 x 95 x 130

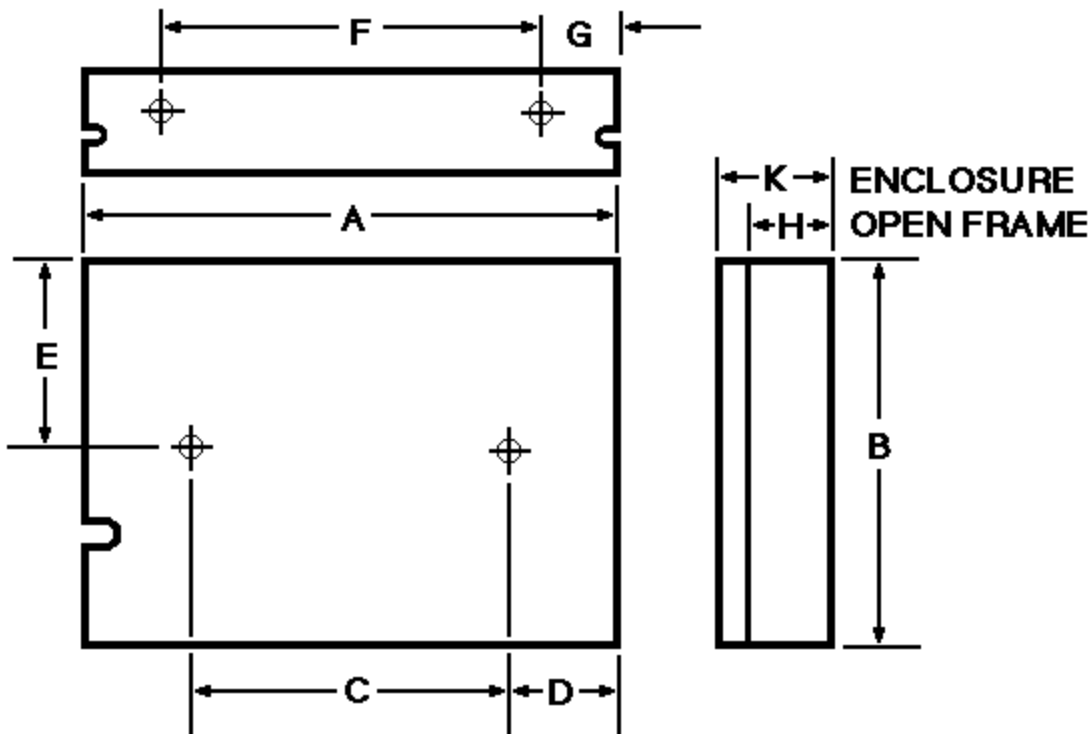
CASED DIMENSIONS (HxWxD)

- 15W case (CA 21):
 ○ inches 0.9 x 2.76 x 3.74
 ○ mm: 23 x 70 x 95
- 25W case (CA 22):
 ○ inches: 1.12 x 2.76 x 4.53
 ○ mm: 28.5 x 70 x 115
- 50W case (CA 23):
 ○ inches: 1.12 x 3.74 x 5.12
 ○ mm: 28.5 x 95 x 130

Fractional dimensions in light face type are in inches, dimensions in bold face type are in millimeters.

Tolerances: 0.4" (1.0mm) unless otherwise noted

Munting: 4-40 tapped holes --(2) side; maximum screw penetration 0.2" (5mm)



MODEL	A	B	C	D	E	F	G	H(1)	K(2)
15 WATTS	3.75 95	2.76 70	2.16 55	0.90 23	1.30 33	2.91 74	0.33 8.5	0.79 20	0.90 23
25 WATTS	4.53 115	2.76 70	2.75 70	0.94 24	1.30 33	3.54 90	0.47 12	0.98 25	1.12 28.5
50 WATTS	5.12 130	3.74 95	2.76 70	0.98 25	1.85 47	3.94 100	0.39 10	0.98 25	1.12 28.5

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