Akribis
where precision matters

AC SERVO CATALOG



where precision matters

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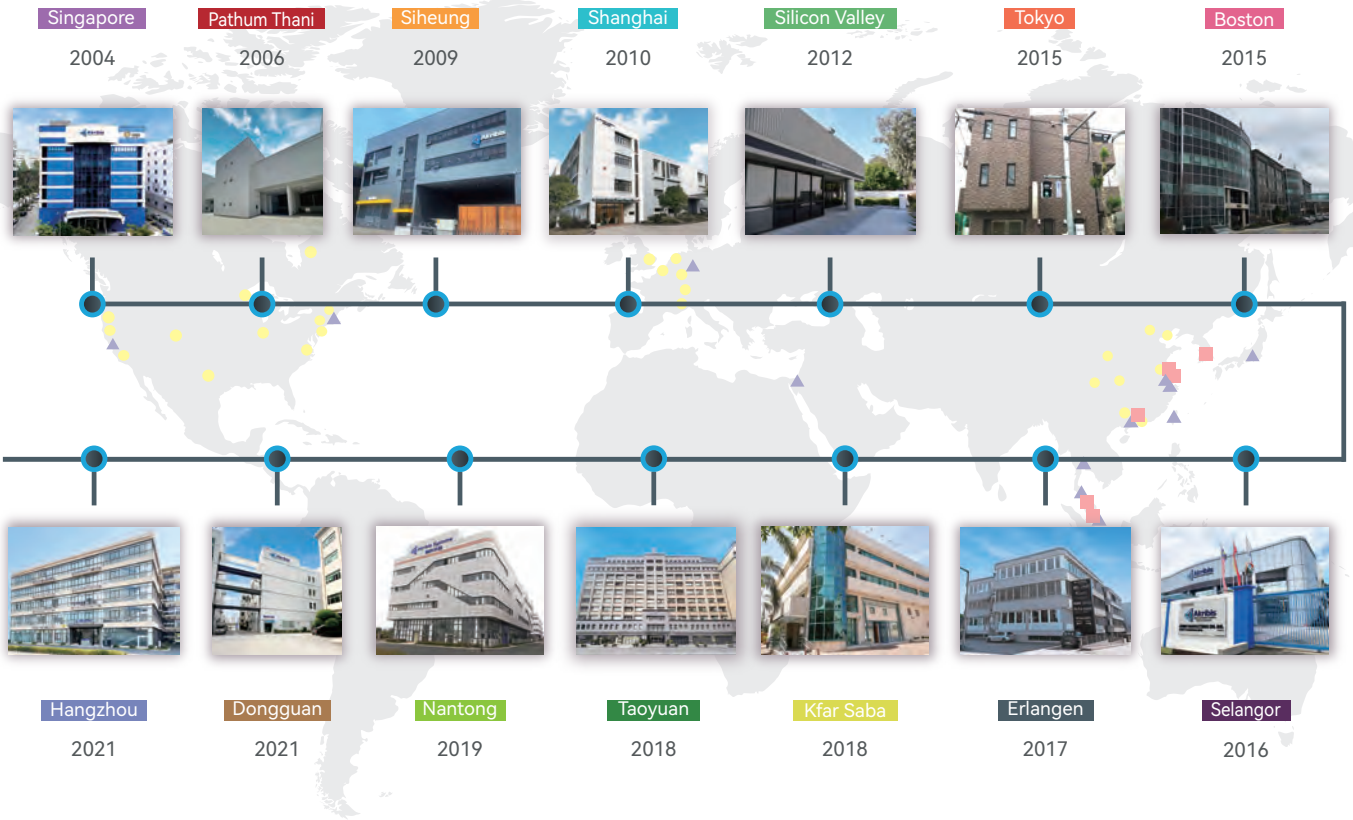
Akribis is a Latinized Greek word that means “Precision”. On the Akribis logo, the letter “a” is formed by a line and a circle, representing linear and rotary motions. These are supported by a tetrahedron structure, the same structure as the diamond crystal which has many exceptional physical properties.

The logo signifies that Akribis Systems’strong engineering expertise is the basis of the company’s foundation, and this enables us to provide customers with precise, direct drive motion control solutions.

Akribis Systems Pte Ltd was founded in 2004. We design and manufacture direct drive motors, stages and precision systems that are used in equipment for manufacturing, inspection and testing. Akribis Systems supports a wide range of industries including semiconductor, solar, flat panel, hard disk, LED, printed circuit board, printing, photonics and biomedical manufacturing.

From the beginning, the company has been focusing on innovation and development of new technologies and solutions in motion control, with more than 148 patents applied. Backed by a very strong and committed engineering team, the company continues to develop custom motors and systems for demanding applications.

We have manufacturing facilities in Singapore and in Shanghai， Nantong and Dongguan, China and in Selangor, Malaysia and in Siheung, Korea. Our sales network includes our sales offices in USA, Germany, South Korea, Japan, Thailand, Israel and Malaysia， and is reinforced by our comprehensive distribution channels in Asia, Europe and North America.



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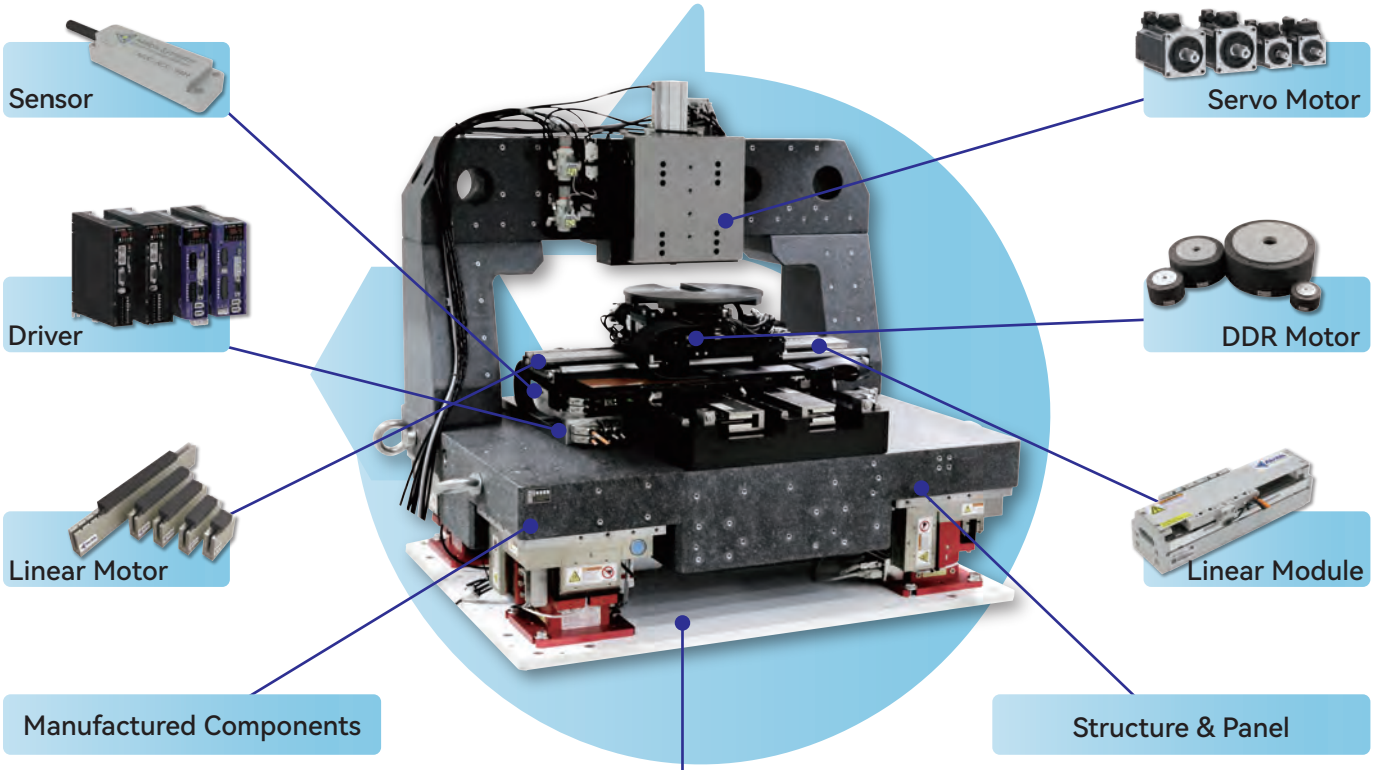
Cable Matching

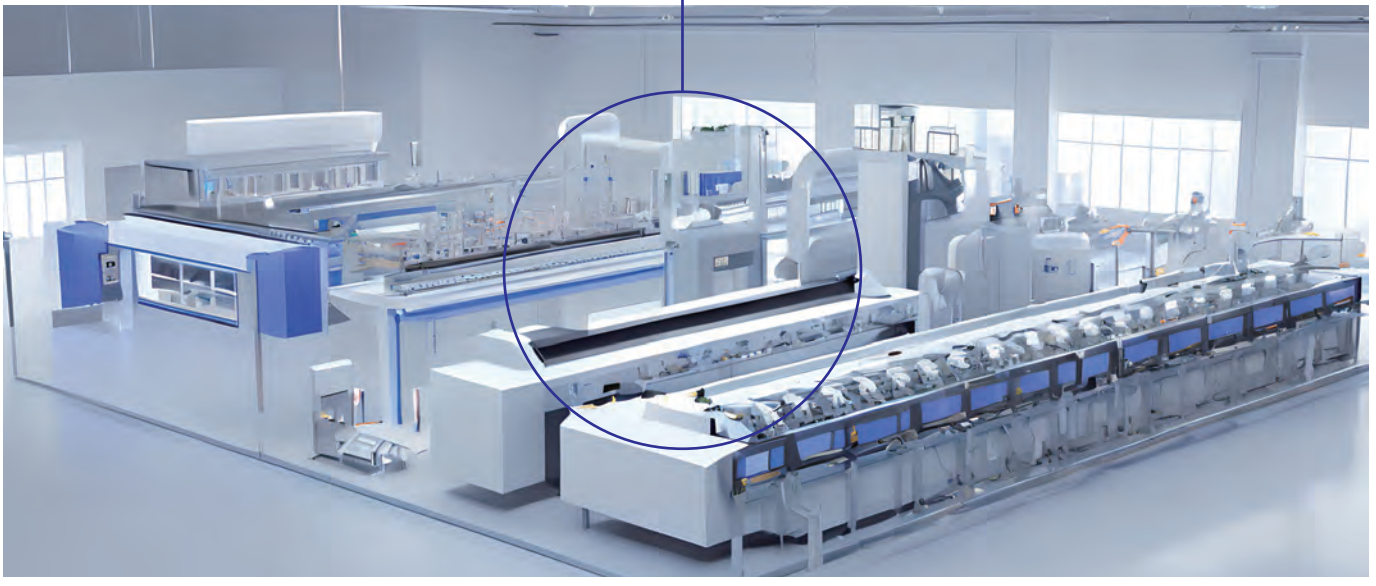
Motor Cable 28
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Product Lineup

One-Stop Service

Akribis offers comprehensive motion control solutions, encompassing a diverse range of products from high-precision direct-drive motors (serving as precision axes) to high-performance servo motors (serving as key and general axes). Each product plays a vital role within the equipment, ensuring operational efficiency and system stability. Whether in precision positioning, drive control, or load-bearing, ourproducts provide customers with one-stop, customized services to meet the requirements of various complex applications.





