

## 240ACDR1\_SC3 series

240W - Single Output AC-DC Converter



### AC-DC Converter

240 Watt

- ⊕ Universal AC input range  
90 ~264VAC
- ⊕ LED indicator for power on
- ⊕ Cooling by free air convection
- ⊕ Operating temperature  
-30°C to +70°C
- ⊕ DC output voltage adjustable
- ⊕ Protection: short circuit,  
over load, over voltage and  
over temperature
- ⊕ Can be installed on  
DIN rail TS-35/7.5 or 15

Introducing our new 240ACDR1\_SC3 series, designed to meet the highest standards of reliability and performance. With a universal AC input range of 90 ~ 264VAC, this versatile unit is ready for global applications. An LED indicator conveniently shows when the power is on, ensuring easy monitoring at a glance. This power supply is cooled through free air convection, maintaining optimal temperatures without the need for additional fans. It operates within an impressive temperature range of -30°C to +70°C, making it suitable for demanding environments. The DC output voltage is fully adjustable, giving you the flexibility to tailor it to your specific requirements. Comprehensive protection features are built-in, safeguarding against short circuits, overloads, over-voltage, and over-temperature conditions, ensuring both safety and longevity. For easy installation, the unit can be mounted on a DIN rail TS-35/7.5 or 15, allowing seamless integration into various industrial setups.



Common specifications	
Short circuit protection:	Hiccup mode, recovers automatically after fault condition is removed
Over load	105-130% rated current, constant current mode; when the output voltage <50% , hiccup mode, recovers automatically after fault condition is removed
Over temperature	Shut down output voltage: recovers automatically after temperature decreases
Over voltage	240ACDR1_24SC3 27.5-32.5V 240ACDR1_48SC3 56-65V Constant voltage, recovers automatically after fault condition removed
Operating temperature	-30~+70°C (with derating)
Storage Temperature	-40~+80°C
Operating humidity	20%~95% RH, non considering
Storage humidity	10%~95% RH, non considering
Operating altitude	5000mtrs, the ambient temperature derating of 0.6 °C/100m for operating altitude higher than 2000m
Impact	20G, last 11mS, 3 impacts along X, Y and Z axes
MTBF	1,000khrs, Telcordia SR-332 issue 3 method (under 25°C)
Vibration	10~500Hz, 2G. 10min/1 cycle, 60min.each along X, Y, Z axes
Standard	EN61000-4-2,3,4,5,6,8,11\GB17625.1\EN61000-3-2,-3\ EN55032\GB4943\UL62368-1\IEC62368-1
Safety specification	Design refers to: GB4943/UL62368-1
Dimension:	125 x 113 x 63mm
Weight	270g

Output specifications					
Item	Operating condition	Min	Typ	Max	Units
Line regulation			±0.5		%
Load regulation			±1.0		%
Setup rise time	220VAC, 100% loading		1500 50		ms
Hold up time	110VAC 100% loading 220VAC 100% loading		10 16		ms
Output voltage accuracy			±2		%
Temperature coefficient	0-50°C		±0.03		%

Isolation specifications					
Item	Operating Conditions	Min	Typ	Max	Units
Withstand voltage	I/P-O/P: 3KVAC/10mA, I/P-CASE: 1.5KVAC/10mA, O/P-CASE: 0.5KVAC/10mA Each testing time: 1min				
Insulation impedance	500VDC: I/P-O/P, 10M ohms , I/P-case:10M ohms, O/P-case: 10M ohms				

EMC specifications	
EMS	Design refer to: EN61000-4-2,3,4,5,6,8,11
Harmonic current	Design refer to: GB17625.1; EN61000-3-2 A
EMC	Design refer to: EN55032 (CISPR32) Class B

#### Example:

#### 240ACDR1\_24SC

240 = 240Watt; AC = AC-DC; DR = Din Rail, 1 = Series;

24 = 24Vout; S = Single output; C = PFC (Power Factor Correction)

Input specifications					
Item	Operating condition	Min	Typ	Max	Units
Voltage range		90		264	VAC
Rated voltage		100		240	VAC
Current				3.5	A
PF	110VAC 100% loading 220VAC 100% loading	0.98 0.95			
Frequency range		47		63	Hz
Inrush current	220VAC			60	A
Leakage current	Input: 240VAC			1	mA

- In order to extend the service life, it is recommended to leave 30% more allowance when loading. For example, if the equipment needs 100W power, please choose the power supply over 130W.
- Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
- All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25°C of ambient temperature.
- The auxiliary heat dissipation of aluminum plate with an area of 400 \* 400 \* 3mm must be used when full load working.
- The power supply is considered a component which will be installed into a final equipment. The final equipment must be re-confirmed that it still meets EMC directives. All our EMC tests are carried out by mounting samples on metal plates.

