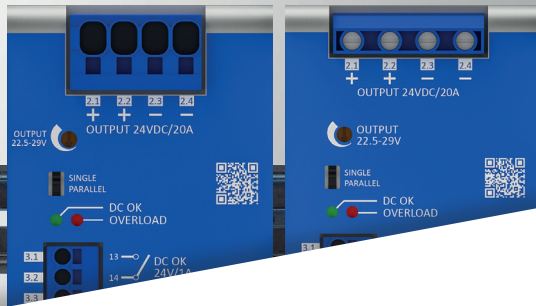




# Efficient all-round talents with push-in or screw terminals

## DRB 3 Phase Series

### Product Data Sheet

The DIN-Rail power supplies in the DRB series are part of TDK-Lambda's industrial heritage. They can be used in many applications, ranging from conventional switch cabinets and decentralised machinery and systems, to information and communications technology solutions.



[EMEA.LAMBDA.TDK.COM/DRB-3-PHASE](http://EMEA.LAMBDA.TDK.COM/DRB-3-PHASE)

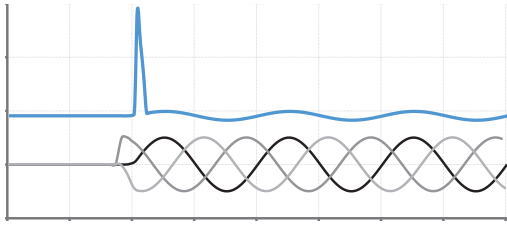
PD000001A05\_DRB3PhaseSeries\_EN\_Ver | 09.01.24

# DRB 3 Phase Series DIN-Rail Power Supplies



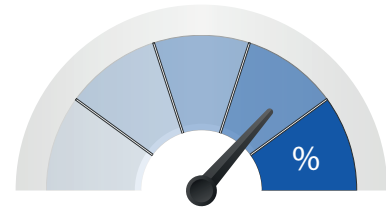
The series covers the popular output voltages of 12, 24, 48 and 72 volts, and users can choose between screw and push-in terminal blocks. All seven major electrical safety standards are covered, enabling global market access. The DRB's high operating efficiencies, conservative thermal design and redundant overvoltage protection measures provide maximum system up-time. Product reliability is also supported by a reduced component count and TDK-Lambda's stringent testing requirements. Overall the DRB 3 phase series offer an excellent balance between functionality and price.





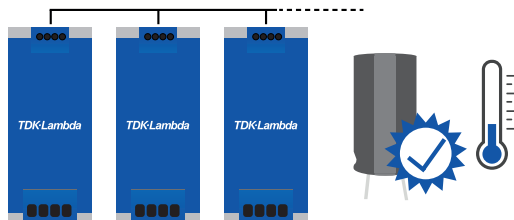
## NUISANCE CIRCUIT BREAKER TRIPPING? NOT A PROBLEM!

The input inrush current of the power supplies lasts less than 2ms. This, combined with a very low energy content of the initial current drawn, false or nuisance tripping of the line protection circuitry is avoided.



## POWERFUL WITH CAPACITIVE LOADS

Starting into a capacitive load poses a challenge for many power supplies. Thanks to comprehensive peak power capability of 150 percent, the DRB series can reliably operate under these conditions.



## DISTRIBUTING LOAD CURRENT, ENHANCING RELIABILITY

To provide additional power, DRB models of the same voltage and current can be connected in parallel. Using the front panel dip-switch, the DRBs can be easily configured from single to parallel operation. The load current is then shared between the power supplies, reducing the thermal stress on the electrolytic capacitors and enhancing field longevity.



## SUPPORTING SYSTEM CONTROLS

The availability of the output voltage can be remotely determined using the DC-OK relay contact. To avoid false notifications, voltage drops lasting less than 100ms are not reported. The highly responsive inhibit contact enables the DRB power supplies to be turned on and off in an effective manner.



