NHDM105C10

Brushless DC/AC Servomotors

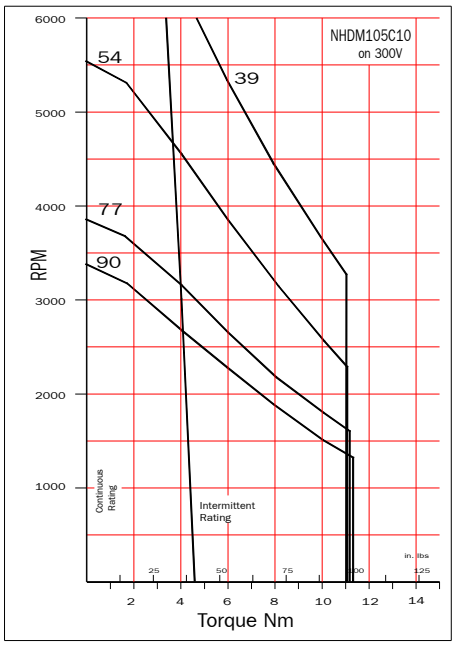
Technical Data

Parameter	Unit	-77S	-54S	-39S
General				
Voltage Gradient No Load	Volts	77	54	39
Max. Motor EMF Line-Line	Volts	460	320	230
Max. Speed (300 V DC link)	RPM	1900	2800	4000
Max. Speed (560 V DC link) [1]	RPM	3700	-	-
Continuous Stall Torque	**Nm**	**4.6**	**4.6**	**4.6**
Peak Stall Torque	Nm	11	11	11
Continuous Stall Current	**Amps**	**5.1**	**7.3**	**10.1**
Peak Current	**Amps**	**22**	**31**	**43**
Rated Torque [2]	Nm	4	4	4
Rated Current [2]	Amps	4.4	6.3	8.9
Rotor Polar Moment of Inertia	kgcm²	2.3	2.3	2.3
Cogging Torque	Nm	0.16	0.16	0.16
Torque Constant K_T [3,4]	Nm/Amp	0.9	0.63	0.45
Winding				
Resistance Line-Line [3]	Ohms	2.3	1.14	0.6
Inductance Line-Line	Millihenrys	12.2	6	3.1
Insulation Class		F	F	F
Max. Ambient Temperature	˚C	40	40	40
Thermal Time Constant	Minutes	35	35	35
Thermal Resistance	˚C/Watt	0.8	0.8	0.8
Static Friction Torque	Nm	0.11	0.11	0.11
Motor Weight	kg	4.3	4.3	4.3

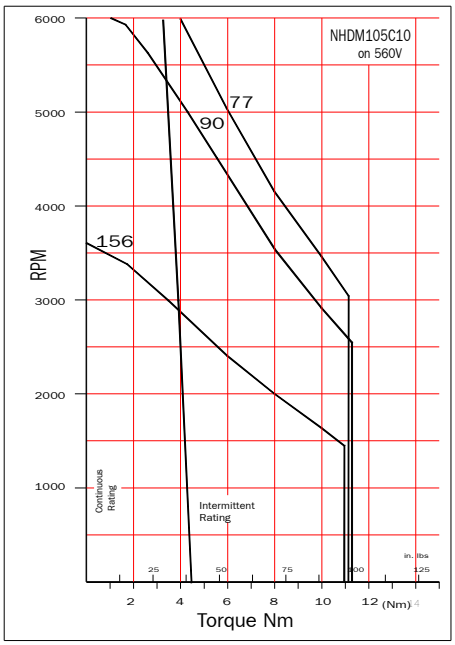
Notes:

1. Where no motor speed is specified, optimal performance may not be achieved on 560V DC link.
2. 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.
3. At 25 ˚C.
4. At rated values Torque = Kt x rms current.

NHDM105C10 on 300V



NHDM105C10 on 560V



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