

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



SINGLE OUTPUT MODELS						
Part Number	Input Voltage	Output Wattage	Output Voltage	Output Current	Efficiency (typical)	Efficiency (minimum)
CA30KAD03	85~265VAC	25 Watts	3.3 VDC	7500mA	76%	74%
CA30KAD05	85~265VAC	30 Watts	5VDC	6000mA	79%	77%
CA30KAD12	85~265VAC	30 Watts	12VDC	2500mA	80%	78%
CA30KAD15	85~265VAC	30 Watts	15VDC	2000mA	84%	82%
CA30KAD24	85~265VAC	30 Watts	24VDC	1250mA	84%	82%

DUAL OUTPUT MODELS						
Part Number	Input Voltage	Output Wattage	Output Voltage	Output Current	Efficiency (typical)	Efficiency (minimum)
CA30KAD12D	85~265VAC	30 Watts	+/-12VDC	+/-1250mA	83%	81%
CA30KAD15D	85~265VAC	30 Watts	+/-15VDC	+/-1000mA	84%	82%
CA30KAD503D	85~265VAC	20 Watts	+5/+3.3VDC	+3A/+1.5A	71%	68%
CA30KAD512D	85~265VAC	30 Watts	+5/+12VDC	+3A/+1.25A	81%	79%

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

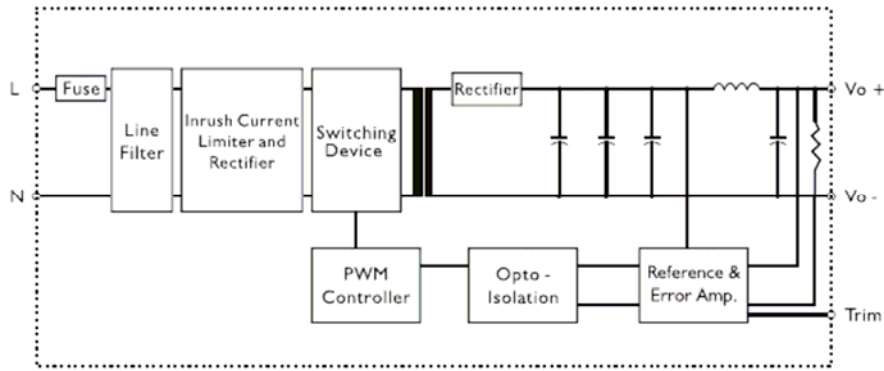
GENERAL					
Characteristics	Conditions	Min	Typ	Max	Unit
Switching frequency	Vi nom, Io nom		100		KHz
Isolation Voltage	Input/Output	3,000			VDC
Isolation Resistance	Input/Output, @500VDC	100			MΩ
Ambient Temp.	Operating at Vi nom Io nom	-20		+71	C
Derating	Vi nom, Io nom +51 to +71C			2	%/C
Storage 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		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

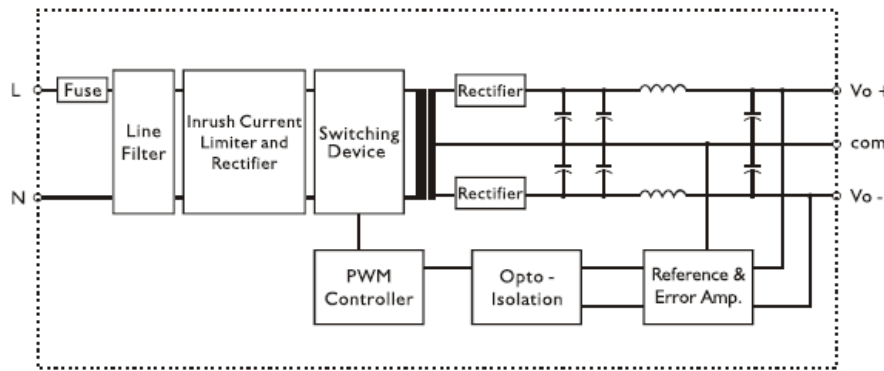
OUTPUT SPECIFICATIONS						
Characteristics	Conditions		Min	Typ	Max	Unit
Output voltage accuracy	Vi nom, Io nom				+/-2	%
Minimum load	Vi nom single output model		0			%
	Vi nom dual output model (each output)		20			%
Line regulation	Io nom, Vi min ... Vi max				+/-1	%
Load regulation	Vi nom, Io min Io nom	single output models			+/-2	%
		dual output models			+/-5	%
		5V at dual output			+/-2	%
Transient recovery time	Vi nom, Io nom= to 0.5 Io nom			500		uS
Temperature coefficient	Vi nom, Io nom				+/-0.02	%/C
Ripple & Noise	Vi nom, Io nom, BW =20MHz	3.3V models			100	mV
		5V-24V model	Vout x +/-1%p-p max.			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 84%, see model list			

Control & Protection	
Input Fuse	T2A/250VAC internal
Output short circuit	By current limited