## 120W models

 All products are available with screw-type (-A0) or push-in terminals (-A1)

|                                        |                   | DRB120-12-3-XX                                                                                                                  | DRB120-24-3-XX                                       |
|----------------------------------------|-------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Output voltage                         | nom.              | 12V <sub>DC</sub>                                                                                                               | 24V <sub>DC</sub>                                    |
| Adjustment range                       | nom.              | 11.4 .. 15V <sub>DC</sub>                                                                                                       | 22.5 .. 29V <sub>DC</sub>                            |
| Output current                         | nom.              | 10A                                                                                                                             | 5A                                                   |
| Boost current 1                        | max.              | 12A / continuous                                                                                                                | 6A / continuous                                      |
| Boost current 2                        | max.              | 14.5A / 600s                                                                                                                    | 7.5A / 600s                                          |
| Hold-up time <sup>1</sup>              | min.              | 20 / 40ms                                                                                                                       | 20 / 40ms                                            |
| Ripple & noise voltage                 | max.              | 10mVpp                                                                                                                          | 10mVpp                                               |
| Overload behaviour                     |                   | Constant current + Intermittent mode (Hiccup)                                                                                   |                                                      |
| AC power systems                       |                   | TN, TT, IT (IEC 61010-1), CGD                                                                                                   |                                                      |
| Mains frequency                        | nom.              | 50/60Hz                                                                                                                         |                                                      |
| AC input voltage <sup>7</sup>          | nom.              | 3x400..500V <sub>AC</sub>                                                                                                       |                                                      |
| Voltage range                          | max.              | 3x350..575V <sub>AC</sub>                                                                                                       |                                                      |
| AC input current <sup>2</sup>          | max.              | 3x0.5A                                                                                                                          | 3x0.5A                                               |
| Inrush current <sup>1</sup>            | max.              | 25 / 30A <2ms                                                                                                                   |                                                      |
| Inrush energy <sup>1</sup>             | max.              | 0.3 / 0.6A <sup>2</sup> s                                                                                                       | 0.3 / 0.6A <sup>2</sup> s                            |
| Output power                           | nom.              | <b>120W</b>                                                                                                                     | <b>120W</b>                                          |
| Boost power 1                          | max.              | 144W / continuous                                                                                                               | 144W / continuous                                    |
| Boost power 2                          | max.              | 174W / 600s                                                                                                                     | 174W / 600s                                          |
| Dropped phase power <sup>6</sup>       | max.              | 120W                                                                                                                            | 120W                                                 |
| Power factor <sup>2</sup>              | typ.              | 0.50                                                                                                                            | 0.50                                                 |
| Conversion efficiency <sup>1</sup>     | min.              | 89.4 / 89.1%                                                                                                                    | 91.3 / 91.2%                                         |
| Power losses <sup>1</sup>              | max.              | 14.2 / 14.7W                                                                                                                    | 11.4 / 11.6W                                         |
| No-load consumption <sup>1</sup>       | max.              | 1.7 / 2.1W                                                                                                                      | 1.7 / 2.1W                                           |
| Service lifetime <sup>1</sup>          | min.              | 162,000 / 142,000hrs                                                                                                            | 184,000 / 162,000hrs                                 |
| Service / Early life MTBF <sup>4</sup> | min.              | 1.8M / 0.79M hrs                                                                                                                |                                                      |
| Ambient operating temperature          | max.              | -25 .. +70°C <sub>amb</sub> (-13 .. +158°F <sub>amb</sub> )                                                                     |                                                      |
|                                        | nom.              | -25 .. +55°C <sub>amb</sub> (-13 .. +131°F <sub>amb</sub> )                                                                     |                                                      |
| Power derating                         | min.              | 1.6 / 2.0W/°C <sub>amb</sub><br>(1.11W/°F <sub>amb</sub> )                                                                      | 0.8W/°C <sub>amb</sub><br>(0.44W/°F <sub>amb</sub> ) |
| Operating altitude                     | nom.              | 3000mASL (9842ftASL)                                                                                                            |                                                      |
|                                        | max. <sup>5</sup> | 6000mASL (19685ftASL)                                                                                                           |                                                      |
| Percental power derating <sup>3</sup>  | min.              | 5% per 1000m (5% per 3281ft)                                                                                                    |                                                      |
| Temperature derating <sup>3</sup>      | min.              | 5K per 1000m (9K per 3281ft)                                                                                                    |                                                      |
| Class of protection                    |                   | I / IEC 61140                                                                                                                   |                                                      |
| Ingress protection degree              |                   | IP 20                                                                                                                           |                                                      |
| Radiated noise emission                |                   | Class B                                                                                                                         |                                                      |
| Conducted noise emission               |                   | Class B                                                                                                                         |                                                      |
| Width x Height x Depth                 | max.              | 55 x 129 x 138.2mm (2 <sup>11</sup> / <sub>64</sub> in x 5 <sup>5</sup> / <sub>64</sub> in x 5 <sup>7</sup> / <sub>16</sub> in) |                                                      |
| Weight                                 |                   | 660g (1.46lb)                                                                                                                   |                                                      |
| Certifications (CB, UL, UR)            |                   | IEC/EN/UL/CSA 61010-1, 61010-2-201, 62368-1 (Ed.2)                                                                              |                                                      |
| Designed to meet                       |                   | IEC 60950-1   EN 60204-1   IEC/EN 62477-1, 61204-7, 61558-2-16                                                                  |                                                      |

