

NHDM105E10

Brushless DC/AC Servomotors

Technical Data

Parameter	Unit	-104S	-81S	-51S
General				
Voltage Gradient No Load	Volts	104	81	51
Max. Motor EMF Line-Line	Volts	620	490	310
Max. Speed (300 V DC link)	RPM	1600	2100	3300
Max. Speed (560 V DC link) ¹	RPM	3000	4000	-
Continuous Stall Torque	Nm	6.3	6.3	6.3
Peak Stall Torque	Nm	17	17	17
Continuous Stall Current	Amps	5.2	6.7	10.6
Peak Current	Amps	24	31	49
Rated Torque ²	Nm	5.2	5.2	5.2
Rated Current ²	Amps	4.2	5.4	8.7
Rotor Polar Moment of Inertia	kgcm ²	3.2	3.2	3.2
Cogging Torque	Nm	0.21	0.21	0.21
Torque Constant K _T ^{3,4}	Nm/Amp	1.23	0.96	0.6

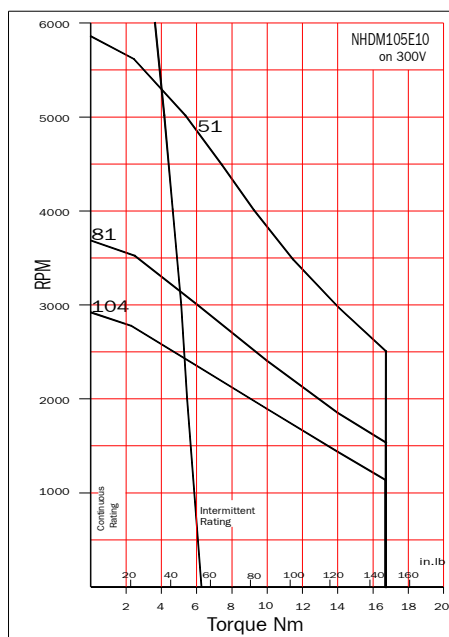
Winding

Resistance Line-Line ³	Ohms	2.6	1.6	0.64
Inductance Line-Line	Millihenrys	14	8.7	3.5
Insulation Class		F	F	F
Max. Ambient Temperature	°C	40	40	40
Thermal Time Constant	Minutes	39	39	39
Thermal Resistance	°C/Watt	0.7	0.7	0.7
Static Friction Torque	Nm	0.11	0.11	0.11
Motor Weight	kg	5.5	5.5	5.5

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_t x rms current.

NHDM105E10 on 300V



NHDM105E10 on 560V

