



30ACMEB Series

30W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated

AC-DC Converter

30 Watt

- ⊕ Universal input: 90~264VAC
- ⊕ Regulated output, low ripple and noise
- ⊕ High efficiency up to 89%
- ⊕ Plastic case, meets UL94V-0
- ⊕ Short circuit protection (SCP)
- ⊕ Output power protection (OPP)
- ⊕ Over voltage protection (OVP)
- ⊕ Meet EN60950, UL60950
- ⊕ Mounting: PCB Mounting & Chassis Mounting with Screw Terminals
- ⊕ Meets EN60601-1, ANSI/AAMI ES60601-1 standards (2xMOOP)
- ⊕ UL 60950-1 (pending)

The 30ACMEB series is a compact size power converter offered by GAPTEC. It features universal input voltage, taking both DC and AC input voltage, low power consumption, high efficiency, high reliability, safer isolation. It offers good EMC performance, meets IEC/EN61000-4, CISPR22/EN55022, UL60950 and EN60950 standards, and is widely used in medical instrumentation and critical applications in commercial and industrial electronic equipment.



(pending)

CB CE

Approval	Model*	Power [W]	Output voltage [V]	Output current [mA, max]	Capacitive Load [μF, max]	Efficiency [@230VAC, %, typ]
UL/CE	30ACMEB_05S4	30	5	5000	6800	84
UL/CE	30ACMEB_12S4	30	12	2500	1600	89
UL/CE	30ACMEB_15S4	30	15	2000	1200	86
UL/CE	30ACMEB_24S4	30	24	1250	470	86

* Add suffix CM for Chassis mounting with screw terminals (e.g. 30ACMEB_05S4CM), see different package measurements.

Input specifications	
Input voltage range	90-264 VAC or 120-370 VDC
Input frequency	47~440Hz
Input current	115VAC • 650mA (max) 230VAC • 400mA max)
Inrush current (<2ms)	115VAC • 30A (typ) 230VAC • 60A (typ)
Leakage current	< 0.1mA/264VAC (touch current)
No Load Input Power (<240 VAC)	<0.15W
External Fuse (recommend)	3.15 A slow blow type

Protection specifications	
Short circuit protection	Protection type: Auto recovery, hiccup mode
Over-voltage protection	Protection type: Zener diode clamp
Over-power protection	Protection type: Auto recovery, hiccup mode

Output specifications						
Item	Test conditions	Min	Typ	Max	Units	
Output voltage accuracy	Full load		±2		%	
Line regulation	LL-HL		±0.5		%	
Load regulation	10% to 100% load		±1		%	
Ripple & noise*	• 30ACMEB_05S4 • 30ACMEB_12S4 / 30ACMEB_15S4 • 30ACMEB_24S4			100 150 240	mVp-p	
Hold-up time		10			ms	

* Measured at 20MHz of bandwidth with 0.1uF & 47uF parallel capacitor.

Example:

30ACMEB_05S4

30 = 30Watt; AC = AC-DC; MEB = series; 5Vout; S = Single Output; 4 = 4kVAC

Note:

- This product is not designed for use in critical life support systems, equipment used in hazardous environment, nuclear control systems or other such applications which necessitate specific safety and regulatory standards other than the ones listed in this datasheet.
- Safety approvals cover frequency 47-63 Hz.
- That "natural convection" is about 20LFM but is not equal to still air (0 LFM).
- It's recommended to add Varistor 14S471K at L / N input side in parallel.
- All specifications valid at normal input voltage, full load and +25°C after warm-up time unless otherwise stated.

