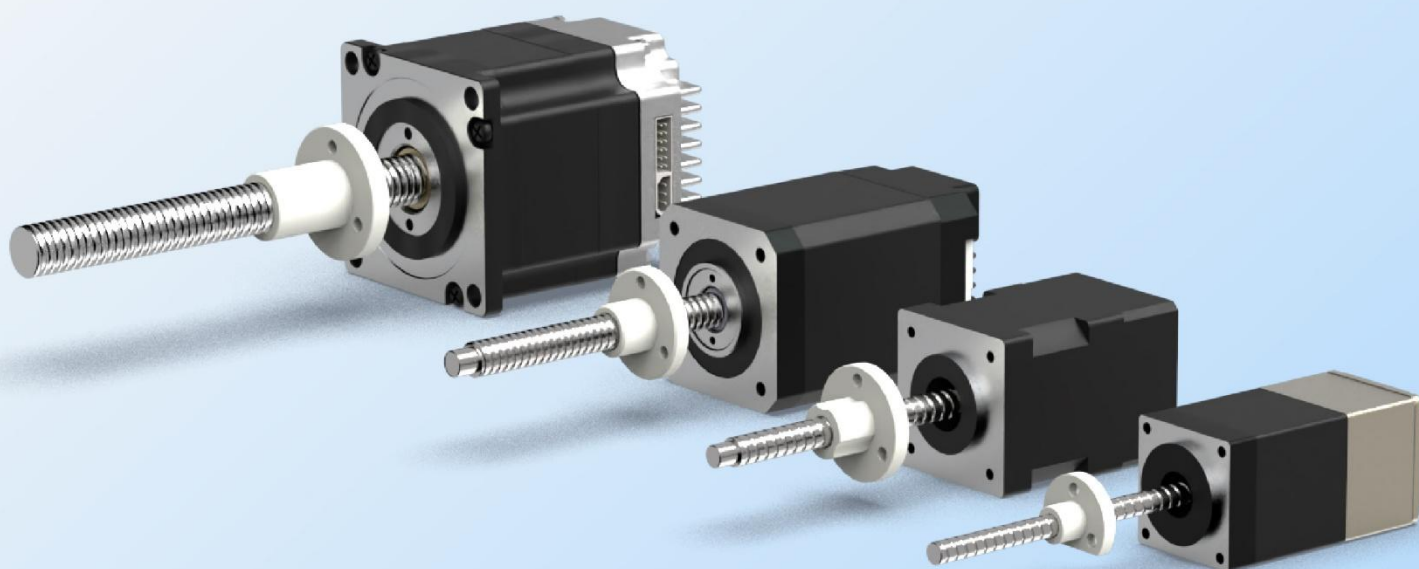




INTEGRATED LEAD SCREW MOTOR HANDBOOK ▶▶

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COMPANY PROFILE



Beijing NiMotion Control Technology Co., Ltd. (hereinafter referred to as "Beijing NiMotion") was founded in 2015. It is a national high-tech enterprise specialized in the R&D, production, sales, and service of motion control systems and related auxiliary products. Its headquarters is located in Daxing District, Beijing.

Nanjing NiMotion Robot Co., Ltd. (hereinafter referred to as "Nanjing NiMotion") is an affiliated enterprise under the NiMotion brand. Beijing NiMotion and Nanjing NiMotion operate under unified technology, unified products, and unified services.

The company's product portfolio includes intelligent controllers, industrial software, integrated stepper motors, integrated servo motors, integrated brushless motors, transmission components, industrial robots, and a full range of other motion control products..

AWARDS & RECOGNITION



NiMotion has been successively recognized as a "Specialized, Refined, Distinctive, and Innovative" (SRDI) small and medium-sized enterprise in Beijing, a national high-tech enterprise, and a pilot unit for intellectual property rights, holding over 70 independent intellectual property rights. The company has obtained ISO 9001 quality management system certification, and its products have received the German TUV CE certification. With strict quality control and a comprehensive product portfolio, NiMotion has formed a strong competitive edge in the industry.

BUSINESS & SALES



Currently, NiMotion's business covers multiple sectors including medical automation, intelligent manufacturing, semiconductors, mobile robotics, warehousing and logistics, new energy, smart retail, and automotive industries. Its products are widely used in various types of automation equipment, exported to over 30 countries worldwide, and have provided professional solutions and technical services to more than 2,000 domestic enterprises.

32 + Countries Served

2000 + Core Clients

5000 + Applications

VISION & VALUES

NiMotion Corporate Culture: Driving Intelligent Innovation

At NiMotion, we believe technology should empower progress. Our culture is built on a shared passion for innovation, excellence, and human-centric solutions—bridging cutting-edge automation with real-world impact.

Corporate Vision

"Make machines more intelligent to better serve humanity."

In an era of rapid technological advancement, smart devices are no longer optional—they're essential. We relentlessly innovate to meet rising demands for smarter, faster, and more intuitive machines, ensuring technology evolves with and for people.

Corporate Mission

"Deliver professional motion control platforms & automation solutions."

Backed by years of industrial automation expertise, our dynamic, young team combines technical mastery with bold creativity. From R&D to real-world applications, we craft precision-driven, efficient products that redefine industry standards.

Core Values

Professionalism | Efficiency | Integrity
Dedication | Innovation | Growth
Pragmatism | Collaboration | Win-Win

Working Principles

User First – Your needs drive our designs.
Continuous Innovation – Breaking boundaries daily.
Pursuit of Excellence – Good isn't enough; we aim for flawless.

FACILITIES & DELIVERY

Warehouse & Material Management

Automated Storage Systems: Equipped with barcode/RFID tracking for real-time inventory visibility.
Strict Quality Checks: All incoming materials undergo 3-step inspections to guarantee compliance.
Lean Inventory Control: Optimized stock levels to reduce waste while ensuring fast turnaround.

Fast & Reliable Shipping

Global Partnerships: Collaborations with DHL, FedEx, and leading freight forwarders for air, sea & land transport.
Express Options: Expedited shipping available for urgent orders, with door-to-door tracking.

24/7 Security Monitoring: Fireproof cabinets, humidity control, and AI-powered surveillance.

Why Choose NiMotion?

Faster lead times with streamcabled workflows
Zero-defect mindset from storage to shipment
Scalable solutions for bulk/custom orders

STM-M SERIES Integrated Lead Screw Motor

The STM-M series integrated stepper servo system integrates a stepper motor, encoder, driver, lead screw, I/O, and controller into a single unit. *The need for cables between the driver and motor is eliminated, as power, I/O, and communication interfaces are directly plugged into the connectors on the motor. This simplifies component selection, reduces wiring, minimizes control panel size, lowers costs, and saves installation space.*

Building upon the STM series, the STM-M series incorporates fully digital servo drive technology. It employs Field-Oriented Control (FOC) and Space Vector Pulse Width Modulation (SVPWM) for driving. It supports DI/DO and offers various servo functions such as fault diagnosis, soft limits, gain switching, S-curve planning, vibration suppression, parameter identification, and online upgrades.

STM-M SERIES Product Naming Convention

Help you quickly choose the product that suits you

STM 28 34 B - 485 - M - 1ZB 4.77 - 2.54 - L106

STM: stepper servo motor

Motor frame width : 28 / 35 / 42 / 57mm

Motor length: 34 / 45 / 48 / 65

Encoder: B-2500 lines.

Communication mode : CAN/CANopen、RS-485

Hardware feature code: Default - Standard type; M - Stepper servo

Lead screw shaft type: 1ZB-T type; 1ZBG - Ball screw.