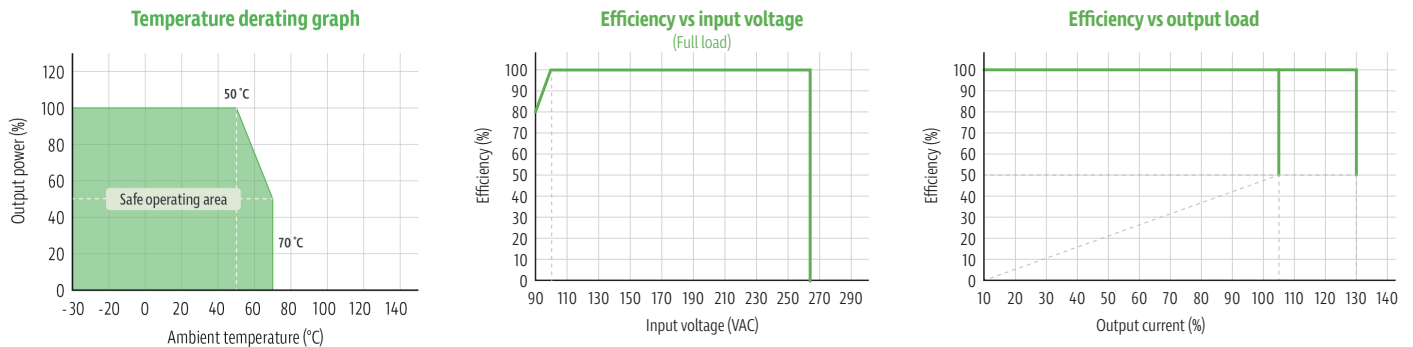
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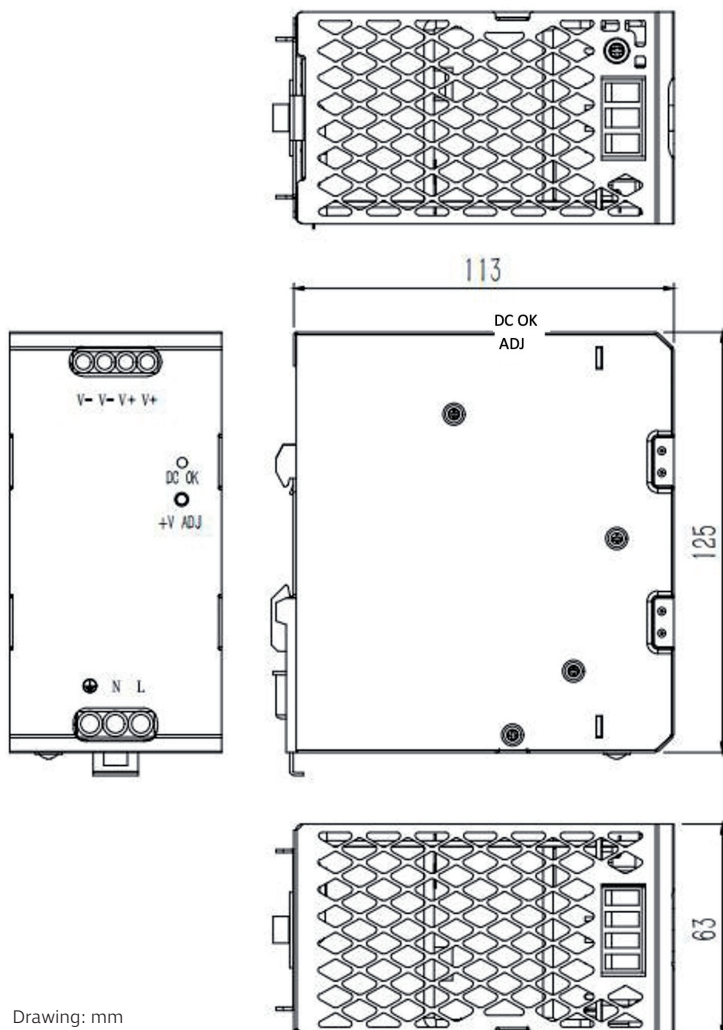
### Product Selection Guide

Certification	Part number	DC Voltage (V)	Rated Current (A)	Rated Power (W)	Voltage Adj. Range (V)	Efficiency (Typ) (%)	Voltage setting range (10% loading) (V)	Ripple & noise (mVpk-pk)
	240ACDR1_24SC3	24	0-10	240	21.6-26.5	88	24-24.3	150
	240ACDR1_48SC3	48	0-5	240	44-53	89	48.0-48.4	240

### Product characteristic curve



### Dimensions and recommended layout



Input / output terminal pin definition			
Pin No.	Pin function	Pin No.	Pin function
	EARTH	V+	+Vo
N	AC NEUTRAL	V+	+Vo
L	AC LINE	V-	-Vo
		V-	-Vo

#### Instructions:

1. Please follow the installation instructions when use the power supply.
2. Before power on test run after installation, please check and proofread the wiring on each terminal, make sure that the input and output, AC and DC, positive and negative, voltage and current values are correct, prevent the occurrence of wrong connection, and avoid damaging the power supply and user equipment.
3. Before power on, please use a multimeter to measure whether the live wire, zero wire and ground wire are short circuited, and whether the output terminal is short circuited; it is better to start without load when power on.
4. Do not exceed the nominal value of the power supply when using, so as not to affect the reliability of the product. If you need to change the output parameters of the power supply, please consult our technical department before using.
5. In order to ensure the safety of use and reduce interference, please ensure that the grounding terminal is reliably grounded (ground wire please thicker than AWG18#).
6. If the power supply fails, please do not repair it without permission. Please contact our customer service department as soon as possible.

#### Transport, storage:

1. Transport: The package is suitable for shipping by automobiles, ships, airs, trains, etc. During transportation, it shall be rain proof, loaded and unloaded gently.
2. Storage: When the product is not in use, it shall be placed in the packing box. The storage environment temperature and relative humidity shall meet the requirements of the product. No corrosive gas or product in the warehouse, and no strong mechanical vibration, impact and strong magnetic field. The packing box shall be padded at least 20cm above the ground, and not be soaked. If the storage time is too long (more than 1 year), it shall be rechecked by professionals before use.