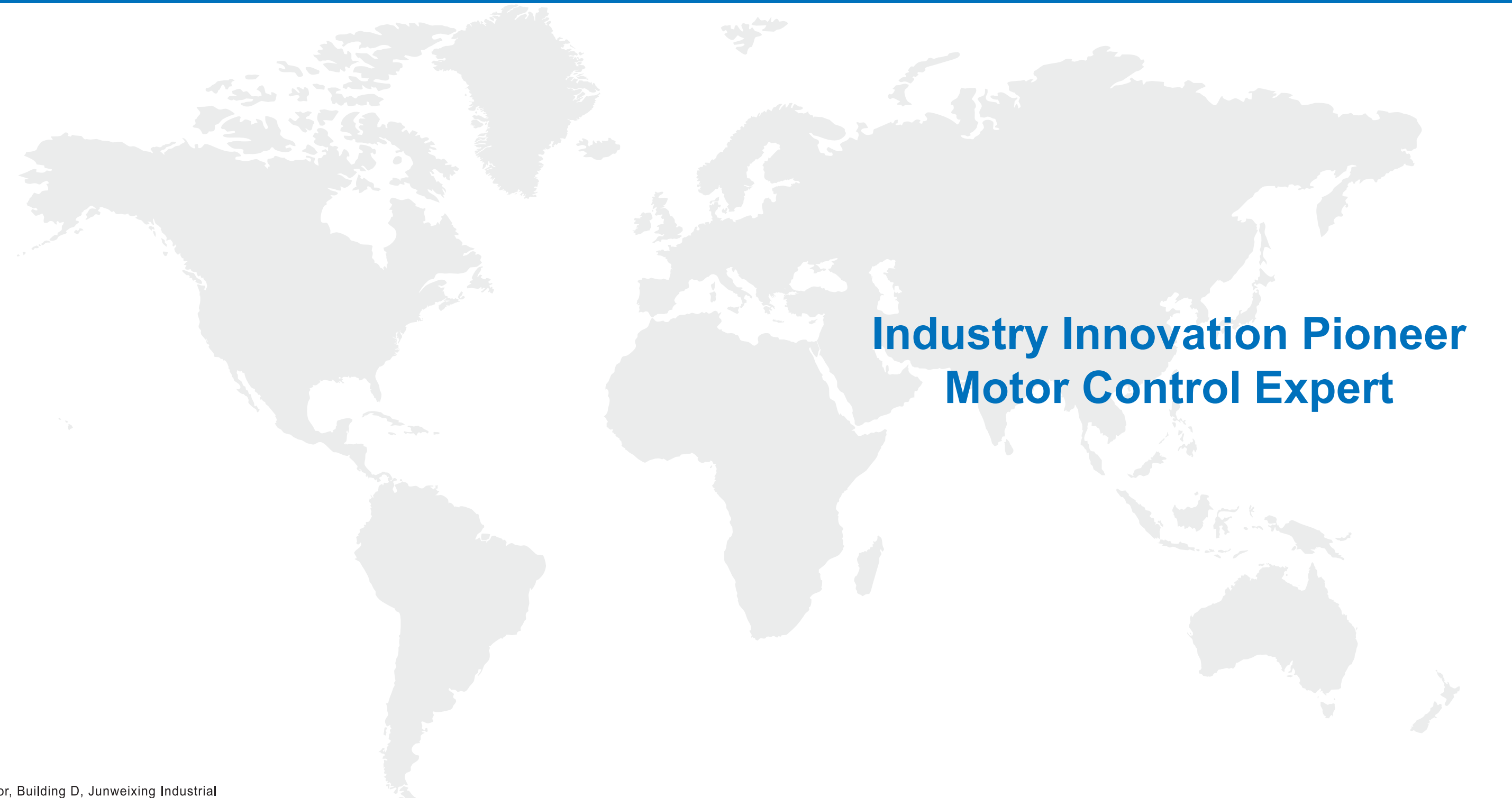


深圳市格睿物联技术有限公司

Shenzhen GRMOT Technology Co.,Ltd.



**Industry Innovation Pioneer
Motor Control Expert**

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交流伺服系统	Communication servo system
变频器	frequency converter
行星减速机	Planetary Reducer
运动控制板	Motion control board

深圳市格睿物联技术有限公司（GRMOT） 是一家致力于电机驱动技术、运动控制技术、智能 化控制等核心部件及关键技术 的国家级高新技术企业。我们给生产及生活类的自动化客户提供优 质的核心零部件，包括：步进电机及驱动器、直流无刷电机 及驱动器、伺服电机及驱动器、减速机、开关电源、智能控制板、定制化智能控制解决方案等一系列运动控制类产品及解决方案。

我们有一支在自动化技术领域有着丰富行业经验的专家团队。核心成员有着十余年的行业 沉淀及积累，首席总工程师被认定 为深圳市高层次人才和宝安区高层次人才。格睿物联（GRMOT） 因绿色的工业 4.0 和人类的智能化而生，我们将始终秉着“致精、 致简、致诚”的发展理 念；以不断挑战自我，持续为客户创造价值；以为客户提供“省时、省事、省人、省钱、省心”的产品 和服务为我们的工作指南；以客户为中心，给客户创造价值为我们的核心价值观！

Shenzhen GRMOT Technology Co., Ltd. is a national high-tech enterprise dedicated to core components and key technologies such as motor drive technology, motion control technology, and intelligent control. We provide high-quality core components for customers in the industrial and domestic automation sectors, including a full range of motion control products and solutions such as stepping motors and drivers, brushless DC motors and drivers, servo motors and drivers, reducers, switching power supplies, intelligent control boards, and customized intelligent control solutions.

We have an expert team with rich industry experience in the field of automation technology. The core members have more than ten years of industry experience and accumulation, and the chief chief engineer has been recognized as a high-level talent in Shenzhen and a high-level talent in Bao'an District. Born for the green Industry 4.0 and human intelligence, GRMOT will always adhere to the development concept of "Pursuit of Precision, Simplicity and Sincerity". We will continue to challenge ourselves and create continuous value for customers; take providing customers with products and services that "save time, trouble, labor, cost and worry" as our work guideline; and take customer-centricity and creating value for customers as our core values!



格睿物联技术有限公司凭借深厚的技术底蕴，在智能物联领域占据领先地位。公司由两名博士与多名硕士组成的精英研发团队担纲，深耕电机控制技术领域，凭借专业知识与创新能力，持续突破技术瓶颈。目前，团队已斩获三十多项核心专利与一百多项软件著作权，这些成果广泛应用于工业自动化、新能源装备等场景，不仅彰显了公司强劲的研发实力，也为产品的智能化、高效化提供了坚实支撑，助力格睿物联成为行业技术创新的标杆企业。



Shenzhen GRMOT Technology Co., Ltd. relying on its profound technological foundation, GRMOT Technology Co., Ltd. occupies a leading position in the field of intelligent IoT. The company is led by an elite R&D team composed of two doctors and multiple masters, who are deeply engaged in the field of motor control technology. With professional knowledge and innovative capabilities, the team continuously breaks through technical bottlenecks. At present, the team has obtained more than 30 core patents and over 100 software copyrights. These achievements are widely applied in scenarios such as industrial automation and new energy equipment, which not only demonstrate the company's strong R&D strength, but also provide solid support for the intelligence and high efficiency of products, helping GRMOT become a benchmark enterprise in industrial technological innovation.

我们始终坚持以国际一流标准打造全流程生产体系，引进国际尖端加工设备，结合精益化生产组装制程，将“零缺陷”的品质理念贯穿每一道工序。从原材料检测到成品出厂，严格遵循国际质量管理体系标准，通过智能化监控系统实现生产效率与产品质量的双重提升。凭借强大的技术研发实力、完善的产业配套生态以及规模化制造优势，我们持续领跑行业前沿。未来，我们将继续深耕技术创新，不断扩大领先优势，以卓越的产品和服务，为客户创造更大价值。



We have always built a full-process production system in line with world-class standards. We introduce internationally advanced processing equipment, integrate lean production and assembly processes, and implement the "zero defect" quality concept in every production procedure. From raw material inspection to finished product delivery, we strictly adhere to the standards of international quality management systems, and achieve dual improvements in production efficiency and product quality through an intelligent monitoring system. Relying on strong technological R&D capabilities, a complete industrial supporting ecosystem and large-scale manufacturing advantages, we continue to lead the industry frontier. In the future, we will continue to deepen technological innovation, constantly expand our leading advantages, and create greater value for customers with excellent products and services.