Flexible Selection

Category	AC Servo Driver	DC Servo Driver
High-performance	 AGD156 series	 AGD101 series
Standard	 AR6 series	 SASD series
Economy	 AR4 series	 ESASD series
Special application	 Customization servo motor	 AGD301 integrated multi-axis drive and control	 SASD integrated multi-axis

■ Akribis AC Servo Driver

1. AR4 Economy AC Servo Driver: An Ultra Cost-effective Option!

Featuring one-touch auto-tuning, high-frequency response, and vibration suppression, it effortlessly manages various standard applications, enabling rapid commissioning and flexible compatibility.

2. AR6 Standard AC Servo Driver: Precise Control with Stability and Reliability!

Incorporating full closed-loop control, gantry synchronization, and the STO safety function, and supporting multiple bus protocols, it serves as a cornerstone for high-precision industrial control.

3. Agito High-Performance AC Servo Driver: Integrated Drive and Control Delivering Peak Performance!

Embedded independent program system with a 16kHz three-loop refresh rate, surpassing precision limits and enabling the most precise and complex motion control in equipment.

■ Akribis DC Servo Driver

1. ESASD Economical Low-Voltage DC Servo Driver: Ultra-compact and Highly Energy-efficient!

Featuring a compact size of 56×53×32mm and 99% energy efficiency, with open-loop force control, full closed-loop, and STO safety function, providing a cost-effective solution for space-constrained applications.

2. SASD Standard Low-Voltage DC Servo Driver: Military-grade Reliability with Micron-level Precision!

Certified to medical-grade EMC standards and operable across a full temperature range from -55℃ to +50℃, combined with 10mA torque fine-tuning and multi-axis integrated design to meet the stringent requirements of high-precision industrial environments.

3. Agito High-Performance Low-Voltage DC Servo Driver: Integrated Three-Axis Drive Control, Revolutionary Performance!

Built-in multithreaded scripting system (8 channels with configurable priority), 16kHz triple-loop refresh, and 3D error compensation, specifically designed to establish a new benchmark for complex motion control in advanced multi-axis systems.

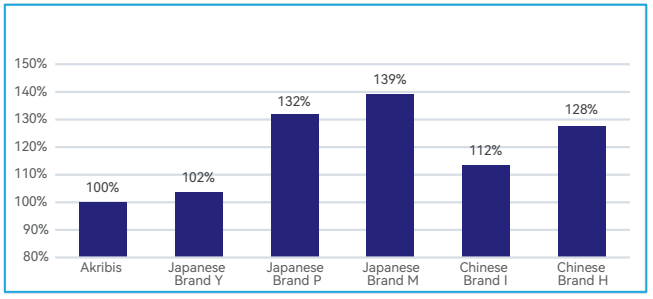
Product Features

Servo Motor Product Features

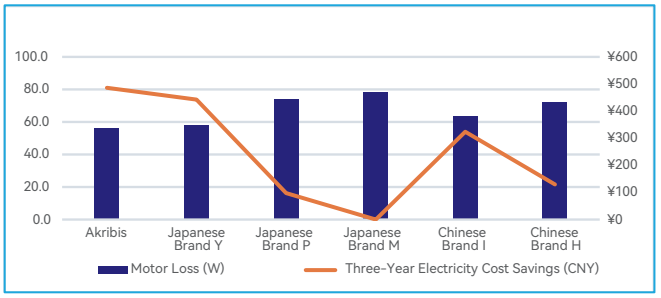
High Efficiency · Low Temperature Rising · High Reliability · Flexible Configuration · Easy to Use



■ 400W Servo Motor Temperature Rising Comparison ❶



■ 400W Servo Motor Energy Efficiency Analysis and Electricity Cost Savings Comparison ❶

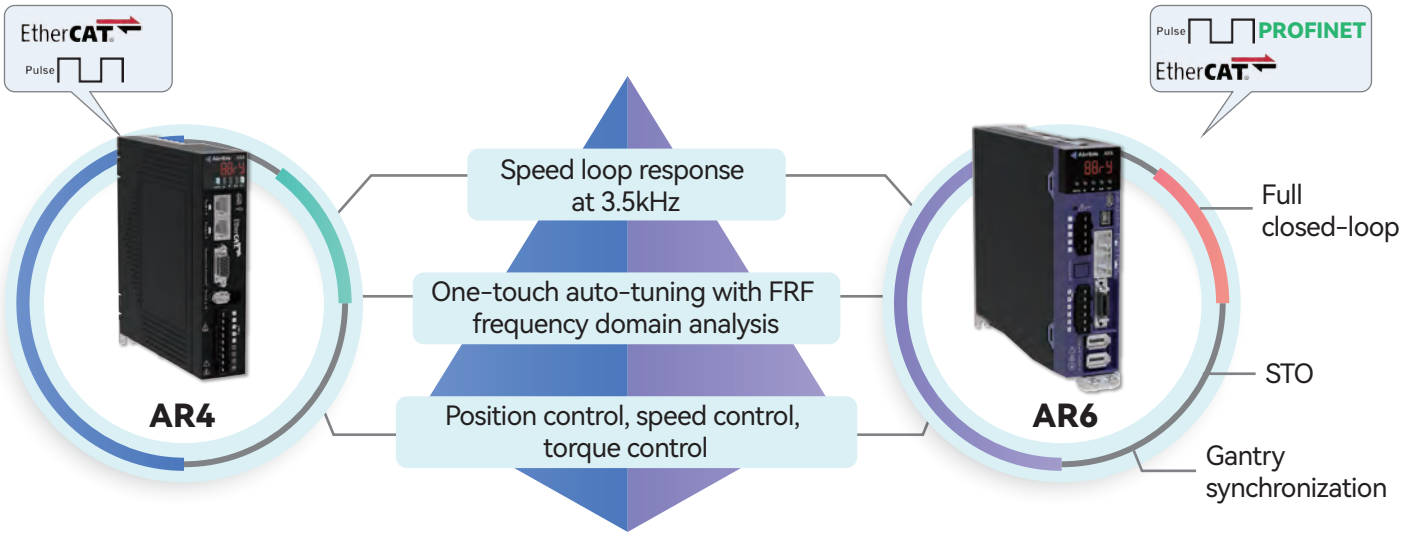


❶ Measured in Akribis Servo Motor Laboratory

- **Magnetic Circuit Optimization Design:** Unique topology structure reduces temperature rising by 20K, improves energy efficiency, and lowers energy consumption by 30% compared to similar competitors.
- **IP67 Protection Rating:** The motor offers excellent dust and water resistance, is robust and durable, and is suitable for various harsh environments.
- **Flexible Configuration:** Supports 17/23-bit multi-turn encoders, provides multiple oil seal, shaft type, and brake combinations, perfectly adapting to diverse industrial applications.
- **Electronic Nameplate + Absolute Encoder:** Plug and play, eliminating complex parameter settings, enabling effortless motor commutation and current loop tuning.

Servo Driver Product Features

Simple and easy to use · Vibration suppression · High response speed · Flexible configuration · Safe and reliable



- **One-touch Auto-tuning Technology:** Automatically matches parameters, enhancing debugging efficiency by over 50%, and significantly shortening the development cycle.
- **FRF Frequency Domain Analysis:** Accurately identifies resonance frequencies, optimizing mechanical debugging and reducing time costs.
- **Ultra-fast Response Speed Control:** The ARM+FPGA control architecture achieves a 3.5kHz speed loop response rate, delivering industry-leading dynamic response performance.
- **Support for Multiple Communication Protocols:**[1] Pulse, EtherCAT, and PROFINET communication methods flexibly accommodate diverse requirements.
- **Full Closed-loop and Gantry Control Support:**[2] The AR6 series offers full closed-loop and gantry control capabilities, meeting the application requirements of high-performance servo control.
- **STO Safe Torque Off:**[2] 0.1s emergency stop response, ensuring safe equipment operation and preventing sudden risks.

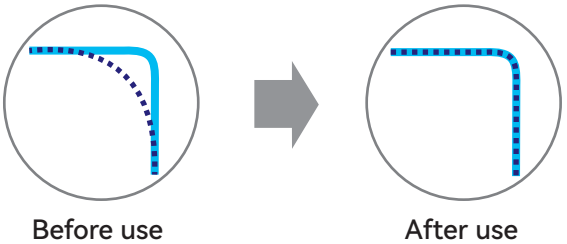
[1] Only the AR6 series supports PROFINET communication.

[2] The AR6 supports full closed-loop, gantry control, and STO safe torque off functions.

Enhanced Control Accuracy

■ Trajectory Model Tracking

The entire series is equipped with high-precision control algorithms, including bias-free control, zero-phase compensation, and iterative learning functions, achieving minimal trajectory error and dynamic high responsiveness. Particularly suitable for applications demanding extremely high precision, such as CNC and laser processing.

