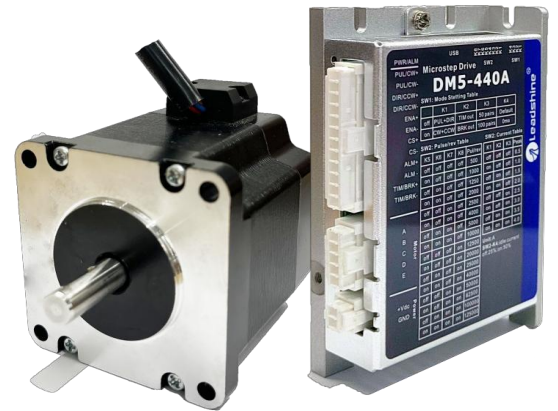


5-phase Stepper System

Leadshine 5-phase stepper drive is a summary of more than 20 years of development experience in stepper drives. Compared with traditional two-phase stepper drives, it has high positioning accuracy, small speed fluctuations in each speed range. It also has a series of advantages including small torque ripple, fast acceleration, high maximum operating speed, and low vibration noise. It compensates for the shortcomings of traditional two-phase stepper drive and also fills a part of the application market of AC servo.



Feature

- Able to match 5-phase stepper motor of NEMA 11/17/24
- Maximum pulse frequency up to 1MHz
- Step&direction and CW&CCW control
- 50 or 100 pairs of pole setting by DIP switch
- 8 current setting by DIP switch
- 16 microstep setting by DIP switch
- Alarm output, brake output, excitation origin output
- Over voltage, over current, over heat protections, etc.

Model Designation

DM5 - 4 40 A
 ① ② ③ ④ ⑤

① **Product Series**

DM5: 5-phase Stepper Drive

② **Command Source**

Blank: Pulse

EC: EtherCAT

③ **Maximum Power Supply**

4: 40V

④ **Maximum Output Current**

22: 2.2A

32: 3.2A

40: 4.0A

⑤ **Version**

A: Standard version

Technical Specification

Drive	DM5-422A	DM5-432A	DM5-440A
Matching Motor	Frame 28	Frame 42	Frame 60
Power Supply	24~36Vdc	24~36Vdc	24~36Vdc
Maximum Output Current (Peak)	2.2A	3.2A	4.0A
Pulse Signal Voltage	5Vdc		
Maximum Pulse Input Frequency	1MHz		
Input Signal Current	Typical 10mA (6~16mA)		
Input Signal Voltage	12V/24V		
Maximum OC Current	100mA		
Maximum OC Voltage	30Vdc		
Isolation Resistance	100 MΩ		

Motor	Frame 28 (NEMA11)	Frame 42 (NEMA17)	Frame 60 (NEMA42)
Step Angle	0.72 °		
Accuracy of Step Angle	±0.036 °(non-load/ full step)		
Temperature Rise	MAX 80K		
Operating Environment	Temperature: -10~+50℃ ; Humidity: 85% MAX		
Insulation Class	B		
Insulation Resistance	MIN 100 MΩ, 500 VDC		
Dielectric Strength	500 VAC, 1 min		
Radial Play	0.025 mm MAX (Load 5N)		
Axial Play	0.075 mm MAX (Load 10N)		
Maximum radial Load (N)	15	30	90
Maximum Axial Load (N)	Motor weight		