Unless otherwise stated, all values are specified in normal mounting position, at full load, nominal input and output voltages, 25°C ambient temperature and a run-in time of 5 minutes.

<sup>1</sup> 400 / 500V<sub>AC</sub> | <sup>2</sup> 400 .. 500V<sub>AC</sub> | <sup>3</sup> above 3000mASL (9842ftASL) | <sup>4</sup> Telcordia SR-332 Issue 4 | <sup>5</sup> not UL approved, reduced OVC | <sup>6</sup> 2x 350 .. 575V<sub>AC</sub>

<sup>7</sup> The product is also capable to operate with DC input voltage. Please contact your local support team.





## 240W models

**i** All products are available with screw-type (-A0) or push-in terminals (-A1)

|                                        |                          | DRB240-24-3-XX                                                                                                                  | DRB240-48-3-XX                                       |
|----------------------------------------|--------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|
| Output voltage                         | <i>nom.</i>              | 24V <sub>DC</sub>                                                                                                               | 48V <sub>DC</sub>                                    |
| Adjustment range                       | <i>nom.</i>              | 22.5 .. 29V <sub>DC</sub>                                                                                                       | 45 .. 56V <sub>DC</sub>                              |
| Output current                         | <i>nom.</i>              | 10A                                                                                                                             | 5A                                                   |
| Boost current 1                        | <i>max.</i>              | 12A / 300s                                                                                                                      | 6A / 300s                                            |
| Boost current 2                        | <i>max.</i>              | 15A / 60s                                                                                                                       | 7.5A / 60s                                           |
| Hold-up time <sup>1</sup>              | <i>min.</i>              | 20 / 40ms                                                                                                                       | 20 / 40ms                                            |
| Ripple & noise voltage <sup>1</sup>    | <i>max.</i>              | 10 / 40mVpp                                                                                                                     | 20 / 80mVpp                                          |
| Overload behaviour                     |                          | Constant current + Intermittent mode (Hiccup)                                                                                   |                                                      |
| AC power systems                       |                          | TN, TT, IT (IEC 61010-1), CGD                                                                                                   |                                                      |
| Mains frequency                        | <i>nom.</i>              | 50/60Hz                                                                                                                         |                                                      |
| AC input voltage <sup>7</sup>          | <i>nom.</i>              | 3x400..500V <sub>AC</sub>                                                                                                       |                                                      |
| Voltage range                          | <i>max.</i>              | 3x350..575V <sub>AC</sub>                                                                                                       |                                                      |
| AC input current <sup>2</sup>          | <i>max.</i>              | 3x0.8A                                                                                                                          | 3x0.8A                                               |
| Inrush current <sup>1</sup>            | <i>max.</i>              | 25 / 30A <3ms                                                                                                                   |                                                      |
| Inrush energy <sup>1</sup>             | <i>max.</i>              | 0.3 / 0.8A <sup>2</sup> s                                                                                                       | 0.3 / 0.8A <sup>2</sup> s                            |
| Output power                           | <i>nom.</i>              | <b>240W</b>                                                                                                                     | <b>240W</b>                                          |
| Boost power 1                          | <i>max.</i>              | 288W / 300s                                                                                                                     | 288W / 300s                                          |
| Boost power 2                          | <i>max.</i>              | 360W / 60s                                                                                                                      | 360W / 60s                                           |
| Dropped phase power <sup>6</sup>       | <i>max.</i>              | 240W                                                                                                                            | 240W                                                 |
| Power factor <sup>2</sup>              | <i>typ.</i>              | 0.60                                                                                                                            | 0.60                                                 |
| Conversion efficiency <sup>1</sup>     | <i>min.</i>              | 93.1 / 93.2%                                                                                                                    | 93.8 / 94%                                           |
| Power losses <sup>1</sup>              | <i>max.</i>              | 17.8 / 17.5W                                                                                                                    | 15.9 / 15.3W                                         |
| No-load consumption <sup>1</sup>       | <i>max.</i>              | 1.6 / 2.0W                                                                                                                      | 1.9 / 2.3W                                           |
| Service lifetime <sup>1</sup>          | <i>min.</i>              | 82,000 / 78,000hrs                                                                                                              | 94,000 / 90,000hrs                                   |
| Service / Early life MTBF <sup>4</sup> | <i>min.</i>              | 1.8M / 0.79M hrs                                                                                                                |                                                      |
| Ambient operating temperature          | <i>max.</i>              | -25 .. +70°C <sub>amb</sub> (-13 .. +158°F <sub>amb</sub> )                                                                     |                                                      |
|                                        | <i>nom.</i>              | -25 .. +55°C <sub>amb</sub> (-13 .. +131°F <sub>amb</sub> )                                                                     |                                                      |
| Power derating                         | <i>min.</i>              | 2.4W/°C <sub>amb</sub><br>(1.33W/°F <sub>amb</sub> )                                                                            | 2.6W/°C <sub>amb</sub><br>(1.44W/°F <sub>amb</sub> ) |
| Operating altitude                     | <i>nom.</i>              | 3000mASL (9842ftASL)                                                                                                            |                                                      |
|                                        | <i>max.</i> <sup>5</sup> | 6000mASL (19685ftASL)                                                                                                           |                                                      |
| Percental power derating <sup>3</sup>  | <i>min.</i>              | 5% per 1000m (5% per 3281ft)                                                                                                    |                                                      |
| Temperature derating <sup>3</sup>      | <i>min.</i>              | 5K per 1000m (9K per 3281ft)                                                                                                    |                                                      |
| Class of protection                    |                          | I / IEC 61140                                                                                                                   |                                                      |
| Ingress protection degree              |                          | IP 20                                                                                                                           |                                                      |
| Radiated noise emission                |                          | Class B                                                                                                                         |                                                      |
| Conducted noise emission               |                          | Class B                                                                                                                         |                                                      |
| Width x Height x Depth                 | <i>max.</i>              | 55 x 129 x 138.2mm (2 <sup>11</sup> / <sub>64</sub> in x 5 <sup>5</sup> / <sub>64</sub> in x 5 <sup>7</sup> / <sub>16</sub> in) |                                                      |
| Weight                                 |                          | 780g (1.72lb)                                                                                                                   |                                                      |
| Certifications (CB, UL, UR)            |                          | IEC/EN/UL/CSA 61010-1, 61010-2-201, 62368-1 (Ed.2)                                                                              |                                                      |
| Designed to meet                       |                          | IEC 60950-1   EN 60204-1   IEC/EN 62477-1, 61204-7, 61558-2-16                                                                  |                                                      |

