



# CM

## Open Loop Stepper Motors

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- ▶ Advanced Manufacturing Technologies
- ▶ Frame Size of NEMA 8 to 34
- ▶ High Reliability and High Precision
- ▶ Low Motor Heating & Low Noise
- ▶ Smooth movement

# Introduction to Leadshine

## Leadshine is an internationally renowned brand and industry-leading enterprise in the precision motion control field.

Leadshine is an internationally renowned brand and industry-leading enterprise in the precision motion control field. Since its establishment in 1997, Leadshine has been pursuing the vision of "promoting the upgrade of the equipment manufacture industry and replacing manual labor", and focusing on the R&D, production, sales, and services of high-tech products like servo motor drive systems, stepper motor drive systems, and motion controllers to help customers realize dreams and mutual benefits through consistent, persistent effort. According to the statistics from authoritative research institutions, Leadshine has been the global-leading motion control product supplier in terms of production and sales volume for 10 consecutive years. Thanks to the advantages of stability and reliability, Leadshine products have been long time used by thousands of excellent equipment manufacturers in the electronics, robotics, machine tools, laser, health care, and textiles industries and exported to over 60 countries.



Headquarters(Shenzhen)



Servo Motors Production Base(Shanghai)

## Key Numbers for Leadshine

**20000000**

Over the mature application of more than 20 million sets, Leadshine's products still run stably and create benefits without stop.

**100000**

According to the statistics from third-party authoritative institutions, Leadshine's products have been or are being used by over 100,000 customers till now.

**20**

Always focuses on the motion control industry for 20 years.  
Continuously accumulates for 20 years, industry trend oriented and customer centered  
Facilitates the development of industries and creates benefits for customers.  
Insists on innovation over the past 20 years, and always treats innovation as the core competitive edge and prioritizes forging products with higher stability and performance.

**1**

China's first professional motion control enterprise.  
First one to create Easy servo drive product in China.  
The sales volume of stepper motor drives ranked No. 1 in the world all the time.

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## 01

# Table for Quickly Selecting CM Series Stepper Motor

## 1.1 Table for Quickly Selecting

### 1 CM series stepper motor quickly selecting table

Motor phase	Frame size	Length	Model	Holding Torque N.m, Speed 0~2400rpm									
				0	0.1	0.2	0.5	1	2	4	8	12	20
2 Phase 1.8°	20mm	33mm	20CM003										
		45mm	20CM005										
	28mm	32mm	28CM006										
		41mm	28CM010										
		51mm	28CM013										
	35mm	31mm	35CM015										
		47mm	35CM04										
	42mm	33mm	42CM02										
		40mm	42CM04										
		47mm	42CM06										
		60mm	42CM08										
4 Phase 1.8°	57mm	41mm	57CM06										
		56mm	57CM13										
		76mm	57CM23										
		84mm	57CM26										
	60mm (D57 Model)	67mm	D57CM21										
		88mm	D57CM31										
	57mm (XModele)	55mm	57CM12X										
		76mm	57CM21X										
		80mm	57CM22X										
	60mm	68mm	60CM22X										
		86mm	60CM30X										
6 Phase 1.8°	86mm	66mm	86CM35										
		80mm	86CM45										
		98mm	86CM80										
		118mm	86CM85										
		129mm	86CM120										

## 02

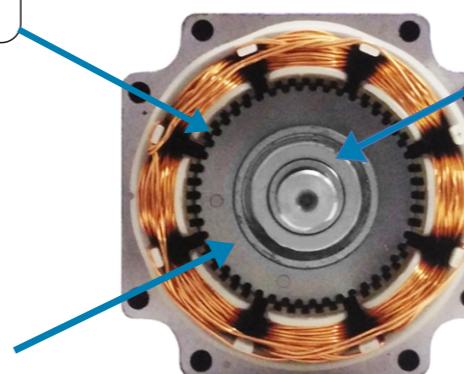
# CM Series Stepper Motors

## 2.1 Overview

A stepper motor, as a type of open loop control motor, is a key executive component in mechatronics widely used in various automated control systems. The bands and specifications of stepper motors on the current market are complicated. The stepper motors from Europe, the United States, and Japan are of high price, while Chinese stepper motors are cheaper but not of the same good quality, which troubles equipment manufacturers a lot during selection. Leadshine has always been committed to developing "cost-effective" open loop and closed loop stepper motors. Leadshine integrates relevant technical resources and spends more than one year on research and design and finally creates the brand-new CM series stepper motor. The CM series is high-performance, low-cost stepper motors manufactured by Leadshine using the latest design, latest technique, and imported core materials from Japan. The CM series provides greater torque, lower heat, and better running stability compared with most of stepper motors on the market. As a result of large-scale automated production lines and strict quality management system, this series of stepper motors is more stable, reliable, superior, and consistent.

**LargeTorque:**  
Uses the latest magnetic circuit optimization design solution to realize small volume and large torque.

**Low Heat:**  
Employs high grade and high performance punches to reduce the heat generated by the motor.



**High Stability:**  
Core components are made of preferential imported materials to ensure the stable and reliable running of the motor.

**High Consistency:**  
Large-scale automated production lines and strict quality management system ensure the batch consistency of products.

## Stepper Motors with Brake

In addition to standard stepper motors, the CM series also includes the stepper motors with double shafts, brake, and waterproof to apply to various applications. Compared with ordinary spring brakes, permanent magnet brakes produce less noise (no mechanical noise), respond fast (30 ms response time, only 1/10 of that of spring brakes), have a long service life, generate low heat, and consume low power. CM series stepper motor with a brake is configured with the cutting-edge permanent magnet brake that is more suitable for vertical motion and protects better against power failure.



