

100ACDRSS_4 series

100W - Single Output AC-DC Converter



AC-DC Converter

100 Watt

- ⊕ 100W output power
- ⊕ 4kVAC isolation
- ⊕ Isolation class II
- ⊕ Class 2/Pass LPS
- ⊕ Ultra slim step shape

- ⊕ DC Output voltage adjustable
- ⊕ Protection: short circuit, overload and over voltage
- ⊕ Over voltage category II

Introducing our high-performance 100ACDRSS_4 series, delivering a robust 100W output power with the added security of 4kVAC isolation, ensuring safety and protection in various applications. Built to meet Isolation Class II standards and compliant with Class 2/Pass LPS requirements, this module offers top-tier reliability and safety in demanding environments. Designed with an ultra-slim step shape, the module is perfect for installations where space is limited, while the DC output voltage adjustable feature offers flexibility to meet specific output needs. The integrated protection mechanisms - short circuit, overload, and over-voltage protection - ensure that the module operates securely even under challenging conditions. With over-voltage category II certification, the module provides added protection against power surges, further enhancing its suitability for industrial and residential applications alike.



Common specifications

Short circuit protection:

Over load 102 ~ 110% rated output power; (below 92.2W)
105 ~ 150% rated output power; (above 92.2W)
Hiccup mode when output voltage <50%, recovers automatically after fault condition is removed constant current limiting within 50%~100% rated output voltage, recovers automatically after fault condition is removed

Over temperature 95C ≤ 5°C (TSW) detect on heatsink of power switch
Protection type: Shut down o/p voltage, recovers automatically after temperature goes down

Over voltage 100ACDRSS_1207S4 = 14.2-16.2V
100ACDRSS_15065S4 = 18.8-22.5V
100ACDRSS_2404S4 = 30-36V
100ACDRSS_4802S4 = 56.5-64.8V
Protection type:
Shut down o/p voltage, re-power on to recover

Operating temperature -20~+70°C (with derating)

Storage Temperature -40~+85°C

Operating humidity 20%~90%RH, non considering

Storage humidity 10%~95%RH

Operating altitude 5000 meters

Over voltage category II; According to EN62368-1; altitude up to 2000 meters

Temp. coefficient ±0.03%/°C (0 ~ 50°C) RH non-condensing

Vibration 10 ~ 500Hz, 2G 10min./1 cycle, period for 60min. each along X, Y, Z axes;
Mounting: compliance to IEC60068-2-6

Safety regulations UL62368-1, BS EN/EN62368-1

Dimension: 90 x 70.2 x 58.4 mm

Weight 270g

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage tolerance			±2.0		%
Line regulation			±1.0		%
Load regulation			±1.0		%
Setup rise time	240VAC at full load 100VAC at full load		500 50		ms
Hold up time	240VAC at full load 100VAC at full load		30		ms

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage range		90 127		264 370	VAC VDC
Frequency range		47		63	Hz
Inrush current (cold start)	115 VAC 230VAC		35 70		A
AC current	115 VAC 230VAC		3 1.6		A

Isolation specifications

Item	Operating Conditions	Min	Typ	Max	Units
Withstand voltage	I/P-O/P		4000		VAC
Isolation resistance	I/P-O/P:100M Ohms / 500VDC / 25°C / 70% RH				

EMC specifications

EMC emissions	BS EN/EN 55032 class B, BS EN/EN IEC 61000-3-2,3
EMC immunity	BS EN/EN61000-4-2,3,4,5,6,8,11

Example:

100ACDRSS_12S4

100 = 100Watt; AC = AC-DC; DR = Din Rail, SS = Step shape;
12 = 12Vout; S = Single output; 4 = 4kVAC isolation

- All parameters not specially mentioned at 230VAC input, rated load and 25°C of ambient temperature.
- Ripple & noise are measured from peak to peak with band width limit of 20MHz (0.1uF and 47uF/50V parallel capacitor under DC output full load, AC nominal input 25°C ambient temperature).
- Installation clearances: top with 40mm, bottom with 20mm, left and right with 5mm. Increase the space to 10-15mm when the adjacent device is heat source.
- Derating may be needed under low input voltage. Please check the derating curve for more details.
- Efficiency test after 30 minutes of burn-in.
- The ambient temperature derating of 3.5 °C/1000m for operating altitude higher than 2000m (6500ft).

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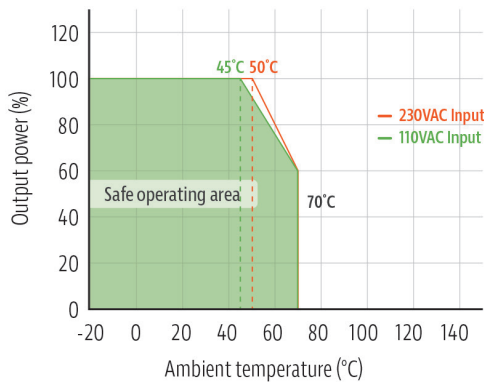
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Product Selection Guide

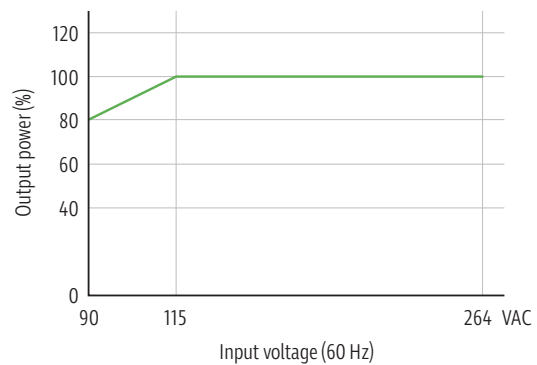
Certification	Part number	DC Voltage (V)	Output current (A)	Power (W)	Voltage Adj. Range (V)	Efficiency (%)	Ripple & noise (mVp-p)
UL	100ACDRSS_12S4	12	7.1	85.2	12-13	88	120
UL	100ACDRSS_15S4	15	6.5	97.5	13.5-18.0	89	120
UL	100ACDRSS_24S4	24	4.17	100	21.6-29	90	150
UL	100ACDRSS_48S4	48	2.08	100	43.2-55.2	90	240

Product characteristic curve

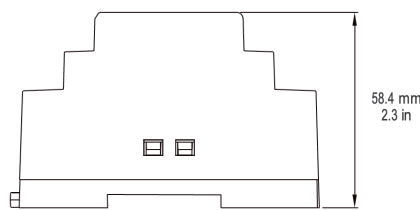
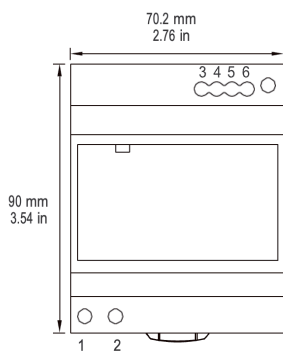
Temperature derating graph



Input voltage derating curve



Mechanical dimensions and recommended layout



Input	
PIN	Mark
1	AC/N
2	AC/L

Output	
PIN	Mark
3,4	-V
5,6	+V

Functional diagram