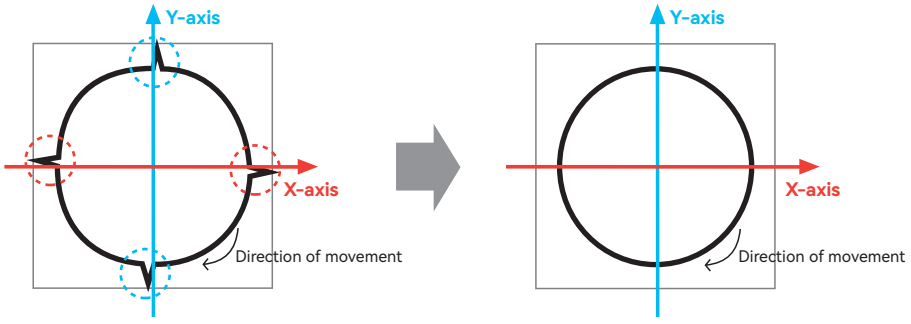


Before use　　After use

Product Features

■ Friction Compensation

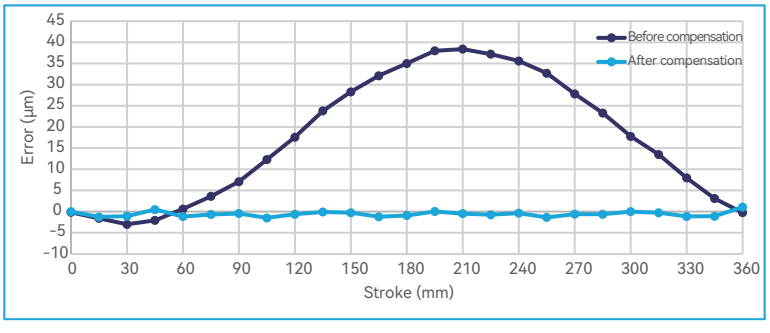
Friction compensation function standard across the entire series. Effectively eliminates quadrant protrusion caused by friction and mechanical nonlinearities, significantly enhancing trajectory accuracy in systems such as X/Y slides, ensuring smoother and more precise arc motion.

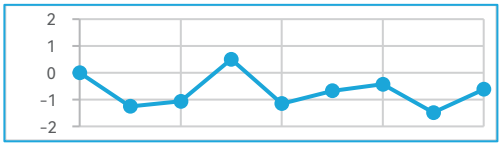


Insufficient friction compensation　　Correct friction compensation

■ Accuracy Compensation

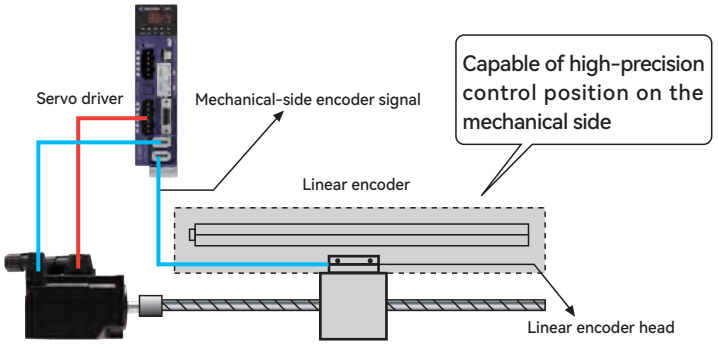
The entire series is standard equipped with multiple compensation mechanisms, including built-in ball screw pitch, synchronous belt backlash, and encoder error compensation. Supports data import from multiple brands of laser interferometers, with up to 2000 configurable compensation points, enabling more flexible and precise accuracy tuning.





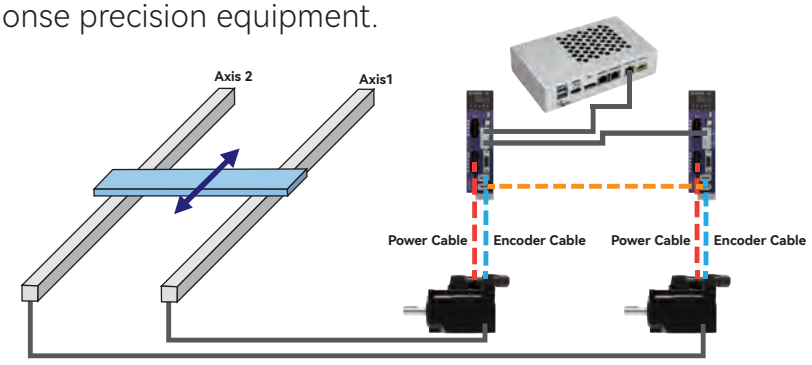
■ Full Closed-loop Control

The AR6 series servo driver supports full closed-loop control functionality. By utilizing external position feedback (such as a linear scale) to close the loop on motor position, it effectively eliminates position errors caused by mechanical backlash, screw reverse clearance, and other factors, significantly enhancing system positioning accuracy and repeatability, thereby meeting the stringent requirements of high-precision positioning applications.



■ Gantry Synchronous Control

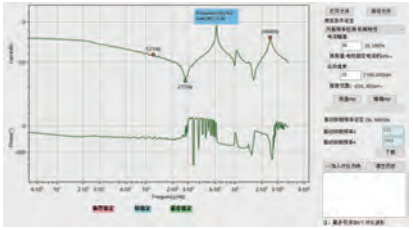
The AR6 series supports rigid or flexible gantry control, achieving dual-axis synchronous operation through 15M high-speed real-time communication between axes, combined with three-loop control data exchange and cross-decoupling algorithms. Unique position synchronization decoupling compensation technology continuously monitors and corrects mechanical errors between dual drives, enabling high-speed, high-precision gantry structure control, suitable for large-span, high-dynamic-response precision equipment.

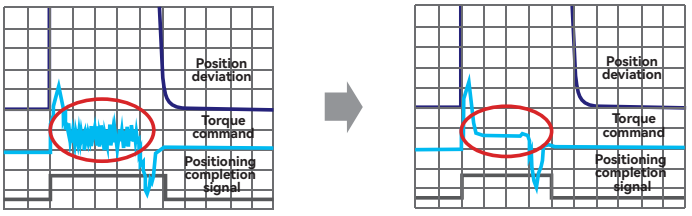


Enhanced Vibration Suppression

■ Mid-to-high Frequency Vibration Suppression

The AR4 and AR6 series servo systems feature frequency domain analysis capabilities, supporting three modes: speed closed-loop, speed open-loop, and mechanical characteristic modes, facilitating easy identification of system resonance points. Up to six vibration suppression notch filters from 50 to 5000 Hz, effectively addressing various servo applications.

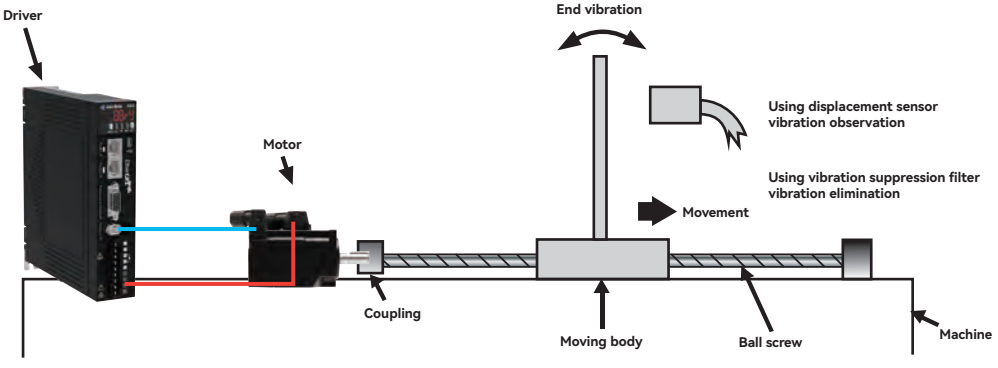




Before use　　After use

■ Low-frequency Vibration Suppression

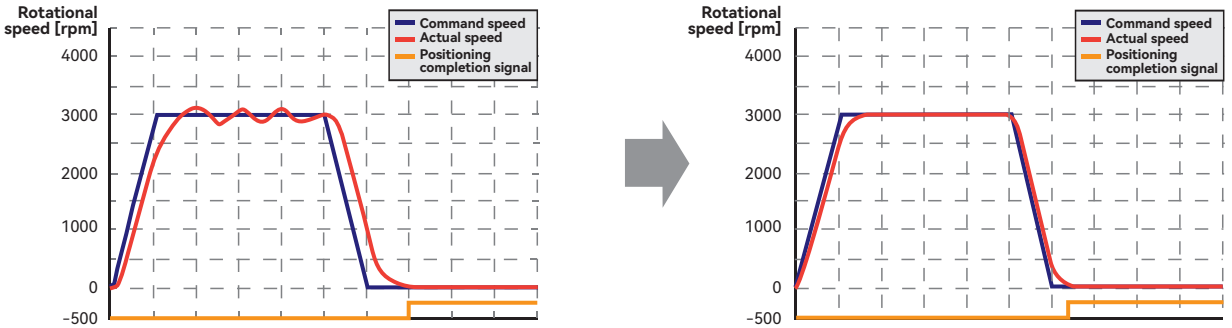
To address end-effector vibrations and overall device sway, the AR4 and AR6 series servo systems incorporate input shaping algorithms and two position notch filters that eliminate low-frequency vibrations below 100 Hz, reducing settling time and enhancing capacity of production.



Simplified Tuning and Debugging

■ One-touch Auto-tuning

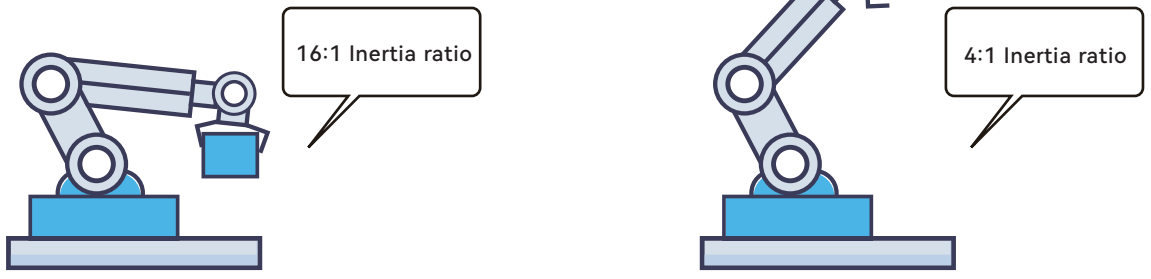
The AR4 and AR6 series servos feature two automatic loop parameter tuning functions: 'single parameter' and 'auto-tuning.' Based on the driver gain parameter auto-tuning algorithm, they can automatically identify the load inertia ratio and set gain and other parameters automatically, significantly reducing servo commissioning time.