## Waterproof Stepper Motors

Different from a standard stepper motor, CM series waterproof stepper motor is protected to **IP65** with its rear cover redesigned, its lead replaced with a waterproof connector, a new type of sealing material used between the front and rear end covers and the motor body, the motor body completely waterproofed, and the shaft end of the motor applied with high-quality oil seal. Therefore CM series waterproof stepper motor is suitable for application with damp, water spray, and oil spray.



## Digital Stepper Drives Introduction

Leadshine digital stepper drives are comprehensively upgraded from the electrical parameters of CM series stepper motor, and will perform better by working with CM series stepper motor.



## 2.2 Part Number

**□ 57 □ CM 06 – (□ A) – □ □□**

①      ②      ③      ④      ⑤      ⑥      ⑦

① **Motor Frame Size**

42: NEMA 17 motor  
57: NEMA 23 motor  
D57: NEMA 23 motor with larger body  
60: NEMA 24 motor  
86: NEMA 34 motor

⑤ **Motor Rate Current**

Blank: Standard rate current  
4A : Rate current 4A

② **Motor Phase**

Blank: 2 phase motor  
3 : 3 phase motor

⑥ **Standard Customized Specification**

SZ : Double shaft motor  
BZ : Brake motor  
FS : Waterproof motor

④ **Holding Torque**

For NEMA 8/11/14 motor: Divide the value by 100  
044 : 0.44N.m

For NEMA 17/23/24/34 motor: Divide the value by 10  
06: 0.6N.m

⑦ **Customized model**

## Specifications

Step Angle	1.8°
Position Accuracy	±0.09°
Temp Rise(Max.)	Max. 85K
Operation Environment	Temperature: -10°C+50°C ; Humidity: 85% Max
Insulation Class	B
Insulation Resistance	MIN 100 MΩ, 500 V DC
Dielectric Strength	500 VAC, 1 min
Radial Play	0.025 mm Max. (Load 5N)
Axial Play	0.075 mm Max. (Load 10N)

## Installation & Operation Conditions

Motor Size	NEMA17	NEMA23	NEMA24	NEMA34
Store Temperature	-10°C+50°C			
Store Humidity	85% Max.			
Operation Environment	Non-corrosive gas and dust; No direct contact with water, oil (except the waterproof type)			
Radial Load(N) (Distance to the flange 10mm)	30	75	90	300
Axial Load(N)	Less than motor weight			

## 2.3 Motor Specifications

### NEMA 8 2-phase

#### Overview:

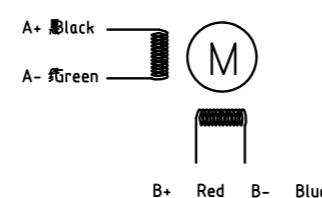
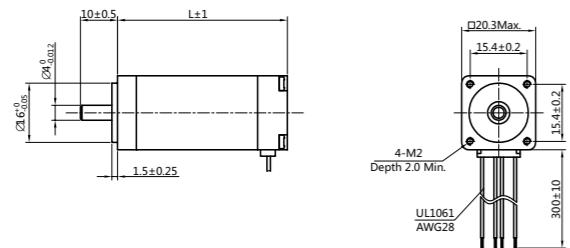
CM series NEMA 8 two-phase stepper motor covers two types of standard motors:  
0.03 N.m and 0.05 N.m.

Note: In such specifications tables, (\*\*) represents recommended models with permanent inventory;



#### Standard Model:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
33	20CM003	0.03	0.6	5.7	2.6	0.003	EM415S
45	20CM005	0.05	0.6	7	3.4	0.004	EM415S

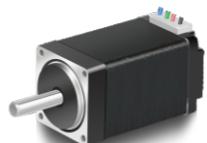


### NEMA 11 2-phase

#### Overview:

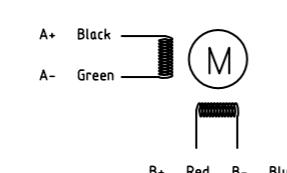
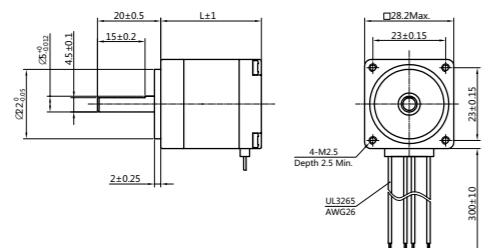
CM series NEMA 11 two-phase stepper motor covers multiple types of standard motors from 0.06 Nm to 0.13 Nm.

Note: In such specifications tables, (\*\*) represents recommended models with permanent inventory;



#### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
32	28CM006	0.06	1.2	1.4	1.0	0.009	EM415S
41	28CM010	0.1	1.2	1.8	1.6	0.013	EM415S
51	28CM013	0.13	1.2	2.2	2.3	0.018	EM415S



### NEMA 14 2-phase

#### Overview:

CM series NEMA 14 two-phase stepper motor covers two types of standard motors:  
0.15 N.m and 0.4 N.m.

