



240ACDRP_SC series

240W - Single Output AC-DC Converter

AC-DC Converter

240 Watt

- ⊕ Higher peak power
- ⊕ Built-in DC ok relay contact
- ⊕ 100% full load burn-in test
- ⊕ Input voltage range: 90 ~ 264VAC, 127 ~ 370VDC
- ⊕ Up to 93% efficiency
- ⊕ Built-in active PFC function
- ⊕ DC output voltage adjustable
- ⊕ Operating temperature: -25 ~ +70°C

Introducing our new high-performance 240ACDRP_SC series, designed for reliability and efficiency. With higher peak power capabilities, it ensures robust performance even under demanding conditions. The built-in DC OK relay contact provides enhanced monitoring and control. Each unit undergoes a rigorous 100% full-load burn-in test to guarantee durability and stability. Featuring a wide input voltage range of 90 to 264VAC and 127 to 370VDC, it offers versatility across various applications. With an efficiency of up to 93%, power conversion is optimized for reduced energy loss. The built-in active PFC function enhances power quality, while the adjustable DC output voltage allows for precise customization. Designed to operate in extreme environments, this series functions reliably within a temperature range of -25 to +70°C, ensuring consistent performance in a variety of conditions.



Common specifications	
Over load	Normally works within 110 ~ 150% rated output power for more than 3 seconds and then shut down o/p voltage with auto-recovery >150% rated power, constant current limiting with auto-recovery within 3 seconds and may cause to shut down if over 3 seconds
Over temperature	29 ~ 33V 240ACDRP_24SC, 56 ~ 65V 480ACDRP_24SC Protection type : Shut down o/p voltage, re-power on to recover
Over voltage	95°C ±5°C (TSW) detect on heatsink of power switch Protection type : Shut down o/p voltage, recovers automatically after temperature goes down
DC OK realy contact ratings (max.)	60VDC/0.3A, 30VDC/1A, 30VAC/0.5A resistive load
Operating temperature:	-25~+70°C (with derating)
Storage temperature:	-40~+85°C
Working humidity:	20%~95% RH, non considering
Storage humidity:	10%~95%RH
Safety standard:	UL508, BS/EN62368-1
MTBF:	1160.3k hrs min. - Telcordia SR-332 (Bellcore) 169.3k hrs min. - MIL-HDBK-217F (25°C)
Temp. coefficient	±0.03%/°C (0 ~ 50°C)
Vibration	Component: 10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6
Dimension:	63 × 125.2 × 113.5 mm
Weight	1 kg

Output specifications					
Item	Operating condition	Min	Typ	Max	Units
Voltage tolerance			±2.0		%
Line regulation			±0.5		%
Load regulation			±1.0		%
Setup rise time	230VAC at full load 115VAC at full load	650 1300		60 60	ms
Hold up time	230VAC at full load 115VAC at full load		20 20		ms

Isolation specifications					
Item	Operating Conditions	Min	Typ	Max	Units
Withstand voltage	I/P-O/P		3		KVAC
	I/P-FG		2		
	O/P-FG		0.50		
	O/P-DC OK		0.50		
Isolation resistance	I/P-O/P, I/P-FG, O/P-FG: > 100M Ohms/ 500VDC / 25°C / 70% RH				

EMC specifications	
EMC Emissions	Compliance to BS EN/EN55032, BS EN/EN61000-3-2,-3
EMC Immunity	Compliance to BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55024, BS EN/EN61000-6-2 (BS EN/EN50082-2), BS EN/EN61204-3, heavy industry level

Example:
240ACDRP_24SC
 240 = 240Watt; AC = AC-DC; DR = DIN Rail, P = High performance;
 24 = 24Vout; S = Single output; C = PFC (Power Factor Correction);

Input specifications					
Item	Operating condition	Min	Typ	Max	Units
Voltage range		90 127		264 370	VAC VDC
Frequency range		47		63	Hz
Power factor	230VAC at full load 115VAC at full load		0.94 0.99		VAC
Efficiency (Note 6)	115VAC 230VAC		90 93		%
AC current	115VAC 230VAC	2.6 1.3			
Inrush current	115VAC 230VAC	33 55			
Leakage current	240VAC			1	mA

Note:

- All parameters NOT specially mentioned at 230VAC input, rated load and 25°C of ambient temperature.
- Ripple & noise are measured from peak to peak with band width limit of 20MHz (0.1uF and 47uF/50V parallel capacitor under DC output full load, AC nominal input 25°C ambient temperature).
- Installation clearances: top with 40mm, bottom with 20mm, left and right with 5mm. Increase the space to 10-15mm when the adjacent device is heat source.
- It could hold up 3 seconds max when reached peak power 360W, please refer to peak loading curves.
- Derating may be needed under low input voltage. Please check the derating curve for more details.
- After 30 minutes of burn-in.
- The ambient temperature derating of 3.5°C/1000m for operating altitude higher than 2000m (6500ft).

