

150ACP_S Series

150W - Single Output AC-DC Converter - Universal Input - Isolated & Regulated



AC-DC Converter

150 Watt

- ⊕ High efficiency up to 87%
- ⊕ AC input selectable by switch (115VAC/230VAC)
- ⊕ Withstand 300VAC surge input for 5s
- ⊕ Over power protection (OPP)
- ⊕ Over load protection (OLP)
- ⊕ Short circuit protection (SCP)
- ⊕ Wide operating ambient temperature (-20°C~65°C)
- ⊕ Suitable for critical applications
- ⊕ Altitude up to 5000M
- ⊕ 100% full load burn-in test
- ⊕ All using 105°C long life electrolytic capacitors

The 150ACP_S 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.



c **UL** [®] **US** **CB** **CE**

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*98.3*38mm
Weight:	750g

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	<ul style="list-style-type: none"> 12V: 13.75~18.75A 24V: 6.88~9.38A 	Protection type: Constant power, auto recovery
Over-power protection	165~225W	Protection type: Constant power, auto recovery

Note:

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

Input specifications

Input voltage range	90~132VAC/176VAC~264VAC	
Input frequency	47~63Hz	
AC current	110VAC • 4.0A (max)	220VAC • 2.0A (max)
Inrush current	Cold start	220VAC • 60A (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			±1	%
Voltage adjustment range	<ul style="list-style-type: none"> 12V 24V 	11.4	22.8	13.2	V
Line regulation	Vin= min. to max. at full load			±0.5	%
Load regulation	0% to 100% load			±1	%
Set-up time				1.2	s
Hold-up time	<ul style="list-style-type: none"> @230VAC input @115VAC input 	10	20		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:

150ACP_24S

150= 150Watt
 AC= AC-DC
 P= series
 24= 24 Vout
 S= single output

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EMC specifications

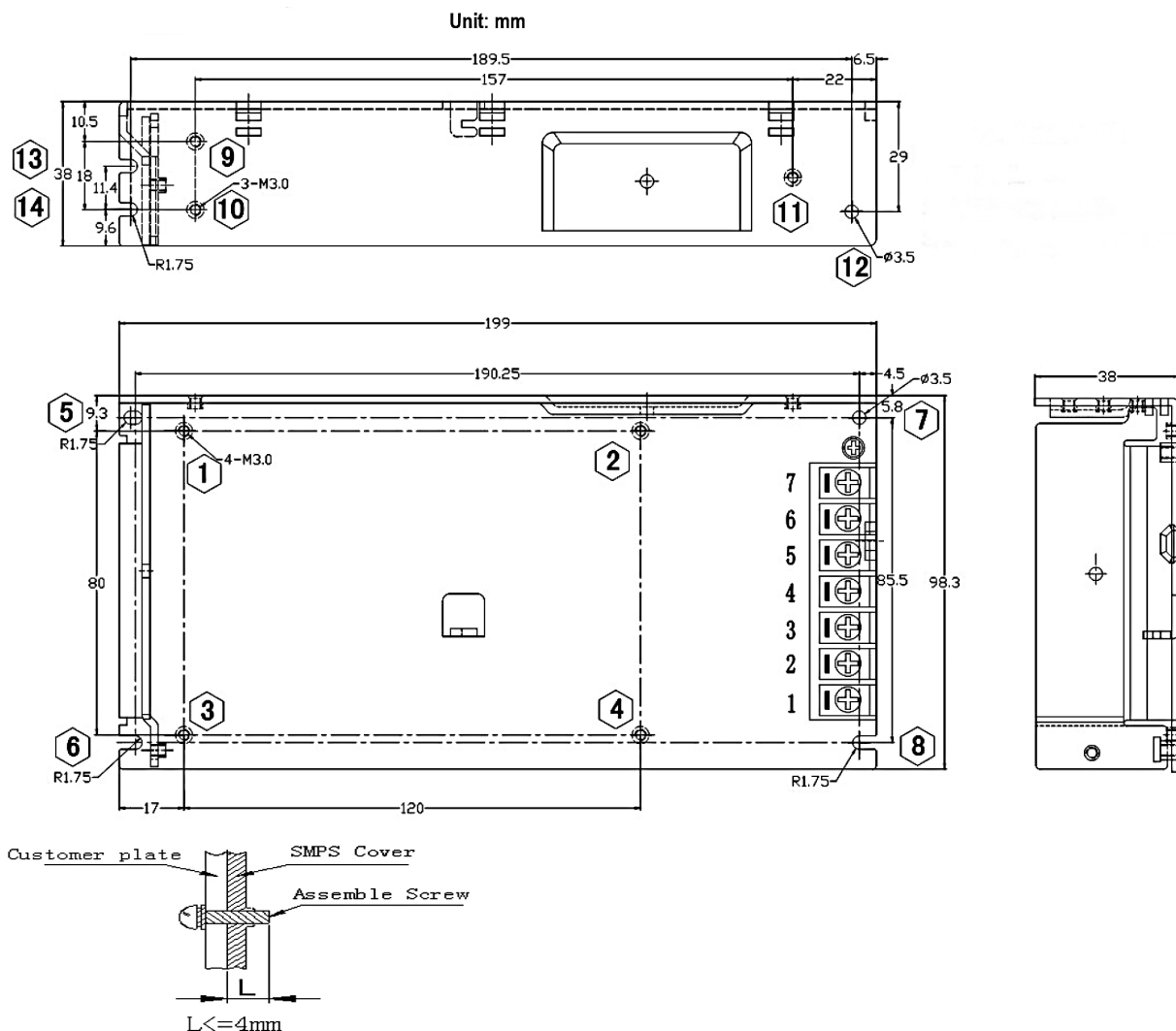
EMC / Emission	Compliance to EN55022, EN55024, FCC PART 15 B / Class B
EMC / Harmonic current	Compliance to EN61000-3-2, CLASS A
EMC / Immunity	Compliance to EN61000-4-2, -3, -4, -5, -6, -8, -11; heavy industry level