Ordering Information

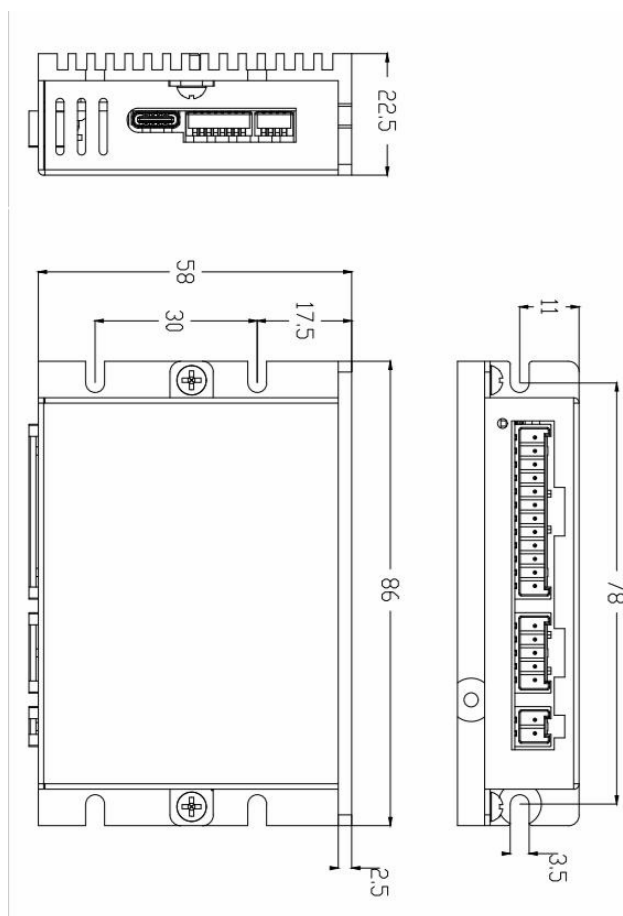
Model	Frame size	Single/dual-axis	Step Angle	Motor Length (mm)	Rated current (A)	Torque (N m)	Resistance (Ω)	Inertia (kg cm ²)	Weight (kg)	Matching Drive
285CM005	28	Single-axis	0.72 °	32.2	1.2	0.05	0.56	0.009	0.1	DM5-422A
285CM005-SZ	28	Dual-axis	0.72 °	32.2	1.2	0.05	0.56	0.009	0.1	DM5-422A
285CM012	28	Single-axis	0.72 °	51.8	1.2	0.12	0.9	0.018	0.2	DM5-422A
285CM012-SZ	28	Dual-axis	0.72 °	51.8	1.2	0.12	0.9	0.018	0.2	DM5-422A
425CM03	42	Single-axis	0.72 °	39	1.8	0.3	0.48	0.055	0.3	DM5-432A
425CM03-SZ	42	Dual-axis	0.72 °	39	1.8	0.3	0.48	0.055	0.3	DM5-432A
425CM04	42	Single-axis	0.72 °	47	1.8	0.4	0.55	0.071	0.38	DM5-432A
425CM-SZ	42	Dual-axis	0.72 °	47	1.8	0.4	0.55	0.071	0.38	DM5-432A
425CM05	42	Single-axis	0.72 °	59	1.8	0.5	0.64	0.11	0.49	DM5-432A
425CM05-SZ	42	Dual-axis	0.72 °	59	1.8	0.5	0.64	0.11	0.49	DM5-432A
605CM11	60	Single-axis	0.72 °	55	2.4	1.15	0.38	0.29	0.75	DM5-440A
605CM11-SZ	60	Dual-axis	0.72 °	55	2.4	1.15	0.38	0.29	0.75	DM5-440A
605CM21	60	Single axis	0.72 °	85	2.4	2.1	0.64	0.54	1.2	DM5-440A
605CM21-SZ	60	Dual-axis	0.72 °	85	2.4	2.1	0.64	0.54	1.2	DM5-440A

Accessory

Cable	Specification	Picture	Note
Power cable	Cable name: CABLE-DY0M2-DM5-02P(PJ) RoHS Cable length: 0.2 meters Cable Code: 82600089		Included in package
Motor cable	Cable name: CABLE-DY0M2-DM5-05P(PJ) RoHS Cable length: 0.2 meters Cable code: 82600090		Included in package
Control cable	Cover description: 12P 2.5mm (Molex 511631200) Cover code: 11601479 Pin description: AWG#20-22 (Molex507528200) Pin code: 11601477		Included in package
Tuning cable	Cable name: CABLE-TYPEC2M0 Cable code: 11601448		Get by another order

