# DBR2-300W Aluminium housed braking resistor for Unidrive-M



### High temperatures - Risk of Burn

Braking resistors can reach high temperatures.

Do not mount the resistor on a combustible surface.

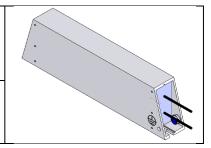
Locate the braking resistor so that inadvertent contact is not possible. Provide adequate ventilation.

Use cable with insulation capable of withstanding high temperatures.



## Thermal Overload protection must be used

The thermal switch must be incorporated into the overload protection circuit. The thermal protection circuit must disconnect the AC supply from the drive if the resistor becomes overloaded due to a fault.



### Selection:

The resistance of the braking resistor must be higher than the minimum resistance specified in the drive *User Guide*. The required Pulse Power rating must be calculated to suit the application. Refer to the Drive *User Guide*.

#### Installation:

The resistor must be mounted as shown in the Table below.

The resistor housing must be grounded.

The cable between the resistor and the drive must be shielded if the cable is not fully enclosed inside a metal enclosure. The cable does not need to be screened if the braking resistor and drive are both fully enclosed inside the same metal enclosure.

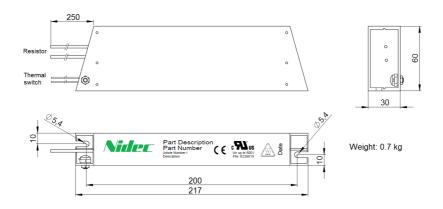
### **Technical data: DBR2-300W**

| Part number   |                    | 1220-                     | 1220-                | 1220-   | 1220-   | 1220-   | 1220-   | 1220-   |  |  |
|---|--------------------|---------------------------|----------------------|---------|---------|---------|---------|---------|--|--|
|   |                    | 0003020                   | 0003050              | 0003068 | 0003080 | 0003100 | 0003135 | 0003270 |  |  |
| Pulse Power (W) Ta ~ 40                               | ED 6 %             | UL 2250 W / CE 2700 W     |                      |         |         |         |         |         |  |  |
| °C  | ED 15 %            | UL 1250 W / CE 1500 W     |                      |         |         |         |         |         |  |  |
| Referred to a cycle duration                          | ED 25 %            | UL 750 W / CE 900 W       |                      |         |         |         |         |         |  |  |
| of 120 s. Approximate value (depending on resistance) | ED 40 %            | UL 500 W / CE 600 W       |                      |         |         |         |         |         |  |  |
| Nominal continuous power (W                           | ') Ta ~40 °C       | UL 250 W / CE 300 W       |                      |         |         |         |         |         |  |  |
| Resistance values at 20 °C                            |                    | 20 Ω                      | 50 Ω                 | 68 Ω    | 80 Ω    | 100 Ω   | 135 Ω   | 270 Ω   |  |  |
| Tolerance of resistance at 20 °C                      |                    | ±10 %                     |                      |         |         |         |         |         |  |  |
| Degree of protection (EN 60529)                       |                    | IP 54                     |                      |         |         |         |         |         |  |  |
| Maximum permissible operating voltage                 |                    | UL 600 V / CE 1000 VDC    |                      |         |         |         |         |         |  |  |
| Cooling   |                    | Natural convection        |                      |         |         |         |         |         |  |  |
| Housing temperature at nominal                        |                    | UL ~ 340 °C / CE ~ 360 °C |                      |         |         |         |         |         |  |  |
| continuous power Ta ~ 40 °C                           |                    |                           |                      |         |         |         |         |         |  |  |
| Thermal switch operating temperature                  |                    | 200 °C                    |                      |         |         |         |         |         |  |  |
| Minimum distance to other equipment                   |                    | >20 mm                    |                      |         |         |         |         |         |  |  |
| Electrical connection                                 |                    | 2 x AWG 16 / L = 25 cm    |                      |         |         |         |         |         |  |  |
| Operating temperature range                           |                    | -25 +40 °C                |                      |         |         |         |         |         |  |  |
| Testing voltage                                       |                    | 2.7 kV AC (1 s)           |                      |         |         |         |         |         |  |  |
| Approvals / marking                                   | UL (File: E226619) |                           |                      |         |         |         |         |         |  |  |
| Mounting positions                                    |                    |                           | uuuu <mark>uu</mark> |         |         | u uu fu |         |         |  |  |

## **Unidrive-M parameters:**

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|-----------------------------|----------|-------|------|------|------|-------|-------|-------|--|
| Ramp mode                   | # 02.004 | Fast  |      |      |      |       |       |       |  |
| Rated power of the resistor | # 10.030 | 300 W |      |      |      |       |       |       |  |
| Thermal time constant       | # 10.031 | 90 s  |      |      |      |       |       |       |  |
| Resistance value            | # 10.061 | 20 Ω  | 50 Ω | 68 Ω | 80 Ω | 100 Ω | 135 Ω | 270 Ω |  |

### **Dimensions:**



# DBR2-500W Aluminium housed braking resistor for Unidrive-M

# WARNING

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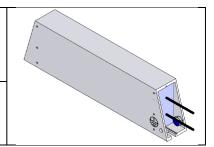
Locate the braking resistor so that inadvertent contact is not possible. Provide adequate ventilation.

