

20-40A DIN Rail Redundancy Module

<https://product.tdk.com/en/power/drm40>  
<https://www.emea.lambda.tdk.com/drm40>



The DRM40 series of DIN rail mount redundancy modules are ideal for connecting two 20A, 10V to 30Vdc output power supplies to produce a 20A N+1 redundant configuration. Alternatively, using the load balancing option, two 20A supplies can be paralleled to deliver a 40A output. For capacitive and inductive loads, the DRM40 will support an additional 50% peak load for four seconds. The use of low-loss MOSFET reverse current protection devices reduces the internal voltage drop to just 200mV.

| Features                           | Benefits                                       |
|------------------------------------|------------------------------------------------|
| • Compact Size                     | • Occupies Less Space on the DIN rail          |
| • Low 200mV Voltage Drop           | • Reduced Voltage Drop and Power Loss          |
| • Current Balance Indicator Option | • Ensure and Monitor Power Supply Load Sharing |
| • Isolated Alarm Signals           | • Simplified Remote Monitoring                 |

| Model Selector |                         |             |                     |                                        |                                           |
|----------------|-------------------------|-------------|---------------------|----------------------------------------|-------------------------------------------|
| Model          | Input Voltage Range (V) | # of Inputs | Maximum Current (A) | Peak Current (A) (<4s, 35% Duty Cycle) | Monitoring Signals                        |
| DRM40          | 10-30                   | 2           | 40                  | 60                                     | Input Good and Current Balance Indicators |
| DRM40B         | 10-30                   | 2           | 40                  | 60                                     | None                                      |

| Related Products                                  |                                       |                                                                            |
|---------------------------------------------------|---------------------------------------|----------------------------------------------------------------------------|
| Type                                              | Part Number(s)                        | Description                                                                |
| Buffer DIN rail modules                           | <a href="#">DBM20</a>                 | 20A DIN rail Buffer (hold-up) modules                                      |
| Low power DIN rail power supplies                 | <a href="#">DRL10, 30, 60, 100</a>    | 10 to 100W AC-DC DIN rail power supplies (Class II, No AC Ground required) |
| Low power DIN rail power supplies                 | <a href="#">DRB15, 30, 50, 100</a>    | 15 to 100W AC-DC DIN rail power supplies (Class I, AC Ground required)     |
| Mid to high power DIN rail power supplies         | <a href="#">DRB120, 240, 480</a>      | 120 to 480W AC-DC DIN rail power supplies                                  |
| Mid to high power premium DIN rail power supplies | <a href="#">DRF120, 240, 480, 960</a> | 120 to 960W AC-DC DIN rail power supplies                                  |
| DIN rail mount filters                            | <a href="#">RSMN</a>                  | 3A to 30A 250Vac 2 stage filters with pulse attenuation                    |
| DIN rail mount filters                            | <a href="#">RSEV</a>                  | 6A to 30A 250Vac 2 stage filters                                           |
| RSEV DIN rail mounting kit                        | <a href="#">DIN-RSEV</a>              | RSEV DIN rail mounting kit                                                 |

| Specifications                     |     |                                                |        |
|------------------------------------|-----|------------------------------------------------|--------|
| Model                              |     | DRM                                            | DRM40B |
| Input                              |     |                                                |        |
| Input Voltage range                | Vdc | 10 - 30                                        |        |
| Number of inputs                   | -   | Two                                            |        |
| Maximum Input Current              | A   | (Two) 20, total 60 peak                        |        |
| Peak Input Current                 | A   | (Two) 30 for 4s maximum, 35% duty cycle        |        |
| Internal Power Loss (typ)          | W   | 8 at 40A(1)                                    |        |
| Input to Output Voltage Drop       | Vdc | 0.2 at 40A(1)                                  |        |
| Input Good Indicators              | -   | Two green LEDs indicating each input is “good” | None   |
| Reverse Polarity Protection        | Vdc | 40 max                                         |        |
| Immunity                           | -   | See immunity table                             |        |
| Safety Certifications and Markings | -   | IEC/UL/EN62368-1, UL508, CE Mark and UKCA Mark |        |

| Immunity                        |             |            |          |                        |
|---------------------------------|-------------|------------|----------|------------------------|
| Test                            | Standard    | Test Level | Criteria | Notes                  |
| ESD                             | EN61000-4-2 | 4          | A        | 15kV air, 8kV contact  |
| Radiated Susceptibility         | EN61000-4-3 | 3          | A        | 10V/m                  |
| Electrical Fast Transient Burst | EN61000-4-4 | 3          | A        | 2.4kV, 5kHz            |
| Surge                           | EN61000-4-5 | 1-2        | A        | Signal pin to FG Lvl 1 |
| Conducted Susceptibility        | EN61000-4-6 | 3          | A        | 10Vrms                 |
| Magnetic Fields                 | EN61000-4-8 | 3          | A        | 10A/m                  |

