

# NHRS142C6

## Brushless DC/AC Servomotors

### Technical Data

| Parameter  | Unit              | -130        | -88         | -64         |
|--|-------------------|-------------|-------------|-------------|
| <b>General</b>   |                   |             |             |             |
| Voltage Gradient No Load Line-Line                                       | Volts/1000RPM     | 130         | 88          | 64          |
| Max. Motor EMF Line-Line   | Volts             | 700         | 530         | 380         |
| Max. Speed   | RPM               | 5400        | 6000        | 6000        |
| <b>Continuous Stall Torque TENV (110K) <sup>3</sup></b>                  | <b>Nm</b>         | <b>11.3</b> | <b>11.3</b> | <b>11.3</b> |
| Continuous Stall Torque when fitted to Heatsink (Size 300 x 300 x 12 mm) | Nm                | 12.1        | 12.1        | 12.1        |
| Peak Stall Torque  | Nm                | 30          | 30          | 30          |
| <b>Continuous Stall Current rms <sup>3</sup></b>                         | <b>Amps</b>       | <b>7.4</b>  | <b>11</b>   | <b>15</b>   |
| Rotor Polar Moment of Inertia  | kgcm <sup>2</sup> | 11.5        | 11.5        | 11.5        |
| <b>Maximum Current (Peak)</b>  | <b>Amp</b>        | <b>35</b>   | <b>52</b>   | <b>72</b>   |
| Cogging Torque   | Nm                | 0.24        | 0.24        | 0.24        |
| Torque Constant K <sub>T</sub> rms <sup>1,2</sup>                        | Nm/Amp            | 1.53        | 1.02        | 0.75        |

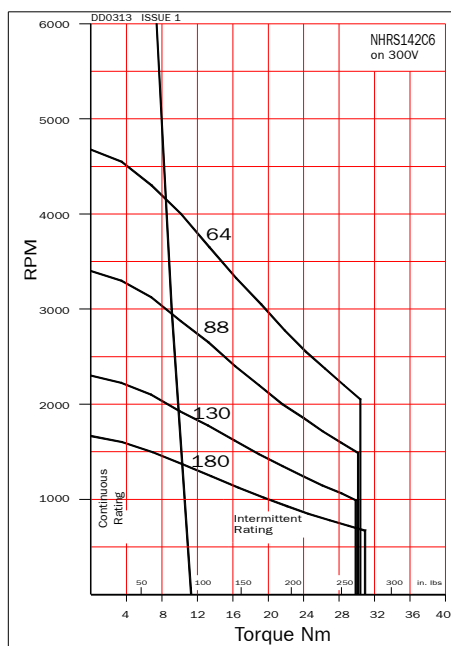
### Winding

|                                   |             |      |      |      |
|-----------------------------------|-------------|------|------|------|
| Resistance Line-Line <sup>1</sup> | Ohms        | 1.7  | 0.76 | 0.43 |
| Inductance Line-Line              | Millihenrys | 19   | 8.9  | 4.7  |
| Insulation Class                  |             | F    | F    | F    |
| Max. Ambient Temperature          | °C          | 40   | 40   | 40   |
| Thermal Time Constant             | Minutes     | 50   | 50   | 50   |
| Thermal Resistance                | °C/Watt     | 0.54 | 0.54 | 0.54 |
| Static Friction Torque            | Nm          | 0.12 | 0.12 | 0.12 |
| Motor Weight                      | kg          | 12.8 | 12.8 | 12.8 |

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.

NHRS142C6 on 300V



NHRS142C6 on 560V