Use cable with insulation capable of withstanding high temperatures.

# WARNING

### Thermal Overload protection must be used

The thermal switch must be incorporated into the overload protection circuit. The thermal protection circuit must disconnect the AC supply from the drive if the resistor becomes overloaded due to a fault.



### Selection:

The resistance of the braking resistor must be higher than the minimum resistance specified in the drive *User Guide*. The required Pulse Power rating must be calculated to suit the application. Refer to the Drive *User Guide*.

### Installation:

The resistor must be mounted as shown in the Table below.

The resistor housing must be grounded.

The cable between the resistor and the drive must be shielded if the cable is not fully enclosed inside a metal enclosure. The cable does not need to be screened if the braking resistor and drive are both fully enclosed inside the same metal enclosure.

## Technical data: DBR2-500W

| Part number                             |                       | 1220-<br>0005020           | 1220-<br>0005050 | 1220-<br>0005068 | 1220-<br>0005080 | 1220-<br>0005100 | 1220-<br>0005270 |  |  |  |
|---|-----------------------|----------------------------|------------------|------------------|------------------|------------------|------------------|--|--|--|
| Pulse Power (W) Ta ~ 40 °C              | UL 3600 W / CE 4500 W |                            |                  |                  |                  |                  |                  |  |  |  |
| Referred to a cycle duration            | ED 15 %               | 15 % UL 2000 W / CE 2500 W |                  |                  |                  |                  |                  |  |  |  |
| of 120 s. Approximate value             | ED 25 %               | UL 1200 W / CE 1500 W      |                  |                  |                  |                  |                  |  |  |  |
| (depending on resistance)               | ED 40 %               | UL 800 W / CE 1000 W       |                  |                  |                  |                  |                  |  |  |  |
| Nominal continuous power (W) Ta ~ 40 °C |                       | UL 400 W / CE 500 W        |                  |                  |                  |                  |                  |  |  |  |
| Resistance values at 20 °C              |                       | 20 Ω                       | 50 Ω             | 68 Ω             | 80 Ω             | 100 Ω            | 270 Ω            |  |  |  |
| Tolerance of resistance at 2 0°C        |                       | ±10 %                      |                  |                  |                  |                  |                  |  |  |  |
| Degree of protection (EN 60529)         |                       | IP 54                      |                  |                  |                  |                  |                  |  |  |  |
| Maximum permissible operating voltage   |                       | UL 600 V / CE 1000 VDC     |                  |                  |                  |                  |                  |  |  |  |
| Cooling                                 |                       | Natural convection         |                  |                  |                  |                  |                  |  |  |  |
| Housing temperature at nominal          |                       | UL ~ 340 °C / CE ~ 360 °C  |                  |                  |                  |                  |                  |  |  |  |
| continuous power Ta ~ 40 °C             |                       |                            |                  |                  |                  |                  |                  |  |  |  |
| Thermal switch operating temperature    |                       | 200 °C                     |                  |                  |                  |                  |                  |  |  |  |
| Minimum distance to other equipment     |                       | >20 mm                     |                  |                  |                  |                  |                  |  |  |  |
| Electrical connection                   |                       | 2 x AWG 16 / L = 25 cm     |                  |                  |                  |                  |                  |  |  |  |
| Operating temperature range             |                       | -25 +40 °C                 |                  |                  |                  |                  |                  |  |  |  |
| Testing voltage                         |                       | 2.7 kV AC (1 s)            |                  |                  |                  |                  |                  |  |  |  |
| Approvals / marking                     |                       | UL (File: E226619)         |                  |                  |                  |                  |                  |  |  |  |
| Mounting positions                      |                       |                            |                  |                  |                  |                  |                  |  |  |  |

## **Unidrive-M parameters**

| Ramp mode                   | # 02.004 | Fast  |      |      |      |       |       |  |  |
|-----------------------------|----------|-------|------|------|------|-------|-------|--|--|
| Rated power of the resistor | # 10.030 | 500 W |      |      |      |       |       |  |  |
| Thermal time constant       | # 10.031 | 90 s  |      |      |      |       |       |  |  |
| Resistance value            | # 10.061 | 20 Ω  | 50 Ω | 68 Ω | 80 Ω | 100 Ω | 270 Ω |  |  |

### **Dimensions:**