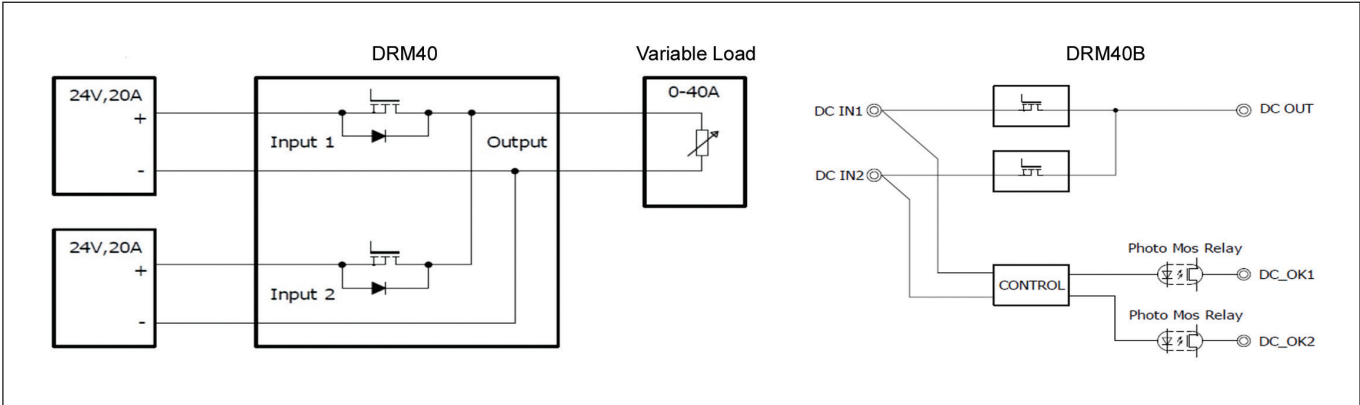
| Specifications                   |        |                                                                              |        |
|----------------------------------|--------|------------------------------------------------------------------------------|--------|
| Model                            |        | DRM                                                                          | DRM40B |
| Output                           |        |                                                                              |        |
| Maximum Output Current           | A      | 40                                                                           |        |
| Peak Output Current              | A      | 60A for 4s maximum, 35% duty cycle                                           |        |
| Overcurrent Protection           | -      | None                                                                         |        |
| Overvoltage Protection           | -      | None                                                                         |        |
| Parallel Operation               | -      | Possible, see installation manual                                            |        |
| Series Operation                 | -      | Not possible                                                                 |        |
| Environmental                    |        |                                                                              |        |
| Operating Temperature            | °C     | -40 to +70 standard mounting orientation                                     |        |
| Storage Temperature              | °C     | -40 to +85                                                                   |        |
| Humidity (non condensing)        | %RH    | 5 to 95 (operating and storage)                                              |        |
| Cooling                          | -      | Convection                                                                   |        |
| Altitude                         | m      | 5,000                                                                        |        |
| Withstand Voltage (For 1 minute) | Vdc    | 707 (input or output to chassis)                                             |        |
| Isolation Resistance             | MΩ     | >100 at 25°C, 70%RH & 500VDC (input or output to chassis)                    |        |
| Vibration (Non Operating)        | -      | 10 - 55Hz (sweep for 1 min) 19.6m/s² (constant X, Y, Z axis for 1 hour each) |        |
| Shock (In packaging)             | -      | < 196m/s² (20G)                                                              |        |
| Other                            |        |                                                                              |        |
| Weight (Typ)                     | g      | 330                                                                          |        |
| Size (WxHxD)                     | mm     | 35 x 124 x 125                                                               |        |
| Size (WxHxD)                     | Inches | 1.18 x 4.87 x 4.91                                                           |        |
| Warranty                         | yrs    | 5                                                                            |        |