我们的月生产能力为300000台电机以及100000个驱动器。我们拥有出色的样品技术部门配合客户的各种需求样品制作、创新和创造新产品。专业质检部门确保每一件GRMOT产品都实现了GRMOT对产品的追求质量。

We have a monthly production capacity of 300000 motors and 100000 drives. We have an excellent sample technology department to cooperate with customers' various needs for sample making, innovate and create new products. Professional qualityinspection department ensures that every GRMOT product achieves GRMOT's pursuit of product quality,pursues for its products.



3条SMT生产线

3条卷绕生产线

1条数控生产线

6条装配生产线

1条老化生产线

1条测试生产线

3 SMT production lines

3 winding production lines

1 CNC production line

6 assembly production lines

1 aging production lines

1 testing production line

★一体式脉冲型开环步进电机列表/LIST OF INTEGRATED PULSE-TYPE OPEN-LOOP STEPPER MOTORS

分类别 Classification	型号 Model	电流A Current	电压V Voltage	机座 Base	总机身長(mm)(含驱动器) The total length of the switchboard (including the driver)	轴径(mm) Shaft diameter	轴长(mm) Axis length
一体式脉冲型 开环步进电机 Integrated Pulse- type Open-loop Stepper Motor	IDH28M-32	1.4~2.1	DC(12~40)	28	48	5	20
	IDH28M-42	1.4~2.1	DC(12~40)	28	58	5	20
	IDH28M-52	1.4~2.1	DC(12~40)	28	68	5	20
	IDH35M-36	1.4~2.1	DC(12~40)	35	56	5	24
	IDH35M-56	1.4~2.1	DC(12~40)	35	76	5	24
	IDH42M-40	1.4~2.1	DC(12~40)	42	62	5	24
	IDH42M-48	1.4~2.1	DC(12~40)	42	70	5	24
	IDH42M-60	1.4~2.1	DC(12~40)	42	82	5	24
	IDH57M-56	1.4~5.3	DC(24~48)	57	74	8	21
	IDH57M-80	1.4~5.3	DC(24~48)	57	98	8	21
	IDH60M-68	1.4~5.3	DC(24~48)	60	86	8	21
	IDH60M-86	1.4~5.3	DC(24~48)	60	104	8	21

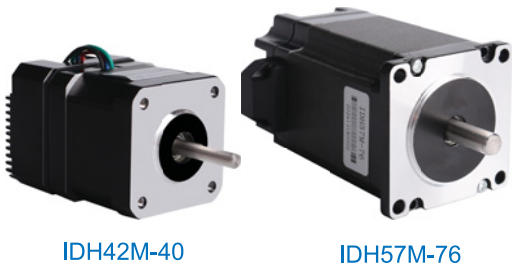
★产品概述/PRODUCT OVERVIEW

一体式脉冲型开环步进电机是最新推出的一款新型电机驱动一体化电机，采用最新专用电机控制数字信号处理器，提升电机的综合性能、降低电机的发热程度和减小电机的振动，采用电机和驱动器一体式设计，安装更加紧凑，减少外界干扰。

该电机带串口调试功能，通讯采用 MINI USB 接口，用户可通过上位机调试软件设置细分、电流、工作模式等多种参数，极大地丰富了产品的实用功能，能够满足绝大多数场合的应用。

The Integrated Pulse-type Open-loop Stepper Motor is a newly launched, advanced integrated motor that combines motor and drive functions. It adopts the latest dedicated digital signal processor (DSP) for motor control, which enhances the motor's overall performance, reduces heat generation, and minimizes vibration. Featuring an integrated design of motor and driver, it enables more compact installation and reduces external interference.

This motor is equipped with a serial port debugging function and uses a MINI USB interface for communication. Users can set various parameters such as subdivision, current, and working mode through the upper computer debugging software, which greatly enriches the product's practical functions and can meet the application needs of the vast majority of scenarios.



★产品特点/PRODUCT FEATURES

- ◆电机和驱动一体化，节省接线人工

◆体积小，便于安装

◆新一代 32 位 DSP 技术，平稳性佳、兼容性强、性价比高

◆外置拨码设置驱动器电流、细分

◆光隔离差分信号输入

◆内置微细分，低速平稳性极佳

◆脉冲响应频率最高可达 200KHz（更高可改）

◆细分设定范围 200~60000（可通过上位机设置任意微细分）

◆精密电流控制使电机发热大幅降低

◆低振动低噪声

◆具有过压、欠压、缺相等报警保护功能

◆输入电压范围：DC12V~50V
- ◆ Integrated motor and driver, saving wiring labor

◆ Small size, easy to install

◆ New generation 32-bit DSP technology, featuring excellent smoothness, strong compatibility and high cost performance

◆ External DIP switches for setting driver current and subdivision

◆ Optically isolated differential signal input

◆ Built-in micro-stepping for excellent low-speed smoothness

◆ Maximum pulse response frequency up to 200KHz (can be modified for higher frequency)

◆ Subdivision setting range: 200-60000 (arbitrary micro-stepping can be set via upper computer)

◆ Precision current control significantly reduces motor heating

◆ Low vibration and low noise

◆ Equipped with alarm and protection functions against overvoltage, undervoltage and phase loss

◆ Input voltage range: DC12V~50V

★一体式脉冲型闭环步进电机列表/LIST OF INTEGRATED PULSE-TYPE CLOSED-LOOP STEPPER MOTORS

分类别 Classification	型号 Model	电流A Current	电压V Voltage	机座 Base	总机身長 (mm) (含驱动器) The total length of the switchboard (including the driver)	轴径 (mm) Shaft diameter	轴长 (mm) Axis length
一体式脉冲型闭环步进电机 Integrated Pulse-type Closed-loop Stepper Motor	ISS28M-32	自适应adaptive	DC (12~40)	28	48	5	20
	ISS28M-42	自适应adaptive	DC (12~40)	28	58	5	20
	ISS28M-52	自适应adaptive	DC (12~40)	28	68	5	20
	ISS35M-36	自适应adaptive	DC (12~40)	35	56	5	24
	ISS35M-56	自适应adaptive	DC (12~40)	35	76	5	24
	ISS42M-40	自适应adaptive	DC (12~40)	42	62	5	24
	ISS42M-48	自适应adaptive	DC (12~40)	42	70	5	24
	ISS42M-60	自适应adaptive	DC (12~40)	42	82	5	24
	ISS57M-56	自适应adaptive	DC (24~48)	57	74	8	21
	ISS57M-80	自适应adaptive	DC (24~48)	57	98	8	21
	ISS60M-68	自适应adaptive	DC (24~48)	60	86	8	21
	ISS60M-86	自适应adaptive	DC (24~48)	60	104	8	21

★产品概述/PRODUCT OVERVIEW

一体式脉冲型闭环步进驱动器是最新推出的一款新型电机驱动一体化电机驱动器，采用最新专用电机控制数字信号处理器，提升电机的综合性能、降低电机的发热程度和减小电机的振动，采用电机和驱动器一体式设计，安装更加紧凑，减少外界干扰。

该电机带串口调试功能，通讯采用 MINI USB 接口，用户可通过 PC 端上位机调试软件设置细分、电流、工作模式等多种参数，极大地丰富了产品的实用功能，能够满足绝大多数场合的应用。

The Integrated Pulse-type Closed-loop Stepper Driver is a newly launched, advanced integrated motor driver that combines motor and driving functions. It adopts the latest dedicated digital signal processor (DSP) for motor control, which enhances the motor's overall performance, reduces heat generation, and minimizes vibration. Featuring an integrated design of motor and driver, it enables more compact installation and reduces external interference.

This motor is equipped with a serial port debugging function and uses a MINI USB interface for communication. Users can set various parameters such as subdivision, current, and working mode through the PC-based upper computer debugging software, which greatly enriches the product's practical functions and can meet the application needs of the vast majority of scenarios.