Before tuning **After tuning**

■ Adaptive Control Function

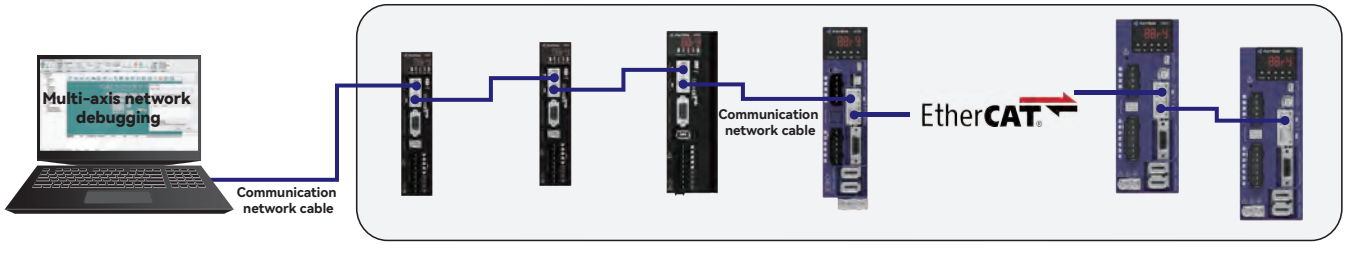
The AR4 and AR6 series servos incorporate adaptive resonance suppression and online load identification functions, which identify and adjust the system's resonance frequency and inertia ratio changes in real time during operation, providing robustness of the control system across varying conditions.



Posture 1: High inertia **Posture 2: Low inertia**

■ Multi-axis Network Debugging

Supports EtherCAT bus FOE functionality and enables network debugging of multiple servos via host computer software. Supports multi-axis parameter modification, parameter saving, inter-axis parameter comparison and parameter copying.



Supports multi-axis parameter modification	Supports multi-axis parameter saving	Supports inter-axis parameter comparison	Supports inter-axis parameter copying

Industry Applications

The AR4 and AR6 high-response drivers are perfectly matched with the A3 and A5 motors, suitable for applications with diverse requirements in precision, response speed, vibration suppression and cost.



Industry Applications

Semiconductor

■ PVD、CVD



Thin Film Deposition: Suitable for low-speed operation with speed fluctuation rates between 0.2% and 2%.

■ CMP



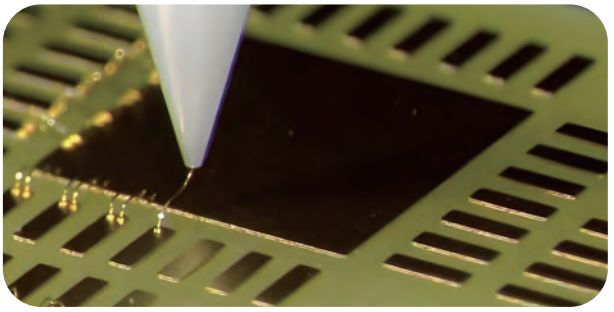
CMP Chemical Mechanical Polishing: Precise grinding pressure control within ±5% and torque output fluctuation within ±1%, ensuring polishing uniformity and effectively suppressing mechanical vibration.

■ Dicing Saw



Wafer Dicing: Suitable for low-speed operation with vibration suppression and minimal speed fluctuation.

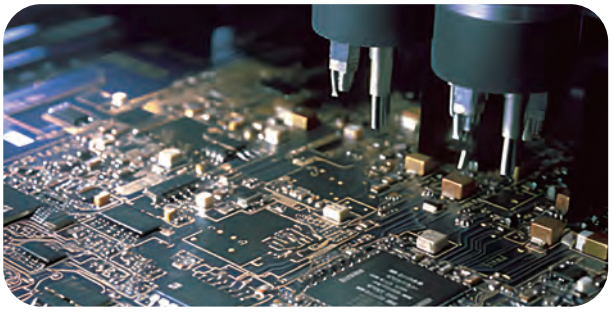
■ Bonding Machine



Bonding Equipment: Suitable for precise pressure control within ±5% and torque fluctuation within ±1%.

Electronics

■ Dispensing Machine



Suitable for applications requiring minimal speed fluctuation, micron-level position compensation, and friction compensation.

■ Inspection Equipment



Suitable for precise positioning and flying shot applications.

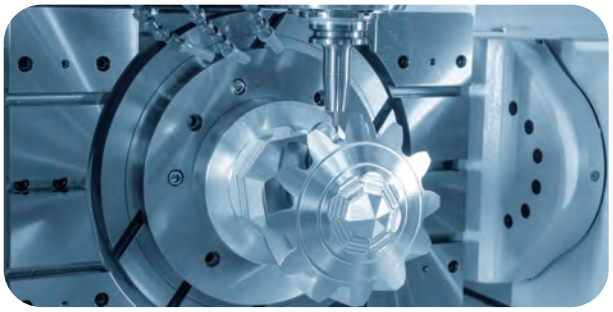
Machine Tools

■ Laser Processing



Suitable for trajectory tracking and friction compensation, with minimal speed and torque fluctuations.

■ Five-axis Machining



Suitable for high-speed tool changes with micron-level precision control.

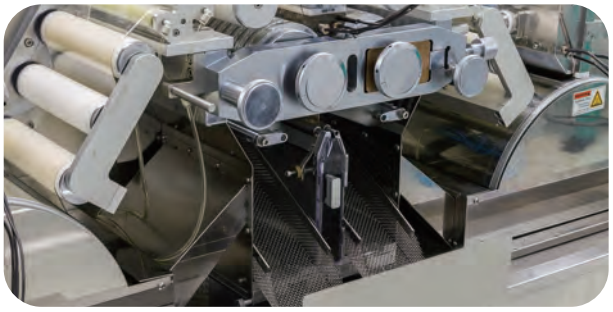
Lithium & Solar Energy

■ Lamination Machine



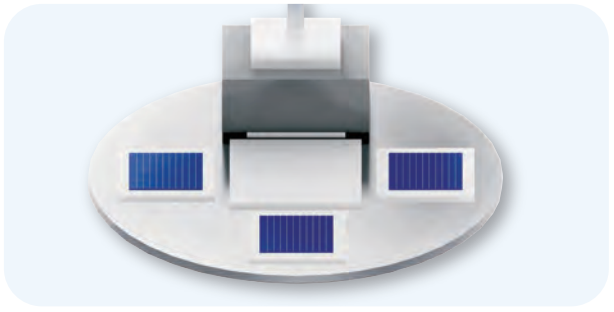
Suitable for high responsiveness and low cost.

■ Coating Machine



Suitable for coating precision control.

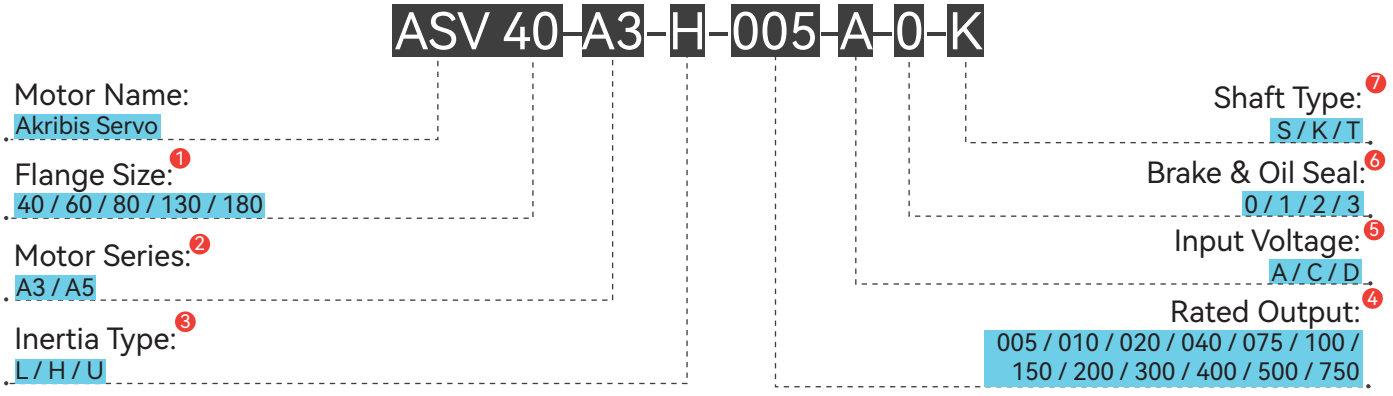
■ Screen Printing



Suitable for micron-level high-precision control.

Naming Rules

Servo Motor

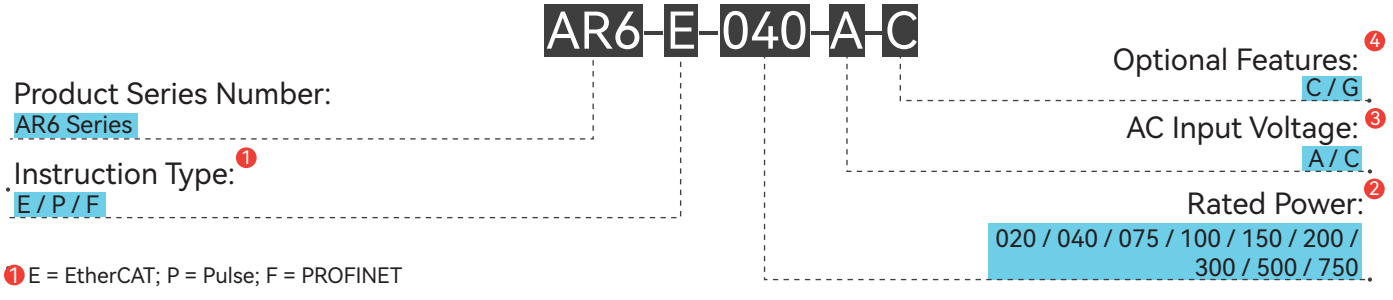


1. 40 = 40×40mm; 60 = 60×60mm; 80 = 80×80mm(coming soon); 130 = 130×130mm(coming soon); 180 = 180×180mm(coming soon)
2. A3 = A3 series 17-bit magnetic encoder; A5 = A5 series 23-bit optical encoder
3. L = Low inertia; H = High inertia; U = Ultra-high inertia
4. 005 = 50W; 010 = 100W; 020 = 200W; 040 = 400W; 075 = 750W(coming soon); 100 = 1kW(coming soon); 150 = 1.5kW(coming soon); 200 = 2kW(coming soon); 300 = 3kW(coming soon); 400 = 4kW(coming soon); 500 = 5kW(coming soon); 750 = 7.5kW(coming soon)
5. A = AC 200V~240V; C = AC 380V~440V; D = DC 24V~60V
6. 0 = Blank; 1 = Oil seal; 2 = Brake; 3 = Oil seal & brake
7. S = Smooth shaft & thread; K = Keyway & thread; T = Others

