

# NHR70E4

## Brushless DC/AC Servomotors

### Technical Data

Parameter	Unit	-130	-88	-64	-44	-32
<b>General</b>						
Voltage Gradient No Load Line-Line	Volts/1000RPM	130	88	64	44	32
Max. Motor EMF Line-Line	Volts	700	700	510	350	260
Max. Speed	RPM	8000	8000	8000	8000	8000
<b>Continuous Stall Torque TENV (110K)</b> <sup>3</sup>	<b>Nm</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>	<b>1.8</b>
Continuous Stall Torque when fitted to Heatsink (Size 150 x 150 x 6 mm)	Nm	2	2	2	2	2
Peak Stall Torque	Nm	6.6	6.6	6.6	6.6	6.6
<b>Continuous Stall Current rms</b> <sup>3</sup>	<b>Amps</b>	<b>1.2</b>	<b>1.75</b>	<b>2.4</b>	<b>3.5</b>	<b>4.8</b>
Rotor Polar Moment of Inertia	kgcm <sup>2</sup>	0.62	0.62	0.62	0.62	0.62
<b>Maximum Current (Peak)</b>	<b>Amp</b>	<b>8.0</b>	<b>11</b>	<b>15.5</b>	<b>22</b>	<b>31</b>
Cogging Torque	Nm	0.057	0.057	0.057	0.057	0.057
Torque Constant K <sub>T</sub> rms <sup>1,2</sup>	Nm/Amp	1.53	1.02	0.75	0.51	0.375

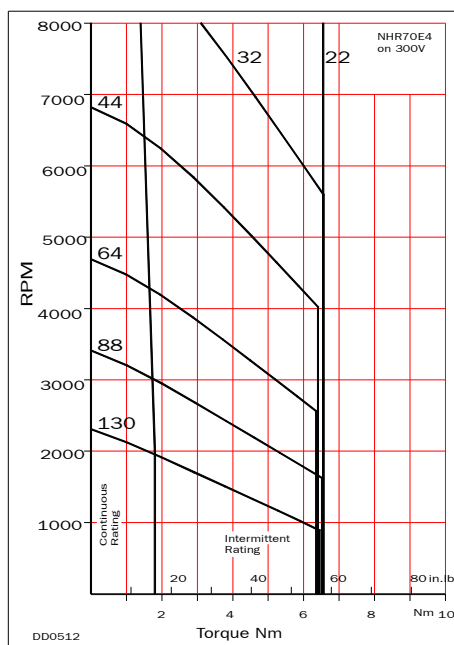
### Winding

Resistance Line-Line <sup>1</sup>	Ohms	27.2	11.6	6.8	2.9	1.7
Inductance Line-Line	Millihenrys	64	30	16	7.5	4
Insulation Class		F	F	F	F	F
Max. Ambient Temperature	°C	40	40	40	40	40
Thermal Time Constant	Minutes	30	30	30	30	30
Thermal Resistance	°C/Watt	1.28	1.28	1.28	1.28	1.28
Static Friction Torque	Nm	0.002	0.002	0.002	0.002	0.002
Motor Weight	kg	3.2	3.2	3.2	3.2	3.2

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.

NHR70E4 on 300V



NHR70E4 on 560V

