

### 30 Watts

- Compact lightweight design
- UL62368-1 and EN62368-1 approvals
- Class B conducted & radiated emissions
- Universal AC input range 85 to 264VAC
- Output voltages from 5V 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:

##### DRC30:

3.6 x 1.38 x 2.28" (92.6 x 35.0 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.

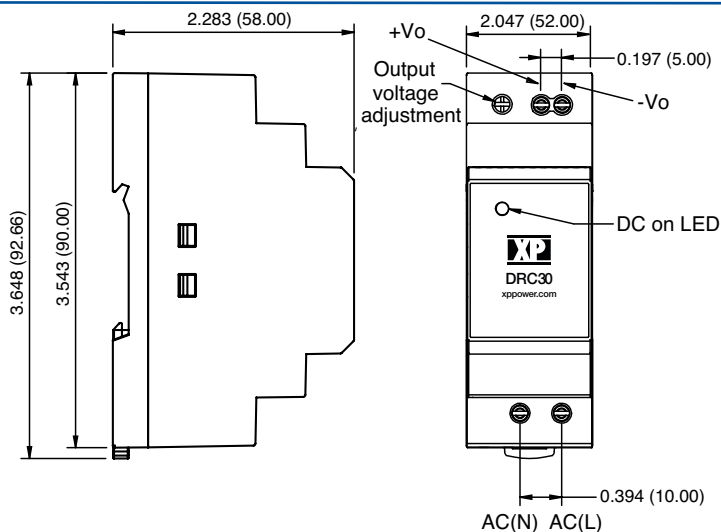
### Models & Ratings

| Output Voltage | Output Power | Output Voltage Range <sup>(1)</sup> | Output Current | Ripple & Noise pk-pk | Typical Efficiency <sup>(2)</sup> | Maximum Capacitive Load | Model Number |
|----------------|--------------|-------------------------------------|----------------|----------------------|-----------------------------------|-------------------------|--------------|
| 5V             | 15W          | 4.9 - 5.5V                          | 3.0A           | 80mV                 | 82%                               | 12000µF                 | DRC30US05    |
| 12V            | 24W          | 10.8 - 13.8V                        | 2.0A           | 120mV                | 88%                               | 6000µF                  | DRC30US12    |
| 15V            | 30W          | 13.5 - 18.0V                        | 2.0A           | 120mV                | 89%                               | 5000µF                  | DRC30US15    |
| 24V            | 36W          | 21.6 - 29.0V                        | 1.5A           | 150mV                | 89%                               | 1400µF                  | DRC30US24    |
| 48V            | 36W          | 43.2 - 55.2V                        | 0.75A          | 240mV                | 90%                               | 600µF                   | DRC30US48    |

#### 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: 0.253 lbs (115 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 <sup>(1)</sup> |
| Input Frequency           | 47                   | 50/60   | 63      | Hz     |   |
| Input Current - Full Load |                      |         | 0.9/0.5 | A      | 115/230 VAC   |
| Inrush Current            |                      |         | 25/45   | A      | At 115/230 VAC  |
| Earth Leakage Current     |                      |         | 0.25    | mA rms | At 264 VAC, 60 Hz   |
| No Load Input Power       |                      |         | 0.3/0.4 | W      | Models below 48V output / 48V model                                       |
| Input Protection          | Internal fuse fitted |         |         |        |   |
| Surge Withstand           |                      | 300     |         | VAC    | 5s  |

### 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            | 4.9  |         | 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              |  | 12/60   |         | 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    |  |         | 7.5     | V        | DRC30US05   |
|                           |  |         | 16      |          | DRC30US12   |
|                           |  |         | 20      |          | DRC30US15   |
|                           |  |         | 36      |          | DRC30US24   |
|                           |  |         | 60      |          | DRC30US48   |
| Overload Protection       |  | 120     |         | %        | 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                     |                                 | 0.253 (115) |         | 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