Servo Driver



1. E = EtherCAT; P = Pulse
2. 020 = 50 / 100 / 200W; 040 = 400W; 075 = 750W(coming soon); 100 = 1kW(coming soon); 150 = 1.5kW(coming soon); 200 = 2kW(coming soon); 300 = 3kW(coming soon); 500 = 4 / 5kW(coming soon); 750 = 7.5kW(coming soon)
3. A = Single-phase 220V (50W~1kW) or single-phase / three-phase 220V (1.5kW~2kW) optional; C = Three-phase 400V (1.5kW~7.5kW)

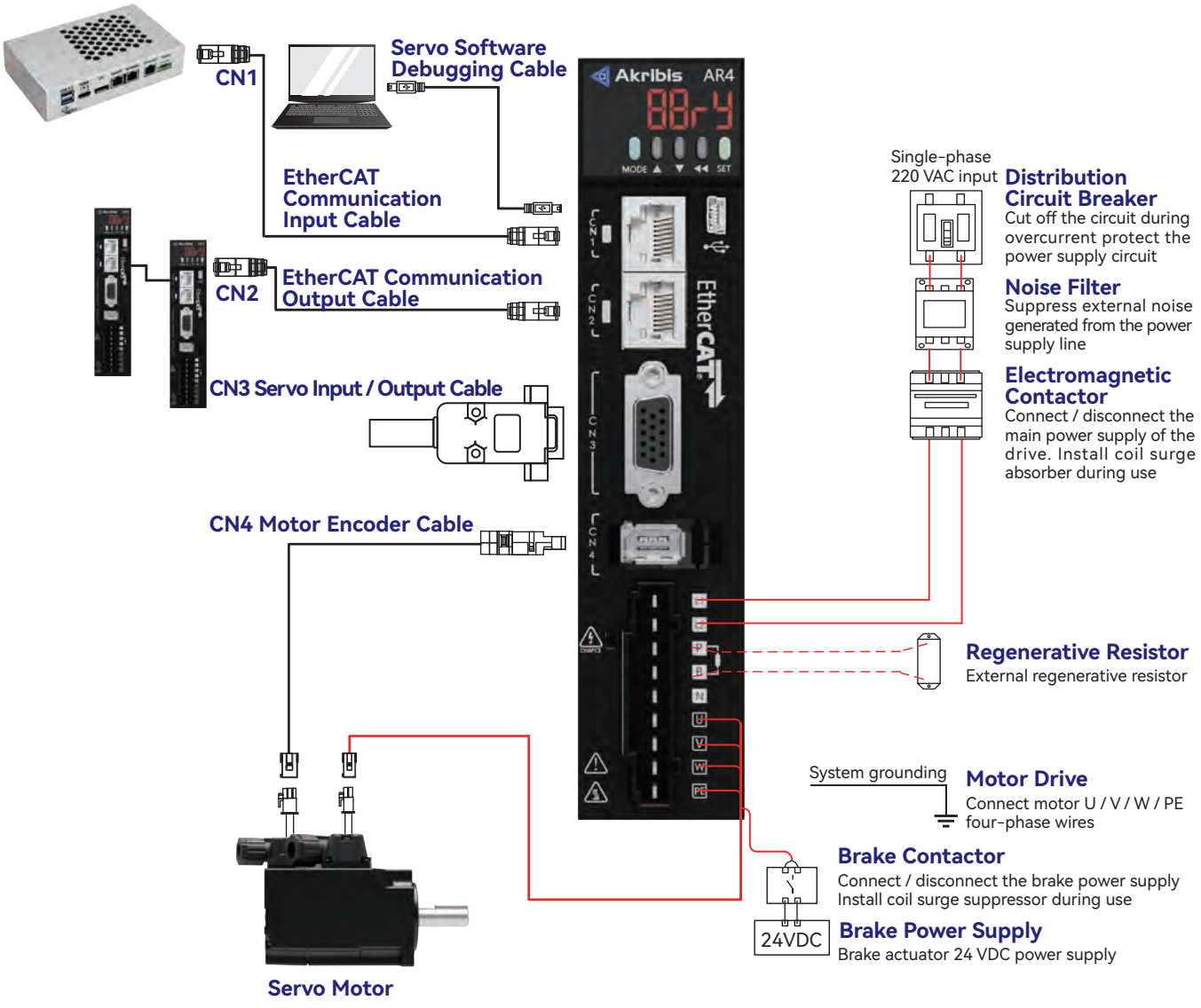


1. E = EtherCAT; P = Pulse; F = PROFINET
2. 020 = 50 / 100 / 200W; 040 = 400W; 075 = 750W(coming soon); 100 = 1kW(coming soon); 150 = 1.5kW(coming soon); 200 = 2kW(coming soon); 300 = 3kW(coming soon); 500 = 4 / 5kW(coming soon); 750 = 7.5kW(coming soon)
3. A = Single-phase 220V (50W~1kW) or single-phase / three-phase 220V (1.5kW~2kW) optional; C = Three-phase 400V (1.5kW~7.5kW)
4. C = Full closed-loop; G = Gantry