Unless otherwise stated, all values are specified in normal mounting position, at full load, nominal input and output voltages, 25°C ambient temperature and a run-in time of 5 minutes.

<sup>1</sup> 400 / 500VAC | <sup>2</sup> 400 .. 500VAC | <sup>3</sup> above 3000mASL (9842ftASL) | <sup>4</sup> Telcordia SR-332 Issue 4 | <sup>5</sup> not UL approved, reduced OVC | <sup>6</sup> 2x 350 .. 575VAC

<sup>7</sup> The product is also capable to operate with DC input voltage. Please contact your local support team.



## 480W models

 All products are available with screw-type (-A0) or push-in terminals (-A1)

|                                        |                                                                | DRB480-24-3-XX                                                                                                                  | DRB480-48-3-XX                                       | DRB480-72-3-XX                                       |
|----------------------------------------|----------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------|------------------------------------------------------|
| Output voltage                         | nom.                                                           | 24V <sub>DC</sub>                                                                                                               | 48V <sub>DC</sub>                                    | 72V <sub>DC</sub>                                    |
| Adjustment range                       | nom.                                                           | 22.5 .. 29V <sub>DC</sub>                                                                                                       | 45 .. 56V <sub>DC</sub>                              | 70 .. 85V <sub>DC</sub>                              |
| Output current                         | nom.                                                           | 20.0A                                                                                                                           | 10.0A                                                | 6.7A                                                 |
| Boost current 1                        | max.                                                           | 30A / 5s                                                                                                                        | 15A / 5s                                             | 10A / 5s                                             |
| Boost current 2                        | max.                                                           | 30A / 7s                                                                                                                        | 15A / 7s                                             | 10A / 7s                                             |
| Hold-up time <sup>2</sup>              | min.                                                           | 24ms                                                                                                                            |                                                      |                                                      |
| Ripple & noise voltage                 | max.                                                           | 30mVpp                                                                                                                          | 40mVpp                                               | 50mVpp                                               |
| Overload behaviour                     | Constant current + Intermittent mode (Hiccup)                  |                                                                                                                                 |                                                      |                                                      |
| AC power systems                       | TN, TT, IT (IEC 61010-1), CGD                                  |                                                                                                                                 |                                                      |                                                      |
| Mains frequency                        | nom.                                                           | 50/60Hz                                                                                                                         |                                                      |                                                      |
| AC input voltage <sup>7</sup>          | nom.                                                           | 3x400..500V <sub>AC</sub>                                                                                                       |                                                      |                                                      |
| Voltage range                          | max.                                                           | 3x350..575V <sub>AC</sub>                                                                                                       |                                                      |                                                      |
| AC input current <sup>2</sup>          | max.                                                           | 3x1.2A                                                                                                                          |                                                      |                                                      |
| Inrush current <sup>1</sup>            | max.                                                           | 17 / 22A <200µs                                                                                                                 |                                                      |                                                      |
| Inrush energy <sup>1</sup>             | max.                                                           | 0.04 / 0.05A <sup>2</sup> s                                                                                                     |                                                      |                                                      |
| Output power                           | nom.                                                           | 480W                                                                                                                            |                                                      |                                                      |
| Boost power 1                          | max.                                                           | 720W / 5s                                                                                                                       |                                                      |                                                      |
