

# Flange type Direct Drive Motor (MDM-DF Series)



### ■ Compact & Slim Design

- Reduced Size / Weight (30% Down)

### ■ High Resolution Encoder

- 24bit S. Turn ABS Encoder(Biss C)

### ■ Flexible Compatibility

- Operated by All LS AC Servo Drive

### ■ Product Line up( 3 Models)

- Rated Output : 63W, 126W, 251W
- Rated Torque : 3.0N.m, 6.0N.m, 12.0N.m ( Instantaneous Max. Torque : 3 times of Rated Torque)
- Rated Speed : 200RPM ( Max. Speed : 500RPM )
- Frame Size : 135mm, 175mm, 230mm ( 3 different Frames )

### ■ DD Motor 3D Outline



## ■ Compact Design and Slim Size

- Slim size with optimized design [The size of MDM-DF is almost 30% smaller than MDM-D Series]

ITEM	63W(3.0Nm)		126W(6.0Nm)		251W(12.0Nm)	
Model	DFB03D	DB03D	DFC06D	DC06D	DFD12D	DE12D
Height	51mm	78mm	56mm	77mm	59mm	82.5mm
Weight	3.8Kg	6.3Kg	6.9Kg	8.7Kg	12.8Kg	17.3Kg

- Easy Connection with one-touch lock type Connector
- Less space and low noise with Gearless type design

## ■ High Resolution / High performance Reflective optical Encoder

- Resolution (24Bit) : 16,777,216 [Pulse/rev]  
=> One of the highest resolution for Direct Drive Motor
- Repeatability : ±1.3 [arc-sec]



## ■ Optimization for Low Speed, High Torque, High Precision of operation

- Realized optimized permanent magnet to coil/slot ratio with Electromagnetic analysis
- Maximized Torque / Torque ripple Reduction with increased No. of Magnet pole

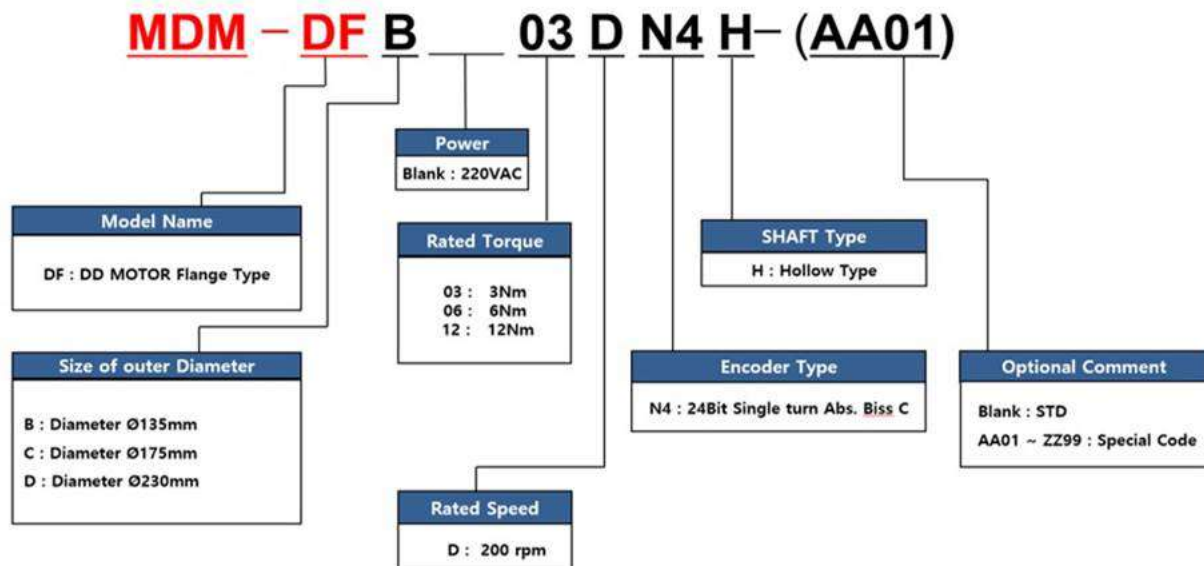
## ■ Flexible Compatibility with AC Servo Drive

- All series of LS AC servo drive can operate our MDM-DF Series  
( iX7NH / L7NH: Network type, L7P/L7C: I/O type )
- 3rd Party Drive which can support Biss C Protocol

## ■ Full Hollow Shaft type DD Motor

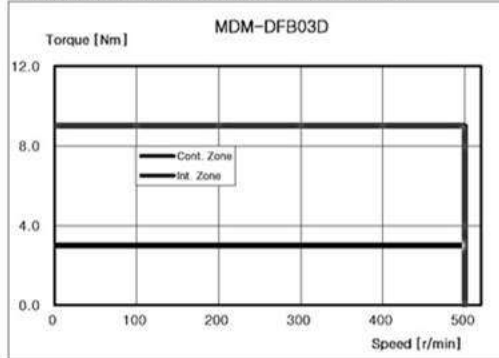


## ※ MDM- DF Series

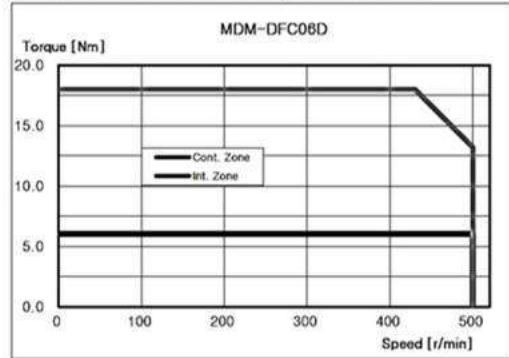


Model		MDM-DFB03D	MDM-DFC06D	MDM-DFD12D
Outer Dia.	[Ø]	135	175	230
Height	[mm]	51	56	59
Rated Output	[W]	63	126	251
Dia. Of Hollow hole	[Ø]	20	35	48
Design Type	-	Flange	Flange	Flange
Connection type	-	Connector	Connector	Connector
Rated Torque	[N·m]	3.0	6.0	12.0
Max. Torque	[N·m]	9.0	18.0	36.0
Rated Current	[Arms]	1.43	1.48	2.58
Applicable Servo Drive	[W] => Based on LS Products	200	200	400
Rated Speed	[Rpm]	200	200	200
Max. Speed	[Rpm]	500	500	500
Moment of Inertia	[Kg · m <sup>2</sup> ]	0.00103	0.0058	0.0110
Accuracy for ABS Position	[Arc-sec]	±30	±30	±30
Repeatability	[Arc-sec]	±1.3	±1.3	±1.3
Axial run-out	[µm]	0.015	0.015	0.015
Radial run-out	[µm]	0.030	0.030	0.030
Resolution	[Ppr]	16,777,216	16,777,216	16,777,216
Weight	[Kg]	3.8	6.9	12.3
Environment	IP Grade	IP40		
	Time Rating	Continuous		
	Ambient Temperature	0~40 [°C]		
	Ambient Humidity	20~80[%]RH (No dew condensation)		
	Circumstance	Indoor, No Corrosive/Inflammable Gas		

※ NT characteristics (Input Voltage : 3Φ 200Vac)



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