

KAM30 SERIES



AC - DC POWER MODULE
20 ~ 30W UL / cUL / TUV / CE

FEATURES

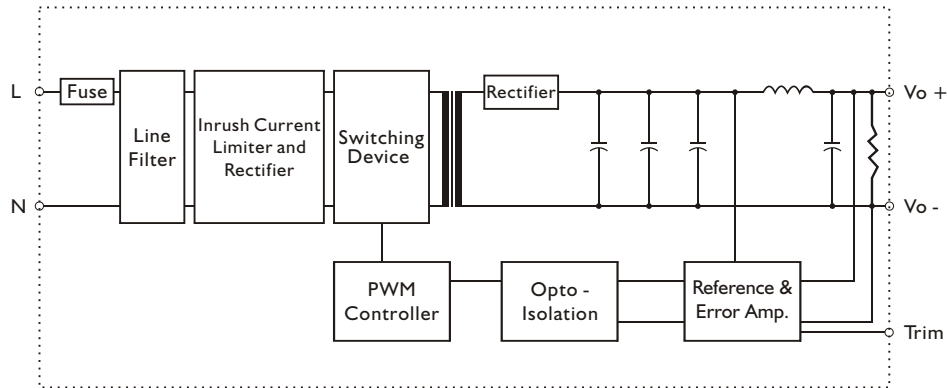
- AC/DC POWER MODULE
- UNIVERSAL INPUT 85 ~ 265 VAC
- HIGH EFFICIENCY UP TO 84%
- SHORT CIRCUIT PROTECTION
- INTERNAL INPUT FILTER
- 2 YEARS WARRANTY

MODEL LIST

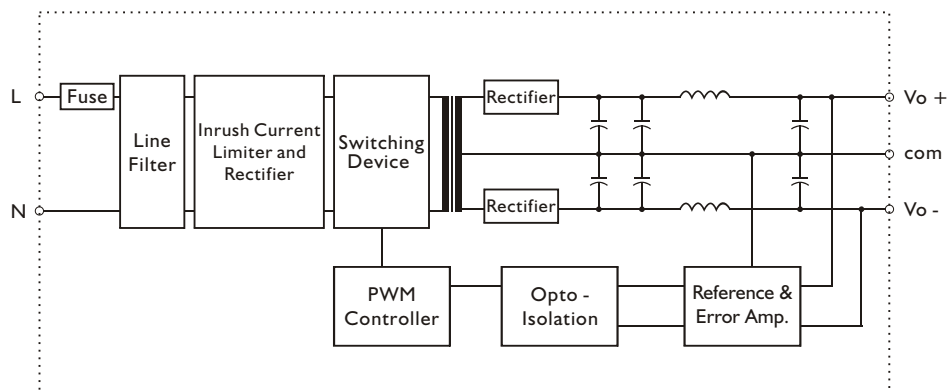
MODEL NO.	INPUT VOLTAGE	OUTPUT WATTAGE	OUTPUT VOLTAGE	OUTPUT CURRENT	EFF. (typ.)	EFF. (min.)
Single Output Models						
KAM3003	85~265 VAC	25 WATTS	+3.3 VDC	7500 mA	76%	74%
KAM3005	85~265 VAC	30 WATTS	+ 5 VDC	6000 mA	79%	77%
KAM3012	85~265 VAC	30 WATTS	+ 12 VDC	2500 mA	80%	78%
KAM3015	85~265 VAC	30 WATTS	+ 15 VDC	2000 mA	84%	82%
KAM3024	85~265 VAC	30 WATTS	+ 24 VDC	1250 mA	84%	82%
Dual Output Models						
KAM3012D	85~265 VAC	30 WATTS	± 12 VDC	± 1250 mA	83%	81%
KAM3015D	85~265 VAC	30 WATTS	± 15 VDC	± 1000 mA	84%	82%
KAM30503D	85~265 VAC	20 WATTS	+ 5 /+ 3.3 VDC	+3A / +1.5 A	71%	68%
KAM30512D	85~265 VAC	30 WATTS	+ 5 /+ 12 VDC	+ 3A / + 1.25A	81%	79%

