

100 Watts

- Compact lightweight design
- 100W convection cooled
- UL62368-1 and EN62368-1 approvals
- Class B conducted & radiated emissions
- Universal AC input range 85 to 264VAC
- Output voltages from 12V to 48V DC
- High efficiency
- DC output LED indicator
- -30°C to +70°C operating temperature
- 300VAC Input surge withstand
- MTBF = 300kHrs (MIL-HDBK-217F, +25°C GB)
- 3 year warranty



Dimensions:

DRC100:

3.6 x 2.76 x 2.28" (92.6 x 70.0 x 58.0 mm)

The DRC range of compact lightweight DIN rail mount power supplies is a convenient and cost effective power conversion solution for many industrial and commercial applications. With international safety certification, an industrial temperature range and class B emission compliance, the DRC series also features a DC "on" LED, wide output voltage adjustment range and alternative DC input range.

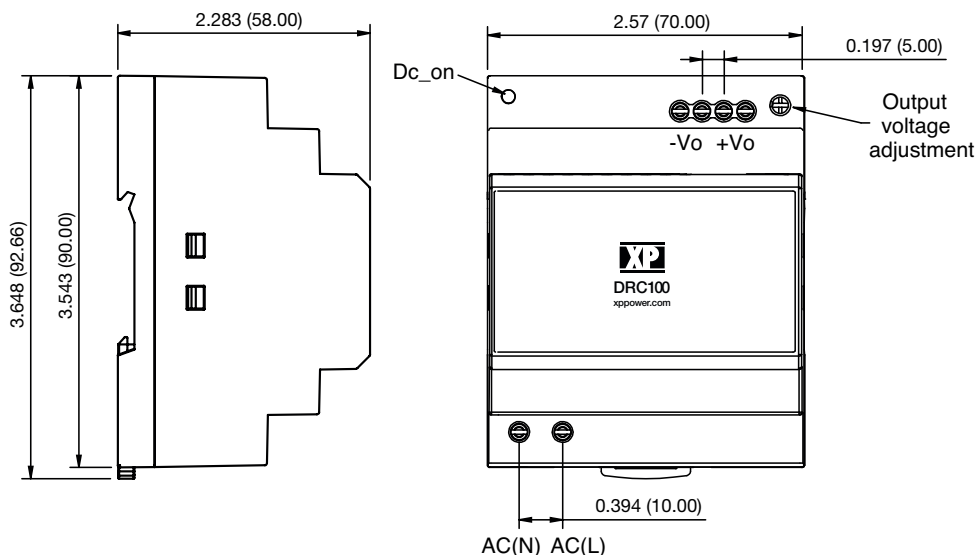
Models & Ratings

Output Voltage	Output Power	Output Voltage Range ⁽²⁾	Output Current	Ripple & Noise pk-pk	Typical Efficiency ⁽²⁾	Maximum Capacitive Load	Model Number
12V	90W	10.8 - 13.8V	7.5A	120mV	88%	10000µF	DRC100US12
15V	97W	13.5 - 18.0V	6.5A	120mV	89%	6400µF	DRC100US15
24V	100W	21.6 - 29.0V	4.2A	150mV	90%	2500µF	DRC100US24
48V	100W	43.2 - 55.2V	2.1A	240mV	90%	1000µF	DRC100US48

Notes

1. Output power rating must not be exceeded.
2. Efficiency measured at 230V AC full load.

Mechanical Details



Notes

1. All dimensions in inches (mm)
2. Weight: 0.518 lbs (235 g)
3. Tolerance: ± 0.039 in (± 1.0 mm)
4. Screw terminal wire gauge: 12-24AWG
5. Connection screw maximum torque: 4.0 lbs-in (0.4 Nm)
6. Mounting rail type TS35

Input

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Input Voltage - Operating	85		264	VAC	See input voltage derating curve. Alternatively 120-370VDC ⁽¹⁾
Input Frequency	47	50/60	63	Hz	
Input Current - Full Load		3.0 / 1.6		A	115/230 VAC
Inrush Current			35/70	A	At 115/230 VAC
Earth Leakage Current			0.5	mA rms	At 264 VAC, 60 Hz
Input Protection	Internal fuse fitted				
No Load Input Power			0.35/0.4	W	Models below 48V output / 48V model output
Input Surge		300		VAC	5 seconds
Surge Withstand		300			

Note

1. DC input voltage was not assessed as part of the safety certification process.

Output

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Output Voltage	12		55.2	VDC	See Models and Ratings table
Initial Set Accuracy		±2		%	
Output Voltage Adjustment	See Models and Ratings table, output power rating must not be exceeded				
Minimum Load	0			A	No minimum load required
Capacitive Load				µF	See Models & Ratings table
Start Up Delay			3	s	Rise time 4ms
Hold Up Time		30		ms	At full load and 115 VAC/230 VAC
Line Regulation		±0.5		%	
Load Regulation		±1.5		%	
Transient Response			4	%	Max deviation recovering to within 2% in 2ms for a 50% load change.
Ripple & Noise				mV pk-pk	Measured at 20 MHz bandwidth. See Models & Ratings table
Overvoltage Protection			20	V	DRC100US12
			25		DRC100US15
			35		DRC100US24
			60		DRC100US48
Overload Protection	110		200	%	Auto recovery
Short Circuit Protection	Trip and Restart (Hiccup Mode)				
Temperature Coefficient			±0.02	%/°C	

