

75ACDRN_C3 series

75W - Single Output AC-DC Converter



AC-DC Converter

75 Watt

- ⊕ 75W output power
- ⊕ Up to 88% efficiency
- ⊕ DC O/P Voltage adjustable
- ⊕ Universal AC input 90-264V
- ⊕ Free air convection design

- ⊕ Installation: DIN rail TS-35/7.5 & 15
- ⊕ Protection: short circuit, overload, over voltage and over temperature

Introducing our high-performance 75ACDRN_C3 series, delivering an impressive 75W output power and achieving up to 88% efficiency. Designed to provide adjustable output, this module features a DC output voltage adjustable option, offering flexibility for a variety of applications. Its universal AC input range of 90-264V ensures compatibility with global power standards, making it a versatile choice for worldwide usage. The module incorporates a free air convection design, eliminating the need for additional cooling equipment and enhancing overall system efficiency and reliability. Built for easy integration, it supports DIN Rail TS-35/7.5 & 15 installation, ensuring quick and secure mounting in industrial environments. For safety and durability, this power module includes comprehensive protection mechanisms such as short circuit protection, overload protection, over-voltage protection, and over-temperature protection.



Common specifications

Short circuit protection:	Continuous
Over load	105 ~ 130% rated output power. Protection type: hiccup mode-recovers automatically after fault condition is removed
Over temperature	Protection type : Shut down o/p voltage, re-power on to recover
Over voltage	75ACDRN_12SC3 (14~17V) 75ACDRN_24SC3 (29~ 33V) 75ACDRN_48SC3 (56 ~ 65V) Protection type : Shut down o/p voltage, re-power on to recover
Operating temperature	-20~+70°C (with derating)
Storage Temperature	-40~+85°C
Operating humidity	20%~95%RH, non condensing
Storage humidity	10%~95%RH
MTBF (MIL-HDBK-217F@25°C)	450,000 hrs (min.)
Safety regulations	UL508, BS/EN62368-1
Dimension:	32 x 125 x 100.5 mm
Weight	0.51 kg

Input specifications

Item	Operating condition	Min	Typ	Max	Units
Rated input (certified voltage)		100		240	VAC
Nominal voltage range	90~264VAC or 127-370VDC				
Frequency range		47		63	Hz
Inrush current (cold start)	115 VAC 230 VAC		20 35		A
Leakage current	240 VAC			< 1	mA
AC current	115 VAC 230 VAC		1.45 0.9		A

Output specifications

Item	Operating condition	Min	Typ	Max	Units
Line regulation			±0.5		%
Load regulation			±1.0		%
Ripple & noise				150	mVp-p
Setup rise time	230VAC at full load 115VAC at full load	1200 2000		60 60	ms
Hold up time	230VAC at full load 115VAC at full load		60 12		ms

Isolation specifications

Item	Operating conditions	Min	Typ	Max	Units
Withstand voltage	I/P-O/P:3kVAC I/P-FG: 2kVAC O/P-FG:0.5kVAC				
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/EN55035, BS EN/EN61000-6-2 (BS EN/EN50082-2),

- 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.
- Derating may be needed under low input voltage. Please check the derating curve for more details.
- Efficiency test after 30 minutes of burn-in.
- The ambient temperature derating of 3.5 C /1000m for operating altitude higher than 2000m (6500ft).

Example:

75ACDRN_12SC3

75 = 75Watt; AC = AC-DC; DRN = Din Rail, 12 = 12Vout; S = Single output; C = PFC (Power Factor Correction); 3 = 3kVAC isolation;

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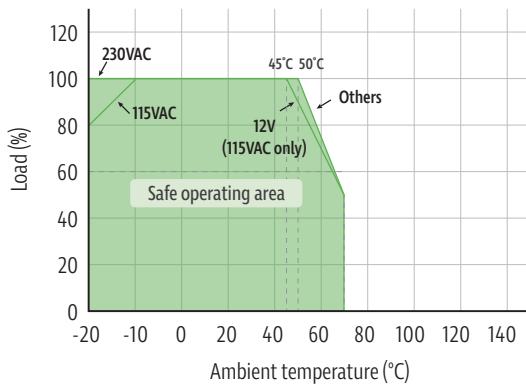
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Product Selection Guide

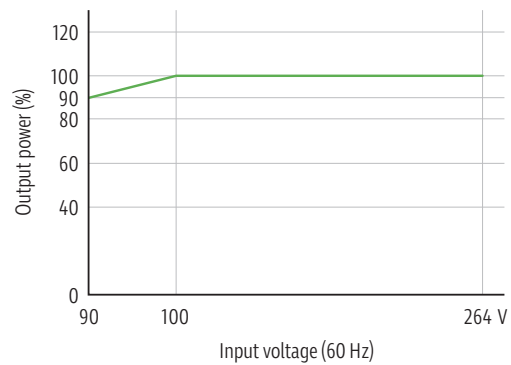
Certification	Part number	DC Voltage (Vin)	Rated Current (max) A	Rated Power (W)	Voltage tolerance (%)	Voltage Adj. Range (V)	Efficiency (typ) %	Ripple & Noise (max.) mVp-p
UL	75ACDRN_12SC3	12	6.3	75.6	±2.0	12-14	85.5	80
UL	75ACDRN_24SC3	24	3.2	76.8	±2.0	24-28	88	120
UL	75ACDRN_48SC3	48	1.6	76.8	±2.0	48.55	88	150

Product characteristic curve

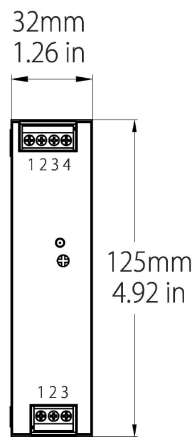
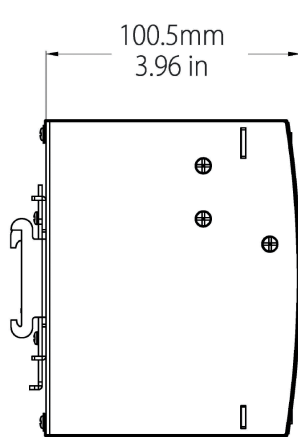
Temperature derating graph



Input voltage derating curve



Mechanical dimensions



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

Functional diagram