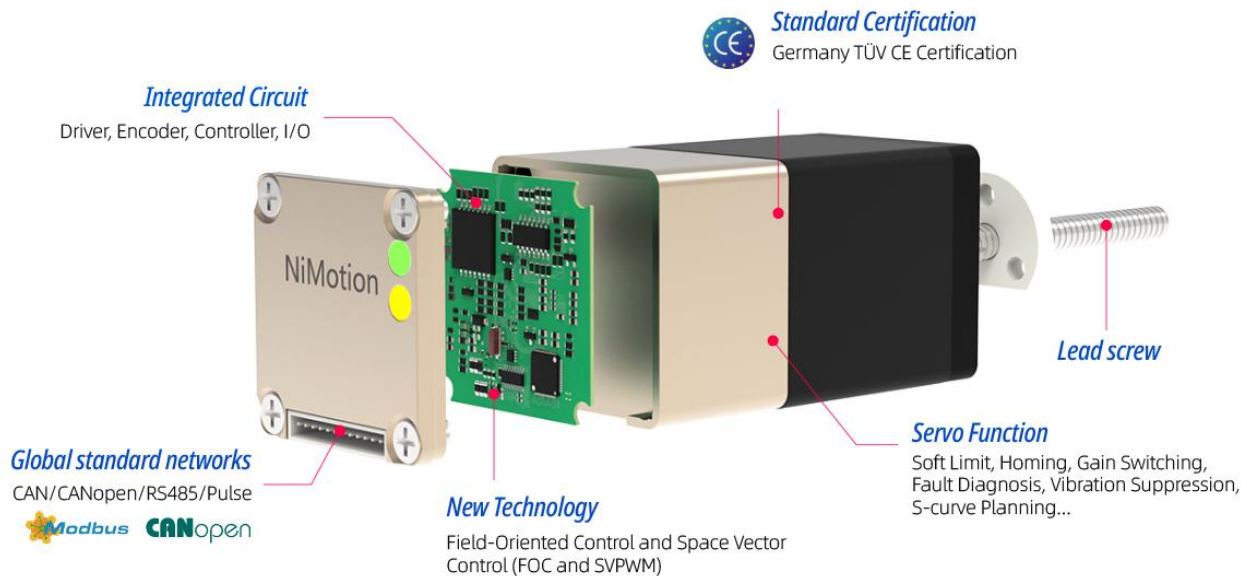
Lead screw diameter: 4.77-4.77mm; 6.35-6.35mm

Lead: 2.54-2.5mm; Non-standard length shaft.

Lead screw length: 106-106mm (customizable)

STM-M SERIES Integrated Lead Screw Motor Features

STM-M series integrated stepper servo motor products are high performance and low power stepper servo products. With its outstanding closed-loop control system and integrated development concept, it integrates stepper motors, encoders and drivers, adopts FOC field-oriented control technology and *SVPWM (Space Vector modulation technology)*, supports *CANopen*, *RS485*, *EtherCAT* bus control, and features small size and simple wiring. It can provide an economical and effective solution for applications that require the performance of servo motors, and the price is only at the level of stepper motors.



Product Advantages

Features	Advantages Introduction
Integrated	Integrates encoder, driver, I/O, and controller into a single unit, no coupling required.
Precise control	Magnetic Field Directional Control Technology (FOC) and Space Vector Modulation Technology (SVPWM)
Servo function	Soft limit/gain switch/S-curve planning/vibration suppression/parameter identification/online upgrade, etc.
Convenient control	Supports CANopen/RS485, I/O control, and pulse control.
Diagnostic function	Supports overcurrent, overvoltage, undervoltage, overload, over-temperature, locked rotor, and origin return timeout
Quality certification	ISO9001 certification, TUV CE certification

Digital Input And Output

Localized digital input and output, making the controller easier and simpler; Can be connected to a variety of signal types of sensors, such as photoelectric switch, proximity sensor, Hall sensor can be flexibly configured according to needs, to complete different functions: *left limit*, *right limit*, *zero switch*, etc.

Parameter Adjustment Software

- *Origin switch parameters*
- *Parameters of positive limit switch*
- *Special function parameters*
- *Fault safety status preset*



Integrated High Precision Encoder

- Internal integrated high resolution absolute **encoder**
- Detect the current absolute position when powering up
- Can choose angle feedback or **pulse** number feedback
- Flexibly set the restricted area to get simpler control way

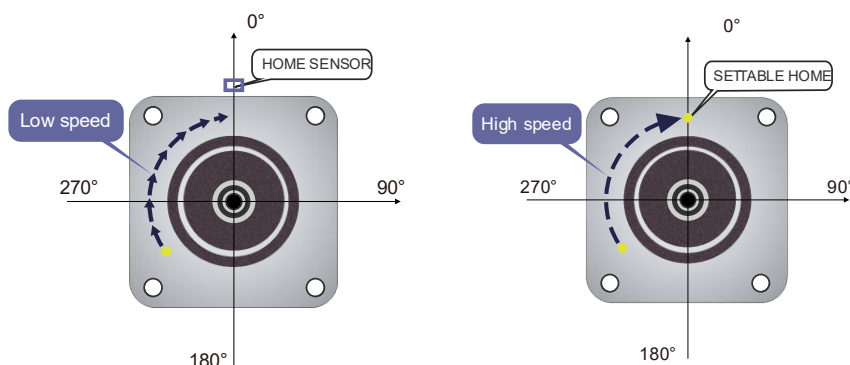


·Magnetic encoder

Note: Built-in high-precision magnetic encoder, single-turn absolute value encoder, multi-turn absolute value counting, automatic retention in case of power failure. The high-precision post-positioning accuracy can reach $\pm 0.05^\circ$. The effect varies depending on the product. For detailed information, please consult us to learn more parameters.

Origin Returns And Setting

- **No origin** sensor is needed, and the origin return can be completed at high speed
- It saves wiring and can be used in situations where sensors cannot be installed
- It can be manually moved to any position and set as the origin
- Supports blocked rotation origin regression
- Integrates multiple origin regression algorithms and can be **flexibly configured**



Perfect Diagnostic Alarm Function

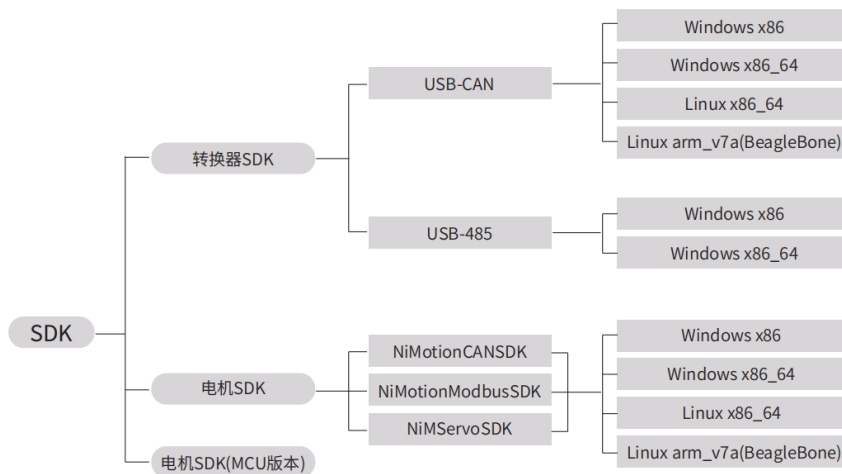
Convenient and quick to the motor hardware configuration, motion configuration. All parameters can be viewed, and the curves of the parameters during the movement process can be viewed. Support multiple motion modes of the motor. It features configuration wizard function, command debugging, vibration suppression and other functions.

- Modify the motor address
- Selection of acceleration curve type
- Maximum rotational speed setting
- Maximum torque adjustment
- Motion mode selection



Support multi-platform software development kits (SDKs)

SDK (Software Development Kit) is a secondary development toolkit designed to facilitate users in developing control programs. It is a collection of development tools for creating application software for specific software packages, software frameworks, hardware platforms, operating systems, etc., which can greatly simplify the difficulty and workload of users developing control programs.



- Currently, we have converter *SDKs and motor SDKs (including MCU versions)*, supporting both Windows and Linux systems, as well as devices such as BeagleBone and Raspberry PI.

