



200ACP_SC series

200W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated

AC-DC Converter

200 Watt

- High efficiency up to 88.5%
- Universal AC input range (85~264VAC)
- Built-in Active PFC function, PF>0.95
- Over power protection (OPP)
- Over load protection (OLP)
- Short circuit protection (SCP)
- Wide operating ambient temperature (-20°C~70°C)
- Operating altitude up to 5000M
- 100% full load burn-in test
- Easy assembling from top side
- PCB soldering side with conformal coating

The 200ACP_SC series features standard rail mounting, energy efficiency and is highly cost-effective. The series offers stability and high noise immunity especially for industrial control equipment, machinery and other demanding environments for industrial equipment. This converter offers a compact and light weight design with and standard rail installation (35mm). Furthermore this series offers Easy Fuse Tripping due and a built-in DC OK relay contact. The converter can be installed on TS-35/7.5 or TS-35/15.



Common specifications

Short circuit protection:	Long-term mode, automatic recovery
Temperature rise at full load:	40°C MAX
Cooling:	Free air convection
Operation temperature range:	-20°C~+65°C
Storage temperature range:	-40°C ~+85°C
Storage humidity range:	< 95%
Temperature coefficient:	0.03%/°C MAX
MTBF (using MIL-HDBK-217F):	+25°C >200,000 hours
Power boost:	150% of rated current
Parallel function:	support
Safety standards:	UL60950-1 2 nd Ed; IEC 60950-1:2005 (2 nd Ed); EN60950-1:2006
Case material:	Heat-resistant Plastic (UL94-V0) and metal
Dimensions:	199*99*38mm
Weight:	800g

Isolation specifications

Item	Test condition	Min	Typ	Max	Units
Withstand voltage*	<ul style="list-style-type: none"> Primary-Sec.: 10mA Primary-PG: 10mA Secondary-PG: 10mA 	3000		1500	VAC
Isolation resistance		100			MΩ

* Input-Output, tested for 1 minute, 500VDC and leakage current less than 1mA

Protection specifications

Over-load protection	105%~150% of rated output current, hiccup mode, auto recovery
Over-power protection	105%~150% of rated output current, hiccup mode, auto recovery

Note:

- All parameters NOT specially mentioned are measured at rated input, rated load and 25°C of ambient temperature.

Input specifications

Input voltage range	90~264VAC
Input frequency	47~63Hz
Power factor	115VAC • 0.98 (typ) 230VAC • 0.95 (typ)
AC current	3A (max)
Inrush current	Cold start 115VAC • 30A (typ) 230VAC • 50A (typ)
Leakage current	Input—output: ≤0.25mA Input—PG: ≤3.5mA

Output specifications

Item	Test conditions	Min	Typ	Max	Units
Output voltage accuracy	Full load • 12V • 24V/48V			±2 ±1	% %
Voltage adjustment range	• 12V • 24V • 48V	10 20 42		15.5 27.2 53	V V V
Line regulation	Vin= min. to max. at full load			±0.5	%
Load regulation	0% to 100% load • 12V • 24V/48V			±2 ±1	% %
Set-up time	• @230VAC input • @115VAC input			2 4	s s
Hold-up time	@full load	16			ms
Overshoot and undershoot				5	%
Switching frequency			100		KHz

* Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.

Example: 200ACP_24SC

200 = 200Watt ; AC = AC-DC ; P = series ; 24 = 24 Vout;
S = single output; C = PFC (Power Factor Correction)