CIRCUIT SCHEMATIC

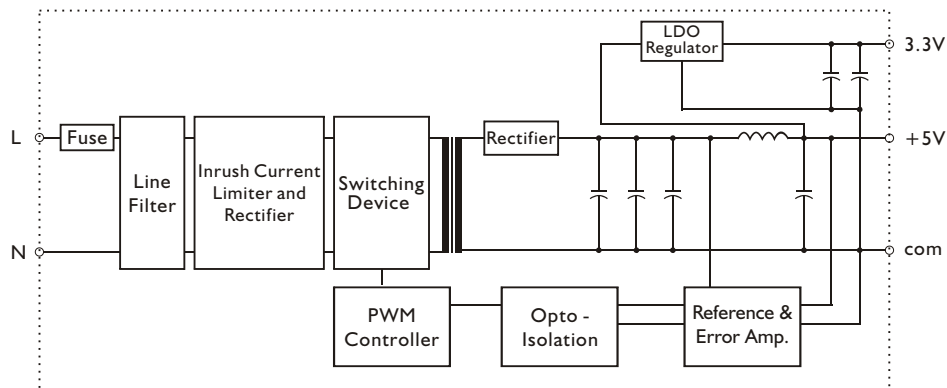
- Block diagram for KAM30 series with single output



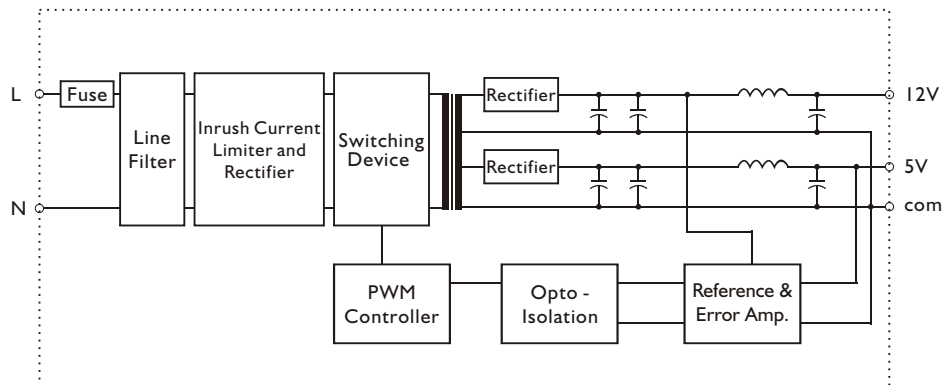
- Block diagram for KAM30 series with dual output



- Block diagram for KAM30503D



- Block diagram for KAM30512D



SPECIFICATION

All Specifications Typical At Nominal Line, Full Load, 25°C Unless Otherwise Noticed

GENERAL

Characteristics	Conditions	min.	typ.	max.	unit
Switching frequency	Vi nom, Io nom		100		KHz
Isolation voltage	Input / Output	3,000			VAC
Isolation resistance	Input / Output, @ 500VDC	100			MΩ
Ambient temperature	Operating at Vi nom, Io nom	-20		+ 71	°C
Case temperature	Operating at Vi nom, Io nom			+ 80	
Derating	Vi nom, Io nom + 5 l to + 71°C			2	% / °C
Storage temperature	Non operational	-40		+ 100	°C
Relative humidity	Vi nom, Io nom			95	% RH
Dimension	L89.2 x W63.8 x H32.3				mm
Cooling	Free air convection				
Case material	Plastic				

INPUT SPECIFICATIONS

Characteristics	Conditions		min.	typ.	max.	unit
Rated input voltage	Io nom		85		265	VAC
Input voltage range	Io nom	AC in	85		265	VAC
		DC in	120		370	VDC
Line frequency	Vi nom, Io nom		47		63	Hz
Inrush current	Io nom	Vi : 115VAC			12	A
		Vi : 230VAC			20	A

OUTPUT SPECIFICATIONS

Characteristics	Conditions		min.	typ.	max.	unit
Output voltage accuracy	Vi nom, Io nom				± 2	%
Minimum load	Vi nom	single output models	0			%
		dual output models (each output)	20			%
Line regulation	Io nom, Vi min ... Vi max				± 1	%
Load regulation	Vi nom, Io min ... Io nom	single output models			± 2	%
		dual output models			± 5	%
		5V at dual output model			± 2	%
Transient recovery time	Vi nom, Io nom = I ↔ 0.5 Io nom			500		μs
Temperature coefficient	Vi nom, Io nom				± 0.02	% / °C
Ripple & noise	Vi nom, Io nom, BW = 20MHz	3.3V models			100	mV
		5V ... 24V models	Vout x ± 1% p-p max.			
External trim ADJ. Range 1) (for single output only)	Io = 5% ... 100%	3.3V models	- 5		+ 5	%
		5V ... 24V models	- 10		+ 10	%
Efficiency	Vi nom, Io nom, Po / Pi		Up to 84%, See model list			

NOTE 1 : Pls refer to Fig 1 & Table 1 for connection and resistance recommended.