Note: In such specifications tables, (\*\*) represents recommended models with permanent inventory;



#### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
31	35CM015	0.15	2	0.8	1.3	0.019	EM422S
47	35CM04	0.36	2	1.2	1.9	0.026	EM422S

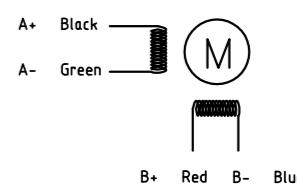
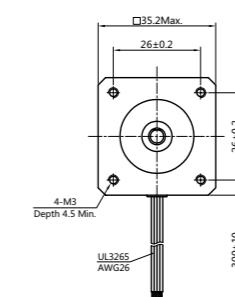
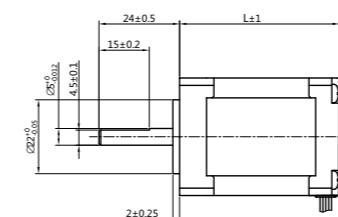


Table for Quickly Selecting CM Series Stepper Motor

CM Series Stepper Motors

Order Information

## NEMA 17 2-phase

### Overview:

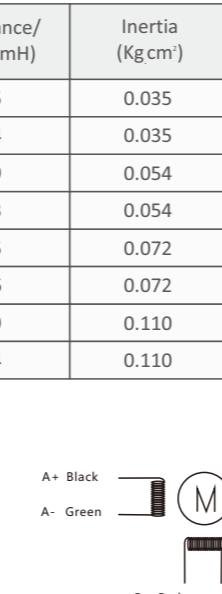
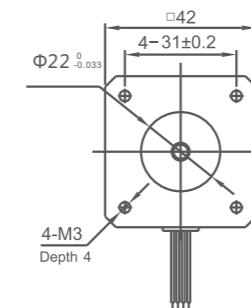
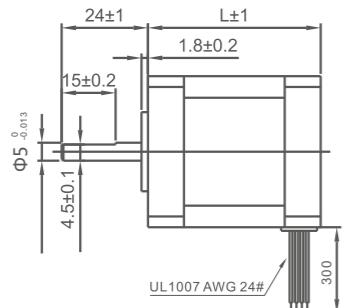
CM series NEMA 17 two-phase stepper motor covers multiple types of standard motors from 0.2 Nm to 0.8 Nm.

Note: In such specifications tables, (\*\*) represents recommended models with permanent inventory;



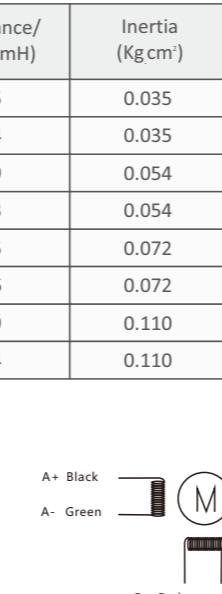
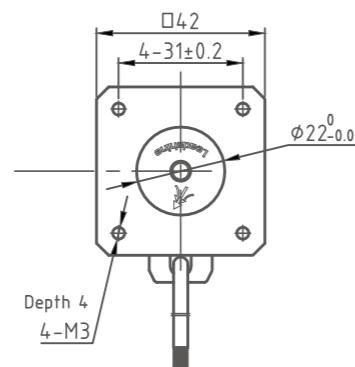
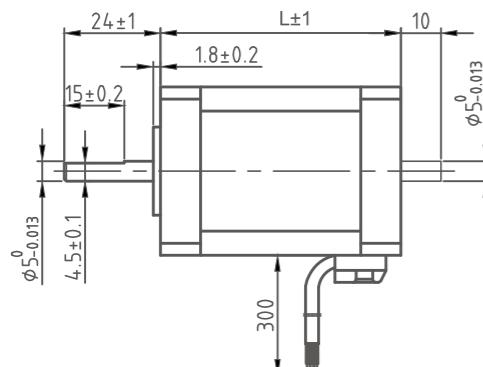
### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
33	42CM02-1A	0.21	1	4.5	6.5	0.035	EM415S
	42CM02	0.21	1.5	1.4	1.4	0.035	EM422S
40	42CM04-1A	0.4	1	4.0	7.9	0.054	EM415S
	42CM04	0.4	1.5	2.3	4.3	0.054	EM422S
47	42CM06-1A	0.6	1.5	2.2	4.5	0.072	EM422S
	42CM06	0.6	2.5	0.9	1.6	0.072	EM432S
60	42CM08-1A	0.8	1.5	3.0	6.9	0.110	EM422S
	42CM08	0.8	2.5	1.0	2.4	0.110	EM432S



### Double Shafts Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
47	42CM06-SZ	0.6	2.5	0.9	1.6	0.072	EM432S
60	42CM08-SZ	0.8	2.5	1.0	2.4	0.110	EM432S



## NEMA 23 2-phase

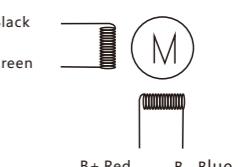
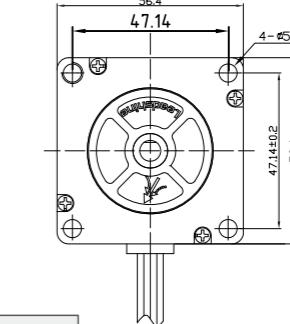
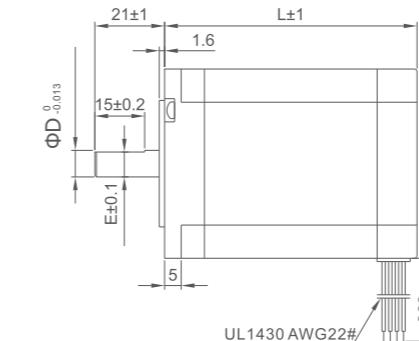
### Overview:

CM series NEMA 23 (including the Large NEMA 23) two-phase stepper motor covers multiple types of standard motors from 0.6 N.m to 3.1 N.m, along with the motors with double shafts, brake, and waterproof to apply to various applications.



### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Detent Torque	Inertia (Kg cm²)	Matching Drives
41	57CM06	0.6	3	0.7	1.4	0.02	0.12	EM542S
	57CM13-3A	1.3	3	0.8	2.8	0.04	0.3	EM542S
	57CM13	1.3	4	0.42	1.6			EM542S/EM556S
55	57CM12X	1.2	4	0.6	1.4	0.07	0.48	EM542S/EM556S
	57CM21X	2.1	4	0.6	2.4			EM542S
	57CM23-3A	2.1	3	1.1	4.2			EM542S/EM556S
76	57CM23-4A	2.3	4	0.5	2	0.07	0.48	EM556S
	57CM23	2.3	5	0.38	1.75			EM556S
	57CM22X	2.2	5	0.34	1.74			EM556S/EM870S
80	57CM26-4A	2.6	4	0.8	3.2	0.08	0.52	EM542S/EM556S
	57CM26	2.6	5	0.44	2			EM556S/EM870S
85	57CM26	2.6	5	0.44	2			

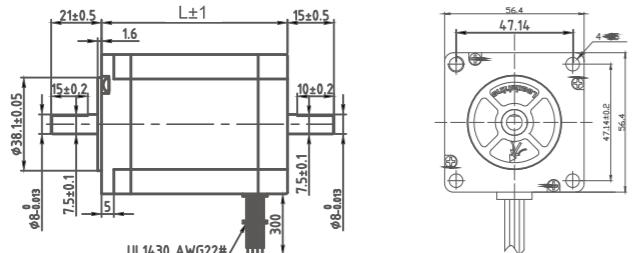


Model	L(mm)	D(mm)	E(mm)
57CM06	41	6.35	6.85
57CM13	55	6.35	6.85
57CM13-3A	55	6.35	6.85
57CM23	76	8	8.5
57CM23-3A	76	8	8.5
57CM23-4A	76	8	8.5
57CM23-4A-0-I6	76	6.35	6.85
57CM26	84	8	8.5
57CM26-4A	84	8	8.5
57CM26-4A-0-I6	84	6.35	6.85

## NEMA 23(Continious) 2-phase

### Double Shafts Models:

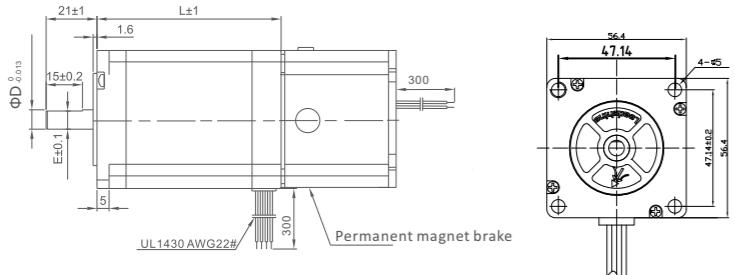
Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase( $\Omega$ )	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia ( $\text{Kg cm}^2$ )
55	57CM13-SZ	1.3	4	0.42	1.6	0.04	0.3
76	57CM23-SZ	2.3	5	0.38	1.75	0.07	0.48
84	57CM26-SZ	2.6	5	0.44	2	0.08	0.52



Model	L(mm)	D(mm)	E(mm)
57CM13-SZ	56	6.35	5.8
57CM23-SZ	80	8	7.5
57CM26-SZ	84	8	7.5

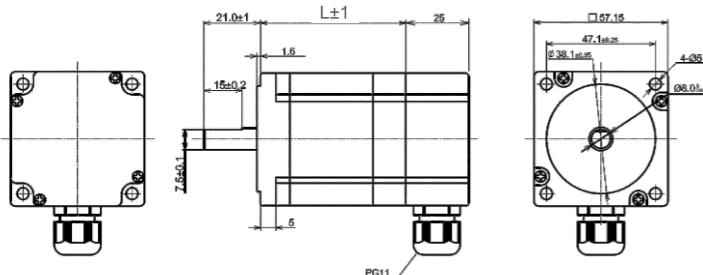
### Brake Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase( $\Omega$ )	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia ( $\text{Kg cm}^2$ )
96	57CM13-BZ	1.3	4	0.42	1.6	0.04	0.3
116	57CM23-BZ	2.3	5	0.38	1.75	0.06	0.48



### Waterproof Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase( $\Omega$ )	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia ( $\text{Kg cm}^2$ )
65	57CM13-FS	1.3	4	0.42	1.6	0.04	0.3
90	57CM23-FS	2.3	5	0.38	1.75	0.06	0.48



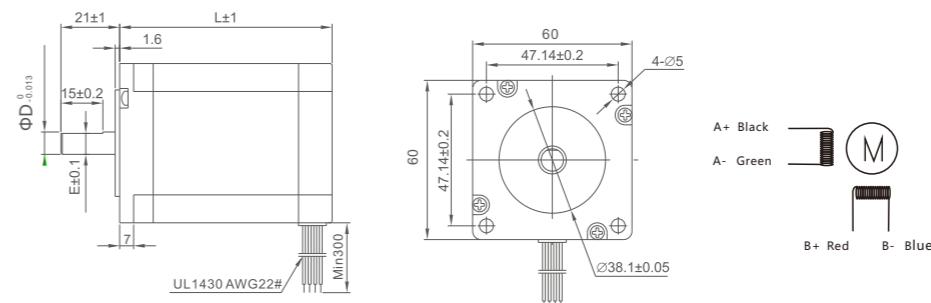
### Overview:

CM series larger NEMA 23 two-phase stepper motors have the external size of NEMA 24 motor, but the installation of NEMA 23 motors. there are two types of standard motors:  
2.1 N.m and 3.1 N.m.



### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase( $\Omega$ )	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia ( $\text{Kg cm}^2$ )	Matching Drives
67	D57CM21-4A	2.1	4	0.5	1.77	0.09	0.57	EM556S
	D57CM21	2.1	5	0.21	0.75			EM556S/EM870S
88	D57CM31-4A	3.1	4	0.62	2.8	0.10	0.84	EM556S
	D57CM31	3.1	5	0.26	1.18			EM556S/EM870S



Model	L(mm)	D(mm)	E(mm)
D57CM21	67	8	7.5
D57CM31	88	8	7.5

### Double Shafts Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase( $\Omega$ )	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia ( $\text{Kg cm}^2$ )
67	D57CM21-SZ	2.1	5	0.21	0.75	0.09	0.57
88	D57CM31-SZ	3.1	5	0.26	1.18	0.10	0.84

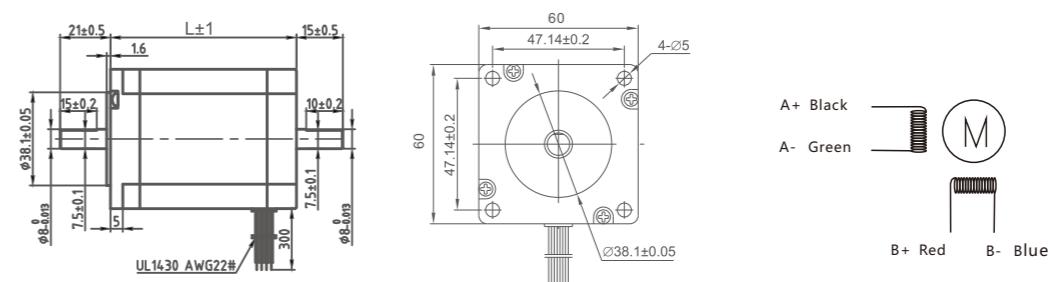


Table for Quickly Selecting CM Series Stepper Motor

CM Series Stepper Motors

Order Information

## NEMA 24 2-phase

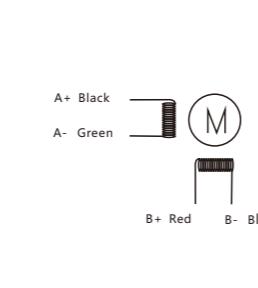
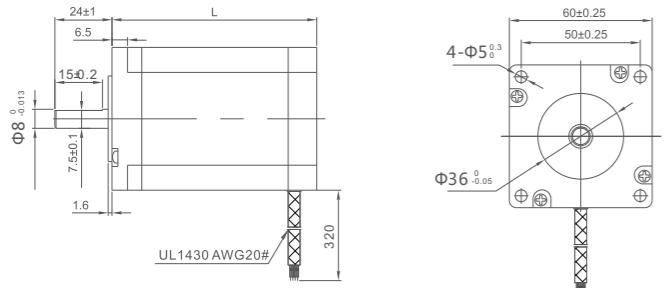
### Overview:

CM series NEMA 24 two-phase stepper motor covers two types of standard motors:  
2.2 N.m and 3.0 N.m.



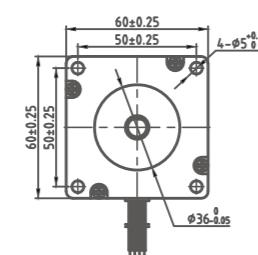
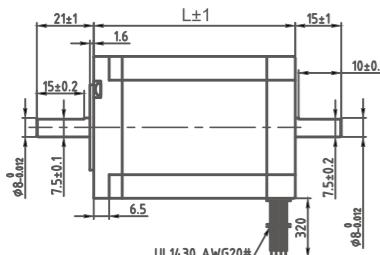
### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia (Kg cm²)	Matching Drives
67	60CM22X (*)	2.2	5	0.33	1.05	0.07	0.49	EM556S/EM870S
85	60CM30X (*)	3.0	5	0.46	2.0	0.08	0.69	EM556S/EM870S



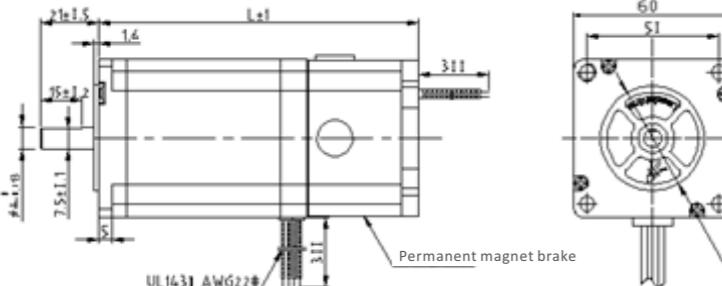
### Double Shafts Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia (Kg cm²)
67	60CM22X-SZ	2.2	5	2.2	1.05	0.07	0.49
85	60CM30X -SZ	3.0	5	3.0	2.0	0.08	0.69



### Brake Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Detent Torque(N.m)	Inertia (Kg cm²)
107	60CM22X-BZ	2.2	5	2.2	1.05	0.07	0.49
125	60CM30X-BZ	3.0	5	3.0	2.0	0.08	0.69



## NEMA 34 2-phase

### Overview:

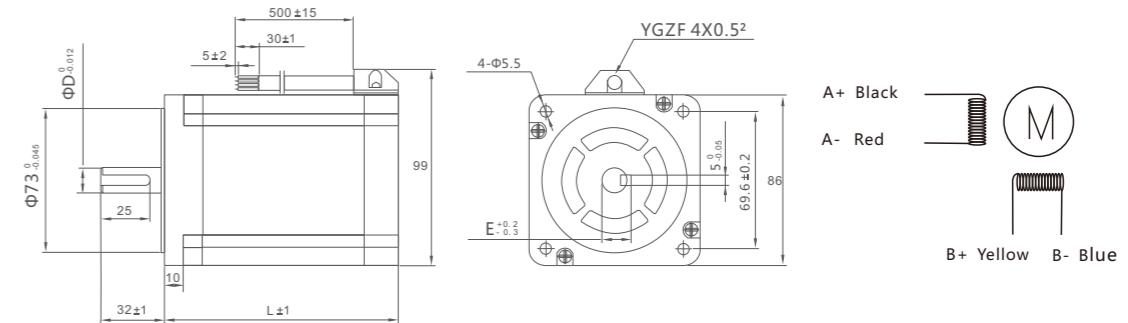
CM series NEMA 34 two-phase stepper motor covers multiple types of standard motors from 3.5 N.m to 12 N.m, along with the motors with double shafts, brake, and waterproof system to apply to various scenarios.