★产品特点/PRODUCT FEATURES

- ◆电机和驱动一体化，节省接线人工

◆体积小，便于安装

◆新一代 32 位 DSP 技术，平稳性佳、兼容性强、性价比高

◆外置拨码设置驱动器初始旋转方向、电流、细分

◆光隔离差分信号输入

◆内置微细分，低速平稳性极佳

◆脉冲响应频率最高可达 200KHz（更高可改）

◆细分设定范围 200-60000（可通过上位机设置任意微细分）

◆精密电流控制使电机发热大幅降低

◆低振动低噪声

◆具有过压、欠压、缺相、超差等报警保护功能

◆输入电压范围：DC12V~50V
- ◆Integrated motor and driver, saving wiring labor

◆Small size, easy to install

◆New generation 32-bit DSP technology, featuring excellent smoothness, strong compatibility and high cost performance

◆External DIP switches for setting driver current and subdivision

◆Optically isolated differential signal input

◆Built-in micro-stepping for excellent low-speed smoothness

◆Maximum pulse response frequency up to 200KHz (can be modified for higher frequency)

◆Subdivision setting range: 200-60000 (arbitrary micro-stepping can be set via upper computer)

◆Precision current control significantly reduces motor heating

◆Low vibration and low noise

◆Equipped with alarm and protection functions against overvoltage, undervoltage and phase loss

◆Input voltage range: DC12V~50V



★一体式RS485总线型开/闭环步进电机列表/LIST OF INTEGRATED RS485 BUS-TYPE OPEN/CLOSED-LOOP STEPPER MOTOR

分类别 Classification	型号 Model	电流A Current	电压V Voltage	机座 Base	总机身長 (mm) (含驱动器) The total length of the switchboard (including the driver)	轴径 (mm) Shaft diameter	轴长 (mm) Axis length
一体式RS485总线型开环步进电机 INTEGRATED RS485 BUS-TYPE OPEN-LOOP STEPPER MOTOR	IRS28M-32	1.4~2.1	DC(12~40)	28	48	5	20
	IRS28M-42	1.4~2.1	DC(12~40)	28	58	5	20
	IRS28M-52	1.4~2.1	DC(12~40)	28	68	5	20
	IRS35M-36	1.4~2.1	DC(12~40)	35	56	5	24
	IRS35M-56	1.4~2.1	DC(12~40)	35	76	5	24
	IRS42M-40	1.4~2.1	DC(12~40)	42	62	5	24
	IRS42M-48	1.4~2.1	DC(12~40)	42	70	5	24
	IRS42M-60	1.4~2.1	DC(12~40)	42	82	5	24
	IRS57M-56	1.4~5.3	DC(24~48)	57	74	8	21
	IRS57M-80	1.4~5.3	DC(24~48)	57	98	8	21
	IRS60M-68	1.4~5.3	DC(24~48)	60	86	8	21
	IRS60M-86	1.4~5.3	DC(24~48)	60	104	8	21
一体式RS485总线型闭环步进电机 INTEGRATED RS485 BUS-TYPE CLOSE-LOOP STEPPER MOTOR	IRS28EM-32	自适应 adaptive	DC(12~40)	28	48	5	20
	IRS28EM-42	自适应 adaptive	DC(12~40)	28	58	5	20
	IRS28EM-52	自适应 adaptive	DC(12~40)	28	68	5	20
	IRS35EM-36	自适应 adaptive	DC(12~40)	35	56	5	24
	IRS35EM-56	自适应 adaptive	DC(12~40)	35	76	5	24
	IRS42EM-40	自适应 adaptive	DC(12~40)	42	62	5	24
	IRS42EM-48	自适应 adaptive	DC(12~40)	42	70	5	24
	IRS42EM-60	自适应 adaptive	DC(12~40)	42	82	5	24
	IRS57EM-56	自适应 adaptive	DC(24~48)	57	74	8	21
	IRS57EM-80	自适应 adaptive	DC(24~48)	57	98	8	21
	IRS60EM-68	自适应 adaptive	DC(24~48)	60	86	8	21
	IRS60EM-86	自适应 adaptive	DC(24~48)	60	104	8	21

★产品概述/PRODUCT OVERVIEW

一体式 RS485 总线型开环（闭环）步进电机采用最新推出的带串口调试功能的数字式混合步进伺服驱动器，集成了 MODBUS-RTU 标准协议规范，供电接口采用 XH2.54-2P 针座，IO 输入输出以及通讯接口采用 PHB2.0-2×6P 针座，用户可通过上位机调试软件设置细分、电流、速度、工作模式等多种参数，极大地丰富了产品的实用功能，能够满足大多数场合的应用需要。

一体式 RS485 总线型开环（闭环）步进电机采用类伺服的控制原理，兼容了开环步进和伺服系统的双重优点，采用最新 32 位 DSP 控制技术，极大地提升了步进系统的性能。中低速都具有极佳的平稳性和超低噪声，高速力矩也得到极大提升，扩展了步进电机的速度应用范围。平滑、精确的纯正弦电流矢量控制技术有效的减小了电机发热，且其兼容性强、性价比高，能够满足绝大多数场合的应用。

The Integrated RS485 Bus-type Open-loop (Closed-loop) Stepper Motor adopts the newly launched digital hybrid stepper servo driver with serial port debugging function, and integrates the MODBUS-RTU standard protocol specification. The power supply interface uses an XH2.54-2P pin header, while the IO input/output ports and communication interface adopt a PHB2.0-2×6P pin header. Users can set various parameters such as subdivision, current, speed, and working mode through the upper computer debugging software, which greatly enriches the product's practical functions and can meet the application needs of most scenarios.

The Integrated RS485 Bus-type Open-loop (Closed-loop) Stepper Motor adopts a servo-like control principle, combining the dual advantages of open-loop stepper and servo systems. It uses the latest 32-bit DSP control technology, which significantly improves the performance of the stepper system. It features excellent smoothness and ultra-low noise at medium and low speeds, and the high-speed torque is also greatly enhanced, expanding the speed application range of the stepper motor. The smooth and precise pure sine current vector control technology effectively reduces motor heat generation. Additionally, it has strong compatibility and high cost performance, capable of meeting the application needs of the vast majority of scenarios.

★产品特点/PRODUCT FEATURES

- ◆新一代 32 位 DSP 技术，平稳性佳、兼容性强、性价比高

◆仅支持开环模式运行

◆支持速度模式、位置模式、多段位置 / 速度模式、JOG+、JOG- 及回原点模式

◆电流、锁机电流、细分、PI 等参数都可通过主站设置及查询

◆采用 RS485 总线，带隔离，支持标准 MODBUS-RTU 协议

◆拨码 SW1-4 设置驱动器通讯地址，可支持 15 个设备，更多可通过主站设置

◆3 路光电隔离可编程输入接口，接收外部控制信号，实现驱动器使能、启停，限位等功能

◆1 路光电隔离可编程输出接口，输出驱动器状态及控制信号，如报警、到位、回原点完成等功能

◆内置微细分，低速平稳性极佳

◆具有过流（保留）、过压、欠压、缺相等报警保护功能

◆纯正弦电流矢量控制有效降低电机发热

◆直流供电，输入电压范围：DC12V~50V
- ◆New-generation 32-bit DSP technology, featuring excellent smoothness, strong compatibility and high cost performance

◆Only supports operation in open-loop mode

◆Supports speed mode, position mode, multi-segment position/speed mode, JOG+, JOG- and homing mode

◆Parameters such as current, holding current, subdivision and PI can all be set and queried via the master station

◆Adopts RS485 bus with isolation and supports the standard MODBUS-RTU protocol

◆DIP switches SW1 - 4 are used to set the driver communication address, supporting up to 15 devices. More devices can be set via the master station

◆3-channel photoelectric isolated programmable input interfaces, which receive external control signals to realize functions such as driver enabling, start-stop and limit

◆1-channel photoelectric isolated programmable output interface, which outputs driver status and control signals, such as alarm, in-position and homing completion

◆Built-in micro-subdivision, providing excellent low-speed smoothness

◆Has alarm and protection functions for overcurrent (reserved), overvoltage, undervoltage and phase failure

◆Pure sine current vector control effectively reduces motor heating

◆DC power supply, input voltage range: DC12V - 50V



★HB系列开环两相步进电机列表/LIST OF HB SERIES OPEN-LOOP TWO-PHASE STEPPER MOTOR

座号 Mounting Size	标准型号 Standard Model	电流 (A) Current	轴径 (mm) Shaft diameter	轴长(mm) Axis length	电机引线长度(M) Motor Lead Length	保持转矩 (N·m) Holding Torque	机身長 (mm) Body Length
42	GR42HB40	2	5	24	1	0.4	40
	GR42HB48	2	5	24	1	0.6	48
	GR42HB60	2	5	24	1	0.8	60
57	GR57HB56	4	8	21	1	1.3	56
	GR57HB76	5	8	21	1	2.3	76
	GR57HB80	5	8	21	1	2.4	80
	GR57HB80-30	5	8	30	1	2.4	80
	GR57HB112-30	5	8	30	1	3	113
60	GR60HB86	5	8	21	1	3	89
	GR60HB86-30	5	8	30	1	3	89
86	GR86HB80	6	14	32	1	4.5	80
	GR86HB118	6	14	32	1	8.5	118
	GR86HB156	6	14	32	1	12	155

★产品概述/PRODUCT OVERVIEW

格睿公司的 HB 系列开环两相步进电机采用日本新设计、新工艺和进口核心材料打造的高性能、较低成本步进电机。与市面上常见步进电机相比，具有更大力矩、更低发热、更好的运行平稳性等优点。由于采用了大规模的自动化生产线和严格的品质管理体系，此系列步进电机更为稳定可靠，拥有更优越的性能参数批量一致性！

The HB series open-loop two-phase stepper motors of our company are high-performance and cost-effective products, crafted with Japan's advanced design, new manufacturing processes, and imported core materials. Compared with common stepper motors available on the market, they boast advantages such as higher torque, lower heat generation, and better operational stability. Thanks to the adoption of large-scale automated production lines and a strict quality management system, this series of stepper motors is more stable and reliable, and features superior batch consistency in performance parameters!



