

AC-DC POWER MODULE
20-30W SINGLE & DUAL OUTPUTS
Universal 85 ~ 265 VAC/ 120-370VDC
High Efficiency
Internal Input Filter
Short Circuit Protection



PENDING

SINGLE OUTPUT MODELS						
Part Number	Input Voltage	Output Wattage	Output Voltage	Output Current	Efficiency (typical)	Efficiency (minimum)
CA30KAMN03	85~265VAC	25 Watts	3.3 VDC	7500mA	77%	75%
CA30KAMN05	85~265VAC	30 Watts	5VDC	6000mA	81%	79%
CA30KAMN12	85~265VAC	30 Watts	12VDC	2500mA	85%	83%
CA30KAMN15	85~265VAC	30 Watts	15VDC	2000mA	86%	84%
CA30KAMN24	85~265VAC	30 Watts	24VDC	1250mA	86%	84%

DUAL OUTPUT MODELS						
Part Number	Input Voltage	Output Wattage	Output Voltage	Output Current	Efficiency (typical)	Efficiency (minimum)
CA30KAMN12D	85~265VAC	30 Watts	+/-12VDC	+/-1250mA	84%	82%
CA30KAMN15D	85~265VAC	30 Watts	+/-15VDC	+/-1000mA	85%	83%
CA30KAMN503D	85~265VAC	20 Watts	+5/+3.3VDC	+3A/+1.5A	81%	79%
CA30KAMN512D	85~265VAC	30 Watts	+5/+12VDC	+3A/+1.25A	82%	80%

All Specifications Typical at Nominal Line, Full Load, 25 C Unless Noted Otherwise

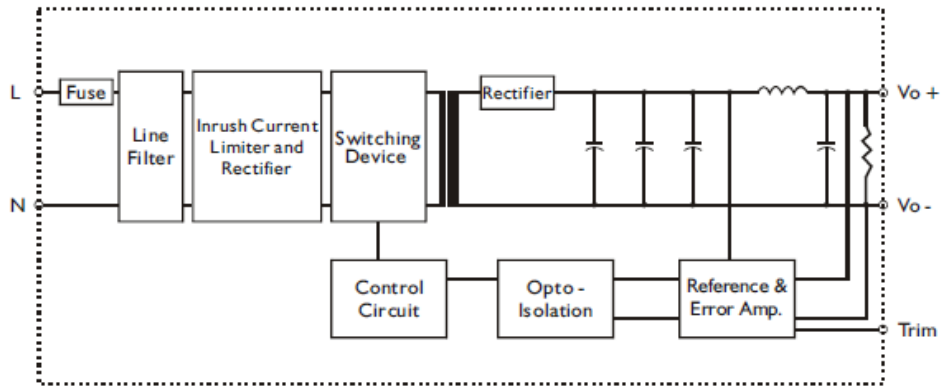
GENERAL						
Characteristics	Conditions	Min	Typ	Max	Unit	
Switching frequency	Vi nom, Io nom		65		KHz	
Isolation Voltage	Input/Output	3,000			VDC	
Isolation Resistance	Input/Output, @500VDC	100			M Ω	
Ambient Temp.	Operating at Vi nom Io nom	-40		+71	C	
Derating	Vi nom, Io nom +61 to +71C			3	% / C	
Storage Temp.	Non Operational	-40		+100	C	
Relative Humidity	Vi nom, Io nom			95	% RH	
Cooling	Free air convection					

INPUT SPECIFICATIONS						
Characteristics	Conditions		Min	Typ	Max	Unit
Rated Input Voltage	Io nom		100		240	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			20	A
		Vi:230VAC			40	A

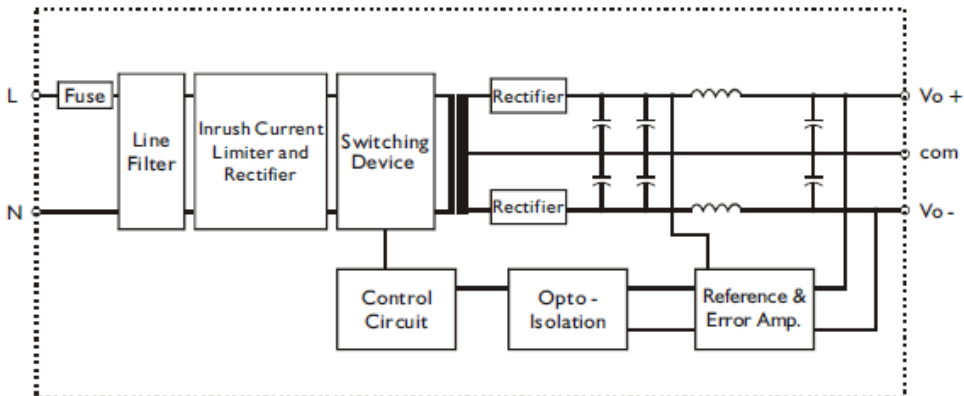
OUTPUT SPECIFICATIONS						
Characteristics	Conditions		Min	Typ	Max	Unit
Output voltage accuracy	Vi nom, Io nom				+/-2	%
Minimum load	Vi nom single output model		0			%
	Vi nom dual output model (each output)		20			%
Line regulation	Io nom, Vi min ... Vi max				+/-1	%
Load regulation	Vi nom, Io min Io nom	single output models			+/-1	%
		dual output models			+/-2	%
Hold up time			15			ms
Transient recovery time	Vi nom, Io nom= \neq to 0.5 Io nom			1000		μ S
Temperature coefficient	Vi nom, Io nom				+/-0.02	%/C
Ripple & Noise	Vi nom, Io nom, BW =20MHz	3.3, 5V models			100	mV
		12-24V model			200	mV
External trim Adj Range (for single output only)	Io = 5% ...100%	3.3V models	-5		+5	%
		5V...24V model	-10		+10	%
Efficiency	Vi nom, Io nom, Po/Pi		Up to 86%, see model list			