16 Position and speed functions & S-shaped curve planning

• Built-in 16 segments position/speed function, can achieve stand-alone operation.

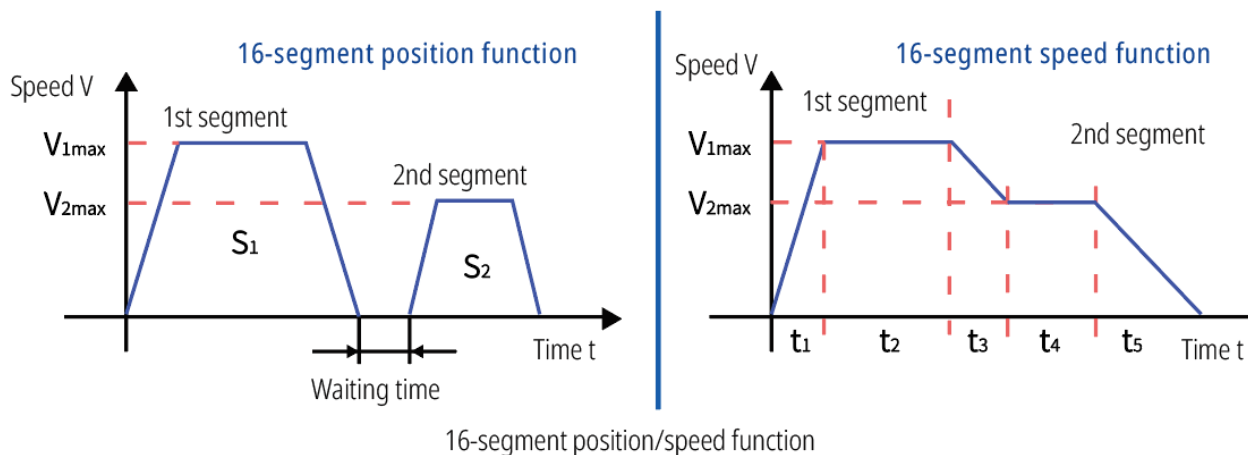
• 16-segment position function

V_{1max} , V_{2max} : Maximum operating speeds in the first and second segments.

S_1 , S_2 : Displacement of the first and second sections.

• 16 speed features:

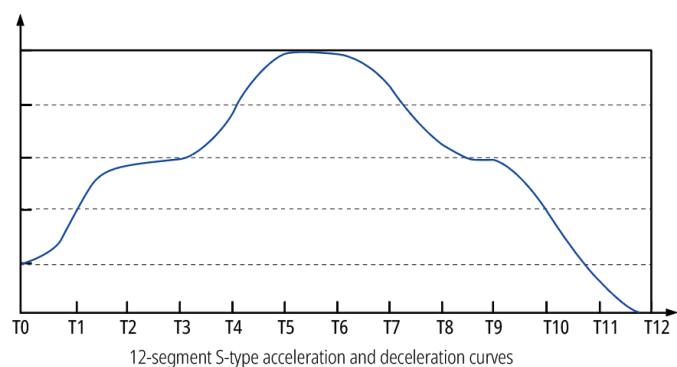
V_{1max} , V_{2max} : Paragraph 1, paragraph 2 command speed.



• S-shaped acceleration and deceleration curve

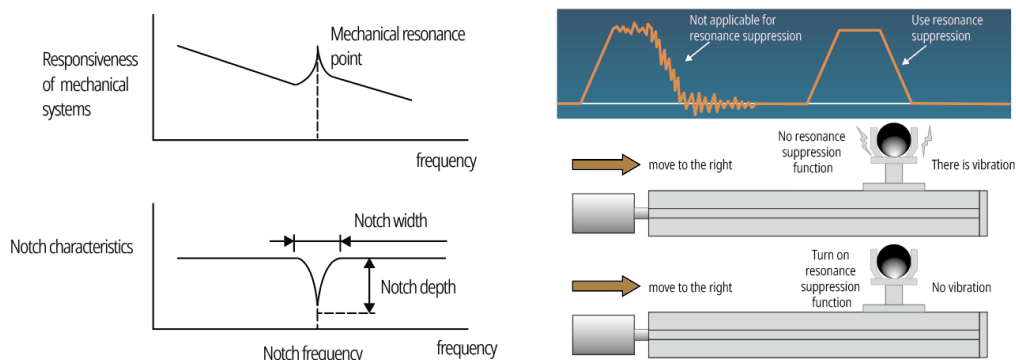
Built-in 12 S-shaped acceleration and deceleration curves.

Effectively reduce the impact, making the motor run more stable and smoother.



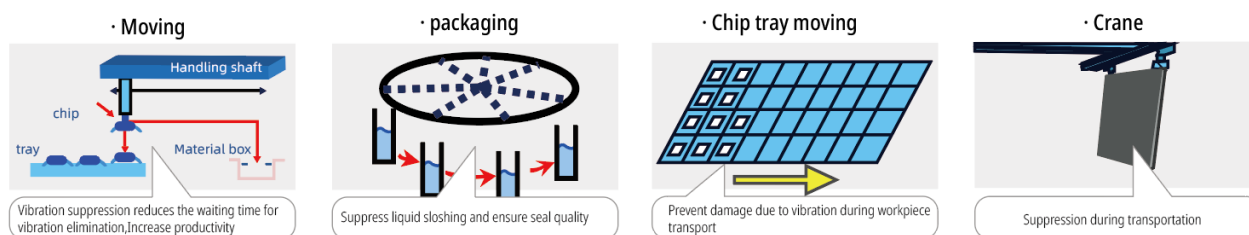
Resonance suppression is performed by notch

- Set 4 sets of steam trap parameters, Effective vibration suppression frequency range $\geq 300\text{Hz}$.



Low frequency vibration suppression function

- If the end of the mechanical load is long and heavy, the end vibration is easy to occur during the emergency stop, which affects the positioning effect. The vibration can be effectively reduced by the *low frequency vibration suppression function*. Effective vibration suppression frequency range $\leq 100\text{Hz}$ vibration



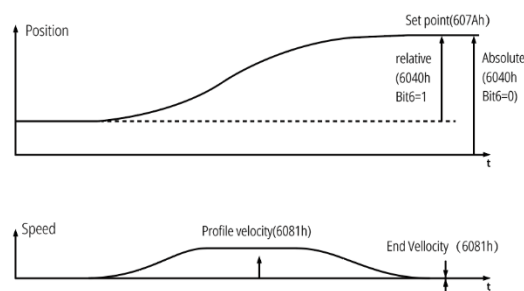
Low frequency vibration suppression function

• CiA402 Mode:

Profile position Mode (PP), Profile Velocity Mode (PV), Profile Torque mode (PT), Velocity mode (VM), interpolation mode (IP), origin regression mode (HM) (switch origin mode, locked-rotation origin mode), cyclic synchronization position mode (CSP), cyclic synchronization velocity mode (CSV), cyclic synchronization torque mode (CST).

