

15-100W, 5-48V Output DIN Rail Mount Power Supplies

Features

- ◆ Compact Size
- ◆ High Efficiency (Up to 91%)
- ◆ ErP Compliant Design
- ◆ Low No Load Power Draw
- ◆ Class 2 Models to UL1310
- ◆ Class 1 Div 2 for Hazardous Locations



Key Market Segments & Applications



| Specifications | | DRB15 | DRB30 | DRB50 | DRB100 |
|--|-----|---|--------------------|--------------------|--------------------|
| Input Voltage range | V | 85 - 264VAC, 120 - 373VDC* (Withstands 300VAC for 5 seconds) | | | |
| Input Frequency | Hz | 47 - 63Hz | | | |
| Inrush Current (typ) (Cold Start) | A | 35A | 40A | 50A | 40A |
| Power Factor (110/230VAC) Meets EN61000-3-2 | - | 0.55 / 0.42 | 0.56 / 0.46 | 0.6 / 0.5 | 0.98 / 0.93 |
| Input Current (110/230VAC) | A | 0.27 / 0.17 | 0.55 / 0.33 | 0.9 / 0.55 | 1.2 / 0.6 |
| Line & Load Regulation | - | See model selector | | | |
| Ripple & Noise | - | See model selector | | | |
| Overcurrent Protection | - | Hiccup with auto recovery | | | |
| Overvoltage Protection | - | See model selector. Cycle AC input voltage to reset | | | |
| Hold Up Time (230VAC input) | ms | > 20ms | | | |
| Efficiency | - | See model selector | | | |
| No Load Power Draw | W | <0.3W | <0.3W | <0.3W | <0.5W |
| LED Indicator | - | Green LED indicates DC is OK | | | |
| Operating Temperature (1) | °C | -20 to +70°C. (DRB30-100, derate linearly to 50% load from 55 to 70°C) | | | |
| Storage Temperature | - | -40 to +85°C | | | |
| Operating Humidity (non condensing) | %RH | 5 - 95%RH | | | |
| Parallel Operation | - | Not available | | | |
| Series Operation | - | Possible | | | |
| Cooling | - | Convection | | | |
| Withstand Voltage (For 1 minute) | VAC | Input to Output 3kVAC, Input to GND 1.5kVAC, Output to GND 500VAC | | | |
| Isolation Resistance | MΩ | >100MΩ at 25°C, 70%RH & 500VDC | | | |
| Vibration (Non operating) | - | 10-55Hz (sweep for 1 min); 19.6m/s ² (2G) Constant; X,Y,Z each 1 hour | | | |
| Shock | - | 294m/s (30G) 11ms half sine | | | |
| Safety Agency Certifications | - | UL508 Listed, UL/CSA/EN60950-1†, CE Mark, UL1310 Class 2 (2), Class 1 Div 2, Group A, B, C, D (ISA 12.12.01) | | | |
| Conducted & Radiated EMI | - | EN55032-B Radiated & Conducted | | | |
| Immunity | - | EN61000-4-2 (lvl 4) , -3 (lvl 3) , -4 (lvl 4) -5 (norm mode lvl 3, com mode lvl 4) , -6 (lvl 3) , -8 (lvl 4) , -11 (class 3) | | | |
| Line Dips | - | SEMI-F47 (200VAC input) | | | |
| Weight (Typ) | g | 85 | 95 | 175 | 300 |
| Size (WxHxD) | in | 0.71 x 2.95 x 3.54 | 0.83 x 2.95 x 3.54 | 1.18 x 2.95 x 3.54 | 1.77 x 2.95 x 3.94 |
| Mounts on TS-35/7.5 or -35/15 rail | mm | 18 x 75 x 90 | 21 x 75 x 90 | 30 x 75 x 90 | 45 x 75 x 100 |
| Case material | - | Flame Retardant Polycarbonate (UL94 V-0) | | | |
| Warranty | yrs | Three years | | | |

(1) For operation below -10°C, start up load is derated linearly to 50% load down to -20°C

(2) NEC Class 2 in accordance with UL1310. Excludes DRB50-5-1 and DRB100-24-1 models

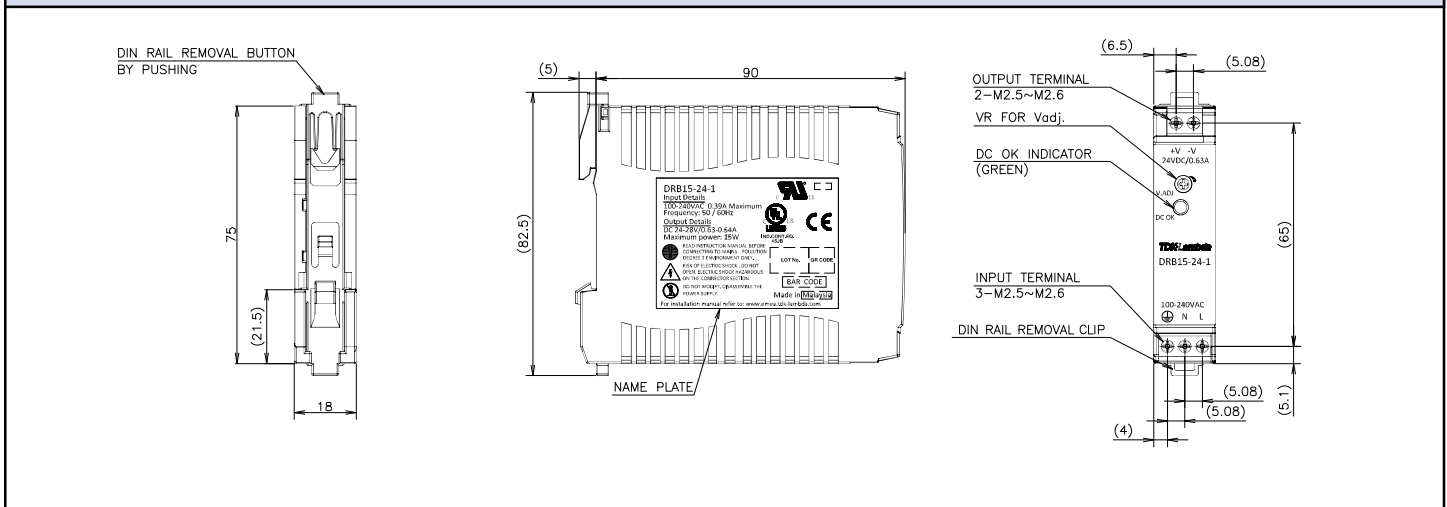
† Certification to the IEC62368-1 standard in progress (2018)