Dimension

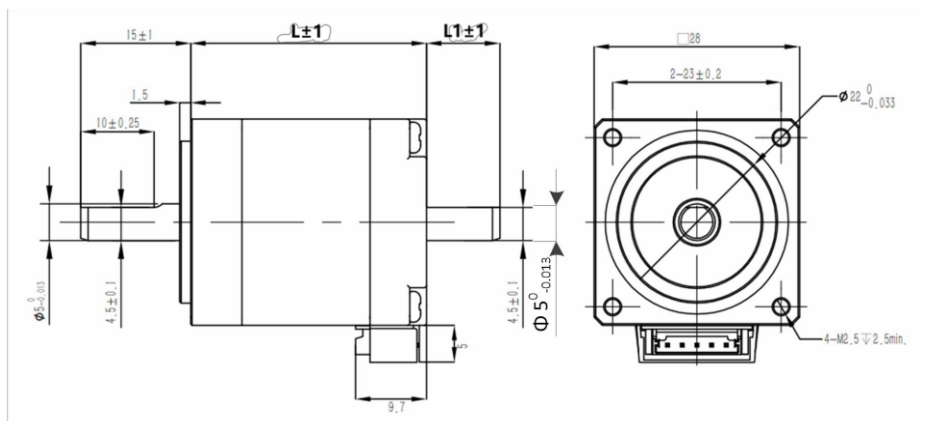
● Dimension of Drive



● Dimension of Motor

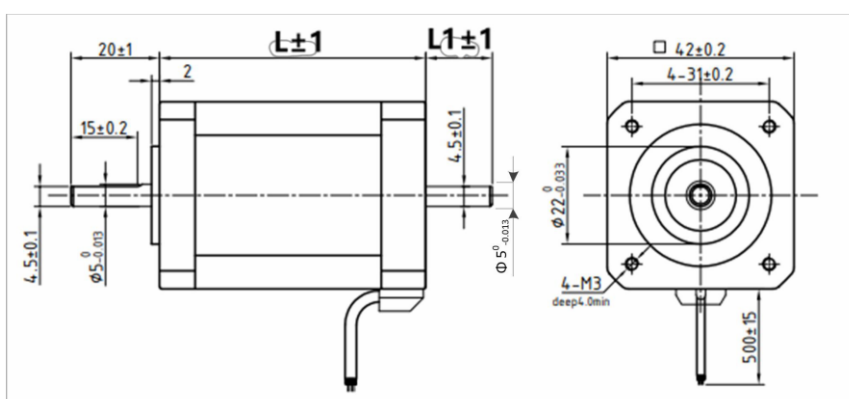
➤ Frame 28

Model	Single/dual-axis	Axis Diameter (mm)	Axis Length (mm)	Motor Length L (mm)	Rear axis Diameter (mm)	Rear axis length (mm)	L1
285CM005	Single-axis	5	15	32.2	/	/	
285CM005-SZ	Dual-axis	5	15	32.2	5	10	
285CM012	Single-axis	5	15	51.8	/	/	
285CM012-SZ	Dual-axis	5	15	51.8	5	10	



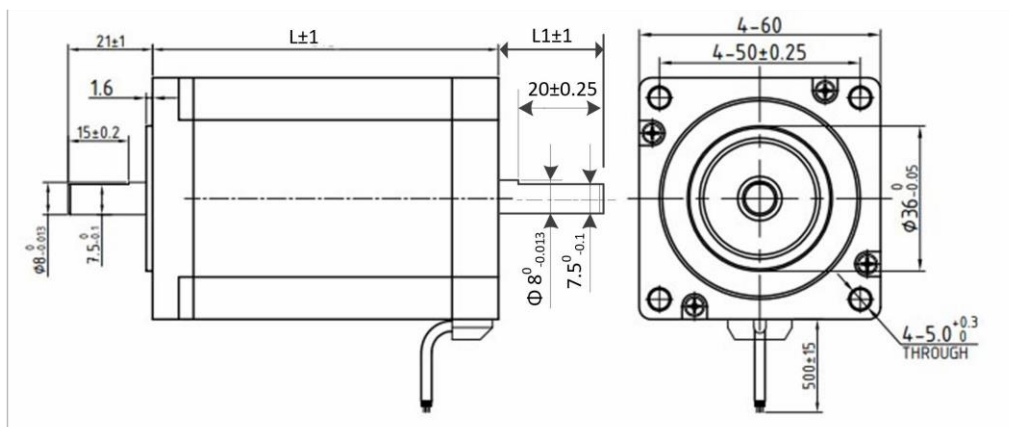
➤ Frame 42

Model	Single/dual-axis	Axis Diameter (mm)	Axis Length (mm)	Motor Length L (mm)	Rear axis Diameter (mm)	Rear axis length (mm)	L1
425CM03	Single-axis	5	20	39	/	/	
425CM03-SZ	Dual-axis	5	20	39	5	15	
425CM04	Single-axis	5	20	47	/	/	
425CM-SZ	Dual-axis	5	20	47	5	15	
425CM05	Single-axis	5	20	59	/	/	
425CM05-SZ	Dual-axis	5	20	59	5	15	