★HS系列两相闭环步进电机列表/LIST OF HS SERIES TWO-PHASE CLOSED-LOOP STEPPER MOTOR

座号 Mounting Size	标准型号 Standard Model	电流 (A) Current	轴径 (mm) Shaft diameter	轴长(mm) Axis length	电机引线长度(M) Motor Lead Length	保持转矩 (N·m) Holding Torque	机身長 (mm) Body Length
42	GR42HS48	2	5	24	0.3	0.6	48
	GR42HS60	2	5	24	0.3	0.8	60
57	GR57HS56	4	8	21	3	1.3	56
	GR57HS80	5	8	21	3	2.4	80
	GR57HS80-30	5	8	30	3	2.4	80
60	GR60HS86	5	8	21	3	3	89
	GR60HS86-30	5	8	30	3	3	89
86	GR86HS80	6	14	32	3	4.5	80
	GR86HS118	6	14	32	3	8.5	118
	GR86HS155	6	14	32	3	12	155

★产品概述/PRODUCT OVERVIEW

格睿公司的两相闭环步进电机是在两相开环步进电机基础上，增加位置反馈单元（如编码器）和闭环控制电路的精密驱动元件，核心特点是“兼具步进电机的结构简洁性，与伺服电机的位置精度、抗失步能力”，广泛应用于对定位精度、响应速度、负载稳定性有要求的自动化设备中（如 3D 打印机、激光雕刻机、小型数控机床、医疗器械等）。

Our company's two-phase closed-loop stepper motors are precision drive components developed based on two-phase open-loop stepper motors, with the addition of a position feedback unit (e.g., an encoder) and a closed-loop control circuit. Their core feature is "combining the structural simplicity of stepper motors with the positional accuracy and step-loss resistance of servo motors". They are widely used in automated equipment that requires positioning accuracy, response speed, and load stability (such as 3D printers, laser engraving machines, small CNC machine tools, and medical devices).



★产品特点/PRODUCT FEATURES

- ◆高精度

◆高稳定性

◆快速响应

◆智能调节
- ◆High Precision

◆High Stability

◆Fast Response

◆Intelligent Regulation

★ETHERCAT总线型开环/闭环步进电机驱动器列表/LIST OF ETHERCAT BUS-TYPE OPEN-LOOP/CLOSED-LOOP STEPPER MOTOR DRIVER

类别	型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
EtherCAT总线型开环步进电机驱动器 EtherCAT Bus-type Open-Loop Stepper Motor Driver	EC1-530	0.1~3.0	DC(24~48)	20/28/35/42
	EC1-570	0.1~7.0	DC(24~48)	57/60
	EC1-872	0.1~7.2	DC(24~48)	57/60/86
EtherCAT总线型闭环步进电机驱动器 EtherCAT Bus-type Closed-Loop Stepper Motor Driver	EC1-57E	0.1~7.0	DC(24~48)	57/60
	ECA1-86E	0.1~8.6	DC(24~48)	57/60/86
			AC(20~60)	
输入信号 Input Signal	原点、正限位、负限位、急停、探针 Home Position,Positive Limit,Negative Limit,Emergency Stop,Probe			
输出信号 Output Signal	报警输出、到位输出、电机使能输出、自由输出 Alarm Output, In-position Output, Motor Enable Output, Free Output			



ECA1-86E

EC1-872

★产品概述/PRODUCT OVERVIEW

EC1 系列总线型开环 / 闭环步进电机驱动器采用 EtherCAT 总线通讯接口, 将 EtherCAT 从站技术、矢量控制技术、内置微细分技术、自适应滤波技术融为一体, 实现了步进系统的实时控制与实时数据传输, 优化了步进电机的性能 中低速具有极佳的平稳性和超低噪声; 高速力矩得到极大提升, 扩展了步进电机的速度应用范围; 平滑、精确的纯正弦电流矢量控制技术有效的减小了电机发热。

EC1 系列总线型开环步进驱动器已完美支持倍福、欧姆龙、基恩士、汇川、信捷等多家主站控制系统, 并且已经广泛应用于纺织、机器人、锂电设备、3C 电子、新能源, 光伏设备, 医疗设备, 检测设备等行业。

The EC1 series bus-type open-loop/closed-loop stepper motor drivers adopt EtherCAT bus communication interface, integrating EtherCAT slave technology, vector control technology, built-in micro-stepping technology, and adaptive filtering technology. This integration enables real-time control and real-time data transmission of the stepping system, optimizing the performance of stepper motors: excellent stability and ultra-low noise at medium and low speeds; significantly improved high-speed torque, expanding the speed application range of stepper motors; smooth and precise pure sine current vector control technology effectively reduces motor heating.

The EC1 series bus-type open-loop stepper drivers have perfectly supported master station control systems from multiple manufacturers such as Beckhoff, Omron, Keyence, Inovance, and Xinje. They have been widely applied in industries including textiles, robotics, lithium battery equipment, 3C electronics, new energy, photovoltaic equipment, medical equipment, and testing equipment.

★产品特点/PRODUCT FEATURES

- ◆ 新一代 32 位 RISC-V MCU, 性价比超高、平稳性佳、噪声、振动性能优越

◆ 采用 EtherCAT 从站技术, 支持 CIA301 以及 CIA402 子协议, 支持 CSP、PV、PP、HM 模式

◆ 用户可以通过 EtherCAT 总线或者串口通讯的方式设置电流、细分及锁机电流大小

◆ 内置单轴控制器功能: 用户可以通过总线设置同步位置模式、速度模式、位置模式、回原点模式

◆ 3 路光电隔离可编程输入接口, 接收外部控制信号, 实现驱动器限位, 原点, 急停, 探针等功能

◆ 内置电机参数设定

◆ 静止时可设置任意电流减流比例

◆ 具有过压、欠压等保护功能

◆ 支持位置控制、速度控制等模式

◆ 纯正弦电流矢量控制有效降低电机发热

◆ 1 路光电隔离可编程输出接口, 输出驱动器状态及控制信号

◆ 设有任意细分调节, 可以随意更改细分

◆ 电压范围: DC 24~50V
- ◆ New-generation 32-bit RISC-V MCU with ultra-high cost performance, excellent smoothness, and superior noise and vibration performance

◆ Adopts EtherCAT slave technology, supports CIA301 and CIA402 sub-protocols, and supports CSP, PV, PP, HM modes

◆ Users can set the current, micro-stepping and locking current through EtherCAT bus or serial communication

◆ Built-in single-axis controller function: Users can set synchronous position mode, speed mode, position mode and homing mode through the bus

◆ 3 channels of optically isolated programmable input interfaces, receiving external control signals to realize driver limit, origin, emergency stop, probe and other functions

◆ Built-in motor parameter setting

◆ Arbitrary current reduction ratio can be set when stationary

◆ Equipped with overvoltage, undervoltage and other protection functions

◆ Supports position control, speed control and other modes

◆ Pure sine current vector control effectively reduces motor heating

◆ 1 channel of optically isolated programmable output interface, outputting driver status and control signals

◆ Equipped with arbitrary micro-stepping adjustment, allowing free modification of micro-stepping

◆ Voltage range: DC 24-50V

★RS485总线型开环/闭环步进电机驱动器列表/LIST OF RS485 BUS-TYPE OPEN-LOOP/CLOSED-LOOP STEPPER MOTOR DRIVER

