

5ACDM Series

5W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated

AC-DC Converter 5 Watt

- ⊕ Wide input voltage range: 90~264VAC/120~370VDC
- ⊕ Short circuit protection (SCP)
- ⊕ Overload, over-voltage protection
- ⊕ High efficiency up to 85%
- ⊕ High safety isolation 3000VAC
- ⊕ Ultra-slim SIP package
- ⊕ Industrial grade
- ⊕ Meets UL/IEC/EN 60950-1, UL/IEC/EN 62368-1
- ⊕ EMI EN55022, CLASS B

The 5ACDM series is a high efficiency green power modules provided by GAPTEC. The features of this series are: Accept either AC or DC input, wide input voltage, high efficiency, low power consumption, safety isolation etc. All models are particularly suitable for the applications such as industrial, electric power, instrumentation, smart home which do not have high requirement on EMC. EMC application circuit (EMC reference EN55032) must be added if the products need to be applied to EMC harsh environment.



UL-62368-1 (E347551)

Common specifications	
Short circuit protection:	Continuous, automatic recovery
Temperature rise at full load:	25°C TYP
Cooling:	Free air convection
Operation temperature range:	-25°C – +70°C
Storage temperature range:	-40°C – +85°C
Welding temperature:	Wave-soldering: 250±10°C; time:5~10s Manual-welding: 360±10°C; time:3~5s
Storage humidity range:	< 95%
Safety standard:	Design refer to UL60950-1, IEC60950-1
EMI Conduction & Radiation:	Design refer to EN55022, CLASS B
EMS Immunity:	Design refer to EN61000
Hot plug:	Unavailable
Case material:	Plastic [UL94-V0]
MTBF (MIL-HDBK-217F@25°C):	>328,000 hours, Ground Benign
Dimensions (LxWxH):	25.4x25.4x16.1 mm
Weight:	20g

Output specifications						
Item	Test condition	Min	Typ	Max	Units	
Output voltage accuracy	• 3.3V/5V output • Others			±3 ±2	% %	
Min. load		0			%	
Line regulation	Io nom, Vi min...Vi max			±1	%	
Load regulation				±1	%	
Temperature drift	100% full load		±0.05		%/°C	
Ripple & Noise*	20MHz Bandwidth			480	mV	
Transient response setting time	Vi nom, Io nom = ↔0.5 Io nom		1000		µs	
Switching frequency	Full load, nominal input			65	KHz	
Over-load Protection	≥ 110% rated output power, Recovers automatically after fault condition is removed					
Over-voltage Protection	Zener clamp diode, 120%-150% rated output Vvoltage					

* Ripple & noise is measured by using 20 MHz bandwidth, measured with a 10µf paralleled with a high-frequency 0.47µf capacitor across each output by full load.

Input specifications						
Item	Test condition	Min	Typ	Max	Units	
Input voltage range	• AC Input • DC Input	90 120		264 370	VAC VDC	
Input frequency		47	50/60	63	Hz	
Input fuse	VDE/UL/CCC FUSE 2.5A/250V (Slow blow)					
Inrush current	• 115VAC • 230VAC		10 20		A A	

Isolation specifications						
Item	Test condition	Min	Typ	Max	Units	
Isolation voltage	Input/Output, 5mA/5sec	3000			VAC	
Isolation resistance	Input/Output, @500 Vdc	100			MΩ	

Example:

5ACDM_05S3
5 = 5Watt; AC = AC-DC; DM = case style; 05 = 5Vout; S = Single Output;

Note:

1. Module required dispensing fixed after assembled;
2. All specifications were measured at Ta = 25°C, humidity <75%, nominal input voltage and rated output load unless otherwise specified;
3. All index testing methods in this datasheet are based on our Company's corporate standards;
4. The performance indexes of the product models listed in this manual are as above, but some indexes of non-standard model products will exceed the above-mentioned requirements, and please directly contact our technician for specific information;
5. We can provide product customization service;
6. Specifications of this product are subject to changes without prior notice.