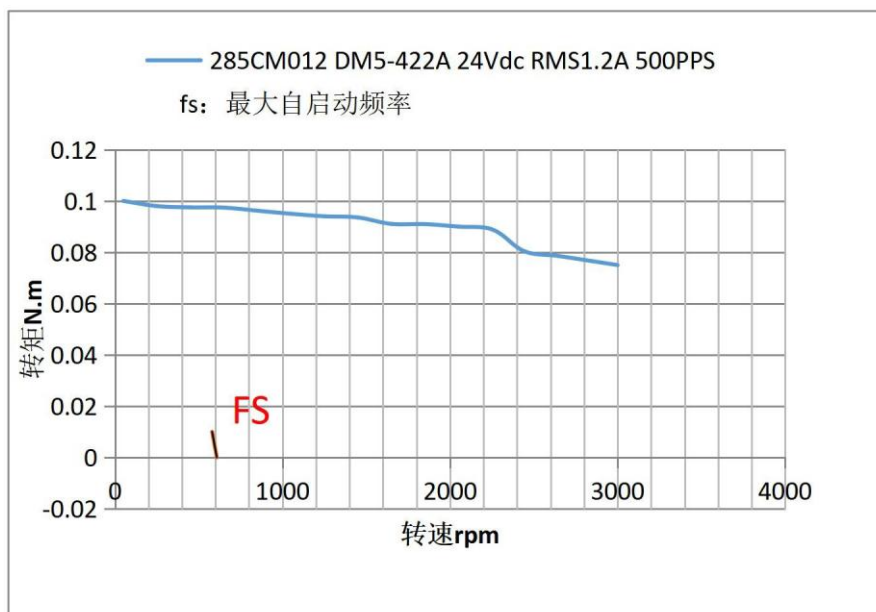
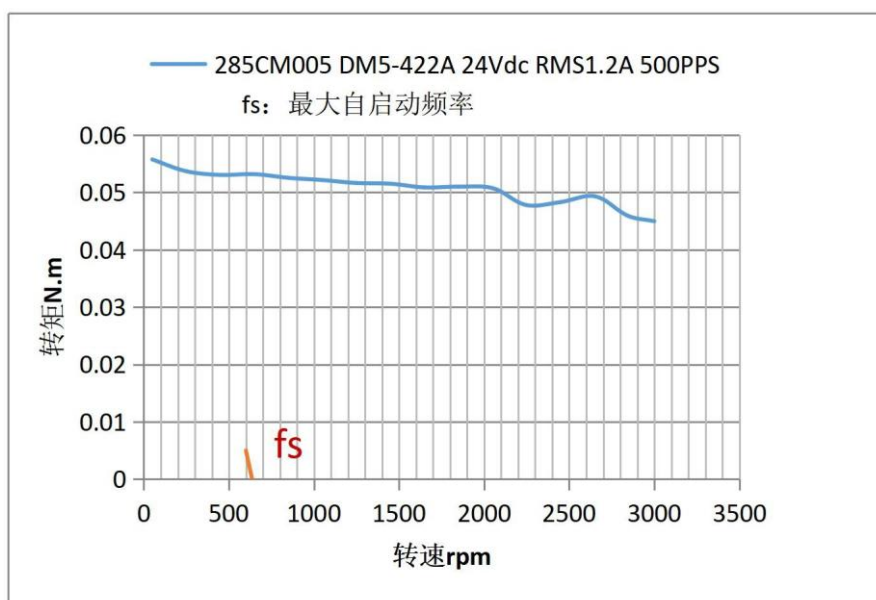
➤ Frame 60

Model	Single/dual-axis	Axis Diameter (mm)	Axis Length (mm)	Motor Length L (mm)	Rear axis Diameter (mm)	Rear axis length (mm)	L1
605CM11	Single-axis	8	21	55	/	/	
605CM11-SZ	Dual-axis	8	21	55	8	21	
605CM21	Single-axis	8	21	85	/	/	
605CM21-SZ	Dual-axis	8	21	85	8	21	