型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
RSA57E	自适应adaptive	AC(20~50)/DC(24~70)	42、57、60
RSA86E	自适应adaptive	AC(20~50)/DC(24~70)	57、60、86

★产品概述/PRODUCT OVERVIEW

RS485 总线型开环（闭环）步进电机驱动器是最新推出的带串口调试功能的数字式混合步进伺服驱动器, 集成了 MODBUS-RTU 标准协议规范, 通讯网口采用标准的 RJ45 接口, 用户可通过上位机调试软件设置细分、电流、速度、工作模式等多种参数, 极大地丰富了产品的实用功能, 能够满足大多数场合的应用需要。

RS485 总线型开环（闭环）步进电机驱动器采用类伺服的控制原理, 兼容了开环步进和伺服系统的双重优点, 采用最新 32 位 DSP 控制技术, 极大地提升了步进系统的性能。中低速都具有极佳的平稳性和超低噪声, 高速力矩也得到极大提升, 扩展了步进电机的速度应用范围。平滑、精确的纯正弦电流矢量控制技术有效的减小了电机发热, 且其兼容性强、性价比高, 能够满足绝大多数场合的应用。



RSA57E

RSA86E

The RS485 Bus-type Open-loop (Closed-loop) Stepper Motor Driver is a newly launched digital hybrid stepper servo driver with serial port debugging function, integrating the MODBUS-RTU standard protocol specification. It adopts a standard RJ45 interface for communication network, allowing users to set various parameters such as subdivision, current, speed and working mode through the upper computer debugging software. This greatly enriches the practical functions of the product and can meet the application needs of most scenarios.

The RS485 Bus-type Open-loop (Closed-loop) Stepper Motor Driver adopts a servo-like control principle, combining the dual advantages of open-loop stepper and servo systems. It utilizes the latest 32-bit DSP control technology, which significantly improves the performance of the stepper system. It features excellent smoothness and ultra-low noise at medium and low speeds, with greatly enhanced high-speed torque, expanding the speed application range of stepper motors. The smooth and precise pure sine current vector control technology effectively reduces motor heat generation. Additionally, it offers strong compatibility and high cost performance, making it suitable for the vast majority of application scenarios.

★产品特点/PRODUCT FEATURES

- ◆ 新一代 32 位 DSP 技术, 平稳性佳、兼容性强、性价比高

◆ 支持开闭环模式切换

◆ 支持速度模式、位置模式、多段位置模式及回原点模式

◆ 电流、锁机电流、细分、PI 等参数都可通过主站设置及查询

◆ 采用 RS485 总线, 带隔离, 支持标准 MODBUS-RTU 协议

◆ 拨码 SW1-5 设置驱动器通讯地址, 可支持 31 个设备, 更多可通过主站设置

◆ 1 路光电隔离可编程输入接口, 接收外部控制信号, 实现驱动器使能, 启停, 限位等功能

◆ 5 路光电隔离可编程输出接口, 输出驱动器状态及控制信号, 如报警、到位、回原点完成等功能

◆ 内置微细分, 低速平稳性极佳

◆ 具有过流、过压、欠压、缺相、超差等保护功能

◆ 纯正弦电流矢量控制有效降低电机发热

◆ 交直流通用, 电压范围: AC20~50V/DC24V~70V
- ◆ New-generation 32-bit DSP technology, featuring excellent smoothness, strong compatibility and high cost performance

◆ Supports switching between open-loop and closed-loop modes

◆ Supports speed mode, position mode, multi-segment position mode and homing mode

◆ Parameters such as current, holding current, subdivision and PI can all be set and queried via the master station

◆ Adopts RS485 bus with isolation and supports standard MODBUS-RTU protocol

◆ DIP switches SW1-5 are used to set the driver communication address, supporting up to 31 devices. More devices can be set via the master station

◆ 1-channel photoelectric isolated programmable input interface, which receives external control signals to realize functions such as driver enabling, start-stop and limit

◆ 5-channel photoelectric isolated programmable output interfaces, which output driver status and control signals, such as alarm, in-position and homing completion

◆ Built-in micro-subdivision, providing excellent low-speed smoothness

◆ Equipped with protection functions against overcurrent, overvoltage, undervoltage, phase loss and over-tolerance

◆ Pure sine current vector control effectively reduces motor heating

◆ Universal for AC and DC, voltage range: AC20~50V/DC24V~70V

★DM系列两相开环步进电机驱动器列表/LIST OF DM SERIES TWO-PHASE OPEN-LOOP STEPPER MOTOR DRIVER

类别 Category	型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
DM系列常规两相数字式驱动器 DM series conventional two-phase digital driver	DM422-JS	0.3~2.2	DC(12~40)	28、35、42
	DM542M	1.0~4.2	DC(24~48)	42、57、60、86
	DM456S	1.4~5.6	DC(24~48)	42、57、60、86
	DM556S	1.4~5.6	DC(24~48)	42、57、60、86
	DMA856S	1.4~5.6	AC(20~55)/DC(24~80)	57、60、86
	DMA872S	1.4~7.2	AC(20~55)/DC(24~80)	57、60、86
	DM860H-KT	2.4~7.2	AC(20~80)/DC(24~110)	57、86、110



DM556

★产品概述/PRODUCT OVERVIEW

格睿物联技术有限公司推出的 DM 系列两相数字式步进电机驱动器，采用类伺服的控制原理，将矢量控制技术、内置微细分技术、自适应滤波技术融为一体，极大地优化了步进电机的性能，低中高速运行都很平稳，噪音小。精确、平滑的纯正弦电流矢量控制技术有效的减少了电机发热。其性价比极高，能够满足绝大多数场合的应用需要。

DM 系列两相数字式步进电机驱动器的正常驱动电压范围在 DC24~50V，适配峰值电流在 7.2A 以下，外径 28~86mm 的两相混合式步进电机。

The DM series two-phase digital stepper motor drivers launched by Shenzhen GRMOT Technology Co., Ltd. adopt a servo-like control principle, integrating vector control technology, built-in micro-subdivision technology, and adaptive filtering technology. This greatly optimizes the performance of stepper motors, ensuring stable operation with low noise at low, medium and high speeds. The precise and smooth pure sine current vector control technology effectively reduces motor heat generation. With extremely high cost performance, it can meet the application needs of most occasions.

The DM series two-phase digital stepper motor drivers have a normal driving voltage range of DC24~50V, and are suitable for two-phase hybrid stepper motors with a peak current below 7.2A and an outer diameter of 28~86mm.

★产品特点/PRODUCT FEATURES

- | | |
|--------------------------|--|
| ◆全新 32 位 DSP 技术 | ◆ New 32-bit DSP technology |
| ◆便于安装 | ◆ Easy to install |
| ◆可驱动 4、6、8 线两相步进电机 | ◆ Capable of driving 4-wire, 6-wire and 8-wire two-phase stepper motors |
| ◆光隔离差分信号输入 | ◆ Optically isolated differential signal input |
| ◆内置微细分 | ◆ Built-in micro-subdivision |
| ◆脉冲响应频率最高可达 200KHz（更高可改） | ◆ Maximum pulse response frequency up to 200KHz (higher frequency available upon modification) |
| ◆精密电流控制使电机发热大为降低 | ◆ Precision current control significantly reduces motor heat generation |
| ◆低振动低噪声 | ◆ Low vibration and low noise |
| ◆静止时电流自动减半 | ◆ Current automatically halves when stationary |
| ◆具有过压、欠压、缺相等保护功能 | ◆ Equipped with protection functions against overvoltage, undervoltage and phase loss |

★交直流脉冲型闭环步进驱动器列表/LIST OF AC/DC PULSE-TYPE CLOSED-LOOP STEPPER DRIVER

类别 Category	型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
闭环驱动器 Closed loop driver	HS1-42	自适应adaptive	AC(20~50)/DC(24~70)	28、42
	HS1-57	自适应adaptive	AC(20~50)/DC(24~70)	57、60、86
	HS86HV	自适应adaptive	AC(20~80)/DC(24~110)	57、60、86



HS1-57

★产品概述/PRODUCT OVERVIEW

格睿公司推出的交直流脉冲型闭环步进驱动器，采用最新专用电机控制数字信号处理器，是一种先进的运动控制设备，结合了传统的步进驱动器和闭环反馈系统的优势。它能够提供更精确、更大的扭矩输出以及更低的驱动噪声。

本驱动器预留了刹车输出控制功能，在工作电压范围内，可稳定输出约 DC24V 电压，用户可直接接入刹车的电源线（注意区分正负），中间不需要外接继电器等器件，可以极大地方便用户使用。带串口调试功能，通讯采用 MINI USB 接口，用户可通过 PC 端上位机调试软件设置细分、电流、工作模式等多种参数，极大地丰富了产品的实用功能，能够满足绝大多数场合的应用。交直流脉冲型闭环步进驱动器电流自适应，适配外径 28~86mm 的两相混合式闭环步进电机。

The AC/DC pulse-type closed-loop stepper driver launched by our company adopts the latest dedicated motor control digital signal processor (DSP) and is an advanced motion control device that combines the advantages of traditional stepper drivers and closed-loop feedback systems. It can deliver higher precision, greater torque output, and lower driving noise.