| Boost power 2                          | max.                                                           | 720W / 7s                                                                                                                       |                                                      |                                                      |
| Dropped phase power <sup>6</sup>       | max.                                                           | 240W                                                                                                                            |                                                      |                                                      |
| Power factor <sup>2</sup>              | typ.                                                           | 0.92                                                                                                                            |                                                      |                                                      |
| Conversion efficiency <sup>1</sup>     | min.                                                           | 95.1 / 94.9%                                                                                                                    | 95.3 / 95.1%                                         | 95.7 / 95.6%                                         |
| Power losses <sup>1</sup>              | max.                                                           | 24.7 / 25.8W                                                                                                                    | 23.7 / 24.7W                                         | 21.6 / 22.1W                                         |
| No-load consumption <sup>1</sup>       | max.                                                           | 3.0 / 3.2W                                                                                                                      | 3.0 / 3.3W                                           | 3.0 / 3.3W                                           |
| Service lifetime <sup>1</sup>          | min.                                                           | 148,000 / 124,000hrs                                                                                                            | 157,000 / 119,000hrs                                 | 137,000 / 123,000hrs                                 |
| Service / Early life MTBF <sup>4</sup> | min.                                                           | 0.86M / 0.48M hrs                                                                                                               | 0.86M / 0.45M hrs                                    | 0.86M / 0.45M hrs                                    |
| Ambient operating temperature          | max.<br>nom.                                                   | -25 .. +70°C <sub>amb</sub> (-13 .. +158°F <sub>amb</sub> )<br>-25 .. +55°C <sub>amb</sub> (-13 .. +131°F <sub>amb</sub> )      |                                                      |                                                      |
| Power derating                         | min.                                                           | 12W/°C <sub>amb</sub><br>(6.67W/°F <sub>amb</sub> )                                                                             | 9.6W/°C <sub>amb</sub><br>(5.33W/°F <sub>amb</sub> ) | 8.0W/°C <sub>amb</sub><br>(4.44W/°F <sub>amb</sub> ) |
| Operating altitude                     | nom.<br>max. <sup>5</sup>                                      | 3000mASL (9842ftASL)<br>6000mASL (19685ftASL)                                                                                   |                                                      |                                                      |
| Percental power derating <sup>3</sup>  | min.                                                           | 5% per 1000m (5% per 3281ft)                                                                                                    |                                                      |                                                      |
| Temperature derating <sup>3</sup>      | min.                                                           | 5K per 1000m (9K per 3281ft)                                                                                                    |                                                      |                                                      |
| Class of protection                    | I / IEC 61140                                                  |                                                                                                                                 |                                                      |                                                      |
| Ingress protection degree              | IP 20                                                          |                                                                                                                                 |                                                      |                                                      |
| Radiated noise emission                | Class B                                                        |                                                                                                                                 |                                                      |                                                      |
| Conducted noise emission               | Class B                                                        |                                                                                                                                 |                                                      |                                                      |
| Width x Height x Depth                 | max.                                                           | 65 x 129 x 159.3mm (2 <sup>9</sup> / <sub>16</sub> in x 5 <sup>5</sup> / <sub>16</sub> in x 6 <sup>17</sup> / <sub>64</sub> in) |                                                      |                                                      |
| Weight                                 | 1050g (2.31lb)                                                 |                                                                                                                                 |                                                      |                                                      |
| Certifications (CB, UL, UR)            | IEC/EN/UL/CSA 61010-1, 61010-2-201, 62368-1 (Ed.2)             |                                                                                                                                 |                                                      |                                                      |
| Designed to meet                       | IEC 60950-1   EN 60204-1   IEC/EN 62477-1, 61204-7, 61558-2-16 |                                                                                                                                 |                                                      |                                                      |

