

# NHR142J6

## Brushless DC/AC Servomotors

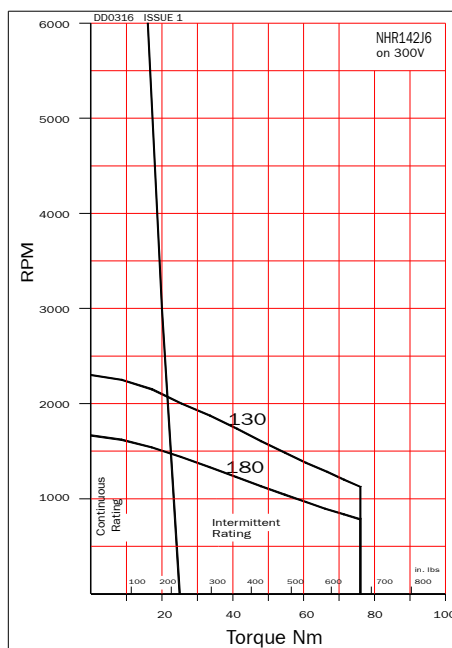
### Technical Data

| Parameter  | Unit              | -260       | -180        | -130      | -88         |
|--|-------------------|------------|-------------|-----------|-------------|
| <b>General</b>   |                   |            |             |           |             |
| Voltage Gradient No Load Line-Line                                       | Volts/1000RPM     | 260        | 180         | 130       | 88          |
| Max. Motor EMF Line-Line   | Volts             | 700        | 700         | 700       | 530         |
| Max. Speed   | RPM               | 2700       | 3900        | 5400      | 6000        |
| <b>Continuous Stall Torque TENV (110K) <sup>3</sup></b>                  | <b>Nm</b>         | <b>25</b>  | <b>25</b>   | <b>25</b> | <b>25</b>   |
| Continuous Stall Torque when fitted to Heatsink (Size 300 x 300 x 12 mm) | Nm                | 26         | 26          | 26        | 26          |
| Peak Stall Torque  | Nm                | 76         | 76          | 76        | 76          |
| <b>Continuous Stall Current rms <sup>3</sup></b>                         | <b>Amps</b>       | <b>8.2</b> | <b>11.9</b> | <b>16</b> | <b>23.5</b> |
| Rotor Polar Moment of Inertia  | kgcm <sup>2</sup> | 27         | 27          | 27        | 27          |
| <b>Maximum Current (Peak)</b>  | <b>Amp</b>        | <b>44</b>  | <b>64</b>   | <b>89</b> | <b>125</b>  |
| Cogging Torque   | Nm                | 0.52       | 0.52        | 0.52      | 0.52        |
| Torque Constant K <sub>T</sub> rms <sup>1,2</sup>                        | Nm/Amp            | 3.03       | 2.1         | 1.53      | 1.02        |
| <b>Winding</b>   |                   |            |             |           |             |
| Resistance Line-Line <sup>1</sup>  | Ohms              | 1.8        | 0.88        | 0.43      | 0.21        |
| Inductance Line-Line   | Millihenrys       | 25         | 12.3        | 6.3       | 3           |
| Insulation Class   |                   | F          | F           | F         | F           |
| Max. Ambient Temperature   | °C                | 40         | 40          | 40        | 40          |
| Thermal Time Constant  | Minutes           | 65         | 65          | 65        | 65          |
| Thermal Resistance   | °C/Watt           | 0.43       | 0.43        | 0.43      | 0.43        |
| Static Friction Torque   | Nm                | 0.12       | 0.12        | 0.12      | 0.12        |
| Motor Weight   | kg                | 25         | 25          | 25        | 25          |

Tolerance All data is subject to a tolerance of ± 10% (except motor 'Voltage Gradient' and K<sub>T</sub> which are to +15%/-5%).

- At 25°C.
- Note that K<sub>T</sub> is shown as a combined value for all **three phases**.
- The temperature rise Δ T on the windings is 110K and applies to all continuous torque values. The maximum ambient temperature is 40°C and therefore the temperature on the windings should not be more than 150°C. A value higher than 150°C would exceed the class F insulation temperature specification.

NHR142J6 on 300V



NHR142J6 on 560V