Note: In such specifications tables, (\*\*) represents recommended models with permanent inventory;  
(\*) represents the models with permanent inventory.  
Models with temporary inventory are stocked for four to six weeks.

### Standard Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
65	86CM35	3.5	4	0.42	2.67	1.00	EM556S/EM870S
80	86CM45	4.5	6	0.43	2.95	1.40	EM880S/EM882S
98	86CM80	8.0	6	0.63	4.0	2.50	EM880S/EM882S
118	86CM85	8.5	6	0.53	4.25	2.70	EM880S/EM882S
129	86CM120	12.0	6	0.75	5.30	2.94	EMA882S



Model	L(mm)	D(mm)	E(mm)
86CM35	65	12.7	14.7
86CM45	80	12.7	14.7
86CM80	98	12.7	14.7
86CM85	118	12.7	14.7
86CM120	129	14	16

### Double Shafts Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg cm²)	Matching Drives
80	86CM45-SZ	4.5	6	0.43	2.95	1.40	EM880S/EM882S
118	86CM85-SZ	8.5	6	0.53	4.25	2.70	EM880S/EM882S

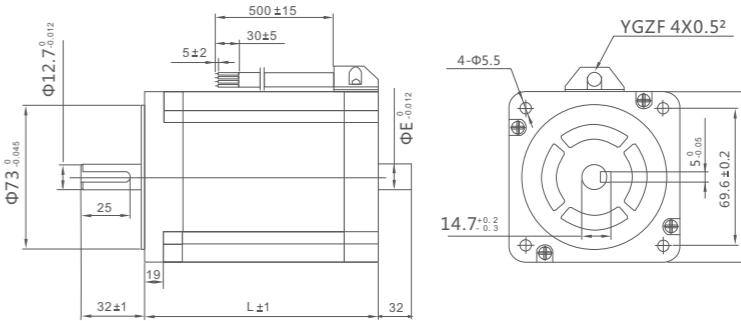


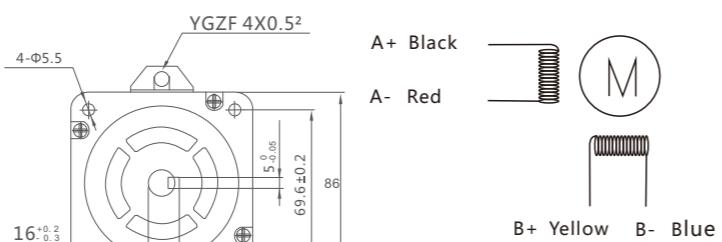
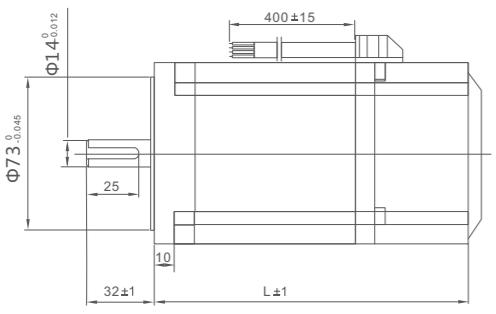
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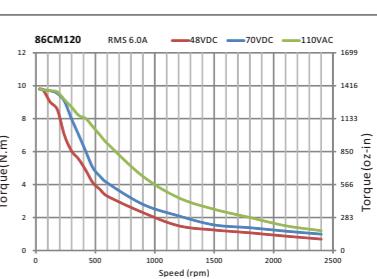
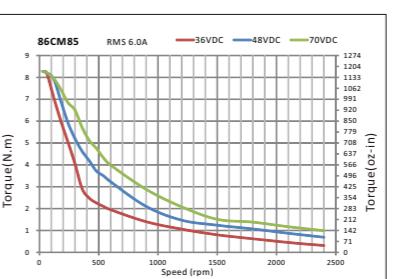
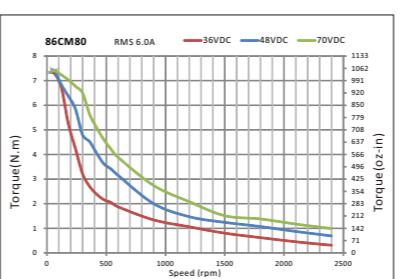
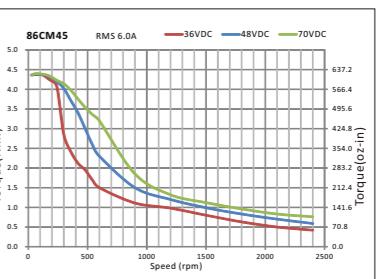