Unless otherwise stated, all values are specified in normal mounting position, at full load, nominal input and output voltages, 25°C ambient temperature and a run-in time of 5 minutes.

<sup>1</sup> 400 / 500V<sub>AC</sub> | <sup>2</sup> 400 .. 500V<sub>AC</sub> | <sup>3</sup> above 3000mASL (9842ftASL) | <sup>4</sup> Telcordia SR-332 Issue 4 | <sup>5</sup> not UL approved, reduced OVC | <sup>6</sup> 2x 350 .. 575V<sub>AC</sub>

<sup>7</sup> The product is also capable to operate with DC input voltage. Please contact your local support team.



## 960W models

**i** All products are available with screw-type (-A0) or push-in terminals (-A1)

|                                        |                          | DRB960-24-3-XX                                                                                                                    | DRB960-48-3-XX                                      | DRB960-72-3-XX                                        |
|----------------------------------------|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|-------------------------------------------------------|
| Output voltage                         | <i>nom.</i>              | 24V <sub>DC</sub>                                                                                                                 | 48V <sub>DC</sub>                                   | 72V <sub>DC</sub>                                     |
| Adjustment range                       | <i>nom.</i>              | 22.5 .. 29V <sub>DC</sub>                                                                                                         | 45 .. 56V <sub>DC</sub>                             | 70 .. 85V <sub>DC</sub>                               |
| Output current                         | <i>nom.</i>              | 40.0A                                                                                                                             | 20.0A                                               | 13.3A                                                 |
| Boost current 1                        | <i>max.</i>              | 60A / 7s                                                                                                                          | 30A / 7s                                            | 20A / 7s                                              |
| Boost current 2                        | <i>max.</i>              | 60A / 5s                                                                                                                          | 30A / 5s                                            | 20A / 5s                                              |
| Hold-up time <sup>2</sup>              | <i>min.</i>              | 20ms                                                                                                                              |                                                     |                                                       |
| Ripple & noise voltage                 | <i>max.</i>              | 65mVpp                                                                                                                            | 100mVpp                                             | 40mVpp                                                |
| Overload behaviour                     |                          | Constant current + Intermittent mode (Hiccup)                                                                                     |                                                     |                                                       |
| AC power systems                       |                          | TN, TT, IT (IEC 61010-1), CGD                                                                                                     |                                                     |                                                       |
| Mains frequency                        | <i>nom.</i>              | 50/60Hz                                                                                                                           |                                                     |                                                       |
| AC input voltage <sup>7</sup>          | <i>nom.</i>              | 3x400..500V <sub>AC</sub>                                                                                                         |                                                     |                                                       |
| Voltage range                          | <i>max.</i>              | 3x350..575V <sub>AC</sub>                                                                                                         |                                                     |                                                       |
| AC input current <sup>2</sup>          | <i>max.</i>              | 3x2A                                                                                                                              |                                                     |                                                       |
| Inrush current <sup>1</sup>            | <i>max.</i>              | 17 / 20A <1ms                                                                                                                     |                                                     |                                                       |
| Inrush energy <sup>1</sup>             | <i>max.</i>              | 0.02 / 0.02A <sup>2</sup> s                                                                                                       |                                                     |                                                       |
| Output power                           | <i>nom.</i>              | <b>960W</b>                                                                                                                       |                                                     |                                                       |
| Boost power 1                          | <i>max.</i>              | 1440W / 7s                                                                                                                        |                                                     |                                                       |
| Boost power 2                          | <i>max.</i>              | 1440W / 5s                                                                                                                        |                                                     |                                                       |
| Dropped phase power <sup>6</sup>       | <i>max.</i>              | 480W                                                                                                                              |                                                     |                                                       |