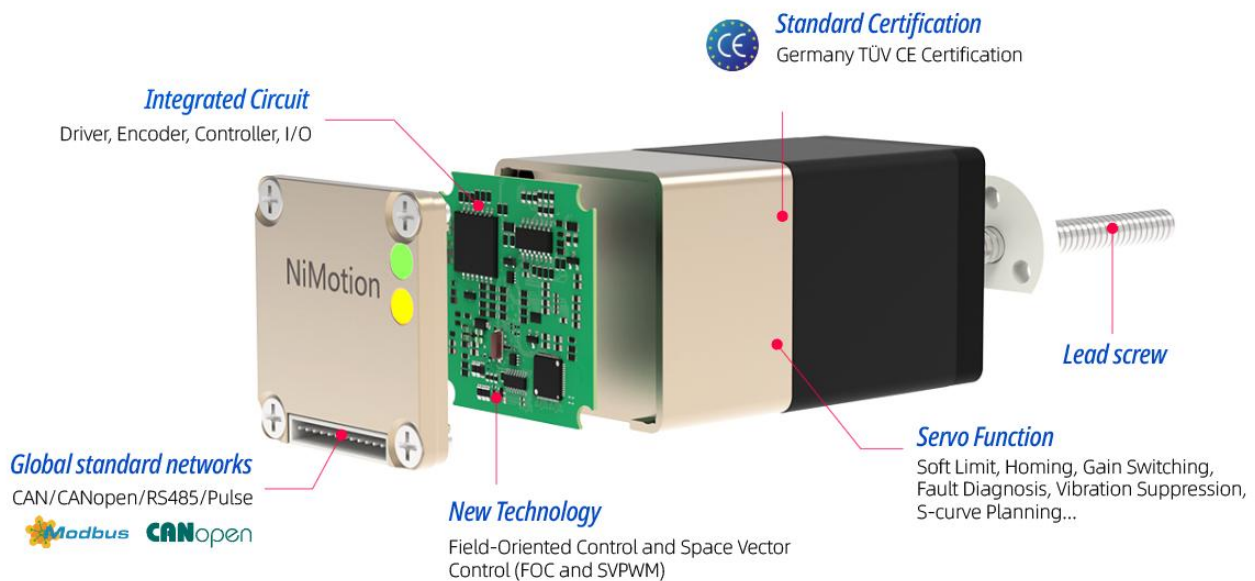
• NiMotion Mode:

Position mode: pulse control, multi-segment position control, digital quantity set control. Speed mode: multi-stage speed control, digital quantity set control. Torque mode: digital quantity set control.



STM28-M SERIES Integrated Lead Screw Motor

The STM28M series *CANopen&RS485* communication integrated stepper servo lead screw motor is a high-performance and low-power stepper servo product independently developed by our company. With its outstanding closed-loop control system and integrated development concept, it integrates stepper motors, magnetic encoders, drivers, lead screws and digital IO into one. It supports CANopen and RS485 communication bus control, is compact in size and easy to wire.



Model Specifications

Flange: 28mm (Rated Current: 1A, Rated voltage :24VDC)

Communication: CANopen/RS485

Model	Thrust	Load	Thread lead	Step angle @1.8°	Self-locking force	Holding torque	Brake	Motor length
STM2834B-M	105N	70N	0.635mm	0.00320mm	100N	0.06N	NO	48mm
STM2834B-M	85N	60N	1.270mm	0.00630mm	40N	0.06N	NO	48mm
STM2834B-M	50N	35N	2.540mm	0.0127mm	10N	0.06N	NO	48mm
STM2834B-M	30N	20N	5.080mm	0.02540mm	1N	0.06N	NO	48mm
STM2845B-M	15N	12N	10.16mm	0.05080mm	0N	0.06N	NO	48mm
STM2845B-M	145N	100N	0.635mm	0.00320mm	100N	0.10N	NO	58mm
STM2845B-M	125N	84N	1.270mm	0.00630mm	40N	0.10N	NO	58mm
STM2845B-M	90N	70N	2.540mm	0.01270mm	10N	0.10N	NO	58mm

STM2845B-M	60N	40N	5.080mm	0.02540mm	1N	0.10N	NO	58mm
STM2845B-M	30N	24N	10.16mm	0.05080mm	0N	0.10N	NO	58mm

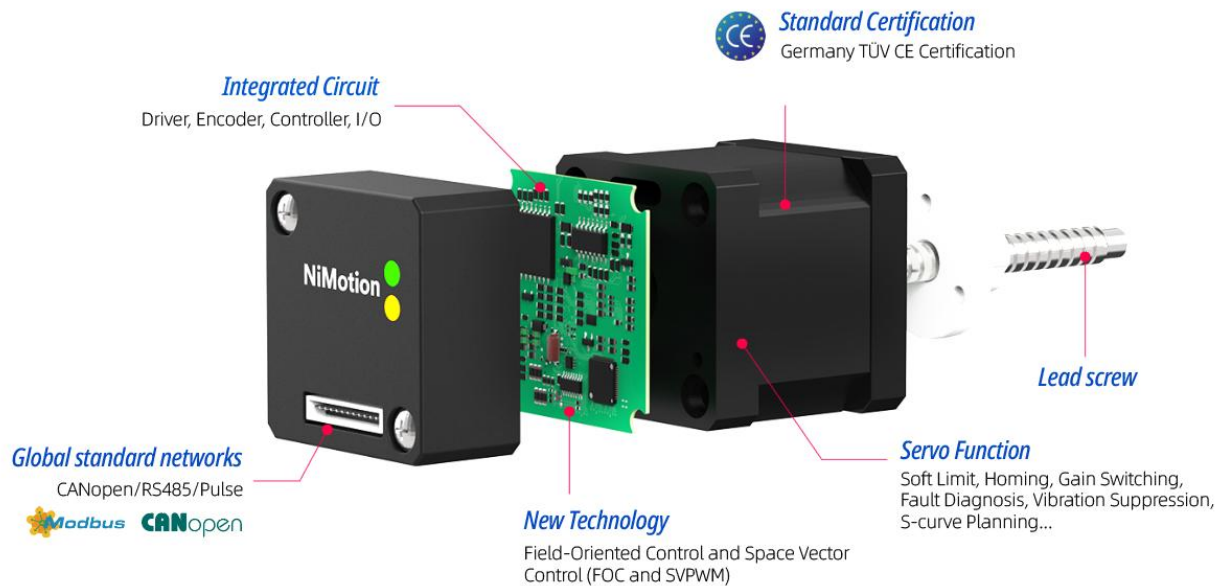
Technical Specifications

Specification	Content
Input voltage range	Wide voltage input range: <i>10~30VDC</i>
Encoder	2500-line encoder
Control mode	<i>CiA402 mode</i> : PP, VM, PV, PT, HM, IP, CSP, CSV, CST NiMotion modes: Position mode, Speed mode, Torque mode.
Maximum thrust	150N
Recommended load limit	140N
Lead screw diameter/accuracy	4.77mm/Linear accuracy: 0.18/300mm; Lead screw straightness: 0.2/300mm; Backlash accuracy: 0.02mm.
Drive method	Utilizes FOC (Field-Oriented Control) technology and SVPWM (Space Vector Pulse Width Modulation) technology.
DI (Digital input)	Quantity: 3 units; Frequency $\leq 200\text{kHz}$; Supports 5V–30V dual-level input.
DO (Digital output)	Quantity: 2 units, 0.5A@30V, maximum pulse frequency 1MHz; Output method: MOS open-drain output, NPN; Configurable functions: 1. Motor run/stop; 2. Target reached; 3. Alarm output.
Environment	Ambient temperature: <i>0°C to 40°C</i> / Ambient relative humidity: 10%RH to 85%RH No condensation, Storage ambient temperature <i>-40°C ~ 85°C</i> / pollution degree SO_2 : $< 0.5\text{ppm}$; H_2S : $< 0.1\text{ppm}$; Altitude: <i>$< 1000\text{m}$</i>
Fault alarm	Overvoltage power supply, undervoltage power supply; Overheat alarm: If the drive overheats beyond the internal set temperature, an alarm will be triggered. Locked rotor alarm: The locked rotor threshold can be set through parameters (closed-loop support)
Features	Fault Diagnosis, Fault Reset, Soft Limit, Parameter Identification, Adjustable Parameters, Gain Switching, Resonance Suppression, Low-Frequency Suppression, Parameter Save Settings, Online Upgrade

Note: Product content information may be updated, the actual parameters of the product manual shall prevail.

STM35-M SERIES Integrated Lead Screw Motor

The STM35M series *CANopen&RS485* communication integrated stepper servo lead screw motor is a high-performance and low-power stepper servo product independently developed by our company. With its outstanding closed-loop control system and integrated development concept, it integrates stepper motors, magnetic encoders, drivers, lead screws and digital IO into one. It supports CANopen and RS485 communication bus control, is compact in size and easy to wire.



