240ACDRN_SC series

240W - Single Output AC-DC Converter - Universal Input

AC-DC Converter 240 Watt

- DC O/P voltage adjustable
- Universal AC input 90-264V
- Protection: Short circuit/ overload/over voltage/over temperature
- Free air convection design
- Installation: DIN rail TS-35/7.5 & 15
- With built-in active PFC function

The 240ACDRN_SC series metal case power family designed with slim housing and for full range AC input from 90VAC to 264VAC. The series are single phase PSU, providing adjustable DC output voltage. They have high efficiency and operate in wide temperature range. The series can widely be used for industrial automation& control systems and varied equipments etc.

E526868

Common specifications

Short circuit protection:	
Over load	105 - 130% rated output power Protection type: Hickup mode, recovers automatically after fault condition is removed.
Over temperture	Shut down o/p voltage, recovers automatically after temperature goes down
Over voltage	240ACDRN_24SC 29 ~ 33V 240ACDRN_48SC 56 ~ 65V Protection type: Shut down o/p voltage, re-power on to recover
Operating temperature:	-20~+70°C
Storage Temperature:	-40~+85°C (10 - 95% RH)
Operating humidity:	20%~95%RH, Non considering
Storage humidity:	10%~95%RH
Safety standard:	UL508, BS/EN62368-1
MTBF:	1398.4Kh Hours min. Telcordia SR-332 (Bellcore)
Dimension:	63 × 125 × 113,5 mm
Weight	1Kg

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Rated input	Certified voltage	100		240	VAC
Nominal input voltage range	[DC input by connecting AC/L(+), AC/N(-)]	90 127		264 370	VAC VDC
Frequency range		47		63	Hz
Powe factor	115 VAC at full load 230VAC at full load		0.98 0.95		
AC Current	115 VAC 230VAC		2.5 1.3		A
Inrush current	115 VAC 230VAC		20 35		A
Leakage current	240VAC			1	mA

Example:
240ACDRN_24SC
240 = 240Watt; AC = AC-DC; DRN = Din Rail series; 24 = 24Vout;
S = Single output; C = PFC (Power Factor Correction);

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage tolerance			±2.0		%
Line regulation			±0.5		%
Load regulation			±1.0		%
Ripple & noise				150	mVp-p
Setup rise time	230V/50Hz full load 115V/60Hz full load	3000 1500		100 60	ms
Hold up time	230V/50Hz full load 115V/60Hz full load		16 12		ms

Isolation specifications

Item	Operating Conditions	Min	Typ	Max	Units
Withstand voltage	I/P-O/P I/P-FG O/P-FG		3 2 0.5		KVAC
Isolation Resistance	I/P-O/P, I/P-FG, O/P-FG >100M Ohms / 500VDC / 25°C / 70% RH				

EMC specifications

EMC Emissions	BS EN/EN55032, BS EN/EN61000-3-2, -3
EMC Immunity	BS EN/EN61000-4-2,3,4,5,6,8,11, BS EN/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2)

Note:
1. All parameters NOT specially mentioned at 230VAC input, rated load and 25 of ambient temperature.
2. Ripple&noise are measured from peak to peak with band width limit of 20MHz(0.u1F and 47uF/50V parallel capacitor under DC output full load, AC nominal input 25°C ambient temperature).
3. 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.
4. Derating may be needed under low input voltage. Please check the derating curve for more details.
5. Efficiency test after 30 minutes of burn-in.
6. The ambient temperature derating of 3.5/1000mf or operating altitude higher than 2000m(6500ft).

Product Selection Guide

Certification	Model	DC Voltage (Vout)	Rated Current (max) A	Rated Power (W)	Voltage Adj. Range (V)	Efficiency (Typ) %
UL	240ACDRN_24SC	24	10	240	24-28	87
UL	240ACDRN_48SC	48	5	240	48-55	88

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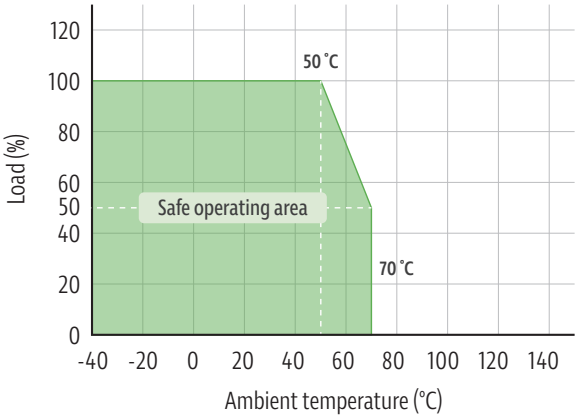
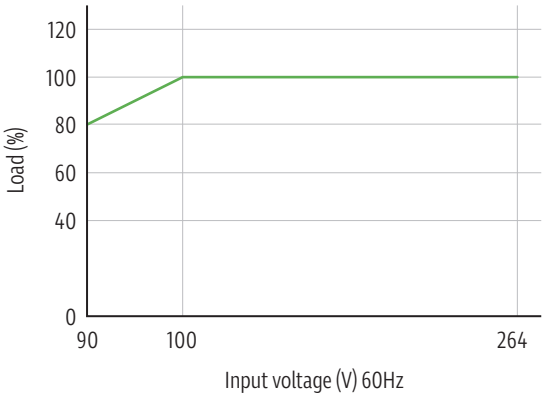
Product Characteristic Curve

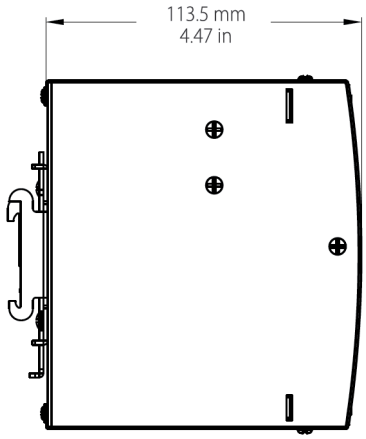
Temperature derating graph

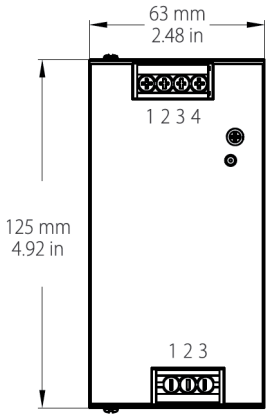


Output and Input Voltage Curves



Dimensions and Recommended Layout





Input	
PIN	Mark
1	FG ⏚
2	AC/N or DC-
3	AC/L or DC+

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

Block Diagram