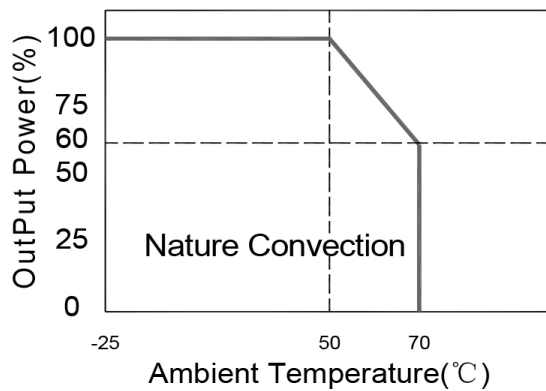
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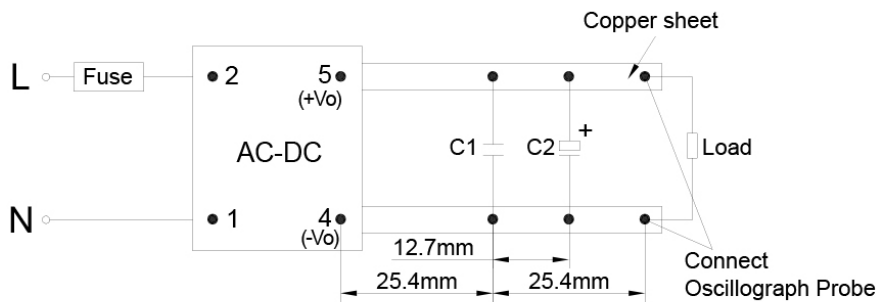
Model	Power [W]	Output voltage [VDC]	Output current [mA]	Ripple&noise [mV, max]	Efficiency [%, typ]	Capacitive load [μ F, max]
5ACDM_03S3	5	3.3	1515	74	74	2200
5ACDM_05S3	5	5	1000	80	80	1000
5ACDM_09S3	5	9	555	82	82	300
5ACDM_12S3	5	12	416	82	82	160
5ACDM_15S3	5	15	333	83	83	100
5ACDM_24S3	5	24	208	83	83	43
5ACDM_48S3	5	48	104	85	85	10

Typical characteristics

Temperature derating graph



Parallel lines measure

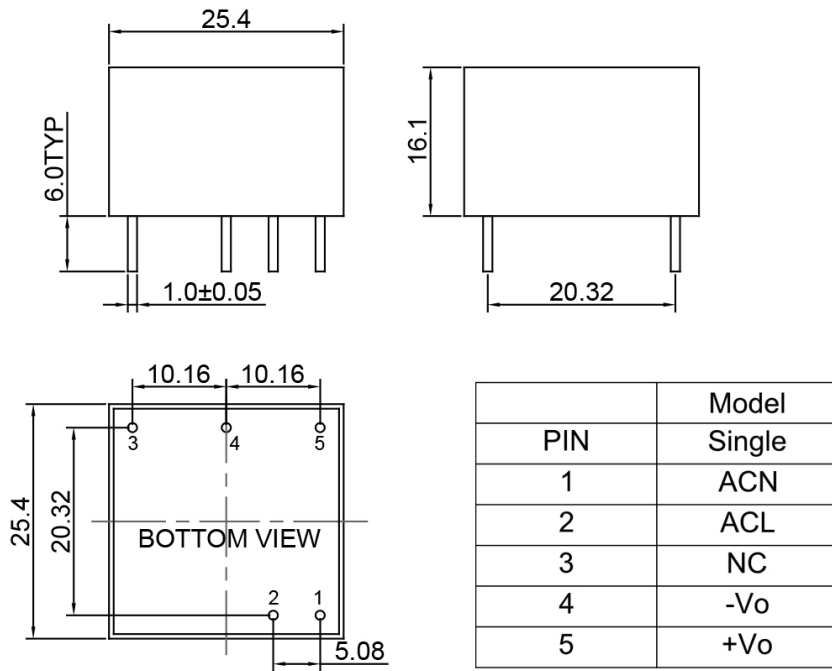


C1: Ceramic capacitor, 1uF; C2: Electrolytic capacitor, 10uF

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Mechanical dimensions



Unit : mm ,

Unless otherwise specified, all tolerances are ±0.50