150ACDR1S_S4 series

150W - Single Output AC-DC Converter

AC-DC Converter 150 Watt

- Wide input voltage range: 90-264VAC / 120-370VDC
- No load power consumption: only 0.3W
- 4000VAC isolation voltage
- Suitable for TS-35/7.5 or TS-35/15 guide rails
- Over current protection
- Short circuit protection (SCP)
- Overvoltage protection OVC III
- Output voltage adjustable via potentiometer
- Operating temperature range: -30°C up to +70°C

Introducing our new 150ACDR1S_S4 series, a robust and versatile AC-DC power supply platform designed for reliable performance in industrial control and DIN-rail applications. Featuring a wide input voltage range of 90–264VAC or 120–370VDC, the series ensures flexible operation across global power networks and demanding installation environments. With 4000VAC isolation voltage and suitability for TS-35/7.5 or TS-35/15 guide rails, the 150ACDR1S_S4 series enables safe and convenient integration into standard industrial cabinet systems. The output voltage can be adjusted via potentiometer, providing additional flexibility for system-specific requirements. Integrated protection features including overcurrent protection, short circuit protection (SCP), and overvoltage protection enhance operational safety and long-term reliability. With a no-load power consumption of only 0.3W and an operating temperature range from –30°C up to +70°C, the 150ACDR1S_S4 series combines energy efficiency, robust protection, and easy DIN-rail installation in a compact industrial power solution.

SHORT CIRCUIT PROTECTED

100% RoHS compliant 6/6

c UL us
UL62368 - E347551
Pending

Common specifications

Short circuit protection	When a short-circuit fault occurs at the output, hiccup mode protection is activated. When the short-circuit fault is cleared, the power supply automatically resumes normal output.
Over current protection	105% Io (min.) 160% Io (max.) When the fault is cleared, the output automatically returns to normal. 50% Io (min.) 100% Io (max.) hiccup when output voltage<50%, constant current mode when output voltage is between 50% and 100%. After the fault is removed, the power supply automatically returns to normal
Over voltage protection	110% Vo (min.) 150% Vo (max.) constant voltage mode, when the fault is resolved, the output automatically returns to normal
Operating temperature	-30°C - +70°C (with derating)
Storage temperature	-40°C - +85°C
Working humidity	20~95% RH (non-condensing)
Storage humidity	10~95% RH (non-condensing)
Safety standard	UL 62368-1, CAN/CSA C22.2 No. 62368-1:19, EN 62368-1 IEC 62368-1, GB 4943.1
Altitude	5000m (Above 2000m, for every 100m increase, the ambient temperature decreases by 0.5 °C)
Vibration	Frequency range of 10-500Hz, acceleration of 2G, each sweep cycle lasts for 10 minutes, with 6 sweep cycles along the X, Y, and Z axes
Shock	Acceleration of 20G, duration of 11mS, conduct 3 impacts along the X, Y, and Z axes respectively
MTBF (MIL-HDBK-217F)	200,000 hours
Weight	310 g

Isolation specifications

Item	Operating Conditions	Min	Typ	Max	Units
Dielectric strength*	Input-Output / Last for 60s, leakage current <7mA	4000			VAC
Isolation resistance	Input-Output Test Voltage: 500VDC	100			MΩ

Note: *The dielectric strength test value is the minimum value, if the higher test standard is needed, please contact our sales.

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Output voltage tolerance	All models	-2		+2	%
Line regulation	All models	-1		+1	%
Load regulation	All models	-1%		+1%	%
Turn on delay time	115VAC/230VAC, full load			500	ms
Rise time	115VAC/230VAC, full load			50	ms
Hold up time	230VAC, full load 115VAC, full load	30 12			ms
Temp. coefficient	0~50°C	-0.03		0.03	%/°C

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Input AC voltage		90 176		132 264	VAC
Rated input AC voltage		100 200		120 240	VAC
Input DC voltage	When DC input, L is positive and N is negative	120		370	VDC
Input frequency		47		63	Hz
Input current	115VAC, full load 230VAC, full load			3.0 1.8	A
Leakage current	240VAC/50Hz			0.25	mA
Inrush current	115VAC, cold start 230VAC, cold start		30 70		A

Example:
150ACDR1S_12S4
150 = 150Watt; AC = AC-DC; DR = DIN rail; 1S = Series; 12 = 12Vout; S = Single output; 4 = 4kVAC isolation

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Specifications subject to change without notice.

EMC specifications					
EMC	EMI	Conducted Emission	EN 55032	Class B	
EMC	EMI	Radiated Emission	EN 55032	Class B	
EMC	EMI	Harmonic Current[4]	EN 61000-3-2	Class A	
EMC	EMI	Voltage Flicker	EN 61000-3-3		
EMC	EMS	Electrostatic Discharge Immunity	EN 61000-4-2	Air 8 kV / Contact 4 kV	Criteria B
EMC	EMS	Radio Frequency Electromagnetic Field Immunity	EN 61000-4-3	80MHz–1GHz 10V/m	Criteria A
EMC	EMS	Electrical Fast Transient/Burst Immunity	EN 61000-4-4	±2KV	Criteria A
EMC	EMS	Surge Immunity	EN 61000-4-5	CM±2KV	Criteria A
EMC	EMS	Injected Currents Susceptibility	EN 61000-4-6	10Vr.m.s	Criteria A
EMC	EMS	Power Frequency Magnetic Field Immunity	EN 61000-4-8	30A/m,continuous	Criteria A
EMC	EMS	Voltage Dips and Short Interruptions Immunity	EN 61000-4-11	Drop 100%, 0.5 periods Drop 20%, 250 periods Drop 30%, 25 periods Interrupt 100%, 250 periods	Criteria B Criteria B Criteria B Criteria C

