

# NHR70A4

## 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) <sup>3</sup></b>	<b>Nm</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>	<b>0.6</b>
Continuous Stall Torque when fitted to Heatsink (Size 150 x 150 x 6 mm)	Nm	0.7	0.7	0.7	0.7	0.7
Peak Stall Torque	Nm	2.2	2.2	2.2	2.2	2.2
<b>Continuous Stall Current rms <sup>3</sup></b>	<b>Amps</b>	<b>0.5</b>	<b>0.6</b>	<b>0.8</b>	<b>1.17</b>	<b>1.6</b>
Rotor Polar Moment of Inertia	kgcm <sup>2</sup>	0.32	0.32	0.32	0.32	0.32
<b>Maximum Current (Peak)</b>	<b>Amp</b>	<b>2.6</b>	<b>3.7</b>	<b>5.2</b>	<b>7.4</b>	<b>10.2</b>
Cogging Torque	Nm	0.027	0.027	0.027	0.027	0.027
Torque Constant K <sub>T</sub> rms <sup>1,2</sup>	Nm/Amp	1.53	1.02	0.75	0.51	0.375

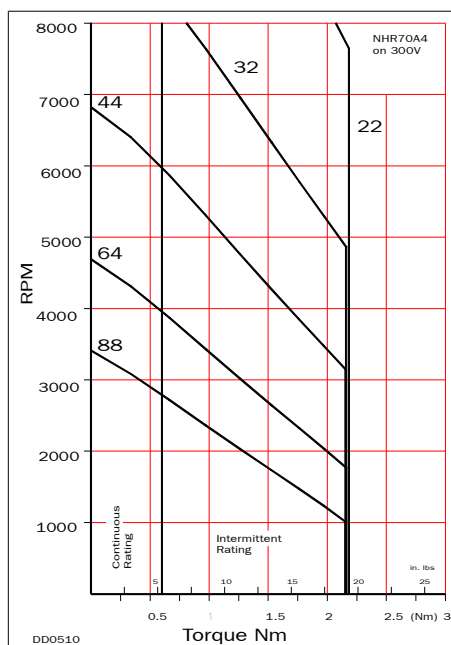
### Winding

Resistance Line-Line <sup>1</sup>	Ohms	147.2	72	36.8	18	9.2
Inductance Line-Line	Millihenrys	222.4	108	55.6	27	13.9
Insulation Class		F	F	F	F	F
Max. Ambient Temperature	°C	40	40	40	40	40
Thermal Time Constant	Minutes	15	15	15	15	15
Thermal Resistance	°C/Watt	2.4	2.4	2.4	2.4	2.4
Static Friction Torque	Nm	0.002	0.002	0.002	0.002	0.002
Motor Weight	kg	2	2	2	2	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.

NHR70A4 on 300V



NHR70A4 on 560V