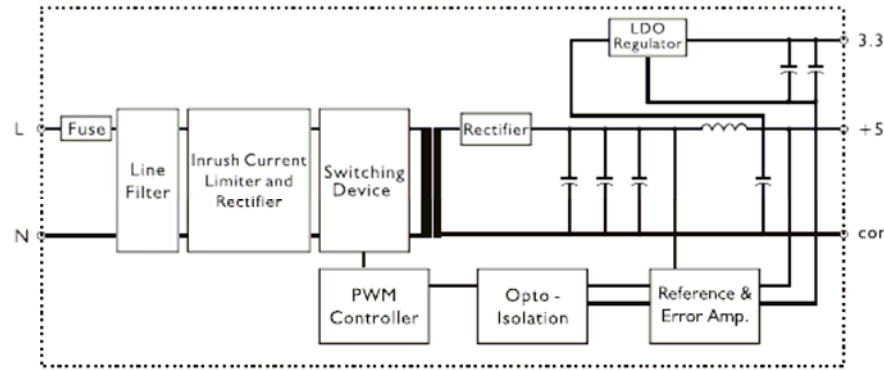
Block diagram for CA30KAD series with single output



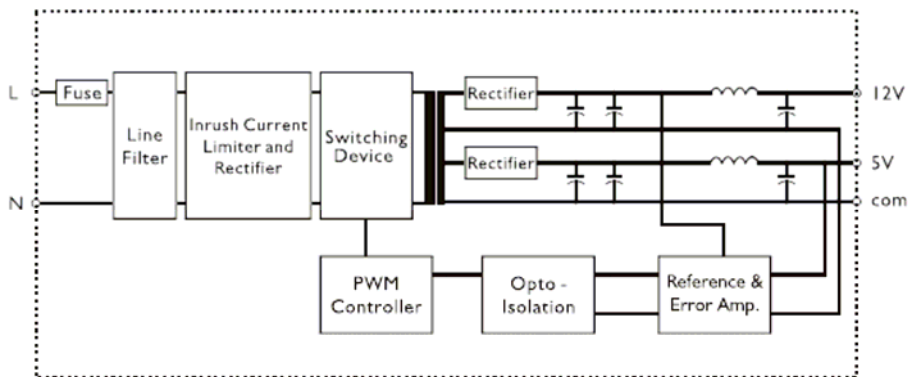
Block diagram for CA30KAD series with dual output



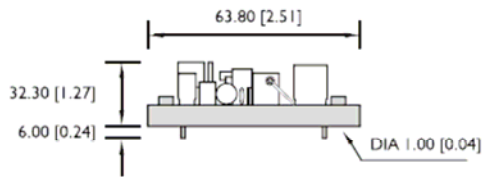
Block diagram for CA30KAD503D



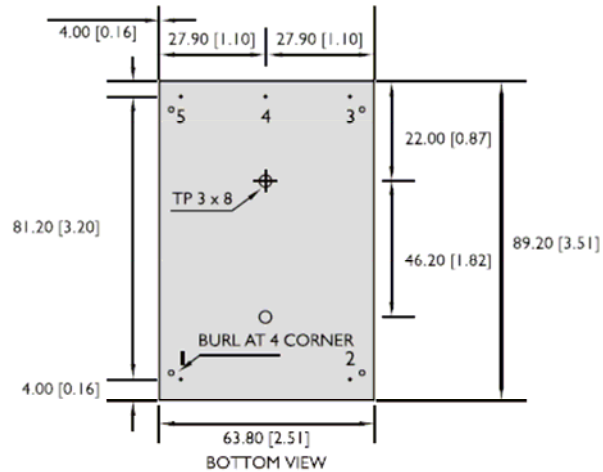
Block diagram for CA30KAD512D



mm [inch]

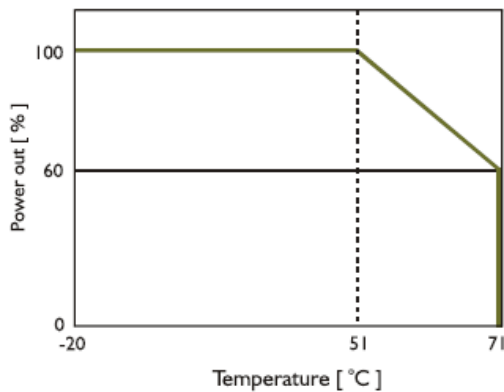


Plastic base, weight 135 g



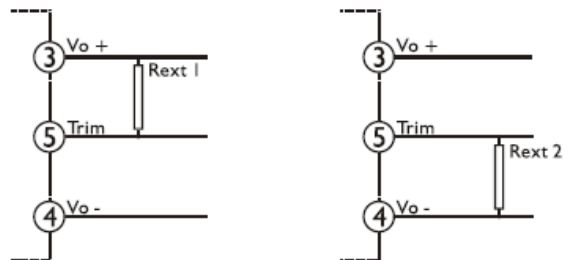
PIN ASSIGNMENT					
Pin No	1	2	3	4	5
SINGLE	AC IN	AC IN	Vo+	Vo -	TRIM
DUAL	AC IN	AC IN	Vo+ or +5V	com	Vo - or +3.3V, +12V

**DERATING**



**Fig. 1 Trim connection**

(For single output only)



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%
CA30KAD03	100K $\Omega$	N/A	12K $\Omega$	N/A
CA30KAD05	4.7K $\Omega$	0K $\Omega$	5.6K $\Omega$	820 $\Omega$
CA30KAD12	39K $\Omega$	15K $\Omega$	15K $\Omega$	2.7K $\Omega$
CA30KAD15	120K $\Omega$	51K $\Omega$	22K $\Omega$	2.7K $\Omega$
CA30KAD24	130K $\Omega$	56K $\Omega$	8.66K $\Omega$	510 $\Omega$