Product Selection Guide

Approval	Part number	Output Power (W)	Output voltage (VDC)	Adjustable output voltage[3]	Output Current (A)	Ripple and noise (mV)[2]	Efficiency @230VAC (typ.)[1]
	150ACDR1S_12S4	135	12	10.8-13.8	0-11.3	100	89%
	150ACDR1S_15S4	142	15	13.5-18	0-9.5	120	89.5%
	150ACDR1S_24S4	150	24	21.6-29	0-6.25	150	91%
	150ACDR1S_48S4	153	48	43.2-55.2	0-3.2	200	91%

Notes: 1. All parameters not specially mentioned are measured at rated input voltage, full load and 25°C ambient temperature.

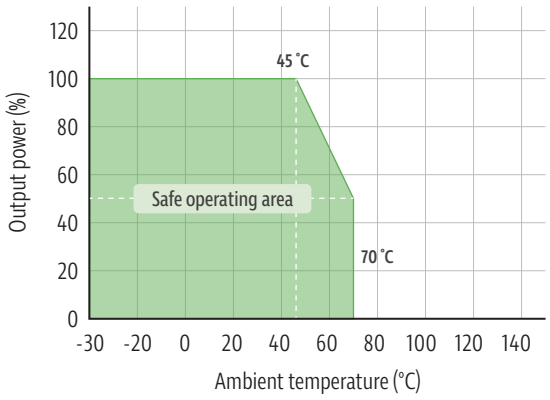
2. Ripple & noise are measured at 20MHz of oscilloscope bandwidth(oscilloscope probe cap and ground clamp are removed)by using a 20±2cm twisted pair-wire terminated with a 47uF electrolytic capacitor and a 0.1uF high frequency capacitor that are connected in parallel at the output end.

3. Under any steady operating condition, the total output power shall not exceed the rated output power. When the output voltage is raised, the total output power cannot exceed the rated output power. When the output voltage is turned down, the output current cannot exceed the rated output current.

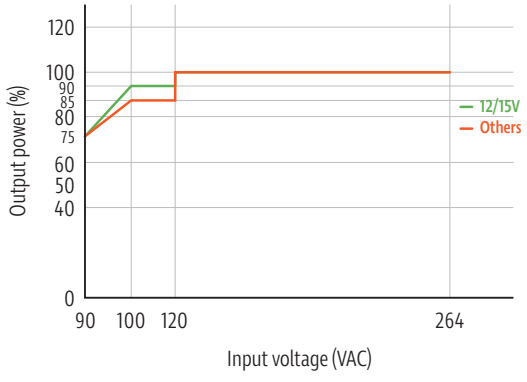
* For the product models under development, please contact our sales team or distributor for more information.

Typical characteristics

Temperature derating graph

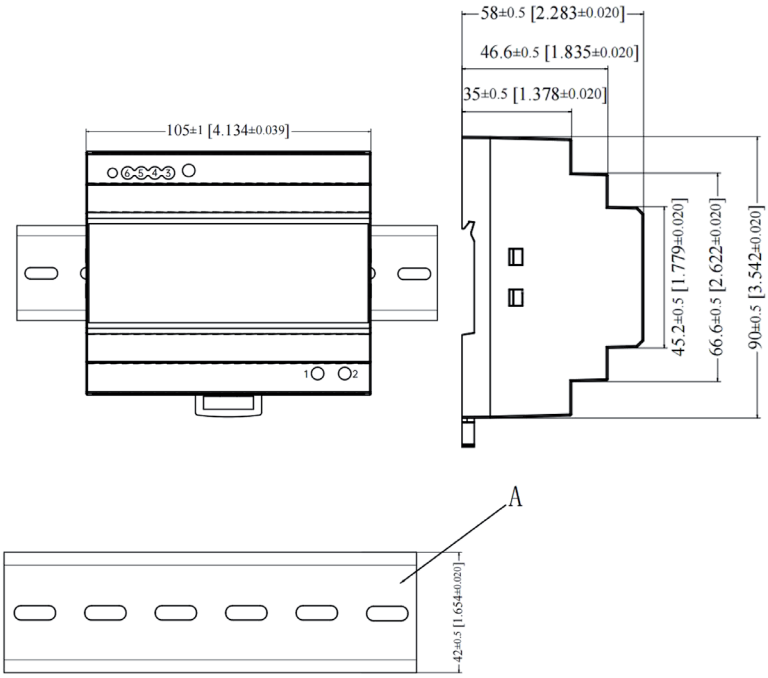


Input voltage derating curve



Note: If more detailed test data during application is needed, please contact our technical team to obtain application notes of related products.

Mechanical dimensions



Guide rail model:TS35/7.5 or TS35/15

Installation screw: M4
Installation torque: 8kgf. cm (0.8N. m)
The screw should extend into the casing no more than 3mm
Unit:mm [inch];
The unmarked tolerance is ± 0.5 [± 0.020]

Input/output pin function

Pin number	Pin	Function	Screw torque requirements
1	L	AC LINE	Screw: M2.5 Torque: 4Kgf.cm (0.4N.m)
2	N	AC NEUTRAL	
3/4	V+	DC output +	
5/6	V-	DC output -	