Model Specifications

Flange: 35mm (Rated Current: 1.5A, Rated voltage :24VDC)

Communication: CANopen/RS485

Model	Thrust	Load	Thread lead	Step angle @1.8°	Self-locking force	Holding torque	Brake	Motor length
STM3534B-M	150N	91N	1.270mm	0.00640mm	150N	0.18N	NO	50mm
STM3534B-M	110N	63N	2.540mm	0.01270mm	70N	0.18N	NO	50mm
STM3534B-M	100N	58N	3.175mm	0.01590mm	40N	0.18N	NO	50mm
STM3534B-M	80N	42N	6.350mm	0.03180mm	15N	0.18N	NO	50mm
STM3534B-M	35N	20N	12.70mm	0.06350mm	3N	0.18N	NO	50mm
STM3548B-M	25N	10N	25.40mm	0.12700mm	0N	0.18N	NO	64mm
STM3548B-M	210N	157N	1.270mm	0.00640mm	150N	0.35N	NO	64mm
STM3548B-M	155N	109N	2.540mm	0.01270mm	70N	0.35N	NO	64mm

STM3548B-M	145N	100N	3.175mm	0.01590mm	40N	0.35N	NO	64mm
STM3548B-M	110N	72N	6.350mm	0.03180mm	15N	0.35N	NO	64mm
STM3548B-M	40N	35N	12.70mm	0.06350mm	3N	0.35N	NO	64mm
STM3548B-M	35N	17N	25.40mm	0.12700mm	0N	0.35N	NO	64mm

Technical Specifications

Specification	Content
Input voltage range	Wide voltage input range: <i>10~30VDC</i>
Encoder	2500-line encoder
Control mode	<i>CiA402 mode</i> : PP, VM, PV, PT, HM, IP, CSP , CSV, CST NiMotion modes: Position mode, Speed mode, Torque mode.
Maximum thrust	300N
Recommended load limit	230N
Lead screw diameter/accuracy	6.35mm/Linear accuracy: 0.18/300mm; Lead screw straightness: 0.2/300mm; Backlash accuracy: 0.02mm.
Drive method	Utilizes FOC (Field-Oriented Control) technology and SVPWM (Space Vector Pulse Width Modulation) technology.
DI (Digital input)	Quantity: 3 units; Frequency $\leq 200\text{kHz}$; Supports 5V–30V dual-level input.
DO (Digital output)	Quantity: 2 units, 0.5A@30V, maximum pulse frequency 1MHz; Output method: MOS open-drain output, NPN;Configurable functions: 1. Motor run/stop; 2. Target reached; 3. Alarm output.
Environment	Ambient temperature: <i>0°C to 40°C</i> / Ambient relative humidity: 10%RH to 85%RH No condensation, Storage ambient temperature <i>-40°C ~ 85°C</i> / pollution degree SO ₂ : < 0.5ppm; H ₂ S: < 0.1ppm; Altitude: <i><1000m</i>
Fault alarm	Overvoltage power supply, undervoltage power supply; Overheat alarm: If the drive overheats beyond the internal set temperature, an alarm will be triggered. Locked rotor alarm: The locked rotor threshold can be set through parameters (closed-loop support)

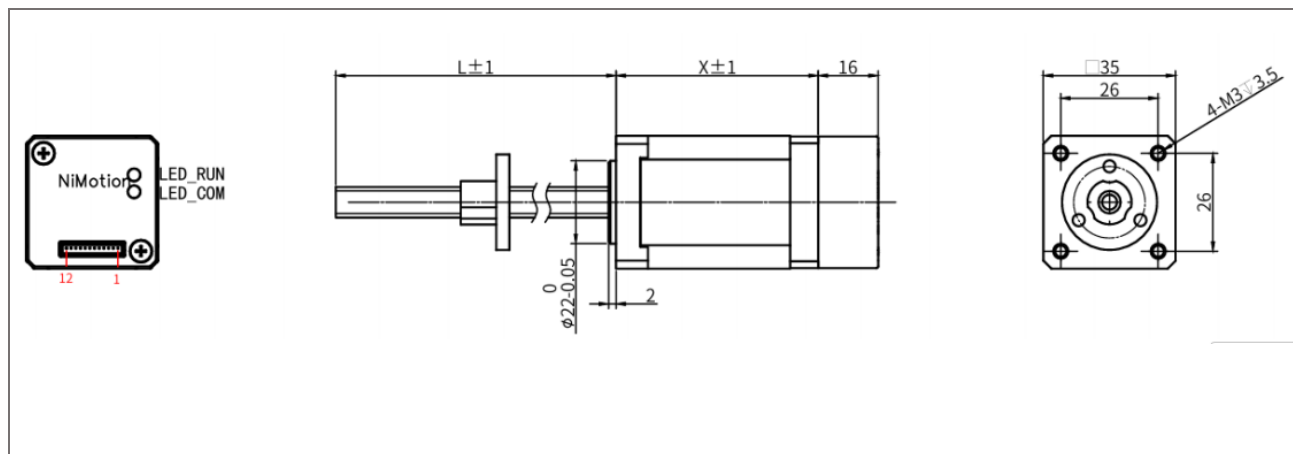
Features	Fault Diagnosis, Fault Reset, Soft Limit, Parameter Identification, Adjustable Parameters, Gain Switching, Resonance Suppression, Low-Frequency Suppression, Parameter Save Settings, Online Upgrade
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Note: Product content information may be updated, the actual parameters of the product manual shall prevail.

Drawing Dimensions

(Base width: 35mm X :stands for fuselage length)

