

## NHRS142E6 Brushless DC/AC Servomotors

### Technical Data

Parameter	Unit	-180	-130	-88
<b>General</b>				
Voltage Gradient No Load Line-Line	Volts/1000RPM	180	130	88
Max. Motor EMF Line-Line	Volts	700	700	530
Max. Speed	RPM	3900	5400	6000
<b>Continuous Stall Torque TENV (110K) <sup>3</sup></b>	<b>Nm</b>	<b>16</b>	<b>16</b>	<b>16</b>
Continuous Stall Torque when fitted to Heatsink (Size 300 x 300 x 12 mm)	Nm	17	17	17
Peak Stall Torque	Nm	45	45	45
<b>Continuous Stall Current rms <sup>3</sup></b>	<b>Amps</b>	<b>7.6</b>	<b>10.5</b>	<b>16</b>
Rotor Polar Moment of Inertia	kgcm <sup>2</sup>	17	17	17
<b>Maximum Current (Peak)</b>	<b>Amp</b>	<b>39</b>	<b>54</b>	<b>78</b>
Cogging Torque	Nm	0.34	0.34	0.34
Torque Constant K <sub>T</sub> rms <sup>1,2</sup>	Nm/Amp	2.1	1.53	1.02

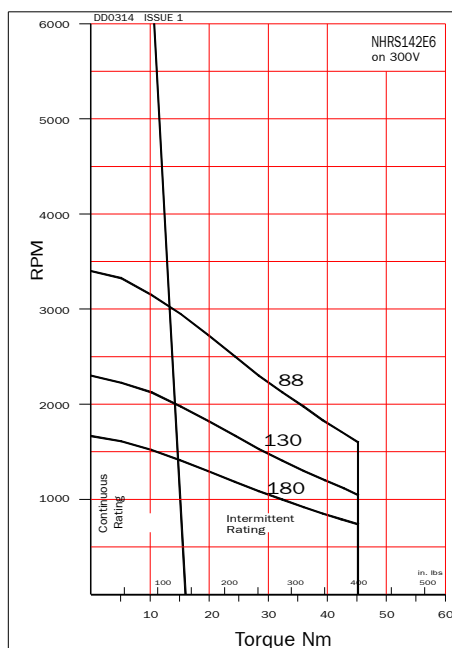
### Winding

Resistance Line-Line <sup>1</sup>	Ohms	1.9	0.9	0.42
Inductance Line-Line	Millihenrys	22	11.8	5.3
Insulation Class		F	F	F
Max. Ambient Temperature	°C	40	40	40
Thermal Time Constant	Minutes	55	55	55
Thermal Resistance	°C/Watt	0.5	0.5	0.5
Static Friction Torque	Nm	0.12	0.12	0.12
Motor Weight	kg	16	16	16

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.

NHRS142E6 on 300V



NHRS142E6 on 560V