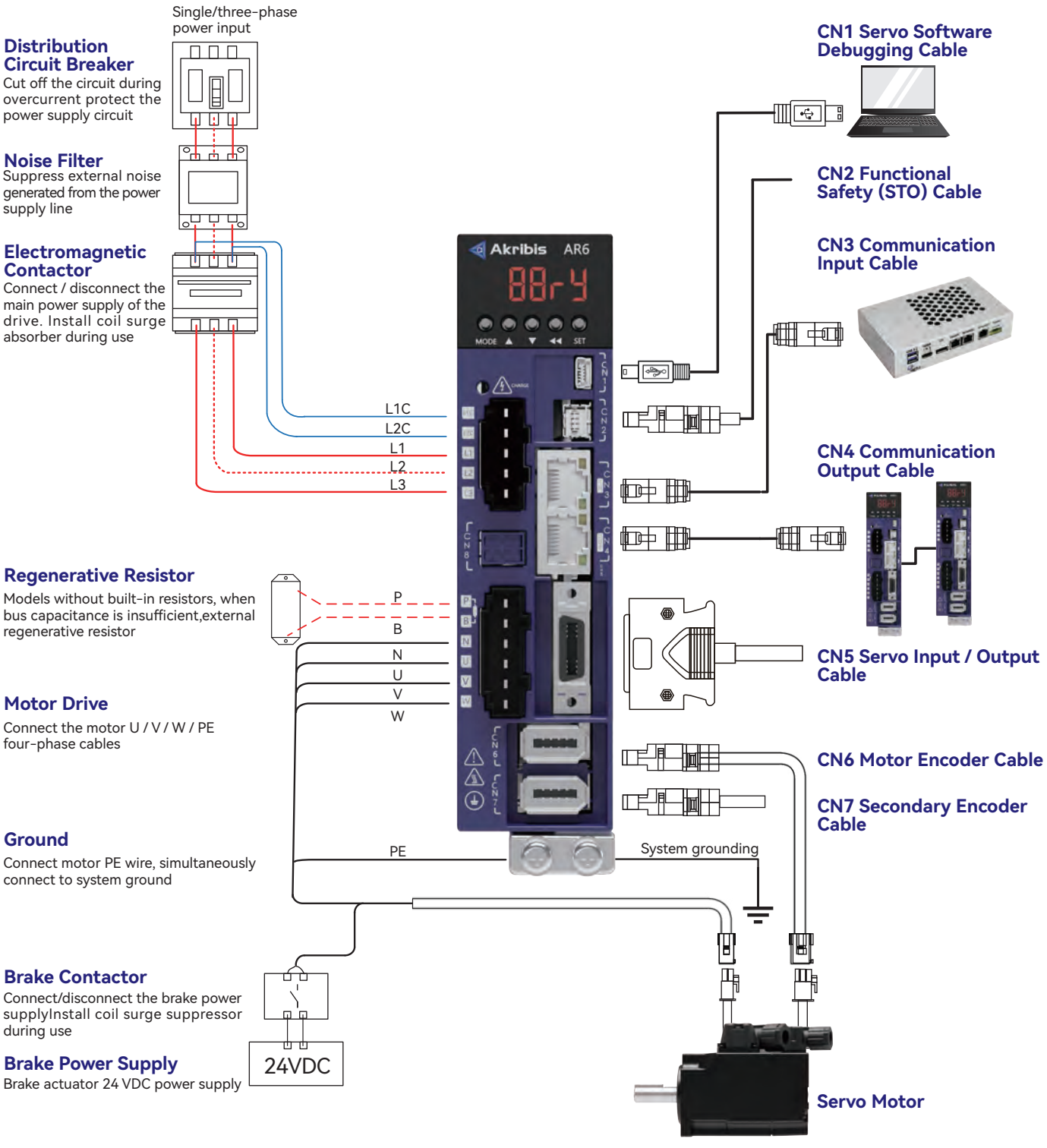
Model List

Servo Motor			Servo Driver		
Power	A3 Series 17-bit Motor Model	A5 Series 23-bit Motor Model	Instruction Type	AR4 Series Driver	AR6 Series Driver
50W	ASV40-A3-H-005	ASV40-A5-H-005	EtherCAT	AR4-E-020-A	AR6-E-020-A-C
			Pulse	AR4-P-020-A	AR6-P-020-A-C
			PROFINET	-	AR6-F-020-A-C
100W	ASV40-A3-H-010	ASV40-A5-H-010	EtherCAT	AR4-E-020-A	AR6-E-020-A-C
			Pulse	AR4-P-020-A	AR6-P-020-A-C
			PROFINET	-	AR6-F-020-A-C
200W	ASV60-A3-H-020	ASV60-A5-H-020	EtherCAT	AR4-E-020-A	AR6-E-020-A-C
			Pulse	AR4-P-020-A	AR6-P-020-A-C
			PROFINET	-	AR6-F-020-A-C
400W	ASV60-A3-H-040	ASV60-A5-H-040	EtherCAT	AR4-E-040-A	AR6-E-040-A-C
			Pulse	AR4-P-040-A	AR6-P-040-A-C
			PROFINET	-	AR6-F-040-A-C
750W	ASV80-A3-H-075	ASV80-A5-H-075	EtherCAT	AR4-E-075-A	AR6-E-075-A-C
			Pulse	AR4-P-075-A	AR6-P-075-A-C
			PROFINET	-	AR6-F-075-A-C
1kW	ASV130-A3-H-100	ASV130-A5-H-100	EtherCAT	AR4-E-100-A	AR6-E-100-A-C
			Pulse	AR4-P-100-A	AR6-P-100-A-C
	ASV130-A3-U-100	ASV130-A5-U-100	PROFINET	-	AR6-F-100-A-C
1.5kW	ASV130-A3-H-150	ASV130-A5-H-150	EtherCAT	AR4-E-150-A	AR6-E-150-A-C
			Pulse	AR4-P-150-A	AR6-P-150-A-C
	ASV130-A3-U-150	ASV130-A5-U-150	PROFINET	-	AR6-F-150-A-C
2kW	ASV130-A3-H-200	ASV130-A5-H-200	EtherCAT	AR4-E-200-A	AR6-E-200-A-C
			Pulse	AR4-P-200-A	AR6-P-200-A-C
	ASV130-A3-U-200	ASV130-A5-U-200	PROFINET	-	AR6-F-200-A-C

AR4 Series Servo Wiring Diagram



AR6 Series Servo Wiring Diagram



Motor Parameters and Dimension Drawings

Motor Specifications

Motor Model	ASV40-A3 / 5-H-005-A	ASV40-A3 / 5-H-010-A	ASV60-A3 / 5-H-020-A	ASV60-A3 / 5-H-040-A
Rated Duration	Consecutive			
Insulation Class	Class F			
Insulation Resistance	DC500 V, 10MΩ or higher			
Insulation Withstand Voltage	AC1500 V, 1 minute			
Excitation Method	Permanent magnet type			
Installation Method	Flange type			
Connection Method	Direct connection			
Rotation Direction	When a forward rotation command is issued, the rotation is counterclockwise (CCW) when viewed from the motor load side			
Vibration Rating ❶	V15			
Ambient Temperature	0°C~40°C			
Ambient Humidity	20% to 80% RH (no condensation allowed)			
Installation Location	1. Indoor environments free of corrosive or explosive gases			
	2. Well-ventilated environments with minimal dust, debris and moisture			
	3. Environments that facilitate easy inspection and cleaning			
	4. Locations below 1000m altitude			
	5. Locations without strong magnetic fields			
Storage Environment	When storing the motor in an unpowered state:			
	1. Ambient temperature: -20°C to +60°C			
	2. Ambient humidity: 20% to 80% RH (no condensation permitted)			
Shock Resistance	Flange acceleration (measured at flange surface): 490 m/s²			
	Number of shocks: 2			
Vibration Resistance	Vibration acceleration (measured at flange surface): 49 m/s²			
Compliance with Global Standards	CE			

❶ Vibration grade V15 indicates that the vibration amplitude of a single servo motor operating at rated speed is less than 15μm.

Motor Rated Values

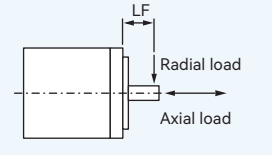
Motor Model			ASV40-A3 / 5-H-005-A	ASV40-A3 / 5-H-010-A	ASV60-A3 / 5-H-020-A	ASV60-A3 / 5-H-040-A
Flange Dimensions		mm	40		60	
Motor Length ❶		mm	60.7[93.7]	74[107]	73[102]	92[120]
Bus Voltage		Vdc	311			
Rated Speed		rpm	3000			
Maximum Speed		rpm	6000			
Rated Power ❷		W	50	100	200	400
Rated Torque		Nm	0.16	0.32	0.64	1.27
Peak Torque		Nm	0.56	1.12	2.24	4.45
Rated Current		Arms	1.3	1.27	1.25	2.55
Peak Current		Arms	4.6	4.62	4.65	9.4
Torque Constant		Nm/Arms	0.123	0.252	0.512	0.498
Rotational Inertia ❶		kg·cm²	0.03[0.032]	0.055[0.057]	0.311[0.328]	0.551[0.568]
Protection Rating		-	IP67			
Weight ❶		kg	0.23[0.35]	0.37[0.59]	0.78[1.09]	1.02[1.33]
Heatsink Dimensions		mm	200×200×6		250×250×6	
Brake ❸ Specifications	Rated Voltage	V	DC24 V±10%			
	Capacity	W	6.1		7.6	
	Holding Torque	Nm	0.32		1.5	
	Coil Resistance	Ω(@20°C)	94.4±7%		75.79±7%	
	Rated Current	A(@20°C)	0.25		0.32	
	Brake Engagement Time	ms	40		60	
	Brake Release Time	ms	20			
	Backlash	°	1.5			
Permissible ❹ Shaft Load	LF	mm	20		25	
	Radial	N	78		245	
	Axial	N	54		74	

❶ Parameters in [ ] denote motors equipped with a brake.

❷ Models with oil seals require a 10% derating during use.

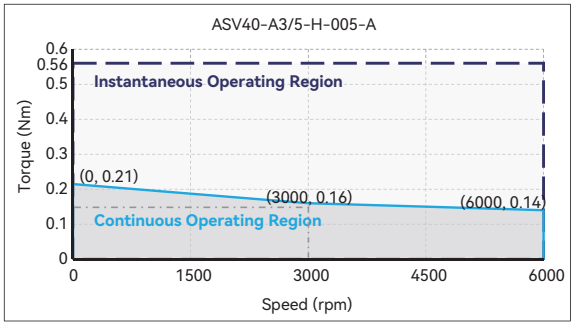
❸ When using servo motors equipped with a holding brake, please observe the following:
1. The holding brake must not be used as a service brake.
2. The brake holding time and brake operation time vary depending on the discharge circuit. When in use, please ensure to verify the operation delay time with the actual product.
3. The DC24 V power supply must be provided by the user.

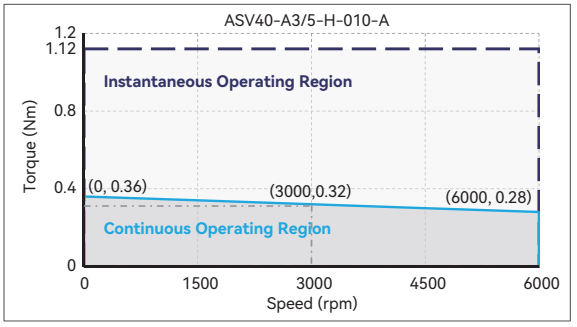
❹ In mechanical design, radial and axial loads on the servo motor during operation must not exceed the values specified in the table.