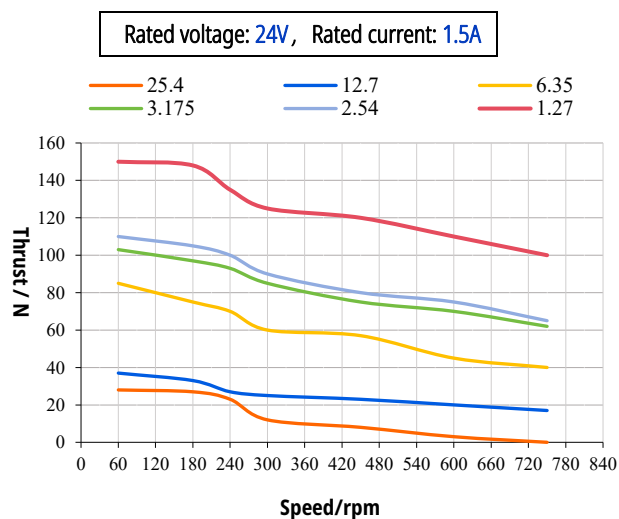
Unit of size: mm



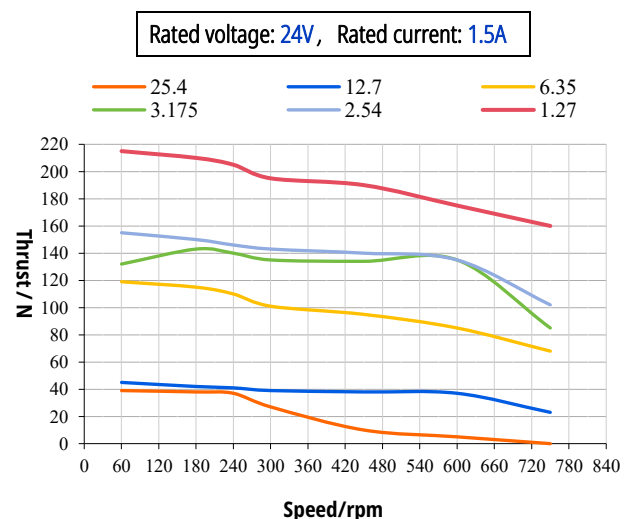
Torque Frequency Curve

XX represents other parameters; Please read the instruction manual carefully

STM3534B-CANopen/485-M Frequency-Torque Characteristics



STM3548B-CANopen/485-M Frequency-Torque Characteristics



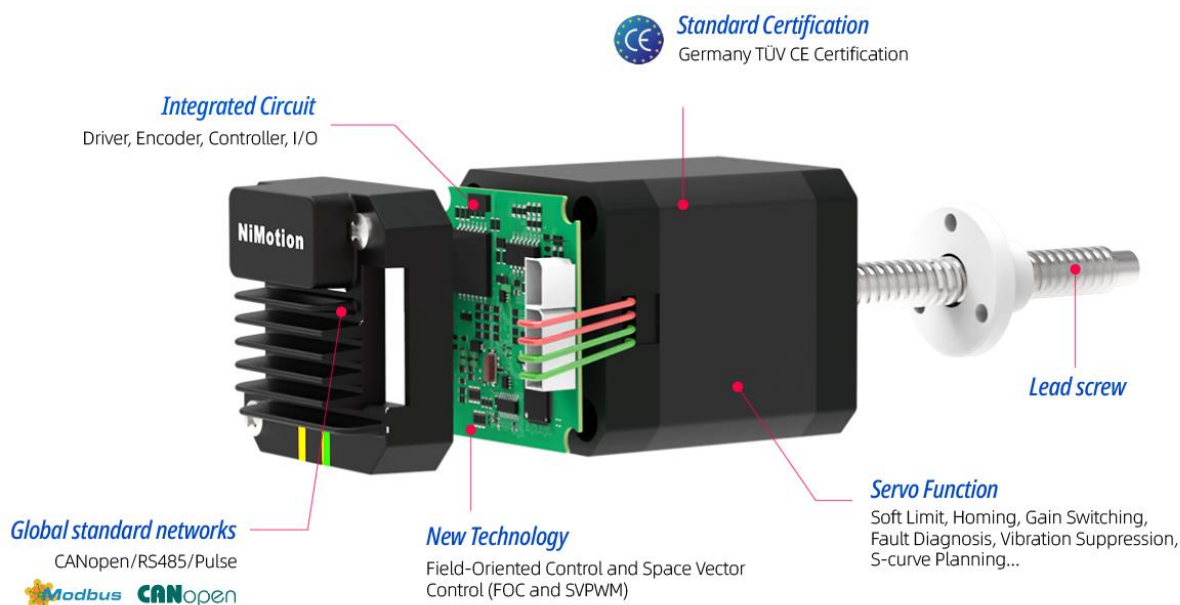
Cable Accessories

The product cables are diverse. For specific cable instructions, please refer to the product manual!

Cable Matching	Series Model Number	
Power/Communication/IO Cable	STX008	
Communication Converter	SCM-USBCANI-L	
	SCM-USB485A-L	

STM42-M SERIES Integrated Lead Screw Motor

The STM42M series *CANopen&RS485* communication integrated stepper servo lead screw motor is a high-performance and low-power stepper servo product independently developed by our company. With its outstanding closed-loop control system and integrated development concept, it integrates stepper motors, magnetic encoders, drivers, lead screws and digital IO into one. It supports CANopen and RS485 communication bus control, is compact in size and easy to wire.



Model Specifications

Flange: 42mm (STM4234B Rated Current: 1.5A STM4248B Rated Current: 2.5A Rated voltage :24VDC)

Communication: CANopen/RS485

Model	Thrust	Load	Thread lead	Step angle @1.8°	Self-locking force	Holding torque	Brake	Motor length
STM4234B-M	300N	150N	1.270mm	0.00640mm	150N	0.25N	NO	62.5mm
STM4234B-M	210N	140N	2.540mm	0.01270mm	100N	0.25N	NO	62.5mm
STM4234B-M	180N	112N	3.175mm	0.01590mm	40N	0.25N	NO	62.5mm
STM4234B-M	100N	70N	6.350mm	0.03180mm	15N	0.25N	NO	62.5mm
STM4234B-M	50N	28N	12.70mm	0.06350mm	3N	0.25N	NO	62.5mm
STM4234B-M	40N	15N	25.40mm	0.12700mm	0N	0.25N	NO	62.5mm
STM4248B-M	450N	320N	1.270mm	0.00640mm	150N	0.48N	NO	66.5mm
STM4248B-M	300N	210N	2.540mm	0.01270mm	100N	0.48N	NO	66.5mm

STM4248B-M	270N	215N	3.175mm	0.01590mm	40N	0.48N	NO	66.5mm
STM4248B-M	155N	109N	6.350mm	0.03180mm	15N	0.48N	NO	66.5mm
STM4248B-M	70N	54N	12.70mm	0.06350mm	3N	0.48N	NO	66.5mm
STM4248B-M	55N	29N	25.40mm	0.12700mm	0N	0.48N	NO	66.5mm

Technical Specifications

Specification	Content
Input voltage range	Wide voltage input range: <i>12~36VDC</i>
Encoder	2500-line encoder
Control mode	<i>CiA402 mode</i> : PP, VM, PV, PT, HM, IP, CSP, CSV, CST NiMotion modes: Position mode, Speed mode, Torque mode.
Maximum thrust	600N
Recommended load limit	230N
Lead screw diameter/accuracy	6.35mm/Linear accuracy: 0.18/300mm; Lead screw straightness: 0.2/300mm; Backlash accuracy: 0.02mm.
Drive method	Utilizes FOC (Field-Oriented Control) technology and SVPWM (Space Vector Pulse Width Modulation) technology.
DI (Digital input)	Quantity: 3 units; PWM frequency $\leq 200\text{kHz}$; supports dual-level input of 5V–30V; logic 1 signal: 5V or 24V; logic 0 signal: 0–2V; configurable functions: 1. enable; 2. positive/negative limit; 3. home switch; 4. alarm reset; 5. pause; 6. multi-segment operation command switching.
DO (Digital output)	Quantity: 2 units, 100mA@30V, e functions: 1. Motor run/stop; 2. Target reached; 3. Alarm output.
AI (Analog Input)	Quantity: 1, Input method: Single-ended, Resolution: 12-bit, Voltage: 0-10V, Accuracy: Reference error $\leq 1\%$, Configurable functions: Dead zone, Filtering, Bias, Scaling, Direction.
Environment	Ambient temperature: <i>0°C to 40°C</i> / Ambient relative humidity: 10%RH to 85%RH No condensation, Storage ambient temperature <i>-40°C ~ 85°C</i> / pollution degree SO ₂ : < 0.5ppm; H ₂ S: < 0.1ppm; Altitude: <i><1000m</i>
Fault alarm	Overvoltage power supply, undervoltage power supply; Overheat alarm: If the drive overheats beyond the internal set temperature, an alarm will be triggered. Locked rotor alarm: The locked rotor threshold can be set through parameters (closed-loop support)

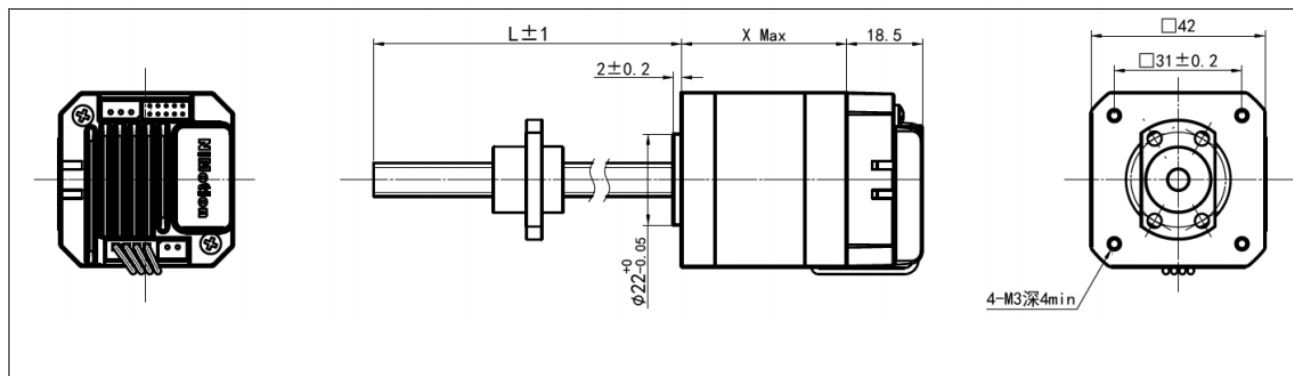
Features	Fault Diagnosis, Fault Reset, Soft Limit, Parameter Identification, Adjustable Parameters, Gain Switching, Resonance Suppression, Low-Frequency Suppression, Parameter Save Settings, Online Upgrade
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Note: Product content information may be updated, the actual parameters of the product manual shall prevail.