General

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Isolation: Input to Output	4000			VAC	
Switching Frequency		65		kHz	
Output LED	Green LED to indicate output on				
Mean Time Between Failure	300			kHrs	MIL-HDK-217F@25°C
Case Material	Black plastic UL94V-0 rated				
Weight		0.518 (235)		lb (g)	

Environmental

Characteristic	Minimum	Typical	Maximum	Units	Notes & Conditions
Operating Temperature	-30		+70	°C	See thermal derating curve
Storage Temperature	-40		+85	°C	
Cooling	Natural convection				
Operating Humidity			95	%RH	Non-condensing
Operating Altitude			2000	m	
Vibration and Shock	Tested to GB/T2423.10-2008 and GB-T2423.22-2002				

EMC: Emissions

Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
Conducted	EN55032	Class B		
Radiated	EN55032	Class B		

EMC: Immunity

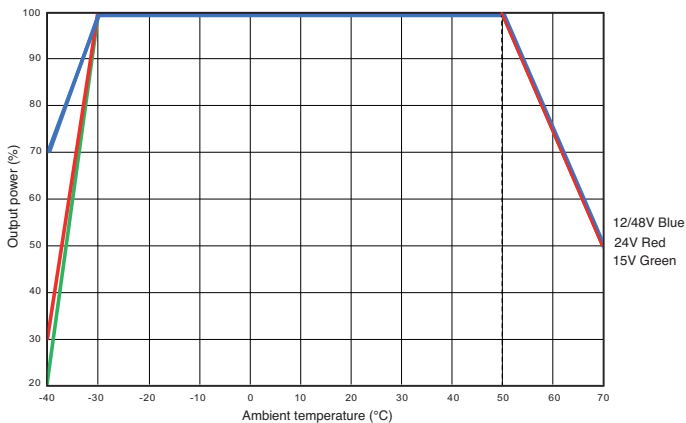
Phenomenon	Standard	Test Level	Criteria	Notes & Conditions
ESD Immunity	EN61000-4-2	±6 kV	A	Contact
		±8 kV		Air Discharge
Radiated Immunity	EN61000-4-3	10 V/m	A	
EFT/Burst	EN61000-4-4	±2 kV	A	
Surges	EN61000-4-5	±2 kV	A	Line to line
Conducted	EN61000-4-6	10 V rms	A	
Dips	EN61000-4-11 (220VAC)	Dip. 100% (0VAC), 10ms Dip. 100% (0VAC), 20ms Dip. 60% (88VAC), 200ms Dip. 30% (154VAC), 500ms Dip. 20% (176VAC), 5000ms	A	
Interrupt		Int. 100% (0VAC), 5000ms	B	

Safety Approvals

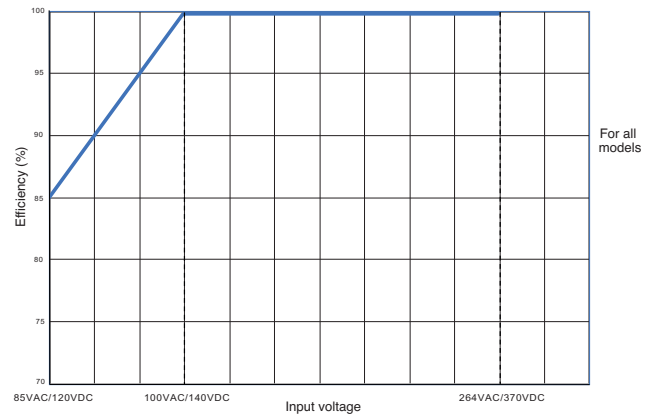
Safety Agency	Safety Standard	Notes & Conditions
UL	UL62368-1	
TUV	EN62368-1	

Application Notes

Temperature Derating

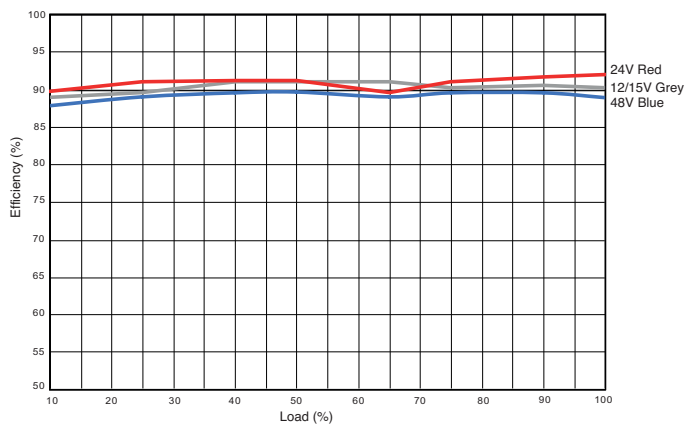


Input Voltage Derating



1. Derating applies for start up below -30°C. Ripple & noise specifications may be exceeded.

Efficiency vs Load



Efficiency vs Input Voltage