* Safety certified for AC input only

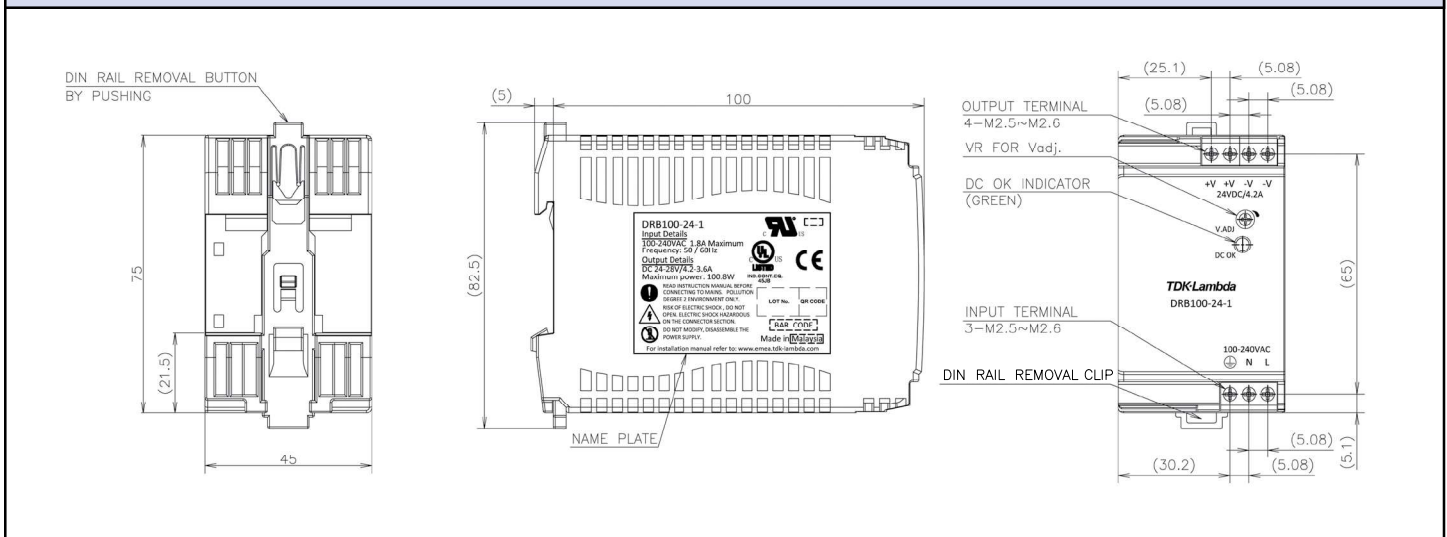
| Model | Output Voltage | Adjust Range | Max Current | Max Power | Load Reg | Line Reg | Ripple & Noise | Oversoltage Protection | Efficiency (%) (115/230VAC) |
|-------------|----------------|--------------|-------------|-----------|----------|----------|----------------|------------------------|-----------------------------|
| DRB50-5-1 | 5V | 5 - 5.5V | 6.0A | 30W | 50mV | 50mV | 30mV | 5.75 - 6.75V | 79 / 80 |
| DRB30-12-1 | 12V | 12 - 15V | 2.5A | 30W | 150mV | 150mV | 40mV | 15.96 - 18.72V | 86 / 88 |
| DRB50-12-1 | 12V | 12 - 15V | 3.4A | 51W(3) | 150mV | 150mV | 20mV | 15.96 - 18.72V | 88 / 90 |
| DRB50-15-1 | 15V | 12 - 15V | 3.4A | 51W(3) | 150mV | 150mV | 20mV | 15.96 - 18.72V | 88 / 90 |
| DRB15-24-1 | 24V | 24 - 28V | 0.63A | 15.1W | 240mV | 240mV | 20mV | 30 - 33.6V | 87 / 90 |
| DRB30-24-1 | 24V | 24 - 28V | 1.25A | 30W | 240mV | 240mV | 30mV | 30 - 33.6V | 88 / 90 |
| DRB50-24-1 | 24V | 24 - 28V | 2.1A | 50.4W | 240mV | 240mV | 30mV | 30 - 33.6V | 88 / 90 |
| DRB100-24-1 | 24V | 24 - 28V | 4.2A | 100.8W | 240mV | 240mV | 30mV | 30 - 33.6V | 90 / 91 |
| DRB50-48-1 | 48V | 48 - 52.8V | 1.05A | 50.4W | 480mV | 480mV | 40mV | 53.76 - 68.16V | 90 / 91 |

(3) With output set at 15V. 40.8W maximum power when output is set at 12V.

Outline DRB15



Outline DRB100



For Additional Information, please visit
<https://product.tdk.com/info/en/products/power/index.html>



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