Control & Protection	
Input Fuse	T2A/250VAC internal
Output short circuit	Hiccup mode
Rated Overload Protection	120% min ~160% max

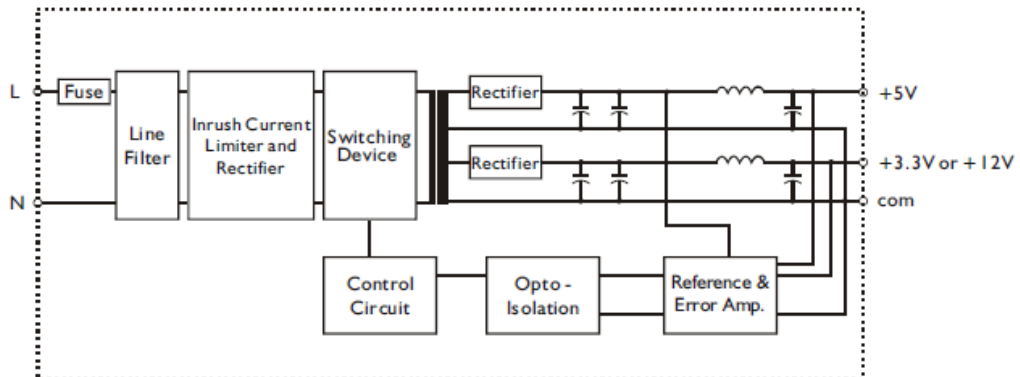
Block diagram for CA30KAMN series with single output



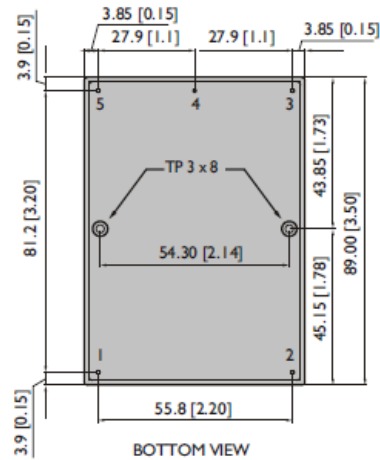
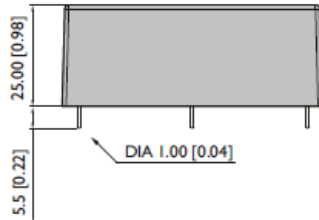
Block diagram for CA30KAMN series with dual output



Block diagram for CA30KAMN503D & 512D



Plastic case, weight 250g
mm(inch)



PIN ASSIGNMENT					
Pin No	1	2	3	4	5
SINGLE	N	L	Vo+	Vo -	TRIM
DUAL	N	L	Vo+ or +5V	com	Vo - or +3.3V, +12V

DERATING

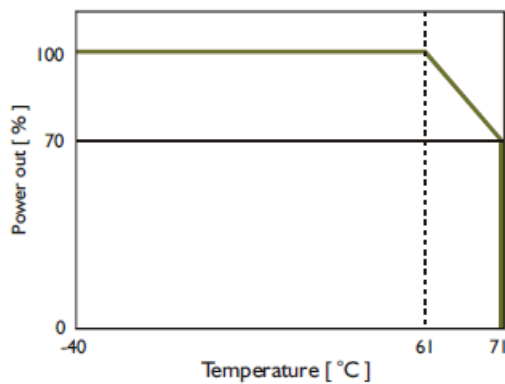
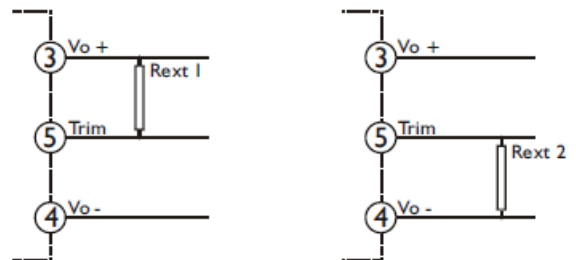


Fig. 1 Trim connection

(For single output only)



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%
CA30KAMN03	100K Ω	N/A	12K Ω	N/A
CA30KAMN05	4.7K Ω	0K Ω	5.6K Ω	820 Ω
CA30KAMN12	39K Ω	15K Ω	15K Ω	2.7K Ω
CA30KAMN15	120K Ω	51K Ω	22K Ω	2.7K Ω
CA30KAMN24	130K Ω	56K Ω	8.66K Ω	510 Ω