

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.

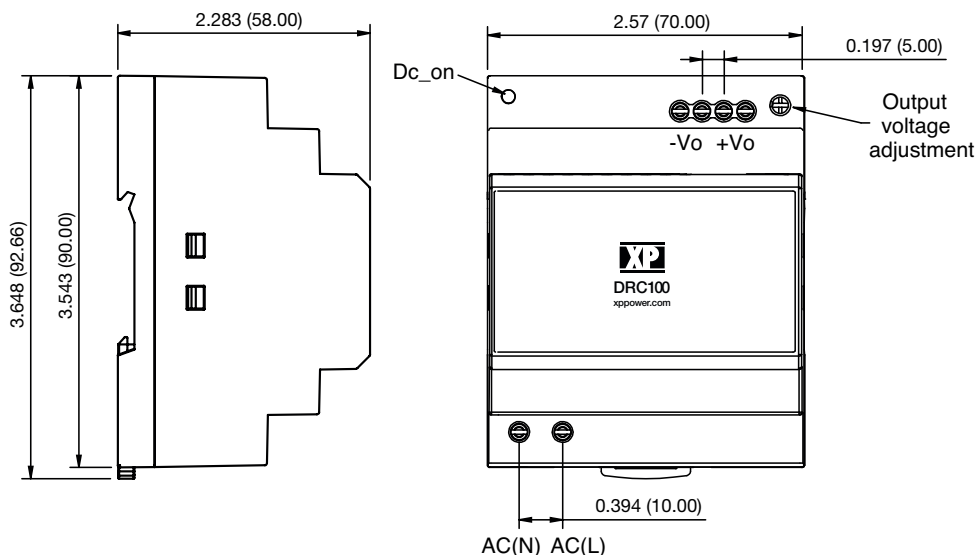
Models & Ratings

| 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

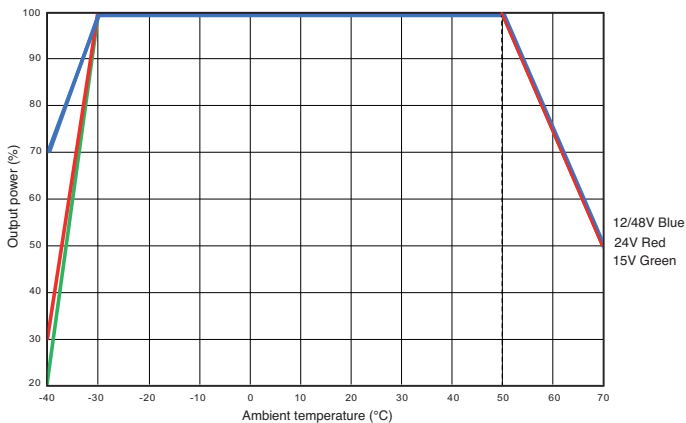
| Phenomenon | Standard | Test Level | Criteria | Notes & Conditions |
|-------------------|-----------------------|--|----------|--------------------|
| ESD Immunity | EN61000-4-2 | ±6 kV | A | Contact |
| | | ±8 kV | | Air Discharge |
| Radiated Immunity | EN61000-4-3 | 10 V/m | A | |
| EFT/Burst | 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

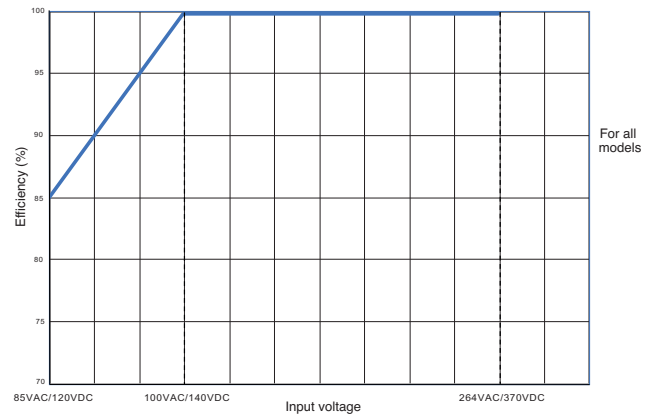
| Safety Agency | Safety Standard | Notes & Conditions |
|---------------|-----------------|--------------------|
| UL | UL62368-1 | |
| TUV | EN62368-1 | |

Application Notes

Temperature Derating

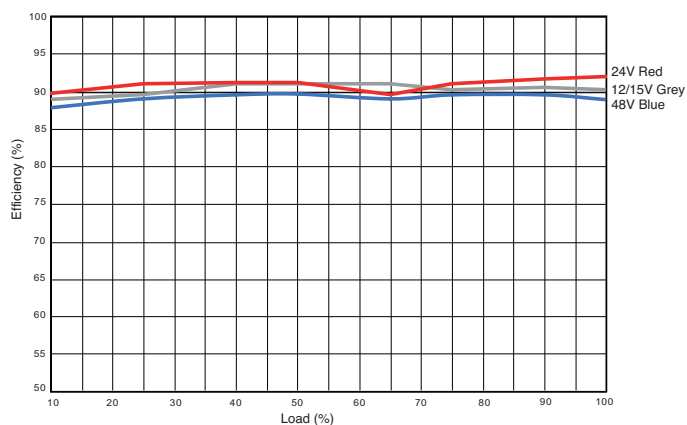


Input Voltage Derating



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

Efficiency vs Load



Efficiency vs Input Voltage