Drawing Dimensions

(Base width: 42mm X:stands for fuselage length)

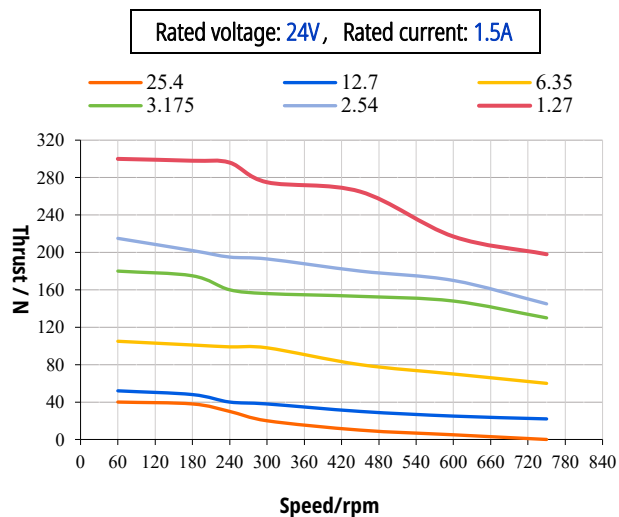
Unit of size: mm



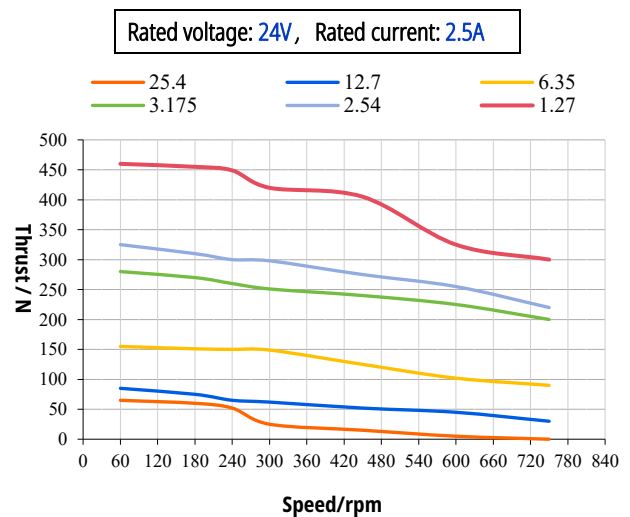
Torque Frequency Curve

XX represents other parameters; Please read the instruction manual carefully

STM4234B-CANopen/485-M Frequency-Torque Characteristics



STM4248B-CANopen/485-M Frequency-Torque Characteristics



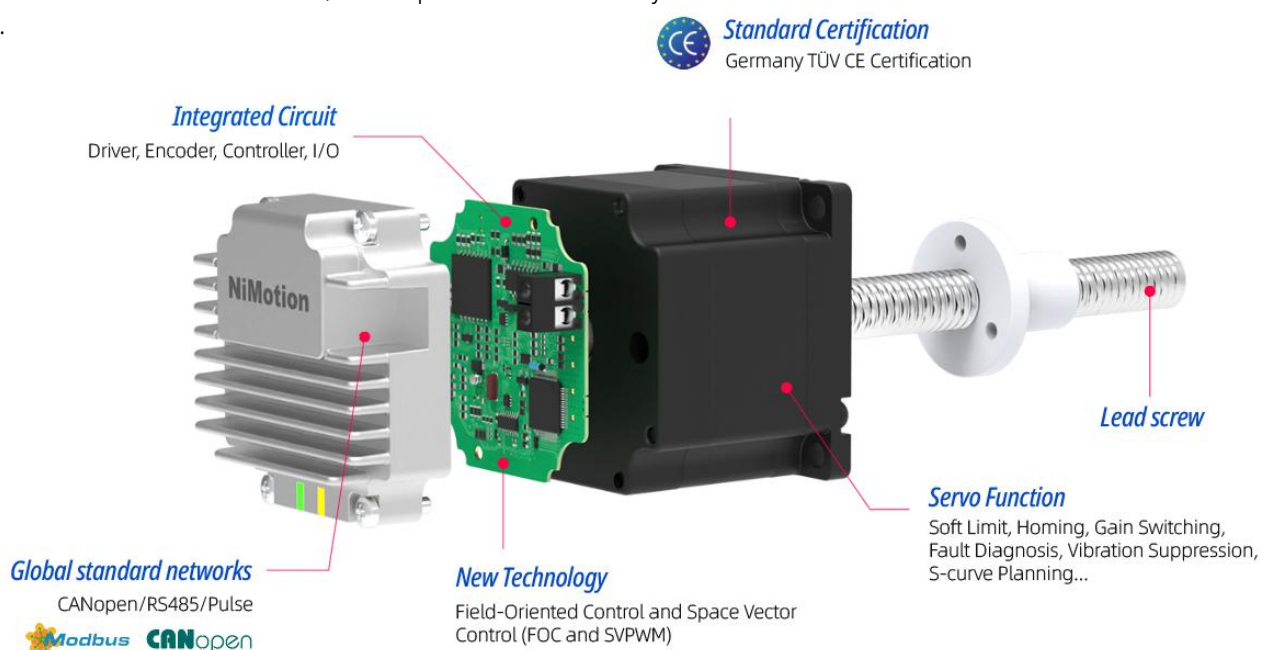
Cable Accessories

The product cables are diverse. For specific cable instructions, please refer to the product manual!

Cable Matching	Series Model Number	
Power cable	STX001A	
Communication cable	STX002B	
I/O cable	STX003	
Communication Converter	SCM-USBCANI-L	
	SCM-USB485A-L	
Extension cable	VDCX010P	
	SDCX001	
Terminal resistance	STRX001-120	

STM57-M SERIES Integrated Lead Screw Motor

The STM57M series *CANopen&RS485* communication integrated stepper servo lead screw motor is a high-performance and low-power stepper servo product independently developed by our company. With its outstanding closed-loop control system and integrated development concept, it integrates stepper motors, magnetic encoders, drivers, lead screws and digital IO into one. It supports CANopen and RS485 communication bus control, is compact in size and easy to wire.