## Notes

\* /EF model has /ADJ included

Other options are available, please contact sales

Block Diagrams DRM40 Series

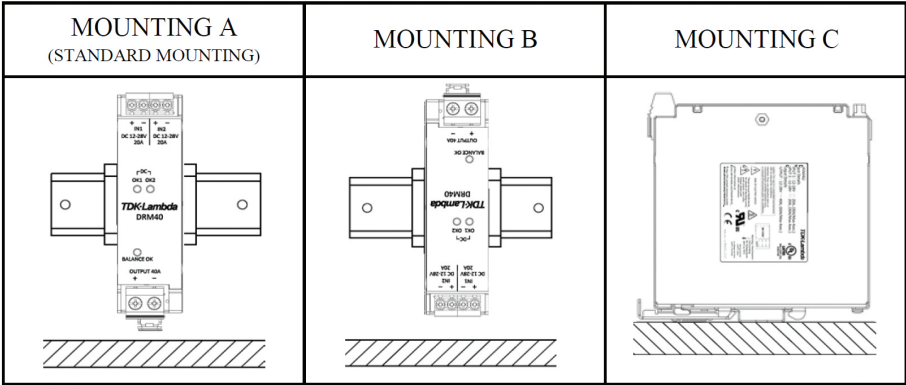
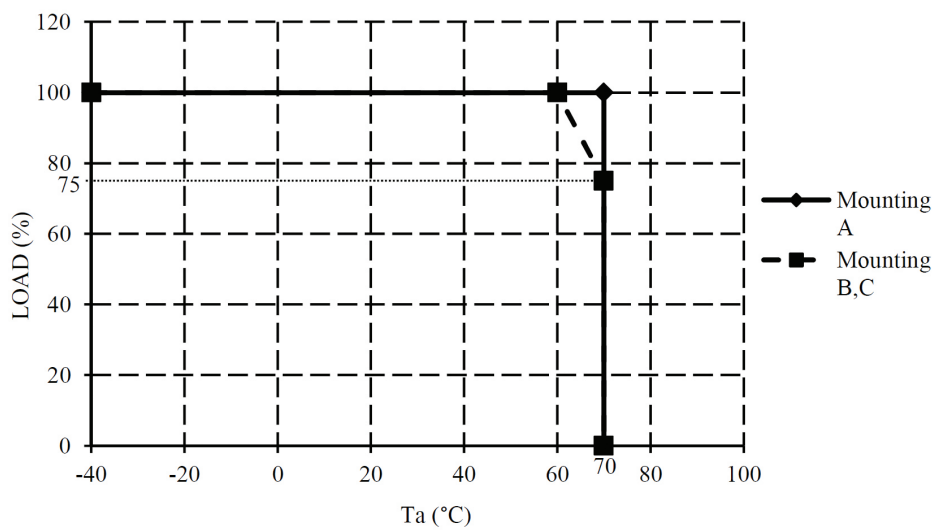


Derating Curve (DRM40 and DRM 40B)