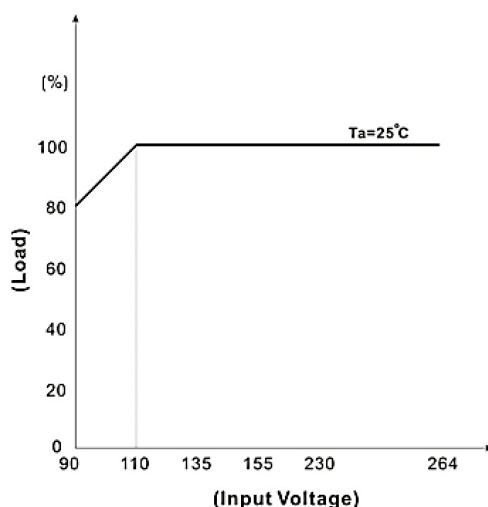
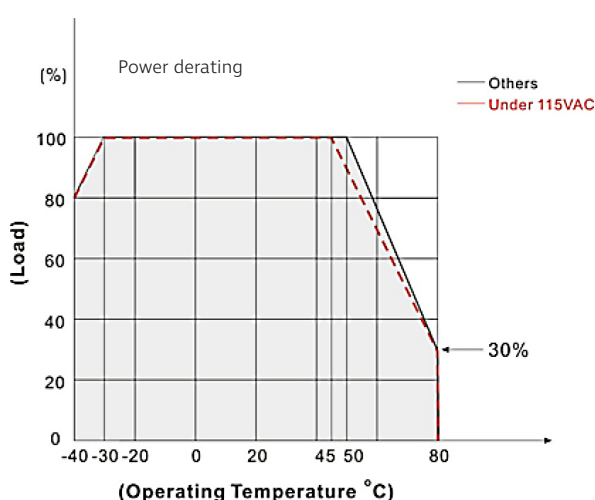
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Common specifications			
Operating temperature range	-40°C ~ +80°C (with derating)		
Storage temperature range	-40°C ~ +90°C		
Case operating temperature	84°C MAX		
Humidity (non-condensing)	95% MAX		
Cooling	Free air convection		
Temperature coefficient	±0.05%/°C		
I/O-isolation voltage	Input-Output: 4000VAC		
Altitude during operation	5000m		
Atmospheric pressure	70kPa to 106kPa		
EMC / EMI / Conducted and radiated EMI*	EN55011 Class B (Radiation Class A for 30ACMEB_S4CM Series)		
EMC / EMS / ESD	IEC/EN 61000-4-2	Contact ±4KV / Air ±8KV	perf. Criteria B
EMC / EMS / Radiated Immunity	IEC/EN 61000-4-3	10V/m	perf. Criteria A
EMC / EMS / Fast Transient	IEC/EN 61000-4-4	±2kV	perf. Criteria B
EMC / EMS / Surge	IEC/EN 61000-4-5	±1KV	perf. Criteria B
EMC / EMS / Conducted immunity	IEC/EN 61000-4-6	10Vr.m.s	perf. Criteria A
EMC / EMS / PFMF	IEC/EN 61000-4-8	30A/m	perf. Criteria A
EMC / EMS / Dips	IEC/EN 61000-4-11	30% / 10ms	perf. Criteria B
EMC / EMS / Interruption	EN61000-4-11	>95% 5000ms	
Safety standards	IEC60950, EN60950, UL60950		
Safety approvals	cUL / UL Standard: UL 60950-1, CAN/CSA C22.2 No. 60950-1-07 ANSI/AAMI ES60601-1 (2005 + C1:09 + A2:10), CAN/CSA-C22.2 No. 60601-1 (2008), 2 x MOPP CB Standard: IEC 60950-1:2005 (2nd Edition) + Am 1:2009 + Am 2:2013 IEC 60601-1:2005 (3rd Edition) + CORR. 1 (2006) + CORR. 2 (2007) + AM1 (2012) or IEC 60601-1 (2012 reprint), 2 x MOPP		
Case material	UL94V-0		
MTBF	>250,000 h @ 25°C (MIL-HDBK-217F)		
Package	64.1 x 45.6 x 23.5 mm /Tolerance ±0.5 mm		
Weight	135 g		

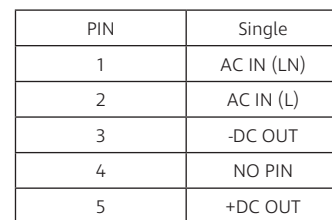
Typical characteristics

Derating graphs



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Single Output

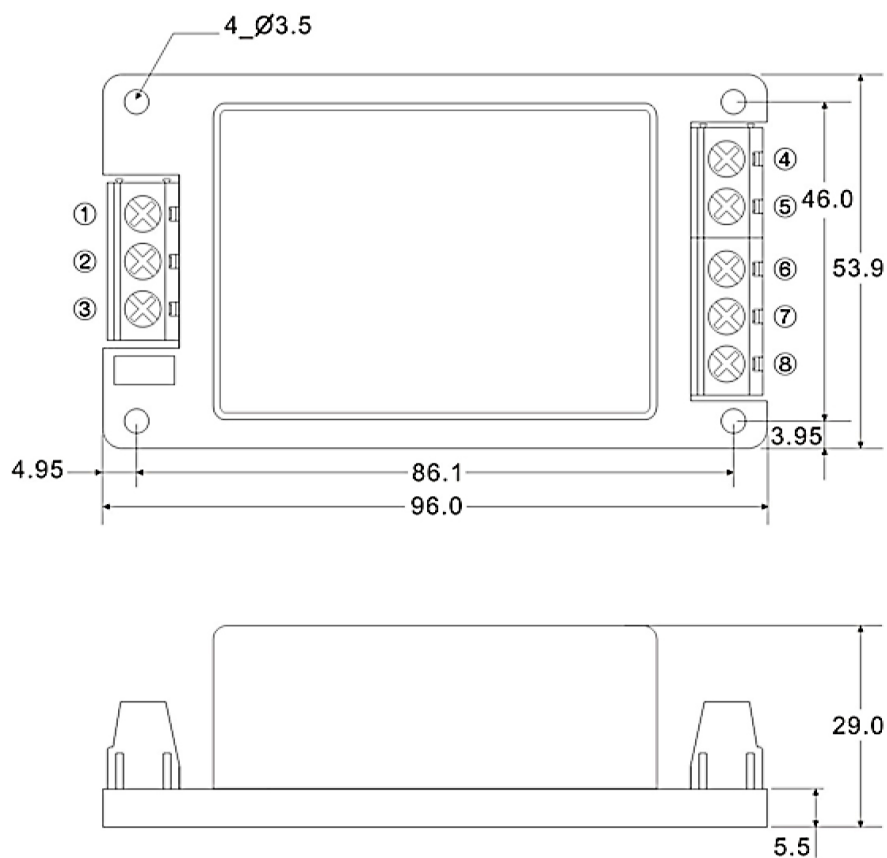


Note:
Unit: mm[inch]
General tolerances: $\pm 0.50\text{mm}$ [$\pm 0.020\text{inch}$]

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Chassis mounting with screw terminals



PIN	Single
1	AC IN (N)
2	NO CONNECT
3	AC IN (L)
4	NO CONNECT
5	-DC OUT
6	NO CONNECT
7	+DC OUT
8	NO CONNECT