

# Encapsulated PSU

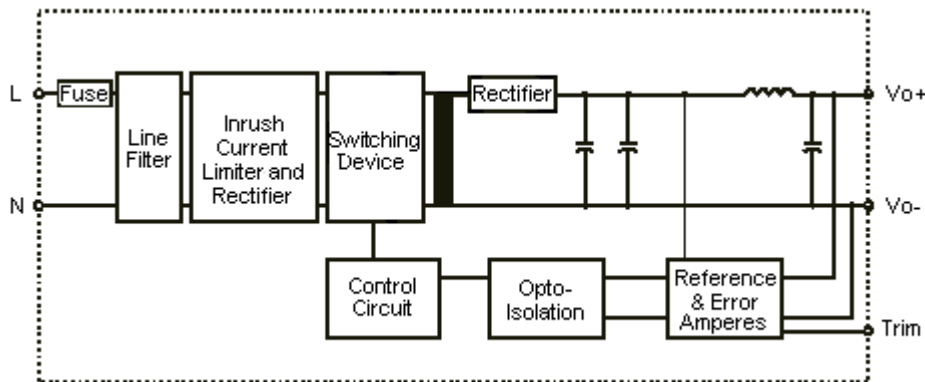
## KAM10 Series



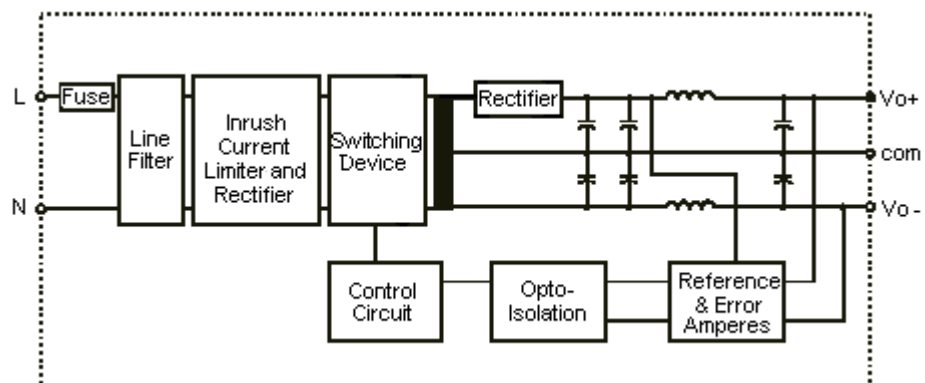
### Features:

- AC / DC power module
- Universal input 85 to 265 V ac
- High efficiency up to 78%
- Short circuit protection
- Internal input filter
- 2 years warranty

### Block Diagram for KAM10 Series with Single Output



### Block Diagram for KAM10 Series with Dual Output



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### Specifications:

All specifications typical at nominal line, full load, 25°C unless otherwise noticed

Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Switching frequency	Vi nominal, Io nominal	-	100	-	KHz
Isolation voltage	Input / output	3,000	-	-	V ac
Isolation resistance	Input / output, at 500 V dc	100	-	-	MΩ
Ambient temperature	Operating at Vi nominal, Io nominal	-20	-	+71	°C
Case temperature		-	-	+80	-
Derating	Vi nominal, Io nominal +51 to +71°C	-	-	2	% / °C
Storage temperature	Non-operational	-40	-	+100	°C
MTBF	According to MIL-HDBK-217F, GF40	-	255,000	-	Hrs
Relative humidity	Vi nominal, Io nominal	-	-	95	% RH
Dimension	(L) 76.2 × (W) 50.8 × (H) 22.6	-	-	-	mm
Cooling	Free air convection	-	-	-	-
Case material	Plastic	-	-	-	-

### Input Specifications

Characteristics	Conditions	Minimum	Typical	Maximum	Unit
Rated input voltage	Io nominal	85	-	265	V ac
Input voltage range	Io nominal		AC in		
		DC in	120	370	V dc
Line frequency	Vi nominal, Io nominal	47	-	63	Hz
Inrush current	Io nominal	Vi : 115 V ac	-	10	A
		Vi : 230 V ac	-	18	

### Output Specifications

Characteristics	Conditions	Minimum	Typical	Maximum	Unit	
Output voltage accuracy	Vi nominal, Io nominal	-	-	±2	%	
Minimum load	Vi nominal	single output models	0	-		
		dual output models (each output)	20	-		
Line regulation	Io nominal, Vi minimum to Vi maximum	-	-	±1		
Load regulation	Vi nominal	single output models	-	-	±2	
	Io minimum to Io nominal	dual output models	-	-		
Transient recovery time	Vi nominal, Io nominal = I ↔ 0.5 Io nominal	-	1,000	-	μS	
Temperature coefficient	Vi nominal, Io nominal	-	-	±0.02	%/°C	
Ripple and noise	Vi nominal, Io nominal, BW = 20 MHz	3.3 V models	-	-	-100	mV
		5 V to 24 V models	Vout x 1% p-p maximum			
External trim ADJ Range I) (for single output only)	Io = 5% to 100%	3.3 V models	-5	-	+5	%
		5 V to 24 V models	-10	-	+10	
Efficiency	Vi nominal, Io nominal, Po / Pi	Up to 78%				

