

## NHDM142J10

### Brushless DC/AC Servomotors

#### Technical Data

Parameter	Unit	-309S	-214S	-137S
<b>General</b>				
Voltage Gradient No Load	Volts	309	214	137
Max. Motor EMF Line-Line	Volts	700	700	690
Max. Speed (300 V DC link)	RPM	600	900	1500
Max. Speed (560 V DC link) <sup>1</sup>	RPM	1200	1800	2800
<b>Continuous Stall Torque</b>	<b>Nm</b>	<b>25</b>	<b>25</b>	<b>25</b>
Peak Stall Torque	Nm	85	85	85
<b>Continuous Stall Current</b>	<b>Amps</b>	<b>6.9</b>	<b>10</b>	<b>16</b>
<b>Peak Current</b>	<b>Amps</b>	<b>42</b>	<b>60</b>	<b>94</b>
Rated Torque <sup>2</sup>	Nm	23	20.2	17
Rated Current <sup>2</sup>	Amps	6.4	8.1	10.6
Rotor Polar Moment of Inertia	kgcm <sup>2</sup>	26	26	26
Cogging Torque	Nm	1	1	1
Torque Constant K <sub>T</sub> <sup>3,4</sup>	Nm/Amp	3.6	2.5	1.6

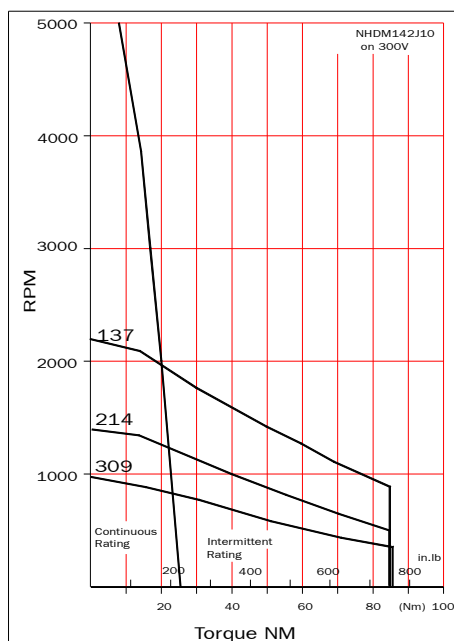
#### Winding

Resistance Line-Line <sup>3</sup>	Ohms	2.8	1.36	0.56
Inductance Line-Line	Millihenrys	37	18	7.2
Insulation Class		F	F	F
Max. Ambient Temperature	°C	40	40	40
Thermal Time Constant	Minutes	50	50	50
Thermal Resistance	°C/Watt	0.35	0.35	0.35
Static Friction Torque	Nm	0.12	0.12	0.12
Motor Weight	kg	15.9	15.9	15.9

#### Notes:

- Where no motor speed is specified, optimal performance may not be achieved on 560V DC link.
- Motors are tested on an aluminium heatsink with dimensions 255x255x6mm and with a temperature rise dT of 100K on the windings. The maximum temperature of the windings is therefore 140 °C.
- At 25 °C.
- At rated values Torque = K<sub>T</sub> x rms current.

NHDM142J10 on 300V



NHDM142J10 on 560V