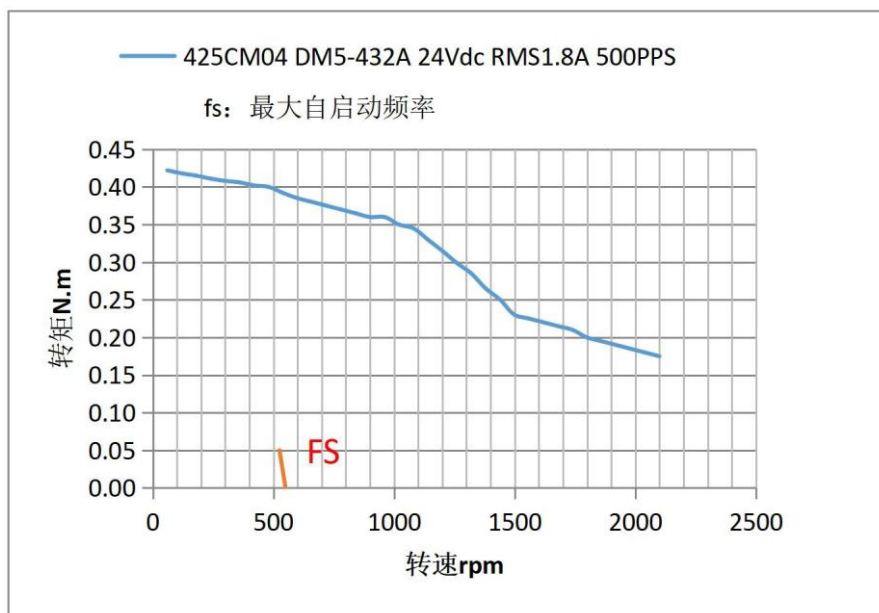
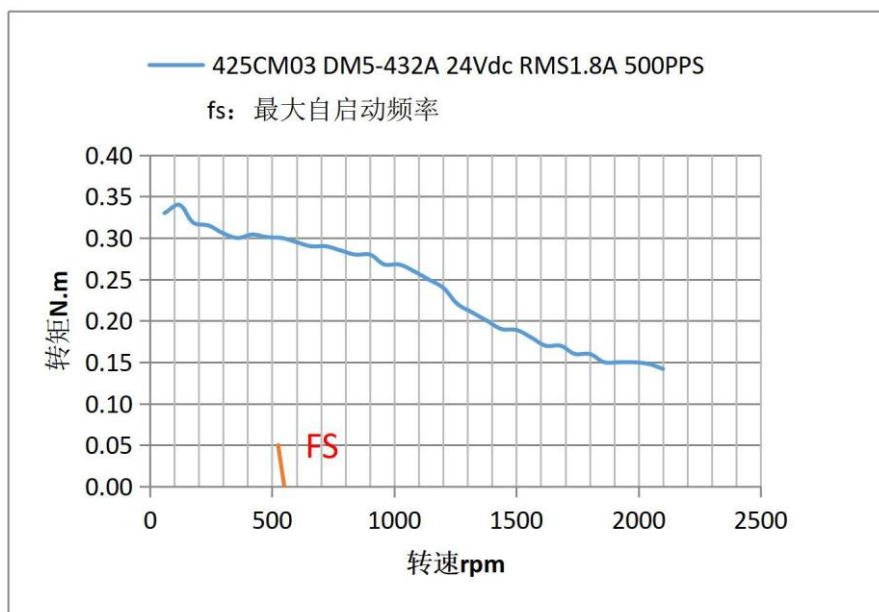


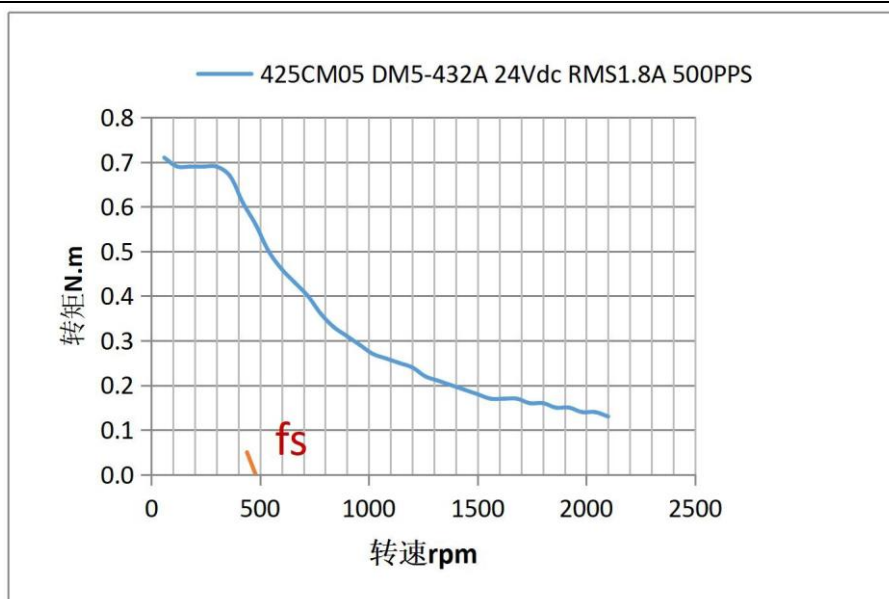
Torque-velocity Curve

➤ Frame 28



➤ **Frame 42**





➤ Frame 60