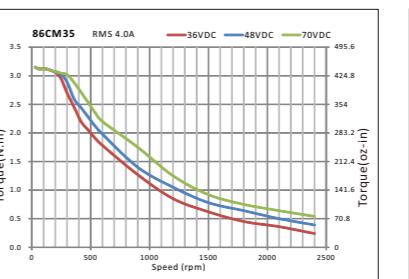
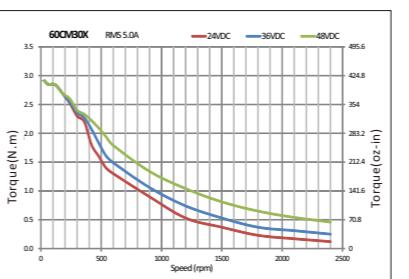
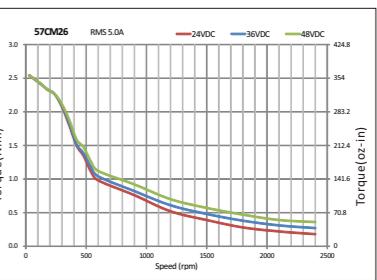
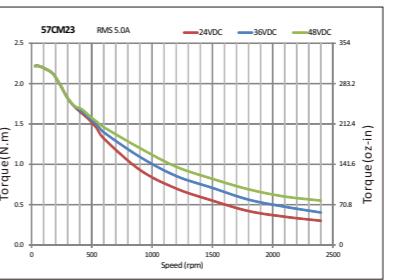
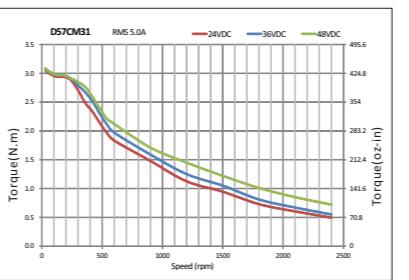
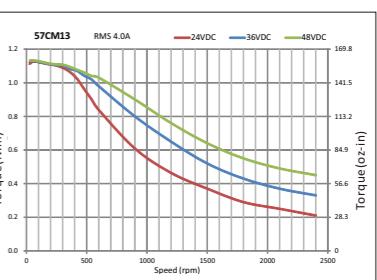
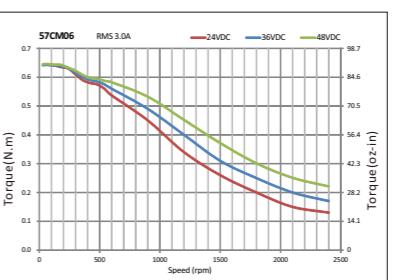
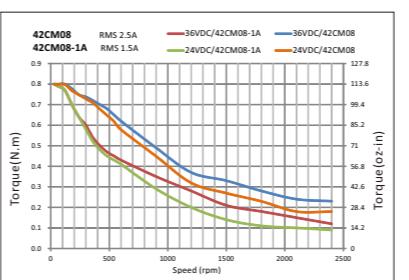
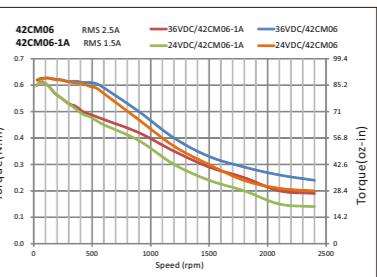
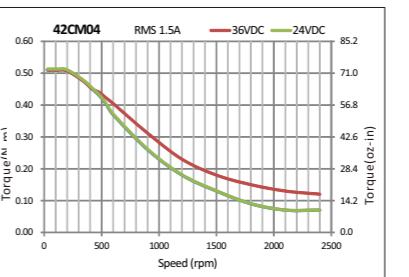
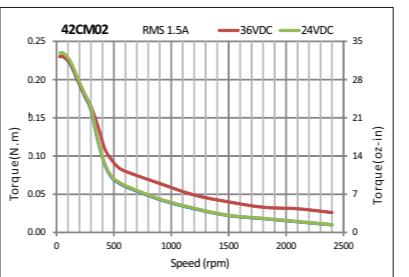
## Brake Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg.cm²)	Matching Drives
114	86CM45-BZ	4.5	6	0.43	2.95	1.40	EM880S/EM882S
132	86CM80-BZ	8.0	6	0.63	4.0	2.50	EM880S/EM882S
152	86CM85-BZ	8.5	6	0.53	4.25	2.70	EM880S/EM882S
163	86CM120-BZ	12.0	6	0.75	5.30	2.94	EMA882S



A+ Black  
A- Red  
B+ Yellow  
B- Blue

## Speed Torque Curves:



## Waterproof Models:

Length (mm)	Model	Holding Torque (N.m)	Rate Current (A)	Resistance/Phase(Ω)	Inductance/Phase(mH)	Inertia (Kg.cm²)	Matching Drives
90	86CM45-FS	4.5	6	0.43	2.95	1.40	EM880S/EM882S
108	86CM80-FS	8.0	6	0.63	4.0	2.50	EM880S/EM882S
128	86CM85-FS	8.5	6	0.53	4.25	2.70	EM880S/EM882S
139	86CM120-FS	12.0	6	0.75	5.30	2.94	EMA882S