| Power factor <sup>2</sup>              | <i>typ.</i>              | 0.94                                                                                                                              |                                                     |                                                       |
| Conversion efficiency <sup>1</sup>     | <i>min.</i>              | 95.2 / 95.1%                                                                                                                      | 95.9 / 95.8%                                        | 96.3 / 96.2%                                          |
| Power losses <sup>1</sup>              | <i>max.</i>              | 48.4 / 49.5W                                                                                                                      | 41.0 / 42.1W                                        | 36.9 / 37.9W                                          |
| No-load consumption <sup>1</sup>       | <i>max.</i>              | 6.1 / 6.0W                                                                                                                        | 6.2 / 6.1W                                          | 5.6 / 5.6W                                            |
| Service lifetime <sup>1</sup>          | <i>min.</i>              | 117,000 / 113,000hrs                                                                                                              | 130,000 / 128,000hrs                                | 130,000 / 124,000hrs                                  |
| Service / Early life MTBF <sup>4</sup> | <i>min.</i>              | 0.97M / 0.39M hrs                                                                                                                 |                                                     |                                                       |
| Ambient operating temperature          | <i>max.</i>              | -25 .. +70°C <sub>amb</sub> (-13 .. +158°F <sub>amb</sub> )                                                                       |                                                     |                                                       |
|                                        | <i>nom.</i>              | -25 .. +55°C <sub>amb</sub> (-13 .. +131°F <sub>amb</sub> )                                                                       |                                                     |                                                       |
| Power derating                         | <i>min.</i>              | 16W/°C <sub>amb</sub><br>(8.89W/°F <sub>amb</sub> )                                                                               | 16W/°C <sub>amb</sub><br>(8.89W/°F <sub>amb</sub> ) | 6.24W/°C <sub>amb</sub><br>(3.47W/°F <sub>amb</sub> ) |
| Operating altitude                     | <i>nom.</i>              | 3000mASL (9842ftASL)                                                                                                              |                                                     |                                                       |
|                                        | <i>max.</i> <sup>5</sup> | 6000mASL (19685ftASL)                                                                                                             |                                                     |                                                       |
| Percental power derating <sup>3</sup>  | <i>min.</i>              | 5% per 1000m (5% per 3281ft)                                                                                                      |                                                     |                                                       |
| Temperature derating <sup>3</sup>      | <i>min.</i>              | 5K per 1000m (9K per 3281ft)                                                                                                      |                                                     |                                                       |
| Class of protection                    |                          | I / IEC 61140                                                                                                                     |                                                     |                                                       |
| Ingress protection degree              |                          | IP 20                                                                                                                             |                                                     |                                                       |
| Radiated noise emission                |                          | Class B                                                                                                                           |                                                     |                                                       |
| Conducted noise emission               |                          | Class B                                                                                                                           |                                                     |                                                       |
| Width x Height x Depth                 | <i>max.</i>              | 100 x 129 x 171.9mm (3 <sup>15</sup> / <sub>16</sub> in x 5 <sup>5</sup> / <sub>64</sub> in x 6 <sup>49</sup> / <sub>64</sub> in) |                                                     |                                                       |
| Weight                                 |                          | 1750g (3.86lb)                                                                                                                    |                                                     |                                                       |
| Certifications (CB, UL, UR)            |                          | IEC/EN/UL/CSA 61010-1, 61010-2-201, 62368-1 (Ed.2)                                                                                |                                                     |                                                       |
| Designed to meet                       |                          | IEC 60950-1   EN 60204-1   IEC/EN 62477-1, 61204-7, 61558-2-16                                                                    |                                                     |                                                       |

Unless otherwise stated, all values are specified in normal mounting position, at full load, nominal input and output voltages, 25°C ambient temperature and a run-in time of 5 minutes.

<sup>1</sup> 400 / 500V<sub>AC</sub> | <sup>2</sup> 400 .. 500V<sub>AC</sub> | <sup>3</sup> above 3000mASL (9842ftASL) | <sup>4</sup> Telcordia SR-332 Issue 4 | <sup>5</sup> not UL approved, reduced OVC | <sup>6</sup> 2x 350 .. 575V<sub>AC</sub>

<sup>7</sup> The product is also capable to operate with DC input voltage. Please contact your local support team.