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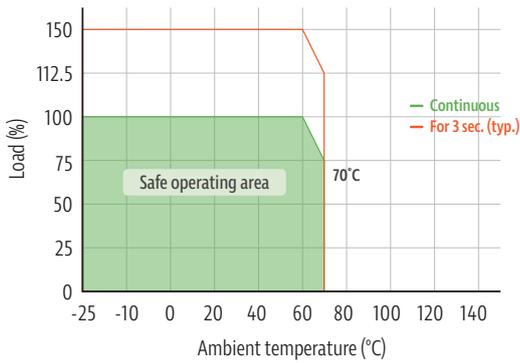
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Product Selection Guide

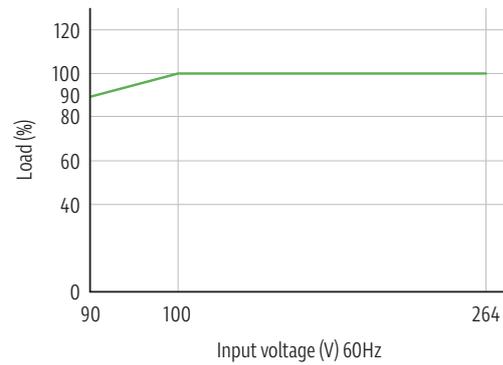
Certification	Part number	DC Voltage (V)	Rated Current (max) A	Rated Power (W)	Peak Power* (W)	Voltage Adj. Range (V)	Ripple & Noise (max.) mVp-p
	240ACDRP_24SC	24	10	240	360 (3sec.)	24-28	100
	240ACDRP_48SC	48	5	240	360 (3sec.)	48-55	120

Product characteristic curve

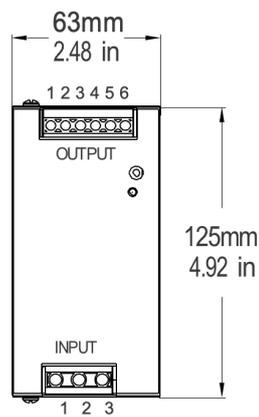
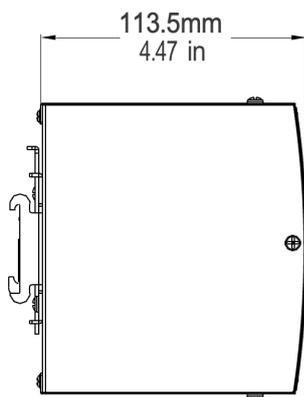
Temperature derating graph



Output and Input Voltage Curves



Dimensions and recommended layout



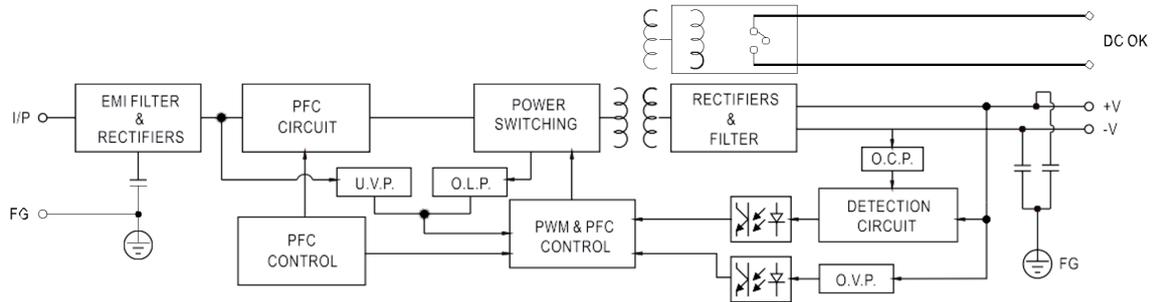
Input	
PIN	Mark
1	FG Ⓡ
2	AC/N
3	AC/L

Output	
PIN	Mark
1, 2	Relay contact
3	DC OUTPUT -V
4	DC OUTPUT +V

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Block diagram



DC OK relay contact

Contact Close	PSU turns on / DC OK.
Contact Open	PSU turns off / DC Fail.
Contact Ratings (max.)	30V/1A resistive load.

Peak loading

