



## 240ACDRW\_SC series

240W - Single Output AC-DC Converter

### AC-DC Converter

240 Watt

- ⊕ 180~550VAC wide input range
- ⊕ Single and two phase input
- ⊕ Over voltage category III
- ⊕ Built-in DC OK relay
- ⊕ DC Output voltage adjustable
- ⊕ Built-in constant current limiting circuit
- ⊕ MTBF: 140k hours

Introducing our new 240ACDRW\_SC series, engineered for demanding industrial applications that require reliability, flexibility, and robust performance. Designed with a wide 180–550 VAC input range supporting both single- and two-phase systems, this power supply ensures stable operation even in challenging electrical environments. With overvoltage category III compliance, it delivers enhanced protection and long-term durability in industrial installations. The series features an adjustable DC output voltage, a built-in DC OK relay for reliable system monitoring, and an integrated constant current limiting circuit to safeguard connected loads. With an impressive MTBF of 140,000 hours, the 240ACDRW\_SC series offers dependable, long-lasting power you can trust for critical applications.



#### Common specifications

Over load	105 ~ 130% rated output power. Protection type : Constant current limiting, unit will shut down after 3 sec., auto-recovery after 1 minute if the fault condition is removed.
Over voltage	(29~33V) 240ACDRW_24SC, (56~65V) 240ACDRW_48SC Protection type : Shut down o/p voltage, auto-recovery after 1 min- ute if the fault condition is removed.
Over temperature	90°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
Working temperature:	-30~+70°C (with derating)
Storage temperature:	-40~+85°C
Working humidity:	20%~95% RH, non-condensing
Storage humidity:	10%~95% RH
Safety standard:	UL508,EAC TP TC 004 approved, IEC62368-1 CB approved by SIQ, design refer to BS EN/EN62368-1, AS/NZS 62368.1, GL; (meet BS EN/EN60204-1).
MTBF: MIL- HDBK-217F (25°C).	140k hrs (min.)
Temp. coefficient	±0.03%/°C (0 ~ 50°C)
Vibration	Component: 10 ~ 500Hz, 2G 10min./1 cycle, 60 min. each along X, Y, Z axes; Mounting clip: Compliance to IEC60068-2-6.
Dimension:	63 × 113.5 × 125 mm
Weight	1 Kg

#### Input specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage range		180 254		550 780	VAC VDC
Frequency range		47		63	Hz
Power factor	400VAC 230VAC		≥0.84 ≥0.84		PF
Efficiency			91		%
AC current	400VAC 230VAC		1 2		A
Inrush current	Cold start		50		A
Leakage current	530VAC		<3.5		mA

#### Example:

##### 240ACDRW\_24SC

240 = 240Watt; AC = AC-DC; DR = Din Rail, W = Wide input range;  
24 = 24Vout; S = Single output; C = PFC (Power Factor Correction)

#### Output specifications

Item	Operating condition	Min	Typ	Max	Units
Voltage tolerance			±1.0		%
Line regulation			±0.5		%
Load regulation			±1.0		%
Ripple & noise				150	mVp-p
Setup rise time	230VAC at full load 115VAC at full load	800 1500		150 150	ms
Hold up time	400VAC at full load		18		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 (CISPR32), BS EN/EN61204-3 Class B, BS EN/EN61000-3-2,-3, EAC TP TC 020.
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), BS EN/EN61204-3, heavy industry level, EAC TP TC 020 approved.

#### Note:

- All parameters NOT specially mentioned are measured at 400VAC input, rated load and 25°C of ambient temperature.
- Ripple&noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uF & 47uF parallel capacitor.
- Tolerance: includes set up tolerance, line regulation and load regulation.
- 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.
- Installation clearances: 40 mm on top, 20 mm on the bottom, 5 mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
- Derating may be needed under low input voltage. Please check the derating curves for more details.
- The ambient temperature derating of 3.5°C/1000m with fanless models and of 5°C/1000m with fan models for operating altitude higher than 2000m (6500ft).