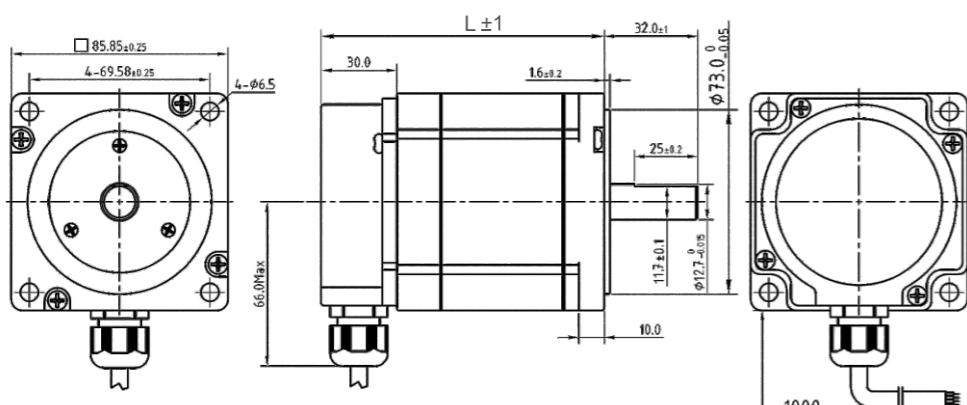


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CM Series Stepper Motors

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## 03 Ordering Information

### CM Series Stepper Motors

Step Angle	Frame Size	Length	Model	Rate Current	Holding Torque	Matching Drives	Remark
2-Phase 1.8°	NEMA 8	33mm	20CM003	0.6A	0.03Nm	EM415S	
		45mm	20CM005	0.6A	0.05Nm	EM415S	
	NEMA 11	32mm	28CM006	1.2A	0.06Nm	EM415S	
		41mm	28CM010	1.2A	0.1Nm	EM415S	
		51mm	28CM013	1.2A	0.13Nm	EM415S	
	NEMA 14	31mm	35CM015	2A	0.15Nm	EM422S	
		47mm	35CM04	2A	0.4Nm	EM422S	
	NEMA 17	33mm	42CM02-1A	1A	0.2Nm	EM415S	
			42CM02	1.5A	0.2Nm	EM422S	
		40mm	42CM04-1A	1A	0.4Nm	EM415S	
			42CM04	1.5A	0.4Nm	EM422S	
		47mm	42CM06-1A	1.5A	0.6Nm	EM422S	
			42CM06	2.5A	0.6Nm	EM432S	Performance in high-speed
			42CM06-SZ	2.5A	0.6Nm	EM432S	Motor with dual shaft
		60mm	42CM08-1A	1.5A	0.8Nm	EM422S	
			42CM08	2.5A	0.8Nm	EM432S	Performance in high-speed
			42CM08-SZ	2.5A	0.8Nm	EM432S	Motor with dual shaft
	NEMA 23	41mm	57CM06	3A	0.6Nm	EM542S	
		56mm	57CM13	4A	1.3 Nm	EM556S	
			57CM13-SZ	4A	1.3 Nm	EM556S	Motor with dual shaft
			57CM13-BZ	4A	1.3 Nm	EM556S	Motor with brake
		76mm	57CM13-FS	4A	1.3 Nm	EM556S	Motor with waterproof
			57CM23-4A	4A	2.3 Nm	EM556S	
			57CM23	5A	2.3 Nm	EM556S/EM870S	Performance in high-speed
			57CM23-SZ	5A	2.3 Nm	EM556S/EM870S	Motor with dual shaft
			57CM23-BZ	5A	2.3 Nm	EM556S/EM870S	Motor with brake
		84mm	57CM23-FS	5A	2.3 Nm	EM556S/EM870S	Motor with waterproof
			57CM26-4A	4A	2.6 Nm	EM556S	
			57CM26	5A	2.6 Nm	EM556S/EM870S	Performance in high-speed
		57CM26-SZ	5A	2.6 Nm	EM556S/EM870S	Motor with dual shaft	

Step Angle	Frame Size	Length	Model	Rate Current	Holding Torque	Matching Drives	Remark
2-Phase 1.8°	NEMA 23	67mm	D57CM21-4A	4A	2.1 Nm	EM556S	
			D57CM21	5A	2.1 Nm	EM556S/EM870S	Performance in high-speed
			D57CM21-SZ	5A	2.1 Nm	EM556S/EM870S	
		88mm	D57CM31-4A	4A	3.1 Nm	EM556S	
			D57CM31	5A	3.1 Nm	EM556S/EM870S	Performance in high-speed
	NEMA 23	55mm	D57CM31-SZ	5A	3.1 Nm	EM556S/EM870S	Motor with dual shaft
			57CM12X	4A	1.2 Nm	EM556S	
		76mm	57CM21X	5A	2.1 Nm	EM556S/EM870S	
			57CM22X	5A	2.2 Nm	EM556S/EM870S	
			60CM22X	5A	2.2 Nm	EM556S/EM870S	Motor with dual shaft
	NEMA 34	68mm	60CM22X-SZ	5A	2.2 Nm	EM556S/EM870S	Motor with brake
			60CM22X-BZ	5A	2.2 Nm	EM556S/EM870S	
		86mm	60CM30X	5A	3.0 Nm	EM556S/EM870S	
			60CM30X-SZ	5A	3.0 Nm	EM556S/EM870S	Motor with dual shaft
			60CM30X-BZ	5A	3.0 Nm	EM556S/EM870S	Motor with brake
		66mm	86CM35	4A	4.0 Nm	EM556S/EM870S	
			86CM45	6A	4.5 Nm	EM880S/EM882S	
			86CM45-SZ	6A	4.5 Nm	EM880S/EM882S	Motor with dual shaft
		80mm	86CM45-BZ	6A	4.5 Nm	EM880S/EM882S	Motor with brake
			86CM45-FS	6A	4.5 Nm	EM880S/EM882S	Motor with waterproof
			86CM80	6A	8.0 Nm	EM880S/EM882S	
	118mm	98mm	86CM85	6A	8.5 Nm	EM880S/EM882S	
			86CM85-SZ	6A	8.5 Nm	EM880S/EM882S	Motor with dual shaft
		118mm	86CM85-BZ	6A	8.5 Nm	EM880S/EM882S	Motor with brake
			86CM85-FS	6A	8.5 Nm	EM880S/EM882S	Motor with waterproof
		129mm	86CM120	6A	12 Nm	EMA882S	

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