

**MDH-70 Series**

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



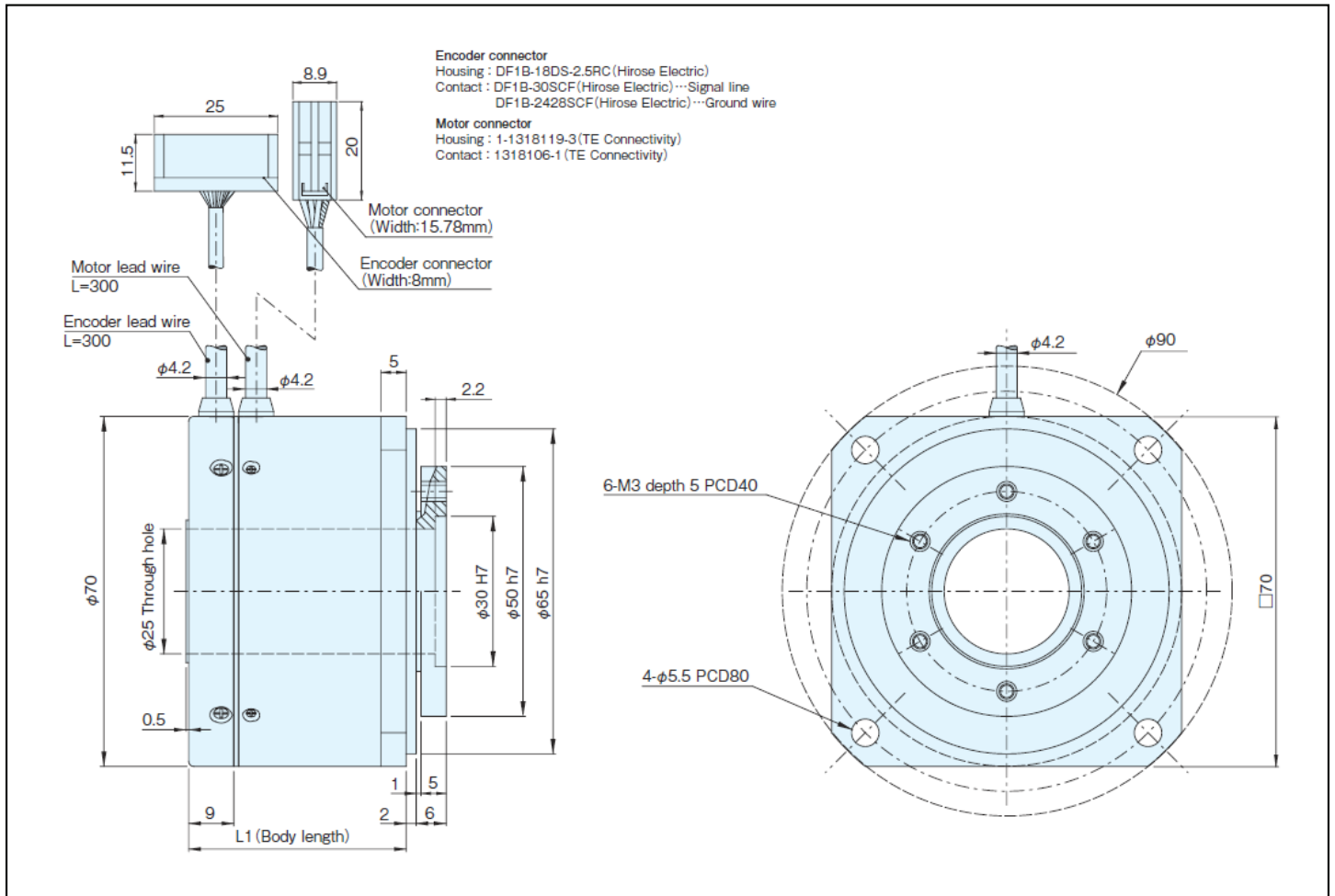
Visit [nipponpulse.com](http://nipponpulse.com) to download 3D CAD drawings and 2D prints of this motor.

Specifications	Unit	MDH-7006	MDH-7012	MDH-7018
Max 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	28 / 48		
Peak Power	W	30	60	90
Peak Armature Current	Arms	10	10	10
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 <sup>2</sup>	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
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	1125 2250	2, 4, 5, 8, 10, 16, 20, 32 20, 32	144,000 288,000
Absolute	18-bit	BiSS-C format	262,144

# MDH-70XX Dimensions



## Standard Models

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

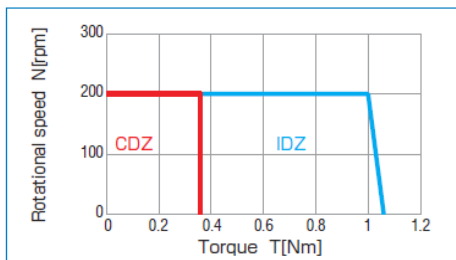
△ = stack length indicator  
 06, 12, 18

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

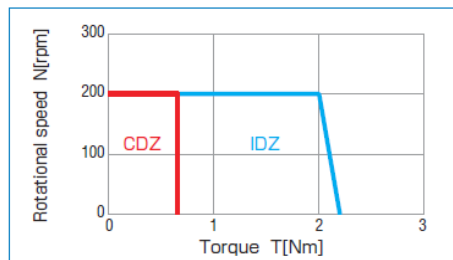
see drawings of motor dimensions on next page

## Performance Curves

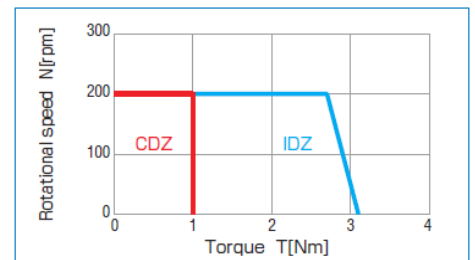
### MDH-7006



### MDH-7012



### MDH-7018



CDZ = Continuous Duty Zone, IDZ = Intermittent Duty Zone

Performance curve based on MCC Drive, 24VDC 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