CONTROL AND PROTECTION

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

APPROVALS AND STANDARDS

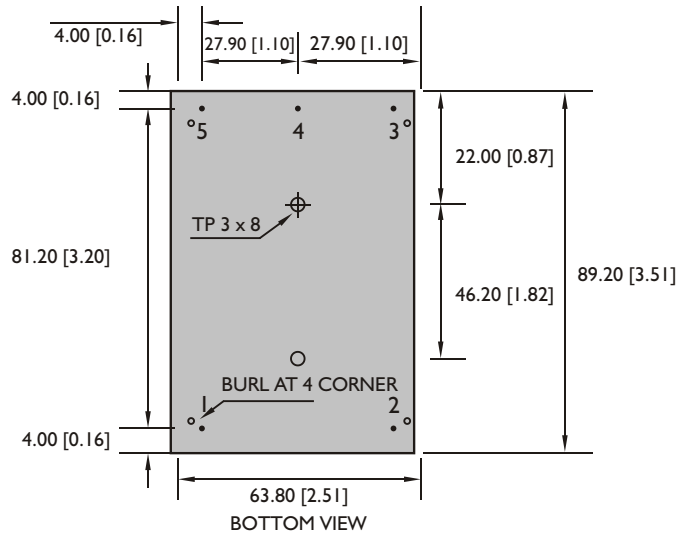
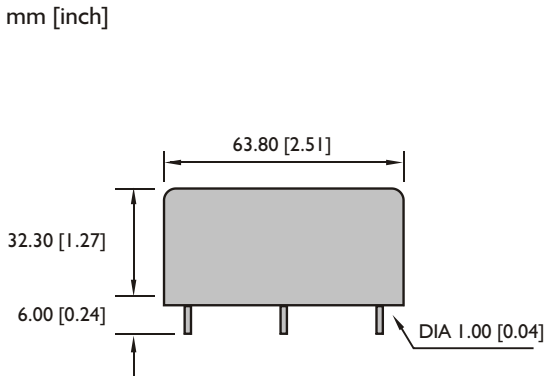
UL / cUL	UL1950
TUV	EN60950
CE	EN55022 class B for EMI
	EN50082-1 for EMS

KAM30 SERIES

AC - DC POWER MODULE

MECHANISM & PIN CONFIGURATION

mm [inch]



PHYSICAL CHARACTERISTICS

CASE SIZE	89.2 x 63.8 x 32.3 mm 3.51 x 2.51 x 1.27 inches
CASE MATERIAL	Plastic
WEIGHT	320 g

PIN ASSIGNMENT

GENERAL

PIN NO.	1	2	3	4	5
SINGLE	AC IN	AC IN	Vo +	Vo -	Trim
DUAL	AC IN	AC IN	Vo + or +5V	com	Vo- or +3.3V, +12V

DERATING

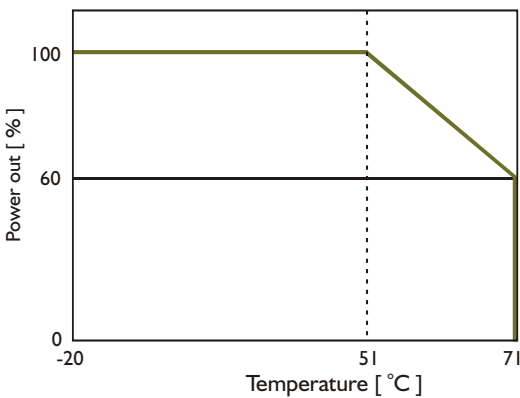


Fig. 1 Trim connection

(For single output only)

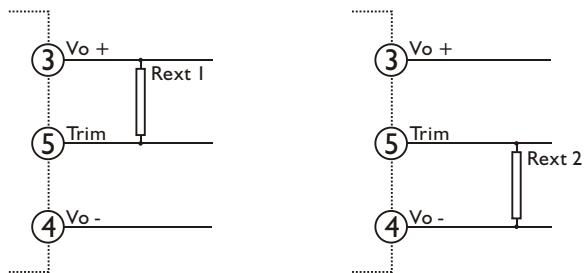


Table 1 Typical resistor values for various output voltage adjustment settings

Type	Rext 1		Rext 2	
	Uo nom -5%	Uo nom -10%	Uo nom +5%	Uo nom +10%
KAM3003	100KΩ	N / A	12KΩ	N / A
KAM3005	4.7KΩ	0KΩ	5.6KΩ	820Ω
KAM3012	39KΩ	15KΩ	15KΩ	2.7KΩ
KAM3015	120KΩ	51KΩ	22KΩ	2.7KΩ
KAM3024	130KΩ	56KΩ	8.66KΩ	510Ω