**i** All values are preliminary and subject to changes without notice.



## Accessories



### DBM buffer modules

In order to secure process uptime and reliability in 24V low-voltage systems, DBM buffer modules increase hold-up time or provide a reserve for peak loads.

#### DBM20

20A input/output, electrolytic capacitors, signalling & control, screw terminals

#### DBM20/E

20A input/output, electrolytic capacitors, signalling & control, spring clamp terminals

[EMEA.LAMBDA.TDK.COM/UK/PRODUCTS/DBM20](http://EMEA.LAMBDA.TDK.COM/UK/PRODUCTS/DBM20)



### DRM redundancy modules

For building fault tolerant 12/24V systems, DRM redundancy modules can be used to decouple n+1 power supplies.

#### DRM40

40A output, 2x20A input, screw terminals, DC OK and balancing LEDs

#### DRM40B

40A output, 2x20A input, screw terminals

[EMEA.LAMBDA.TDK.COM/UK/PRODUCTS/DRM40](http://EMEA.LAMBDA.TDK.COM/UK/PRODUCTS/DRM40)



### DDA DC/DC converter

Non-isolated step-down converter for creating additional DC bus voltages from a single DC input source.

#### DDA250

Single output 20A at 3.3..15V, input 9..53V, DC OK LED, screw terminals

#### DDA325

Dual output 14A at 3.3..24V and 8A at -3.3..-24V, input 9..40V, DC OK LEDs, screw terminals

#### DDA500

Dual output 2x20A at 3.3..15V, input 9..53V, DC OK LEDs, screw terminals

[EMEA.LAMBDA.TDK.COM/UK/PRODUCTS/DDA](http://EMEA.LAMBDA.TDK.COM/UK/PRODUCTS/DDA)







#### **TDK-Lambda France SAS**

Tel: +33 1 60 12 71 65  
tlf.fr-powersolutions@tdk.com  
www.emea.lambda.tdk.com/fr



#### **Italy Sales Office**

Tel: +39 02 61 29 38 63  
tlf.it-powersolutions@tdk.com  
www.emea.lambda.tdk.com/it



#### **Netherlands**

tlf.nl-powersolutions@tdk.com  
www.emea.lambda.tdk.com/nl



#### **TDK-Lambda Germany GmbH**

Tel: +49 7841 666 0  
tlg.powersolutions@tdk.com  
www.emea.lambda.tdk.com/de



#### **Austria Sales Office**

Tel: +43 2256 655 84  
tlg.at-powersolutions@tdk.com  
www.emea.lambda.tdk.com/at



#### **Switzerland Sales Office**

Tel: +41 44 850 53 53  
tlg.ch-powersolutions@tdk.com  
www.emea.lambda.tdk.com/ch



#### **Nordic Sales Office**

Tel: +45 8853 8086  
tlg.dk-powersolutions@tdk.com  
www.emea.lambda.tdk.com/dk



#### **TDK-Lambda UK Ltd.**

Tel: +44 (0) 12 71 85 66 66  
tlu.powersolutions@tdk.com  
www.emea.lambda.tdk.com/uk



#### **TDK-Lambda Ltd.**

Tel: +9 723 902 4333  
tli.powersolutions@tdk.com  
www.emea.lambda.tdk.com/il-en



#### **TDK-Lambda Americas**

Tel: +1 800-LAMBDA-4 or 1-800-526-2324  
tla.powersolutions@tdk.com  
www.us.lambda.tdk.com



#### **TDK Electronics do Brasil Ltda**

Tel: +55 11 3289-9599  
sales.br@tdk-electronics.tdk.com  
www.tdk-electronics.tdk.com/en



#### **TDK-Lambda Corporation**

Tel: +81-3-6778-1113  
www.jp.lambda.tdk.com



#### **TDK-Lambda (China) Electronics Co. Ltd.**

Tel: +86 21 6485-0777  
tlc.powersolutions@tdk.com  
www.lambda.tdk.com.cn



#### **TDK-Lambda Singapore Pte Ltd.**

Tel: +65 6251 7211  
tls.marketing@tdk.com  
www.sg.lambda.tdk.com



#### **TDK India Private Limited, Power Supply Division**

Tel: +91 80 4039-0660  
mathew.philip@tdk.com  
www.sg.lambda.tdk.com