This driver reserves a brake output control function. Within the operating voltage range, it can stably output a voltage of approximately DC24V. Users can directly connect the power cord of the brake (note to distinguish positive and negative poles) without needing external relays or other devices in between, which greatly facilitates user operation. Equipped with serial port debugging function and using a MINI USB interface for communication, users can set various parameters such as subdivision, current and working mode through the PC-based upper computer debugging software. This greatly enriches the product's practical functions and can meet the application needs of most occasions. The AC/DC Pulse-type Closed-loop Stepper Driver features current self-adaptation and is compatible with two-phase hybrid closed-loop stepper motors with an outer diameter of 28~86mm.

★产品特点/PRODUCT FEATURES

- | | |
|----------------------------------|--|
| ◆体积小，便于安装 | ◆ Small size, easy to install |
| ◆预留了刹车输出控制接口，不需要继电器中间控制 | ◆ Reserved brake output control interface, no intermediate relay control required |
| ◆新一代 32 位 DSP 技术，平稳性佳、兼容性强、性价比 | ◆ New-generation 32-bit DSP technology, featuring excellent smoothness, strong compatibility and high cost performance |
| ◆外置拨码设置驱动器细分、初始方向、报警极性、算法、平滑系数 | ◆ External DIP switches for setting driver subdivision, initial direction, alarm polarity, algorithm and smoothing coefficient |
| ◆光隔离差分信号输入 | ◆ Optically isolated differential signal input |
| ◆内置微细分，低速平稳性极佳 | ◆ Built-in micro-subdivision, providing excellent low-speed smoothness |
| ◆脉冲响应频率最高可达 200KHz（更高可改） | ◆ Maximum pulse response frequency up to 200KHz (higher frequency available upon modification) |
| ◆细分设定范围 400~60000（可通过上位机设置任意微细分） | ◆ Subdivision setting range: 400-60000 (arbitrary micro-subdivision can be set via upper computer) |
| ◆精密电流控制使电机发热大幅降低 | ◆ Precision current control significantly reduces motor heat generation |
| ◆低振动低噪声 | ◆ Low vibration and low noise |
| ◆具有过压、超差等报警保护功能 | ◆ Equipped with alarm and protection functions against overvoltage and over-tolerance |
| ◆输入电压范围：DC 24V~50V /AC 18V~36V | ◆ Input voltage range: DC 24V~50V / AC 18V~36V |

★DS系列小体积步进电机驱动器列表/LIST OF DS SERIES SMALL-VOLUME COMPACT STEPPER MOTOR DRIVER

类别 Category	型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
DS系列小体积两相数字式驱动器 DS series small volume two-phase digital driver	DS535	0.3~3.5	DC(20~50)	28、35、42
	MINI DS556	1.4~5.6	DC(20~50)	42、57、86
	DS556	1.4~5.6	DC(20~50)	42、57、86
	DS860H	2.4~7.2	AC(20~80)/DC(24~110)	57、86、110



DS535

★产品概述/PRODUCT OVERVIEW

DS 系列小体积驱动器是格睿物联技术有限公司新推出的带串口调试功能的两相数字式步进驱动器，采用最新 32 位 DSP 控制技术，集成了 MODBUS-RTU 标准协议规范，用户可通过上位机调试软件设置 200~40000 内的任意细分以及工作模式等多个参数，极大地丰富了产品的实用功能，能够满足大多数场合的应用需要。

DS 系列小体积驱动器采用类伺服的控制原理，将矢量控制技术、内置微细分技术、自适应滤波技术融为一体，极大地优化了步进电机的性能，低中高速运行都很平稳，噪音小。精确、平滑的纯正弦电流矢量控制技术有效的减少了电机发热。

DS 系列小体积驱动器的驱动电压范围在 DC20~50V，适配峰值电流范围 0.3~7.2A，外径 28~86mm 的两相混合式步进电机。

The DS series small-volume driver is a new two-phase digital stepper driver with serial port debugging function launched by Green IoT Technology Co., Ltd. It adopts the latest 32-bit DSP control technology and integrates the modbus-rtu standard protocol specification. Users can set any subdivision within 200-40000 and multiple parameters such as working mode through the upper computer debugging software, which greatly enriches the practical functions of the product and can meet the application needs of most occasions.

The DS series small-volume driver adopts the servo-like control principle, integrates vector control technology, built-in micro-subdivision technology and adaptive filtering technology, which greatly optimizes the performance of the stepper motor. It runs stably at low, medium and high speeds with low noise. The precise and smooth pure sine current vector control technology effectively reduces motor heating.

The driving voltage range of ds series small-volume driver is DC20 ~ 50V, which is suitable for two-phase hybrid stepper motors with peak current range of 0.3 ~ 7.2A and outer diameter of 28 ~ 86mm.

★产品特点/PRODUCT FEATURES

- ◆带串口调试功能

◆全新 32 位 DSP 技术

◆体积小，便于安装

◆可驱动 4、6、8 线两相步进电机

◆光隔离差分信号输入

◆内置微细分

◆细分设定范围 200~40000

◆脉冲响应频率最高可达 200KHz（更高可改）

◆电流可任意设置

◆精密电流控制使电机发热大为降低

◆具有过压、欠压、过流等保护功能

◆静止时电流自动减半
- ◆ With serial port debugging function

◆ New 32-bit DSP technology

◆ Small size, easy to install

◆ Capable of driving 4-wire, 6-wire and 8-wire two-phase stepper motors

◆ Optically isolated differential signal input

◆ Built-in micro-subdivision

◆ Subdivision setting range: 200-40000

◆ Maximum pulse response frequency up to 200KHz (higher frequency available upon modification)

◆ Current can be set arbitrarily

◆ Precision current control significantly reduces motor heat generation

◆ Equipped with protection functions against overvoltage, undervoltage and overcurrent

◆ Current automatically halves when stationary

类别	型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
三相开环步进驱动器 Three-Phase Open-Loop Stepper Driver	3DM583	2.1~8.3	DC(20~50)	57、86
	3DMA583	2.1~8.3	DC(24~80)	57、86
			AC(20~60)	



3DM583

★产品概述/PRODUCT OVERVIEW

格睿物联技术有限公司推出的三相数字式步进驱动器，采用类伺服的控制原理，将矢量控制技术、内置微细分技术、自适应滤波技术融为一体，极大地优化了步进电机的性能，低中高速运行都很平稳，噪音小。精确、平滑的纯正弦电流矢量控制技术有效的减少了电机发热。其性价比极高，能够满足绝大多数场合的应用需要。

三相数字式步进驱动器的正常驱动电压范围在 DC24~80V 或者 AC20~60V，适配峰值电流在 8.3A 以下，外径 57~86mm 的三相混合式步进电机。

The three-phase digital stepper driver launched by Shenzhen GRMOT Technology Co., Ltd. adopts servo-like control principles and integrates vector control technology, built-in micro-stepping technology, and adaptive filtering technology. This integration greatly optimizes the performance of stepper motors, ensuring stable operation at low, medium, and high speeds with low noise. The precise and smooth pure sine current vector control technology effectively reduces motor heating. It boasts extremely high cost performance and can meet the application needs of most scenarios.

The normal driving voltage range of the three-phase digital stepper driver is DC 24~80V or AC 20~60V. It is compatible with three-phase hybrid stepper motors with a peak current of less than 8.3A and an outer diameter of 57~86mm.

