

MDH-70 Series

- Direct Drive Brushless AC Servo
- 70mm diameter, 3 stack lengths
- Incremental or absolute encoder feedback



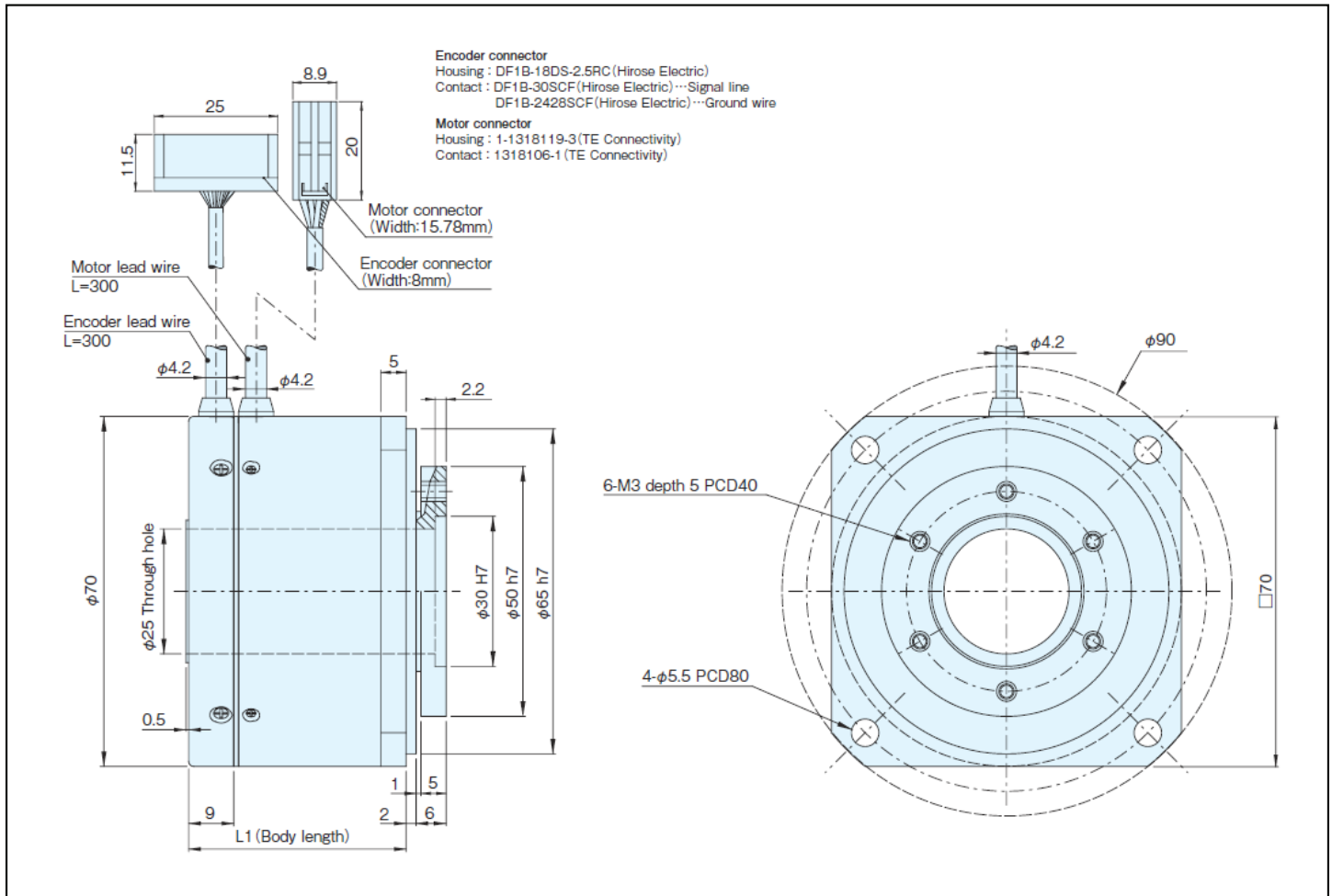
Visit nipponpulse.com to download 3D CAD drawings and 2D prints of this motor.