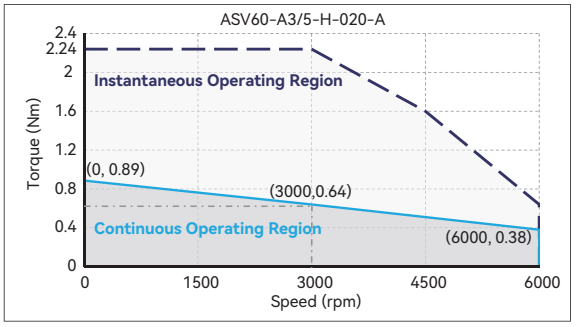


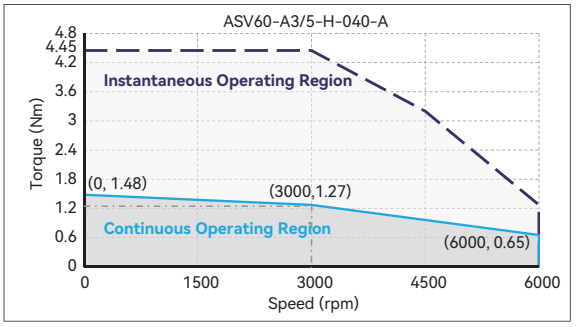
Curve Chart

■ Speed/Torque Curves

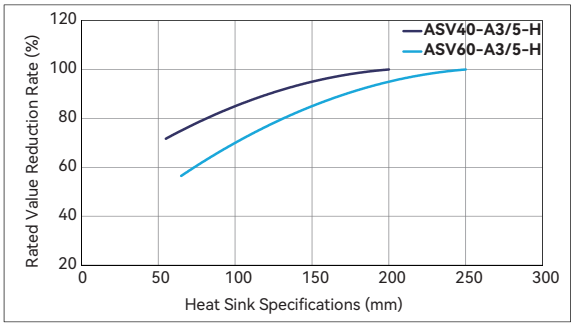




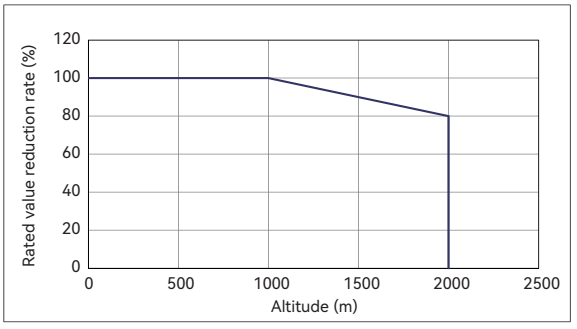




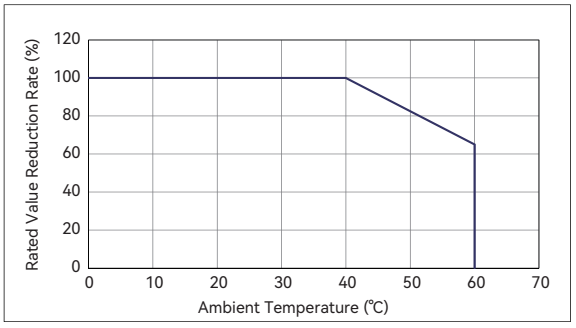
■ Motor Derating Characteristic Curves



Effect of Heat Dissipation Area



Effect of Altitude

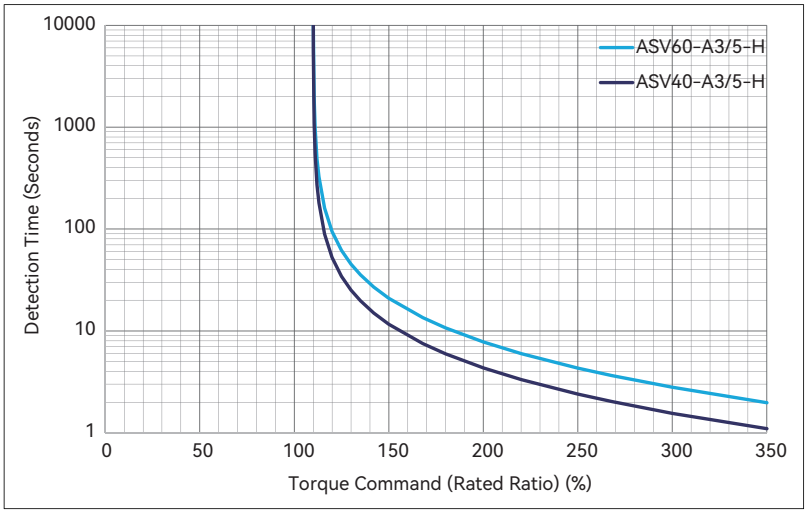


Effect of Ambient Temperature

Motor Parameters and Dimension Drawings

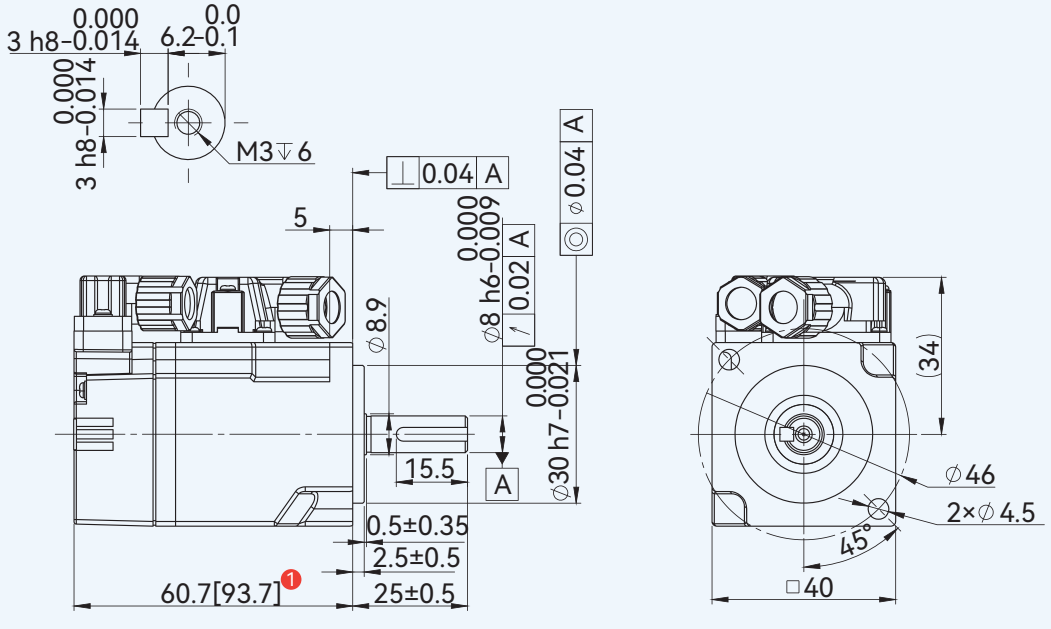
■ Overload Protection Feature

The motor overload protection curve follows an inverse time constant characteristic, while the heating curve indicates the duration required for the motor to reach the overload protection thermal limit at the specified current. The overload detection value is set under conditions of a motor ambient temperature of 40°C and thermal startup. The overload protection function activates only when the current exceeds 115% of the rated current, thereby effectively protecting the motor from overload damage.



Dimension Drawings

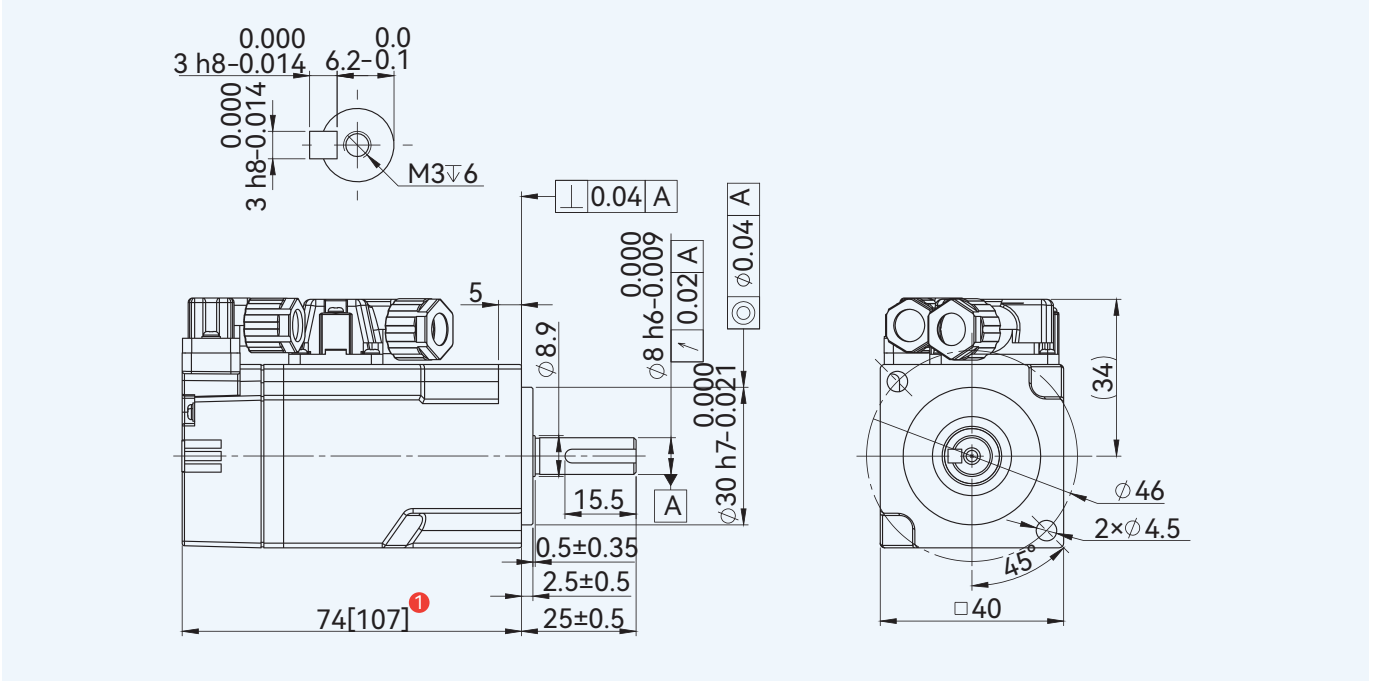
■ ASV40-A3/5-H-005-A



❶ Dimensions for brake models are indicated in [ ]

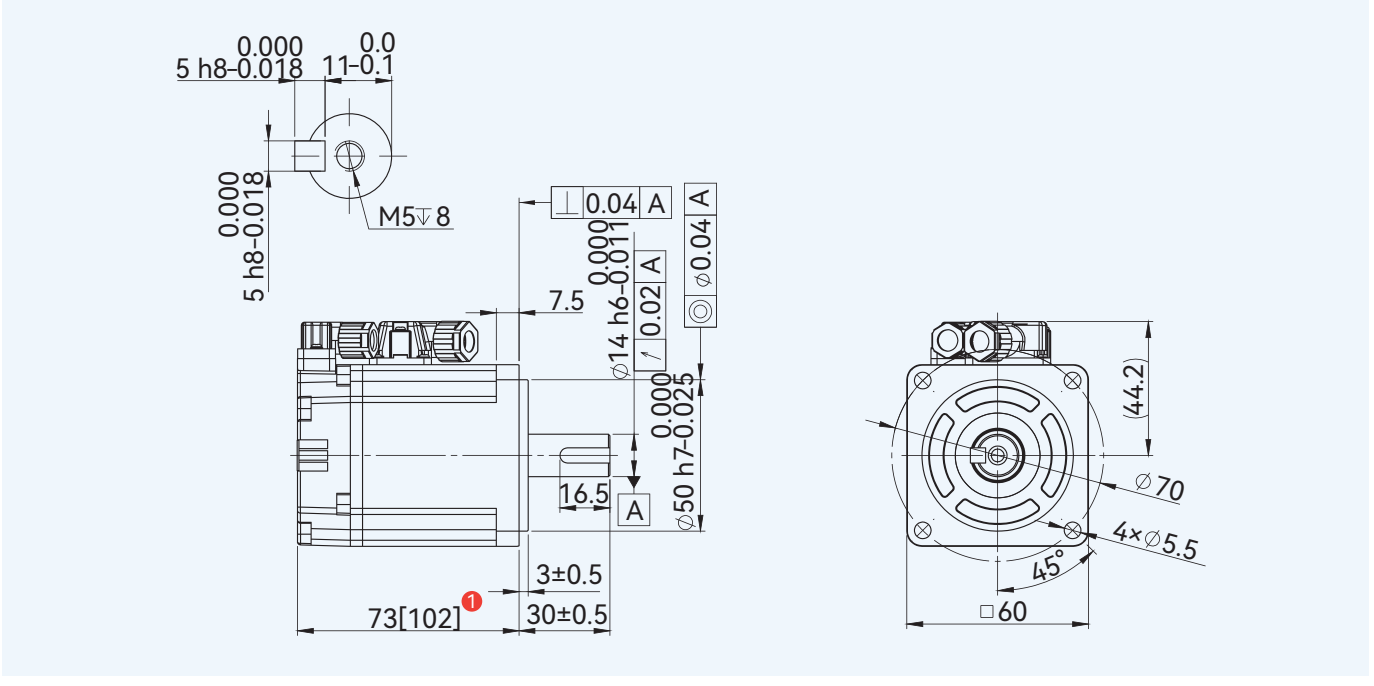
Motor Parameters and Dimension Drawings

■ ASV40-A3/5-H-010-A



❶ Dimensions for brake models are indicated in [ ]