★产品特点/PRODUCT FEATURES

- ◆全新 32 位 DSP 技术

◆便于安装

◆可驱动三相步进电机

◆光隔离差分信号输入

◆内置微细分

◆脉冲响应频率最高可达 200KHz（更高可改）

◆精密电流控制使电机发热大为降低

◆低振动低噪声

◆静止时电流自动减半

◆具有过压、欠压、缺相等保护功能
- ◆ New 32-bit DSP technology

◆ Easy to install

◆ Capable of driving three-phase stepper motors

◆ Optically isolated differential signal input

◆ Built-in micro-stepping

◆ Maximum pulse response frequency up to 200KHz (can be modified to a higher value)

◆ Precision current control significantly reduces motor heating

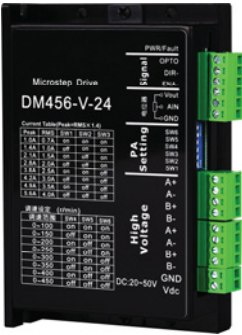
◆ Low vibration and low noise

◆ Current automatically halves when stationary

◆ Equipped with overvoltage, undervoltage, phase loss and other protection functions

★驱控一体式驱动器列表/LIST OF DRIVE-CONTROL INTEGRATED DRIVER

类别 Category	型号 Model	峰值电流 (A) Peak current	电压 (V) Voltage	适配电机 Adapted motor
特殊功能驱动器 Special function driver	GRX04	1.4~5.6	DC(20~50)	直接控制开环刹车电机无需接继电器 Directly control the open-loop brake motor without the need for a relay
	HS1-60-SC	自适应 adaptive	AC(20~50)/DC(24~70)	直接控制开环刹车电机无需接继电器 Directly control the open-loop brake motor without the need for a relay
	DM456-V-24	1.4~5.6	DC(20~50)	一拖二电位器调速或模拟量调速 One to two potentiometer speed regulation or analog speed regulation



DM456-V-24

★产品概述/PRODUCT OVERVIEW

驱控一体式驱动器是格睿物联技术有限公司推出的模拟量调速产品，可同时接两个电机实现同步调速功能。其外接 24V 启动和方向信号控制电机的启动和反转，电机运行速度通过外接 10K 电位器调节，最大运行速度通过拨码选择设置。

驱控一体式驱动器采用类伺服的控制原理，将矢量控制技术、内置微细分技术、自适应滤波技术融为一体，极大地优化了步进电机的性能，低中高速运行都很平稳，噪音小。精确、平滑的纯正弦电流矢量控制技术有效的减少了电机发热。其性价比极高，能够满足绝大多数场合的应用需要。

驱控一体式驱动器的正常驱动电压范围在 DC24~50V，适配峰值电流在 1.4~5.6A 之间，外径 42~86mm 的两相混合式步进电机。

The drive-control integrated driver is an analog speed control product launched by Shenzhen GRMOT Technology Co., Ltd. It can connect two motors simultaneously to achieve synchronous speed control function. It connects to 24V start and direction signals externally to control the motor's start and reverse rotation. The motor running speed is adjusted through an external 10K potentiometer, and the maximum running speed is set via dip switch selection.

The drive-control integrated driver adopts a servo-like control principle, integrating vector control technology, built-in micro-subdivision technology, and adaptive filtering technology. This greatly optimizes the performance of stepper motors, ensuring stable operation with low noise at low, medium and high speeds. The precise and smooth pure sine current vector control technology effectively reduces motor heat generation. With extremely high cost performance, it can meet the application needs of most occasions.

The drive-control integrated driver has a normal driving voltage range of DC24~50V, and is suitable for two-phase hybrid stepper motors with a peak current between 1.4~5.6A and an outer diameter of 42~86mm.

★产品特点/PRODUCT FEATURES

◆全新 32 位 DSP 技术

◆便于安装

◆可驱动 4、6、8 线两相步进电机

◆光隔离差分信号输入

◆内置微细分

◆脉冲响应频率最高可达 200KHz（更高可改）

◆精密电流控制使电机发热大为降低

◆低振动低噪声

◆静止时电流自动减半

◆具有过压、欠压、缺相等保护功能

◆New 32-bit DSP technology

◆Easy to install

◆Capable of driving 4-wire, 6-wire and 8-wire two-phase stepper motors

◆Optically isolated differential signal input

◆Built-in micro-subdivision

◆Maximum pulse response frequency up to 200KHz (higher frequency available upon modification)

◆Precision current control significantly reduces motor heat generation

◆Low vibration and low noise

◆Current automatically halves when stationary

◆Equipped with protection functions against overvoltage, undervoltage and phase loss

★产品概述/PRODUCT OVERVIEW

SCT1-86E 驱动器是最新推出的一款直流调速调力矩型闭环步进驱动器，带 4 位数码管，用户可通过旋钮调整速度值、力矩等级值大小，数码管可显示设定的速度值、力矩等级值大小；驱动器供电电压范围 DC24V~70V，主要匹配 86 基座的闭环电机，但也可驱动 42~60 基座的闭环电机。

The SCT1-86E driver is a newly launched DC DCdc speed and torque adjustable closed-loop stepper driver, featuring a 4-digit nixie tube. Users can adjust the speed value and torque level via a knob, and the nixie tube can display the set speed value and torque level. The driver has a power supply voltage range of DC24V~70V, mainly matching closed-loop motors with 86 bases, but can also drive closed-loop motors with 42~60 bases.

★应用领域/APPLICATION FIELDS

适合各种中小型自动化设备和仪器，例如：智能物流、纺织行业、道闸行业、绕卷行业等。

It is suitable for various small and medium-sized automation equipment and instruments, such as: intelligent logistics, textile industry, barrier gate industry, winding industry, etc.



SCT1-86E

★产品特点/PRODUCT FEATURES

- ◆外形设计小巧，便于安装

◆新一代 32 位 DSP 技术，平稳性佳、兼容性强、性价比高

◆可适配 42~86 基座的闭环电机，主要匹配 86 基座的闭环电机

◆带 4 位数码管显示转速值、力矩等级值

◆可通过旋钮调整转速值、力矩等级值大小

◆通过 3 档 3 脚开关切换控制正转、反转、停止

◆低振动低噪声

◆具有过压、欠压等报警保护功能

◆输入电压范围：DC24V~70V
- ◆Compact design, easy to install

◆New-generation 32-bit DSP technology with excellent stability, strong compatibility and high cost performance

◆Compatible with closed-loop motors with 42~86 bases, mainly matching closed-loop motors with 86 bases

◆Equipped with a 4-digit nixie tube to display rotation speed and torque level

◆Rotation speed and torque level can be adjusted via a knob

◆Forward rotation, reverse rotation and stop can be switched via a 3-gear 3-pin switch

◆Low vibration and low noise

◆Equipped with overvoltage, undervoltage and other alarm protection functions

◆Input voltage range: DC24V~70V

★产品概述/PRODUCT OVERVIEW

SCT1-86 驱动器是最新推出的一款直流调速调力矩型开环步进驱动器，带 4 位数码管，用户可通过旋钮调整速度值、力矩等级值大小，数码管可显示设定的速度值、力矩等级值大小；驱动器供电电压范围 DC24V~70V，主要匹配 86 基座的开环电机，但也可驱动 42~60 基座的开环电机。

The SCT1-86 driver is a newly launched DC speed and torque adjustable open-loop stepper driver, equipped with a 4-digit nixie tube. Users can adjust the speed value and torque level via a knob, and the nixie tube can display the set speed value and torque level. The driver has a power supply voltage range of DC 24V~70V, mainly compatible with open-loop motors with an 86 base, but it can also drive open-loop motors with 42~60 bases.

★应用领域/APPLICATION FIELDS

适合各种中小型自动化设备和仪器，例如：智能物流、纺织行业、道闸行业、绕卷行业等。

It is suitable for various small and medium-sized automation equipment and instruments, such as: intelligent logistics, textile industry, barrier gate industry, winding industry, etc.