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]		Efficiency [%, typ]
						0~70°C	-20~0°C	
UL (pending)	150ACP_12S	150	12	12.5	0~12.5	120	200	84
UL (pending)	150ACP_24S	150	24	6.25	0~6.25	120	200	87

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

Mechanical dimensions

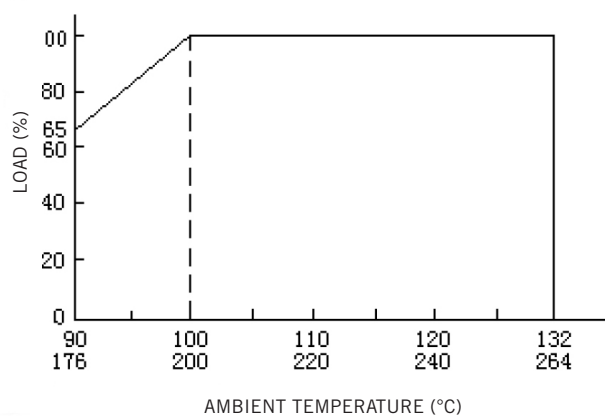


150ACP_S Series

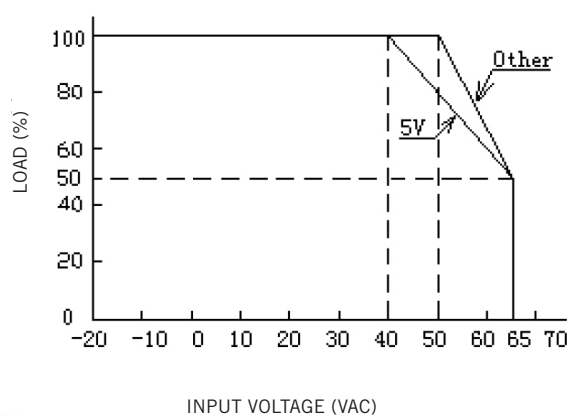
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Typical characteristics

Derating Curve



Efficiency



Functional block diagram

Functional diagram