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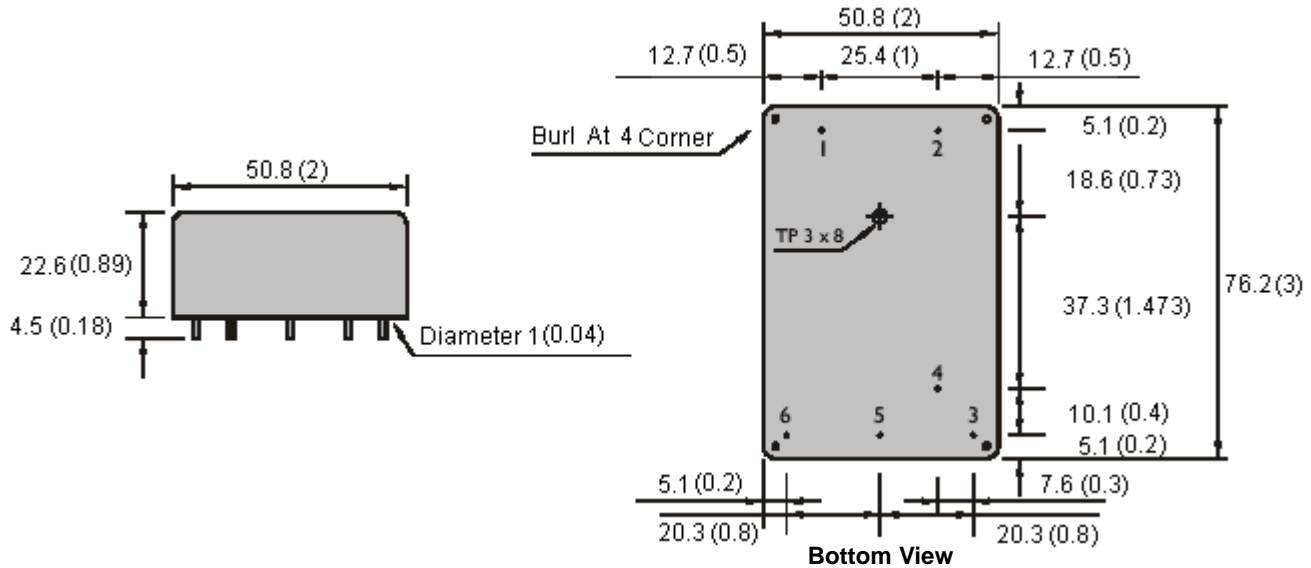
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### Control Protection

Input fuse	T2A / 250 V ac internal
Output short circuit	By current limited

### Mechanism and Pin Configuration



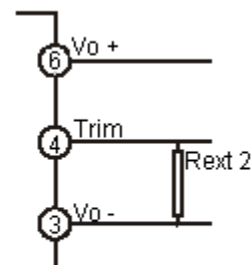
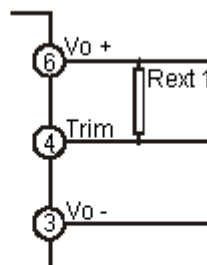
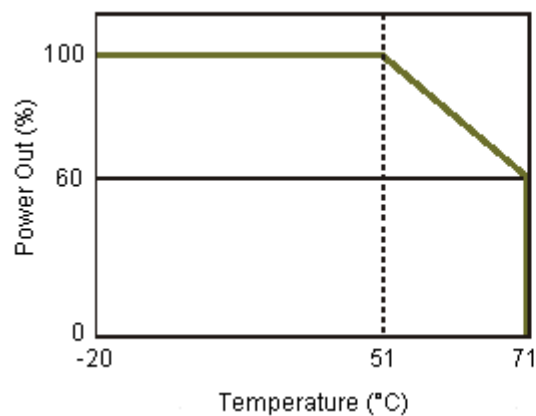
### Physical Characteristics

Case size	76.2 × 50.8 × 22.6 mm (3 × 2 × 0.89 inches)
Case material	Plastic
Weight	160 g

### General Pin Assignment

Pin Number	1	2	3	4	5	6
Single	AC IN	AC IN	Vo-	Trim	No Pin	Vo+
Dual			Vo- or +3.3V	No Pin	com	Vo+ or +5V

### Derating



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### Typical Resistor Values for Various Output Voltage Adjustment Settings

Type	Rext 1		Rext 2	
	Uo Nominal -5% (K $\Omega$ )	Uo Nominal -10% (K $\Omega$ )	Uo Nominal +5% (K $\Omega$ )	Uo Nominal +10% (K $\Omega$ )
KAM 1005	39	15	9.1	2.2
KAM 1012	51	20	10	2
KAM 1024	130	56	12	2

### Specification Table

Description	Type	Input Voltage (V ac)	Output Wattage (Watts)	Output Voltage (V dc)	Output Current (mA)	EFF (Typical) (%)	EFF (Minimum) (%)	Part Number
PSU, Encapsulated	Single output	85 to 265	10	+5	2,000	72	70	KAM1005
				+12	840	77	75	KAM1012
	Dual output			+12	$\pm$ 420			KAM1012D
				+15	$\pm$ 335		74	KAM1015D
	Single output			+24	420	78	76	KAM1024

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