SCT1-86

★产品特点/PRODUCT FEATURES

- | | |
|---|--|
| ◆外形设计小巧，便于安装 | ◆ Compact design, easy to install |
| ◆新一代 32 位 DSP 技术，平稳性佳、兼容性强、性价比高 | ◆ New-generation 32-bit DSP technology, featuring excellent stability, strong compatibility and high cost performance |
| ◆可适配 42-86 基座的开环电机，主要匹配 86 基座的开环电机 | ◆ Compatible with open-loop motors with 42-86 bases, mainly matching open-loop motors with 86 bases |
| ◆带 4 位数码管显示转速值、力矩等级值 | ◆ Equipped with a 4-digit nixie tube to display rotation speed and torque level |
| ◆可通过旋钮调整转速值、力矩等级值大小 | ◆ Rotation speed and torque level can be adjusted via a knob |
| ◆通过 3 档 3 脚开关切换控制正转、反转、停止，也可通过驱动背部的 IO 接口控制启停 | ◆ Forward rotation, reverse rotation and stop can be controlled by switching a 3-gear 3-pin switch; start and stop can also be controlled via the IO interface on the back of the driver |
| ◆低振动低噪声 | ◆ Low vibration and low noise |
| ◆具有过压、欠压等报警保护功能 | ◆ Equipped with overvoltage, undervoltage and other alarm protection functions |
| ◆输入电压范围：DC24V~70V | ◆ Input voltage range: DC24V~70V |

★产品概述/PRODUCT OVERVIEW

格睿公司生产的减速机采用超高强度钢，具有高韧性，耐腐蚀，淬透性好等特点，进口拉齿机加工工艺，内齿轮确保了齿部精度一致性更佳状态；再经研磨处理使得齿轮运转兼具低噪音，无卡点。

适配的电机品牌：格睿公司的行星减速机输入端和后盖法兰可单独定制，适配 95% 以上的品牌及型号伺服电机：ABB、发那科、西门子、欧姆龙、三菱、台达、安川、松下、富士、汇川等等

可匹配的伺服电机有：50W、100W、200W、400W、600W、750W、1000W、1500W2000W、3000W、5000W、7500W

可匹配的步进电机型号有：28、42、57、60、86、110、130

The reducers produced by our company are made of ultra-high strength steel, featuring high toughness, corrosion resistance and good hardenability. With imported gear broaching machine processing technology imported, the internal gears ensure better consistency of tooth precision. After grinding treatment, the gear operation achieves both low noise and no jamming.

Compatible motor brands: The input end and rear cover flange of our planetary reducers can be customized separately, which are compatible with more than 95% of servo motor brands and models, including ABB, Fanuc, Siemens, Omron, Mitsubishi, Delta, Yaskawa, Panasonic, Fuji, Inovance, etc.

Compatible servo motors include: 50W, 100W, 200W, 400W, 600W, 750W, 1000W, 1500W, 2000W, 3000W, 5000W, 7500W.

Compatible stepper motor models include: 28, 42, 57, 60, 86, 110, 130.



★产品概述/PRODUCT OVERVIEW

格睿公司的低压直流伺服电机产品，有着高性能，低成本，高可靠性等特点。高精度转数控制的同时，控制位置精度，编码器即插即用无需设置。高精度，高速度，高响应，提升自动化设备的工作效率。

Our company's low-voltage DC servo motor products feature high performance, low cost, and high reliability. While achieving high-precision rotation speed control, they also ensure precise position control. The encoder is plug-and-play with no need for configuration. With high precision, high speed, and high responsiveness, they improve the working efficiency of automation equipment.



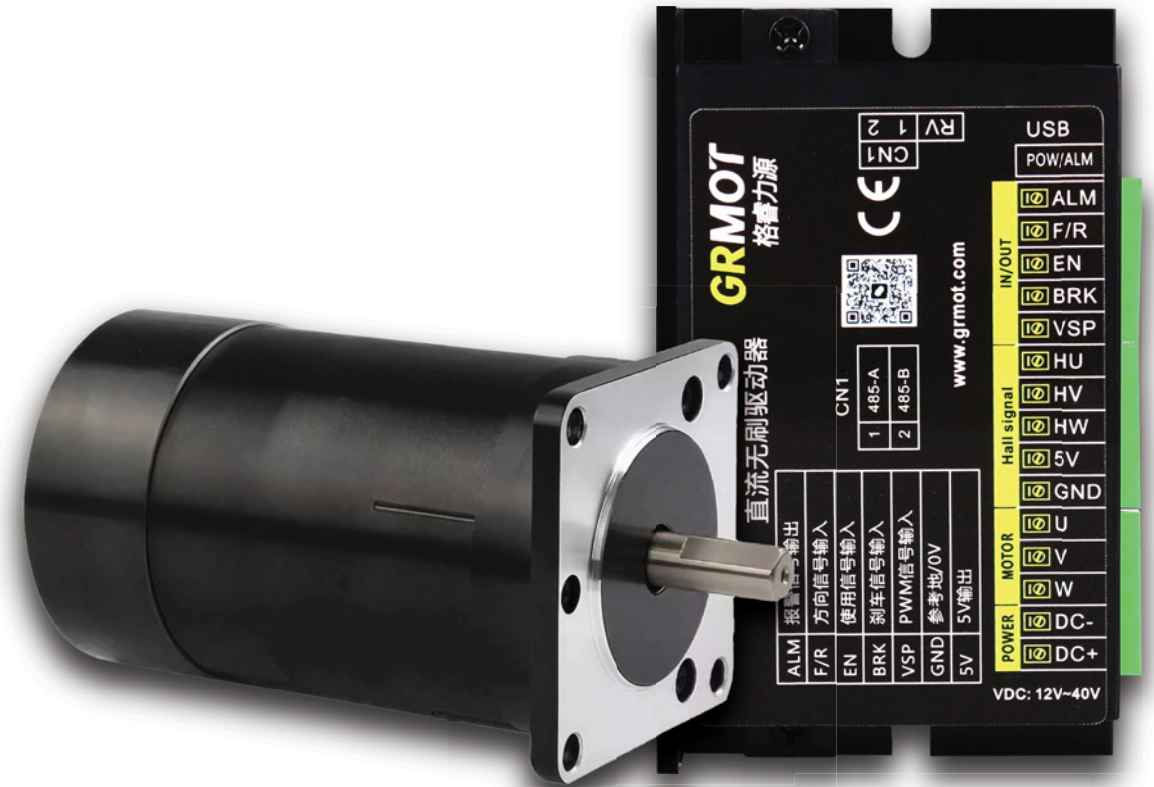
★产品特点/PRODUCT FEATURES

- ◆ 输出力大、速度高、响应快、惯量小、转动平稳、扭矩稳定；
- ◆ 电子换相方式灵活，可以方波换相或正弦波换相；
- ◆ 高效率、工作温度低、噪音低、电磁辐射低、使用寿命长，可用于各种环境；
- ◆ 可以选择各种反馈元件，包括增量编码器、绝对值编码器和旋变；
- ◆ 提供定制化方案服务。
- ◆ Large output force, high speed, fast response, small inertia, stable rotation and stable torque;
- ◆ Flexible electronic commutation methods, supporting square wave commutation or sine wave commutation;
- ◆ High efficiency, low operating temperature, low noise, low electromagnetic radiation, long service life, and applicable to various environments;
- ◆ Various feedback components available, including incremental encoders, absolute encoders and resolvers;
- ◆ Customized solution services provided.

★产品概述/PRODUCT OVERVIEW

格睿公司的直流无刷电机（Brushless DC Motor，简称 BLDC）是一种电子换向式直流电机，通过电子电路替代传统有刷电机的机械电刷和换向器，解决了有刷电机磨损、发热、噪音大等痛点，兼具直流电机的调速便利性和交流电机的高可靠性，已广泛应用于工业自动化、新能源汽车、家电、无人机等领域。

Our company's Brushless DC Motor (BLDC for short) is an electronically commutated DC motor. It replaces the mechanical brushes and commutators of traditional brushed motors with electronic circuits, solving the pain points of brushed motors such as wear, heat generation and high noise. Combining the convenience of speed regulation of DC motors and the high reliability of AC motors, it has been widely used in fields including industrial automation, new energy vehicles, home appliances and UAVs.



★产品特点/PRODUCT FEATURES

- ◆ 具有传统直流电机的有点，且无碳刷、换向器
- ◆ 体积小、重量轻、出力大
- ◆ 无级调速，过载能力强
- ◆ 调速范围宽：100RPM~ 额定转速
- ◆ 缓起缓停、制动特性好，可选自由停车和电磁制动停车
- ◆ 效率高，综合节电率可高达 20%~60%
- ◆ 可靠性搞、稳定性好、适应性抢，维修与保养简单
- ◆ 耐震动、噪音低、振动小、运转平滑、寿命长
- ◆ Possesses the advantages of traditional DC motors, with no carbon brushes or commutators
- ◆ Small size, light weight and high output force
- ◆ Stepless speed regulation and strong overload capacity
- ◆ Wide speed regulation range: 100RPM ~ rated speed
- ◆ Good soft start, soft stop and braking characteristics, with optional free parking and electromagnetic brake parking
- ◆ High efficiency, with a comprehensive power saving rate of up to 20% ~ 60%
- ◆ High reliability, good stability, strong adaptability, and simple maintenance
- ◆ Vibration resistance, low noise, small vibration, smooth operation and long service life