



## 480ACDR1\_SC3 series

480W - Single Output AC-DC Converter

### AC-DC Converter

480 Watt

- ⊕ Universal AC input range: 90~264VAC
- ⊕ Active built-in PFC function (PFC> 0.95)
- ⊕ DC output voltage adjustable
- ⊕ Power ON LED indicator
- ⊕ Free air convection cooling
- ⊕ Operating temp.: -30~+70°C
- ⊕ Short circuit protection
- ⊕ Over load, over voltage and over temperature protection
- ⊕ DIN Rail TS-35/7.5 or 15 ready

Introducing our new 480ACDR1\_SC3 series of power supplies designed for optimal performance and reliability. Featuring a universal AC input range of 90 to 264VAC, this series ensures versatility across various applications. The built-in active PFC function enhances efficiency with a power factor correction greater than 0.95. The DC output voltage is adjustable, providing flexibility to meet specific power requirements. A power-on LED indicator allows for easy status monitoring. With free air convection cooling, the system operates efficiently within a wide temperature range of -30 to +70°C. Built-in protections against short circuit, overload, overvoltage, and overheating safeguard both the device and connected equipment. Designed for seamless integration, this series is DIN rail TS-35/7.5 or 15 ready, making installation straightforward and hassle-free.



#### Common specifications

Short circuit protection:	Hiccup mode, recovers automatically after fault condition is removed
Over load	105~130% rated current, hiccup mode, recovers automatically after fault condition is removed
Over temperature	Shut down output voltage: recovers automatically after temperature decreases
Over voltage (10%loading)	Constant voltage, recovers automatically after fault condition removed
Working temperature	-20~+70°C (with derating)
Storage Temperature	-40~+80°C
Working humidity	20%~95% RH, non-condensing
Storage humidity	10%~95% RH, non-condensing
Cooling	Free air convection
MTBF	Under 25°C: 100,000 hrs, Telcordia SR-332 issue3 method
Vibration	10~500Hz, 2G, 10min/1 cycle, 60min. each along X, Y, Z axes
Impact	20G, last 11ms, 3 impacts along X, Y and Z axes
Altitude	5000mtrs, the ambient temperature derating of 0.6°C/100m for operating altitude higher than 2000m
Standards	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: UL62368-1
Dimension:	125 x 113 x 63 mm

#### Output specifications

Item	Operating condition	Min	Typ	Max	Units
Line regulation			±0.5		%
Load regulation			±1.0		%
Output voltage accuracy			±2		%
Setup rise time	220VAC, 100% loading	1500		50	ms
Hold up time	110VAC 100% loading		16		ms
	220VAC 100% loading		20		
Temperature coefficient	(0-50°C)		±0.03		%

#### Isolation specifications

Item	Operating Conditions	Min	Typ	Max	Units
Withstand voltage	I/P-O/P: 3kVAC; I/P-Case: 1.5kVAC; O/P-Case: 0.5kVAC				
Isolation 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

#### Input specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage range		90		264	VAC
Rated voltage		100		140	VAC
Current				6.5	A
PF (100% loading)	110 VAC	0.98			VAC
	220 VAC	0.95			
Frequency range		47		63	HZ
Leakage current	Input: 240VAC	1			mA
Inrush current	220VAC			50	A

#### Example:

##### 480ACDR1\_24SC3

480 = 480Watt; AC = AC-DC; DR1 = Din Rail, 24 = 24Vout; S = Single output; C = PFC (Power Factor Correction); 3 = 3kVAC isolation;

- 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.
- Please follow the installation instructions when use the power supply.
- 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.
- 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.
- In order to ensure the safety of use and reduce interference, please ensure that the grounding terminal is reliably grounded.

# 480ACDR1\_SC3 series

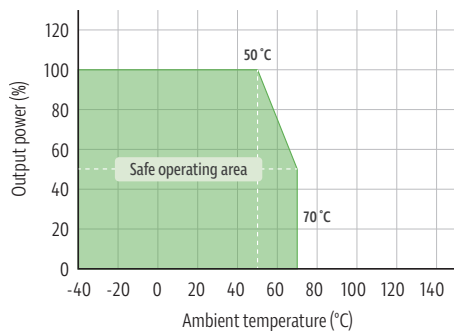
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## Product Selection Guide

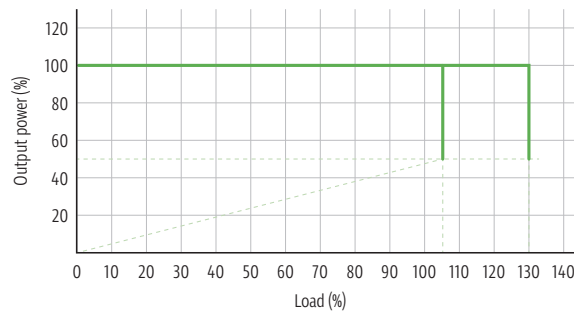
Certification	Part number	DC Voltage (V)	Rated Current (A)	Power (W)	Voltage setting range (V) (10% loading)	Voltage Adj. Range (V)	Efficiency (typ) %	Over voltage (10% loading) (V)	Ripple & Noise mVpk-pk
	480ACDR1_24SC3	24	0-20	480	24-24.3	24-28	92	27.5-32.5	200
	480ACDR1_48SC3	48	0-10	480	48.0-48.4	48-55	93	56-65	300

## Product characteristic curve

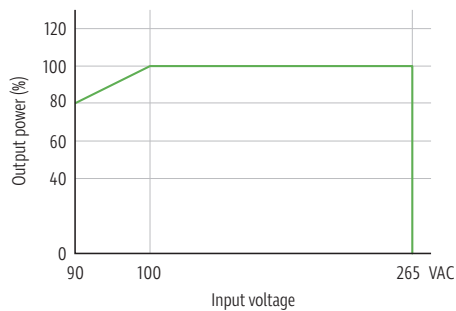
Temperature derating graph



Out voltage vs. load



Input voltage derating curve



## Dimensions and recommended layout

Drawing: mm