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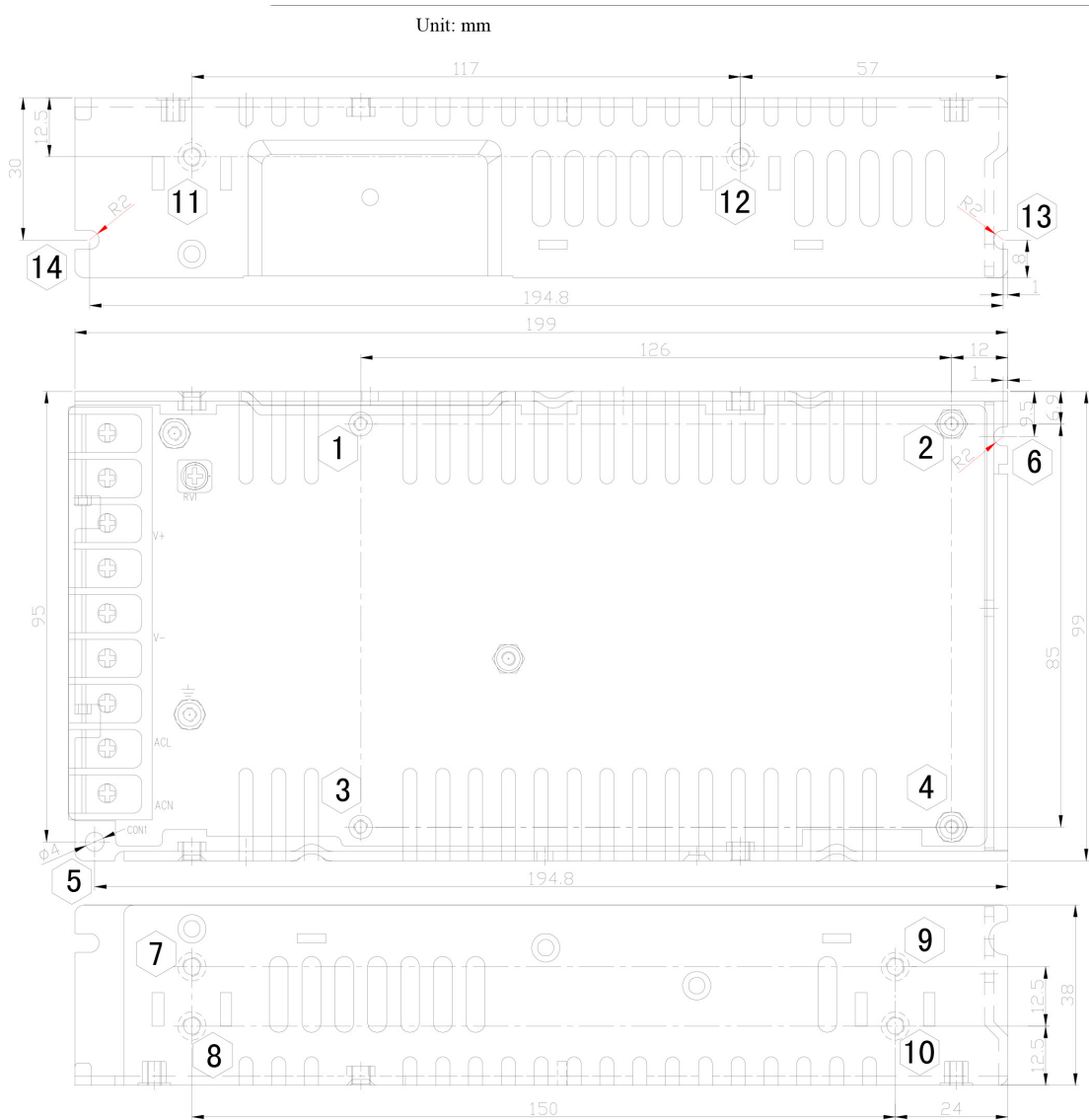
EMC specifications	
EMC / Emission	Compliance to EN55022, EN55024, FCC PART 15 Class B
EMC / Harmonic current	Compliance to EN61000-3-2, CLASS D
EMC / Immunity	Compliance to EN61000-4-2, -3, -4, -5, -6, -8, -11; heavy industry level

The power supply is considered as a component which will be installed into a final equipment.
The final equipment must be re-confirmed that it still meets EMC directives.

Approval	Model	Power [W]	Output [Vo, VDC]	Rated Current [A]	Current Range [A]	Ripple&Noise* [mV, typ] 0~65°C -20~0°C		Efficiency [%, typ]
UL	200ACP_12SC	200	12	16.7	0~16.7	150	200	87
UL	200ACP_24SC	200	24	8.4	0~8.4	200	200	88
UL	200ACP_48SC	200	48	4.2	0~4.2	150	150	88.5

Measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1 uF & 10uF parallel capacitor.

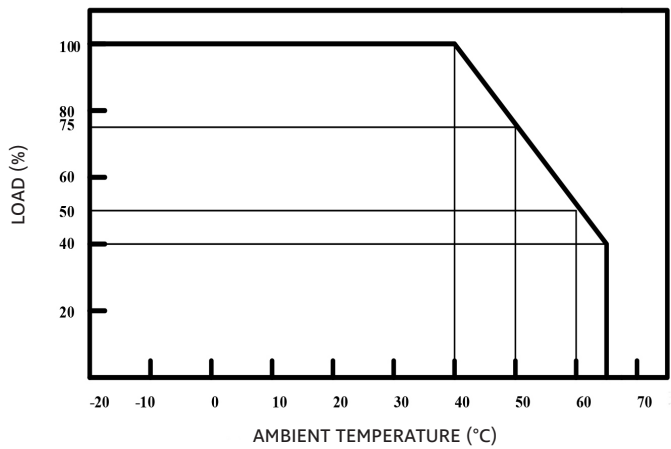
Mechanical dimensions



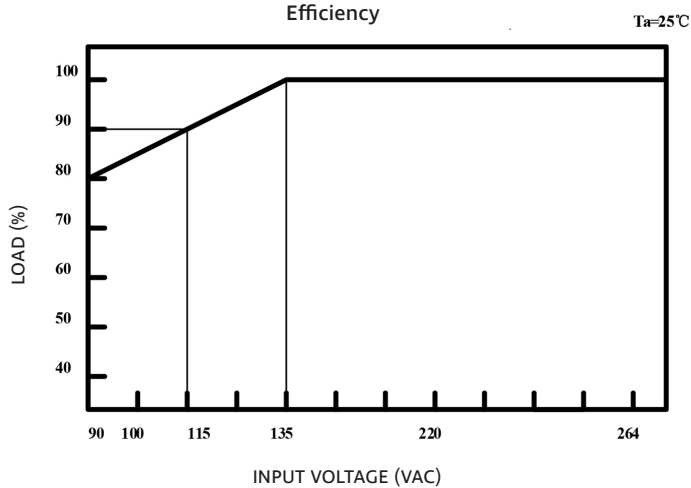
1-4	M3	2.5mm	6.5kgf.cm (max)
5-6	M3	4mm	6.5kgf.cm (max)
7-12	M3	4mm	6.5kgf.cm (max)
13-14	M4	4mm	12kgf.cm (max)

Typical characteristics

Derating Curve



Efficiency



Functional block diagram

Functional diagram