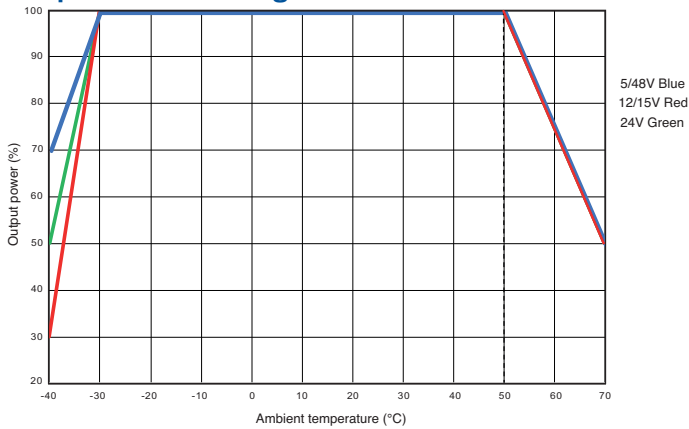
| Phenomenon        | Standard              | Test Level   | Criteria | Notes & Conditions |
|-------------------|-----------------------|--|----------|--------------------|
| ESD Immunity      | EN61000-4-2           | ±6 kV  | A        | Contact            |
|                   |                       | ±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<br>Dip. 100% (0VAC), 20ms<br>Dip. 60% (88VAC), 200ms<br>Dip. 30% (154VAC), 500ms<br>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       |                    |

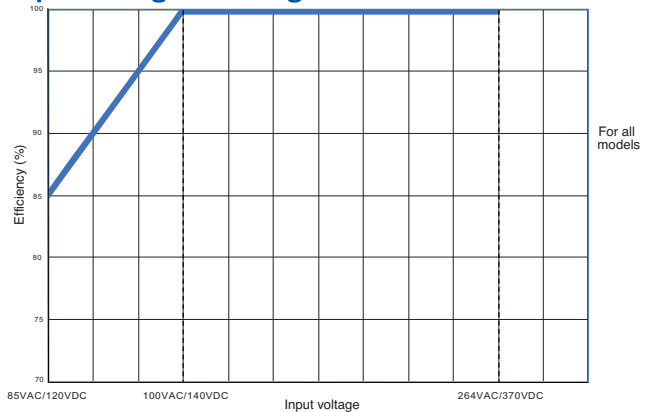
### Application Notes

#### Temperature Derating

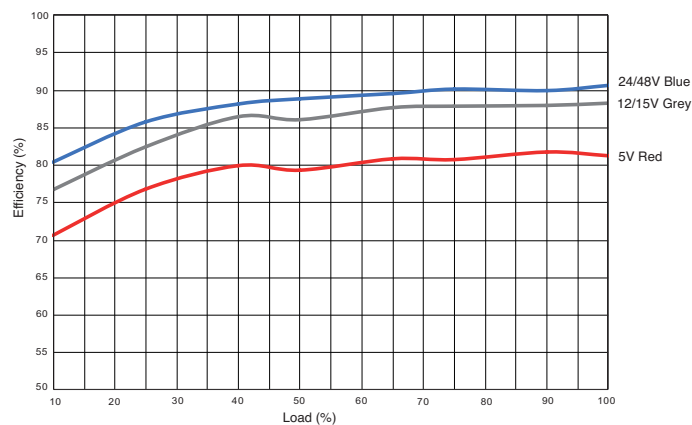


1. Derating applies for start up below -30°C. Ripple & noise specifications may be exceeded.

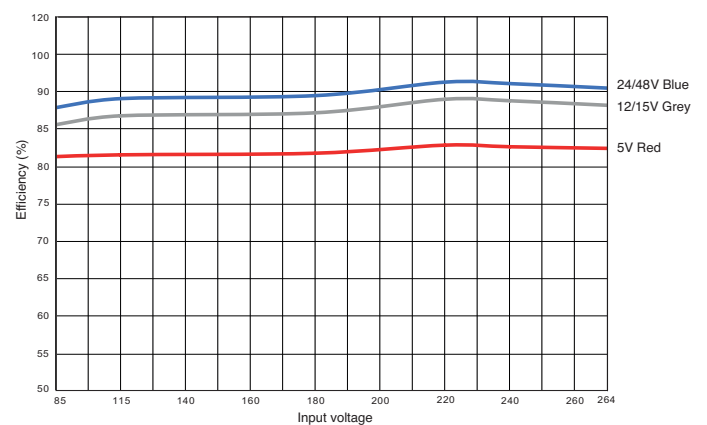
#### Input Voltage Derating



#### Efficiency vs Load



#### Efficiency vs Input Voltage



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