Model Specifications

Flange: 57mm (STM5745B Rated Current: 3A STM5765B Rated Current: 4A Rated voltage :48VDC)

Communication: CANopen/RS485

Model	Thrust	Load	Thread lead	Step angle @1.8°	Self-locking force	Holding torque	Brake	Motor length
STM5745B-M	590N	440N	1.270mm	0.00630mm	2000N	0.80N	NO	65mm
STM5745B-M	500N	360N	2.540mm	0.01270mm	1600N	0.80N	NO	65mm
STM5745B-M	300N	216N	5.080mm	0.02540mm	55N	0.80N	NO	65mm
STM5745B-M	140N	90N	10.16mm	0.05080mm	35N	0.80N	NO	65mm
STM5745B-M	50N	30N	25.40mm	1.27000mm	7N	0.80N	NO	65mm
STM5765B-M	1180N	935N	1.270mm	0.06350mm	2000N	1.70N	NO	85mm
STM5765B-M	900N	700N	2.540mm	0.12700mm	1600N	1.70N	NO	85mm

STM5765B-M	500N	350N	5.080mm	0.02540mm	55N	1.70N	NO	85mm
STM5765B-M	250N	160N	10.16mm	0.05080mm	35N	1.70N	NO	85mm
STM5765B-M	80N	50N	25.40mm	1.27000mm	7N	1.70N	NO	85mm

Technical Specifications

Specification	Content	
Input voltage range	Wide voltage input range: <i>16~52VDC</i>	
Encoder	2500-line encoder	
Control mode	<i>CiA402 mode</i> : PP, VM, PV, PT, HM, IP, CSP, CSV, CST NiMotion modes: Position mode, Speed mode, Torque mode.	
Maximum thrust	STM5745B: 590N	STM5765B: 1180N
Recommended load limit	STM5745B: 440N	STM5765B: 935N
Lead screw diameter/accuracy	9.525mm/Linear accuracy: 0.18/300mm; Lead screw straightness: 0.2/300mm; Backlash accuracy: 0.02mm.	
Drive method	Utilizes FOC (Field-Oriented Control) technology and SVPWM (Space Vector Pulse Width Modulation) technology.	
DI (Digital input)	Quantity: 3 High-speed bidirectional optocoupler, maximum PWM pulse frequency 2MHz, can be connected to an external DC power supply: 12-24V; Configurable functions: Can be used as a switch or as a pulse input channel.	
DO (Digital output)	Quantity: 1 2A@52V, output method: MOS open-drain output; configurable functions: 1. General-purpose DO port; 2. Motor run/stop; 3. Target reached; 4. Alarm output (DO switch status changes when motor status meets the above conditions).	
AI (Analog Input)	Quantity: 1, Input method: Single-ended, Resolution: 12-bit, Voltage: 0-10V, Accuracy: Reference error $\leq 1\%$, Configurable functions: Dead zone, Filtering, Bias, Scaling, Direction.	
Environment	Ambient temperature: <i>0°C to 40°C</i> / Ambient relative humidity: 10%RH to 85%RH No condensation, Storage ambient temperature <i>-40°C ~ 85°C</i> / pollution degree SO ₂ : < 0.5ppm; H ₂ S: < 0.1ppm; Altitude: <i><1000m</i>	

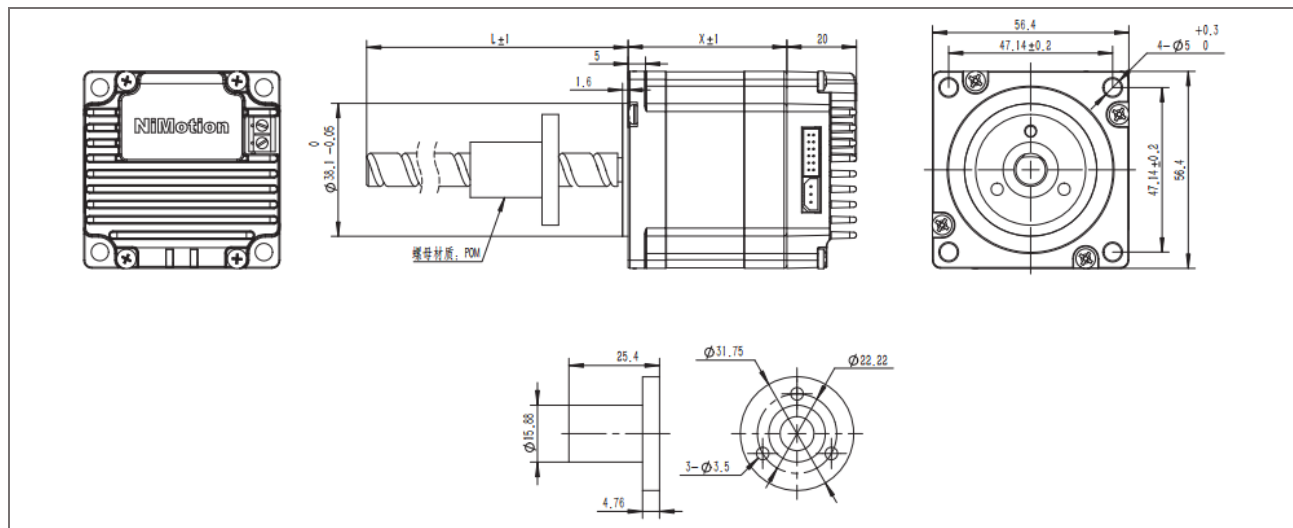
Fault alarm	Overvoltage power supply, undervoltage power supply; Overheat alarm: If the drive overheats beyond the internal set temperature, an alarm will be triggered. Locked rotor alarm: The locked rotor threshold can be set through parameters (closed-loop support)
Features	Fault Diagnosis, Fault Reset, Soft Limit, Parameter Identification, Adjustable Parameters, Gain Switching, Resonance Suppression, Low-Frequency Suppression, Parameter Save Settings, Online Upgrade

Note: Product content information may be updated, the actual parameters of the product manual shall prevail.

Drawing Dimensions

(Base width: 57mm X:stands for fuselage length)

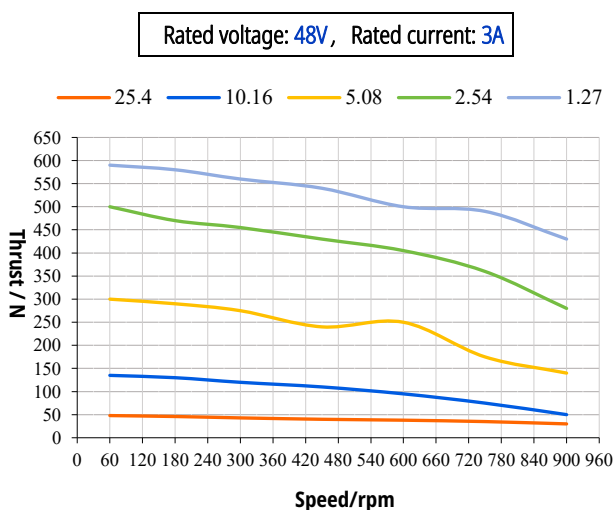
Unit of size: mm



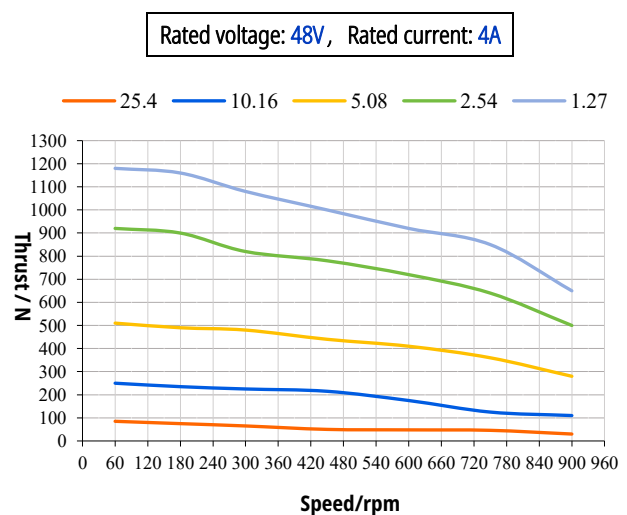
Torque Frequency Curve

XX represents other parameters; Please read the instruction manual carefully

STM5745B-CANopen/485-M Frequency-Torque Characteristics

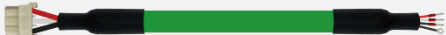
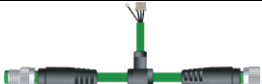


STM5765B-CANopen/485-M Frequency-Torque Characteristics



Cable Accessories

The product cables are diverse. For specific cable instructions, please refer to the product manual!

Cable Matching	Series Model Number	
Power cable	STX001B	
Communication cable	STX002A	
I/O cable	STX004	
Communication Converter	SCM-USBCANI-L	
	SCM-USB485A-L	
Extension cable	VDCX010P	
	SDCX001	
Terminal resistance	STRX001-120	

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