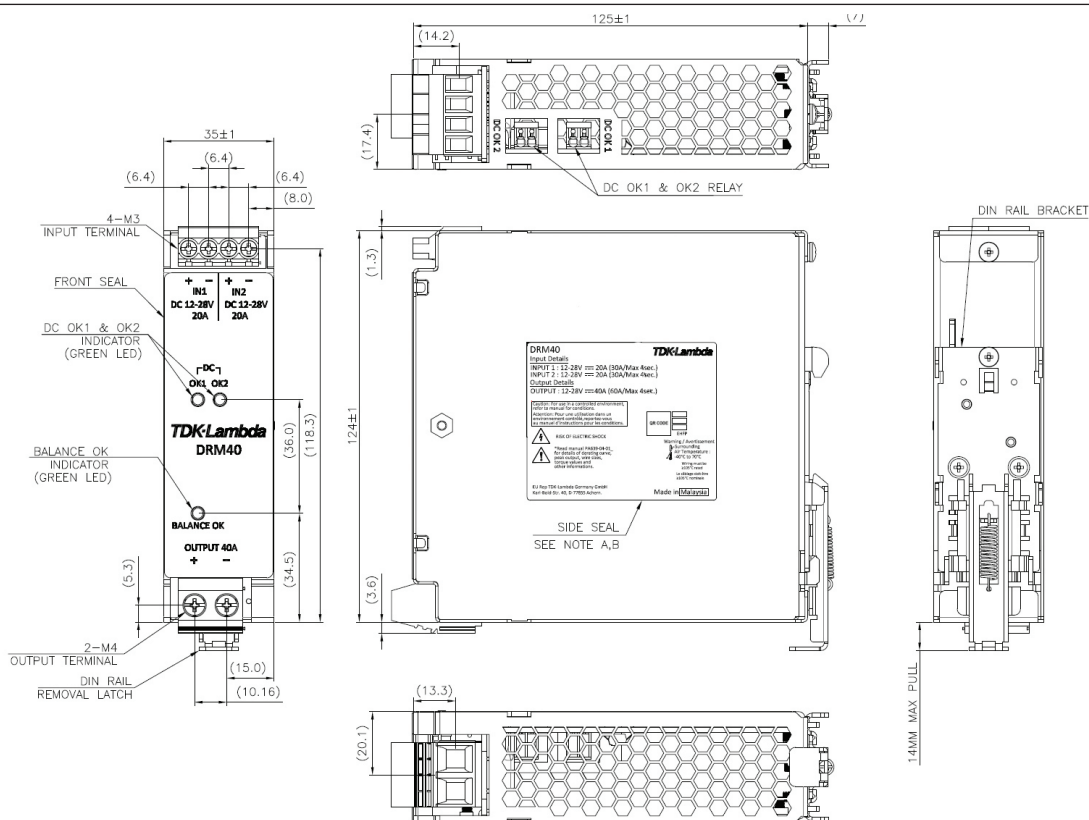
**\*COOLING : CONVECTION COOLING**

| Ta (°C)   | LOAD (%)                          |            |            |
|-----------|-----------------------------------|------------|------------|
|           | MOUNTING A<br>(STANDARD MOUNTING) | MOUNTING B | MOUNTING C |
| -40 ~ +60 | 100                               | 100        | 100        |
| 70        | 100                               | 75         | 75         |

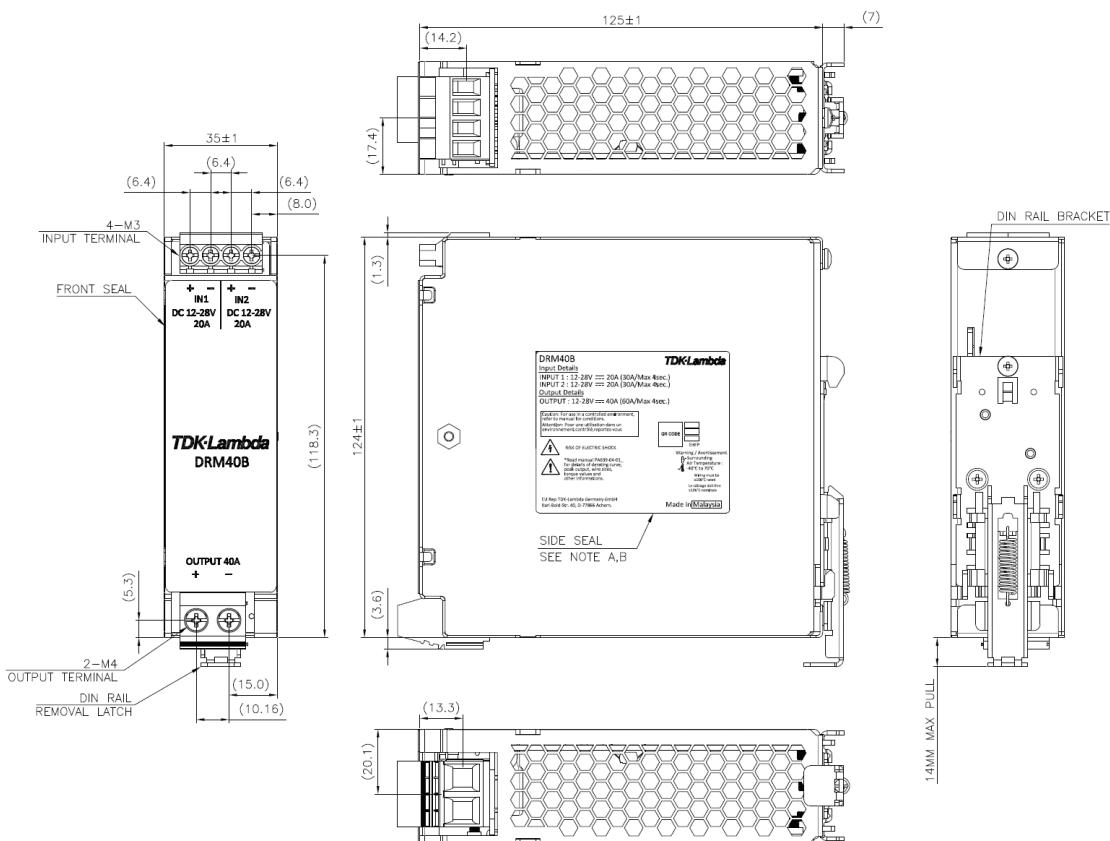
OUTPUT DERATING CURVE



## Outline Drawing DRM40 Series



## Outline Drawing DRM40B Series





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