Specifications	Unit	MDH-7006	MDH-7012	MDH-7018
Peak Stall Torque	Nm	1.0	2.2	3.1
Rated Torque	Nm	0.36	0.66	1.0
Continuous Rated Torque	Nm	0.36	0.66	1.0
Max Speed	rpm	200		
Rated Speed	rpm	200		
Max Encoder Resolution	P/R	Incremental: 2,592,000 (multiplied by 4) / Absolute: 2,097,152 (21 bit)		
Input Power (driver input)	VDC	48		
Peak Power	W	30	60	90
Peak Armature Current	Arms	13	16	19
Rated Armature Current*	Arms	2.8	3.0	3.5
Voltage Constant	V/krpm	13	23	31
Torque Constant (at 25°C)	Nm/Arms	0.13	0.22	0.30
Line Armature Resistance (at 25°C)	Ω	2.1	1.9	1.8
Line Armature Inductance	mH	2.6	3.1	3.3
Rotor Poles	P	20		
Moment of Inertia (J)	kg•cm ²	0.65	0.82	0.99
Permissible Radial Load (Fr)	N	500		
Permissible Axial Load (Fa)	N	250		
Mass	kg	0.53	0.65	0.77
Operating Environment		0°C - +40°C, 10% to 85% relative humidity (non-condensing)		
Standard Heatsink		225 x 225 x 10 Aluminum		

* Rated armature current is the value measured with the standard heatsink attached to the motor at an ambient temperature of 40°C.

Encoder Options	Base Resolution	Interpolation Factors	Max. Resolution (post quad)
Incremental	1024 12960	2, 4, 5, 8, 10, 16, 20, 32 25, 32, 50	131,072 2,592,000
Absolute	21-bit	BiSS-C format	2,097,152

MDH-70XX Dimensions



Standard Models

- MDH-70 Δ -648KE (Incremental)
- MDH-70 Δ -21B (Absolute)

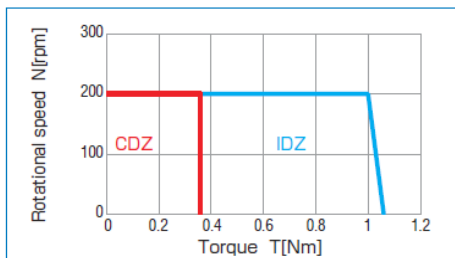
Δ = stack length indicator
 06, 12, 18

Model	Stack Length (L1)
MDH-7006	31.5 mm
MDH-7012	37.5 mm
MDH-7018	43.5 mm

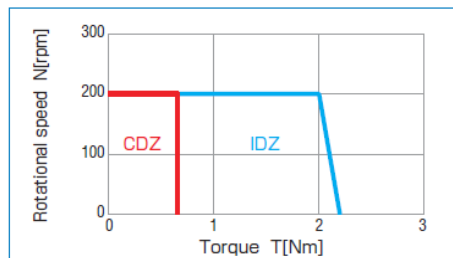
see drawings of motor dimensions on next page

Performance Curves

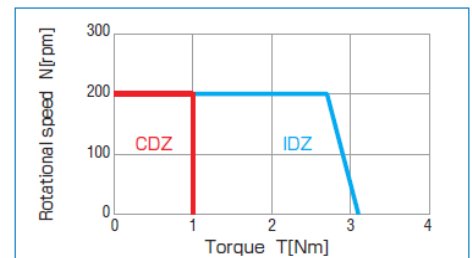
MDH-7006



MDH-7012



MDH-7018



CDZ = Continuous Duty Zone, IDZ = Intermittent Duty Zone

Performance curve based on MCC Drive, 48VDC input power

For assistance in selecting the best motor for your application, contact Nippon Pulse to speak with an applications engineer. 1-540-633-1677