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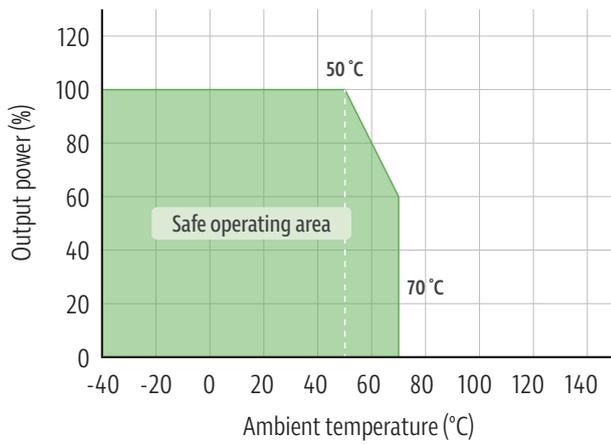
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### Product Selection Guide

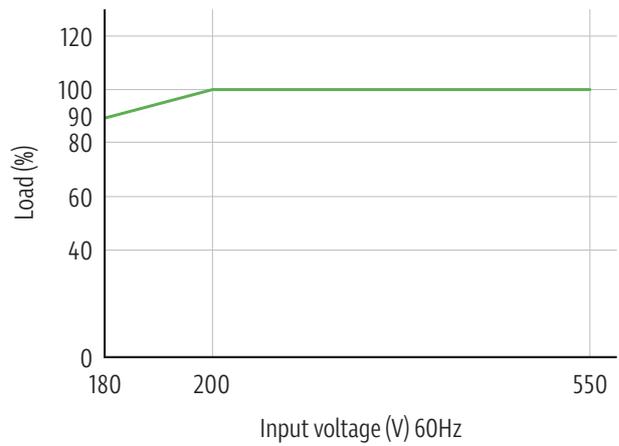
Certification	Part number	DC Voltage (V)	Rated Current (max) A	Rated Power (W)	Voltage Adj. Range (V)
UL	240ACDRW_24SC	24	10	240	24 ~ 48
UL	240ACDRW_48SC	48	5	240	48 ~ 55

### Product Characteristic Curve

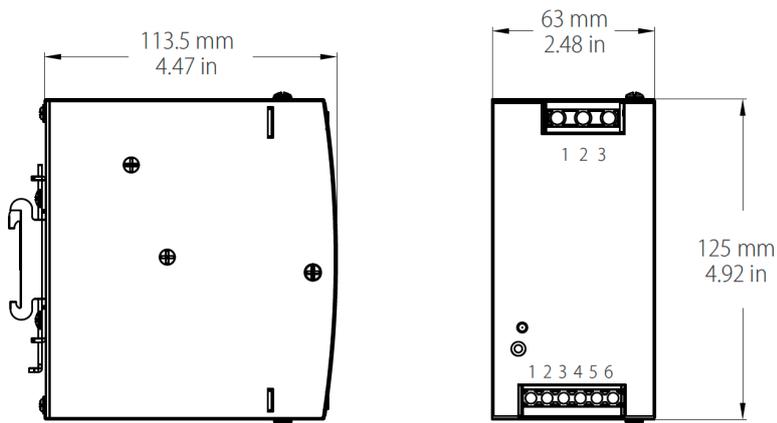
Temperature derating graph



Output and Input Voltage Curves



### Dimensions and recommended layout



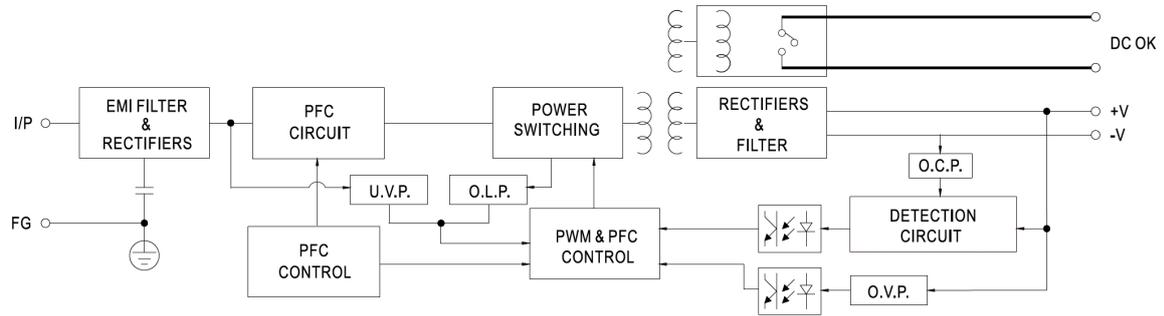
Input	
PIN	Description
1	FG ⊕
2	AC/L2
3	AC/L1

Output	
PIN	Description
1, 2	Relay Contact
3, 4	DC Output +V
5, 6	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.