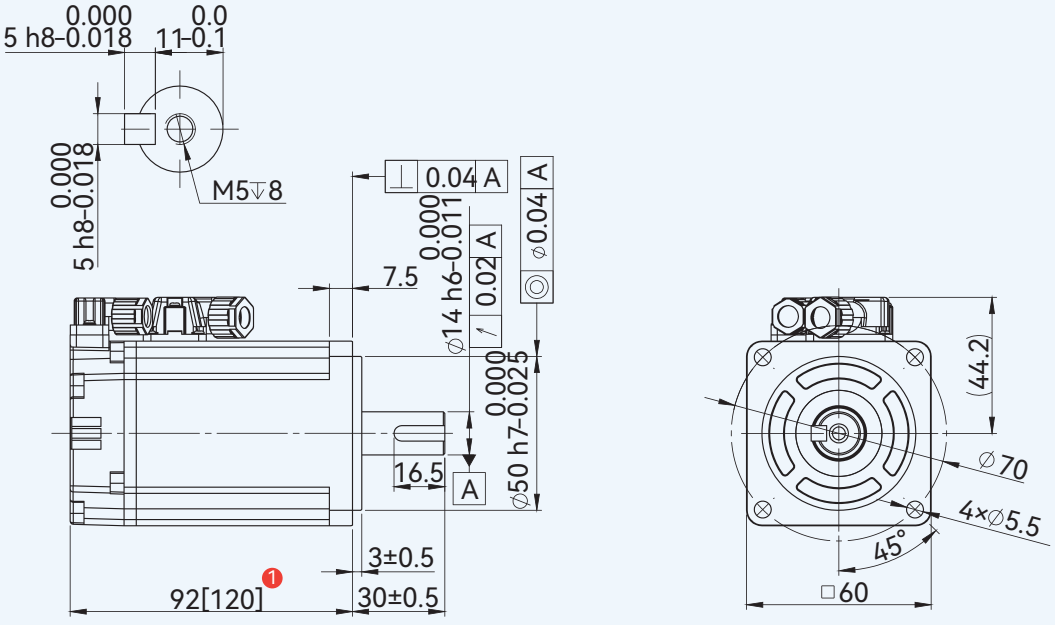
■ ASV60-A3/5-H-020-A



❶ Dimensions for brake models are indicated in [ ]

Motor Parameters and Dimension Drawings

■ ASV60-A3/5-H-040-A



❶ Dimensions for brake models are indicated in [ ]

Driver Parameters and Dimension Drawings

Driver Specifications

Item			Description
Basic Specifications	Control Method		IGBT SVPWM control, sine wave current drive method
			220V, 380V: single-phase or three-phase full-wave rectification
	Operating Conditions	Operating / Storage Temperature [1]	0 ~ +40℃ / -20 ~ +70℃
		Operating / Storage Humidity	Below 90% RH (non-condensing)
		Vibration Resistance / Shock Strength	4.9m/s² / 19.6m/s²
		Protection Rating	IP20
		Pollution Degree	PD level 2
		Altitude	Maximum altitude up to 5000m; no derating required at or below 1000m; above 1000m, derate 1% per 100m increase; contact manufacturer if altitude exceeds 2000m
Position Control Mode	Performance	Feedforward Compensation	Supports speed feedforward setting (0–100.0%) to eliminate following error
		Command Shaping	Position command low-pass filtering and averaging filtering
	Frequency Division Output	Output Type	Phase A, Phase B: differential output
		Frequency Division Range	One motor revolution can produce pulses with a frequency division range from 140 to 1,048,576
Speed and Torque Control Mode	Performance	Speed Loop Characteristics	Speed loop step response: 562.5μs (0–1000rpm)
			Speed loop frequency response: 3.5kHz bandwidth (command signal: ±25%)
		Current Loop Characteristics	Current loop step response: 187.5μs (0–100%)
			±2% torque control accuracy
Input and Output	Digital Input Signals		Configurable functions: forward overtravel switch, reverse overtravel switch, origin switch, etc.
	Digital Output Signals		Configurable functions: servo ready, zero speed signal, speed reached, position reached, positioning proximity signal, torque limiting, warning, servo fault, etc.
Supported Functions	Electronic Gear Ratio		Built-in dual electronic gear ratios, supporting gear ratio switching functionality
	Limit Protection		Immediate stop upon activation of forward or reverse limit switches
	Fault Detection		Protections include overcurrent, overvoltage, undervoltage, overload, main circuit detection faults, heatsink overheating, overspeed, encoder faults, parameter anomalies and others
	Display Functions		5-digit LED display with power indicator light labeled CHARGE
	Vibration Suppression		Equipped with six notch filters spanning 50Hz to 5000Hz, including two adaptive notch filters, featuring input shaping and position notch anti-filtering algorithms for low-frequency vibration
	Ease of Use		Auto-tuning, speed observer and model tracking control
	Debug Interface		USB
	Others		Status display, alarm logging, JOG operation, etc.
Compliance with Global Standards			CE

[1] Please install or store the servo driver within the specified temperature range.

Driver Electrical Parameters

■ AR4

AR4 Series Models	AR4-E / P-020-A	AR4-E / P-040-A	AR4-E / P-075-A [1]	AR4-E / P-100-A [1]	AR4-E / P-150-A [1]	AR4-E / P-200-A [1]
Rated Output Current Arms	1.6	2.8	5.5	7.6	11.6	14.0
Maximum Output Current Arms	5.8	10.1	16.9	23.0	32.0	42.0
Rated Input Current Arms	2.3	4.0	7.9	9.6	Single-phase 12.8 / Three-phase 8.0	Single-phase 16.0 / Three-phase 10.2
Built-in Regenerative Resistor Specifications [2]	No standard regenerative resistor				Optional 25Ω / 80W regenerative resistor	
Main Circuit Power Supply	Single-phase AC200V ~ 240V, -10 ~ +10%, 50 / 60Hz				Single-phase / Three-phase AC 200V–240V, -10% to +10%, 50 / 60Hz	

[1] Higher power drivers will be released soon.
[2] All models support external regenerative resistors.

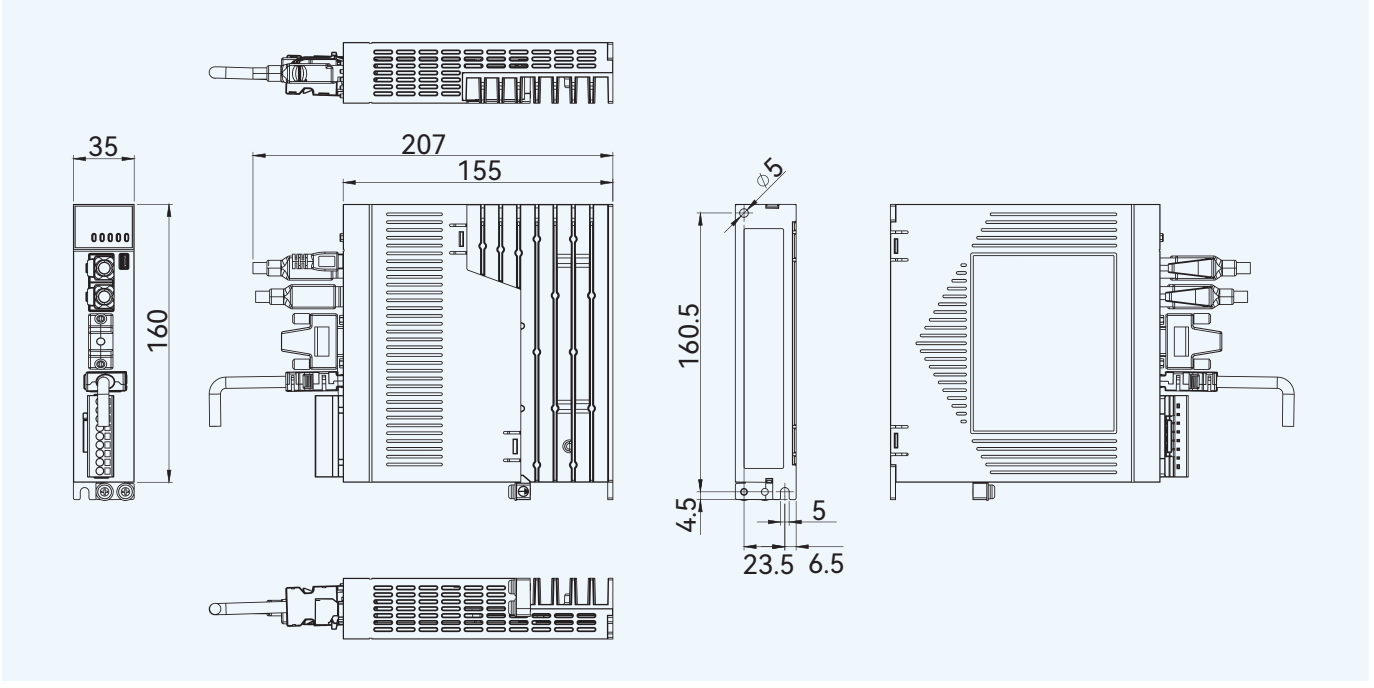
■ AR6

AR6 Series Models	AR6-E / P-020-A	AR6-E / P-040-A	AR6-E / P-075-A [1]	AR6-E / P-100-A [1]	AR6-E / P-150-A [1]	AR6-E / P-200-A [1]
Rated Output Current Arms	1.6	2.8	5.5	7.6	11.6	14.0
Maximum Output Current Arms	5.8	10.1	16.9	23.0	32.0	42.0
Rated Input Current Arms	Single-phase 2.3 / Three-phase 1.4	Single-phase 4.0 / Three-phase 2.6	Single-phase 7.9 / Three-phase 4.4	Single-phase 9.6 / Three-phase 5.6	Single-phase 12.8 / Three-phase 8.0	Single-phase 16.0 / Three-phase 10.2
Built-in Regenerative Resistor Specifications [2]	No built-in regenerative resistor		50Ω / 50W	25Ω / 100W		
Main Circuit Power Supply	Single-phase / Three-phase AC 200V–240V, -10% to +10%, 50 / 60Hz					

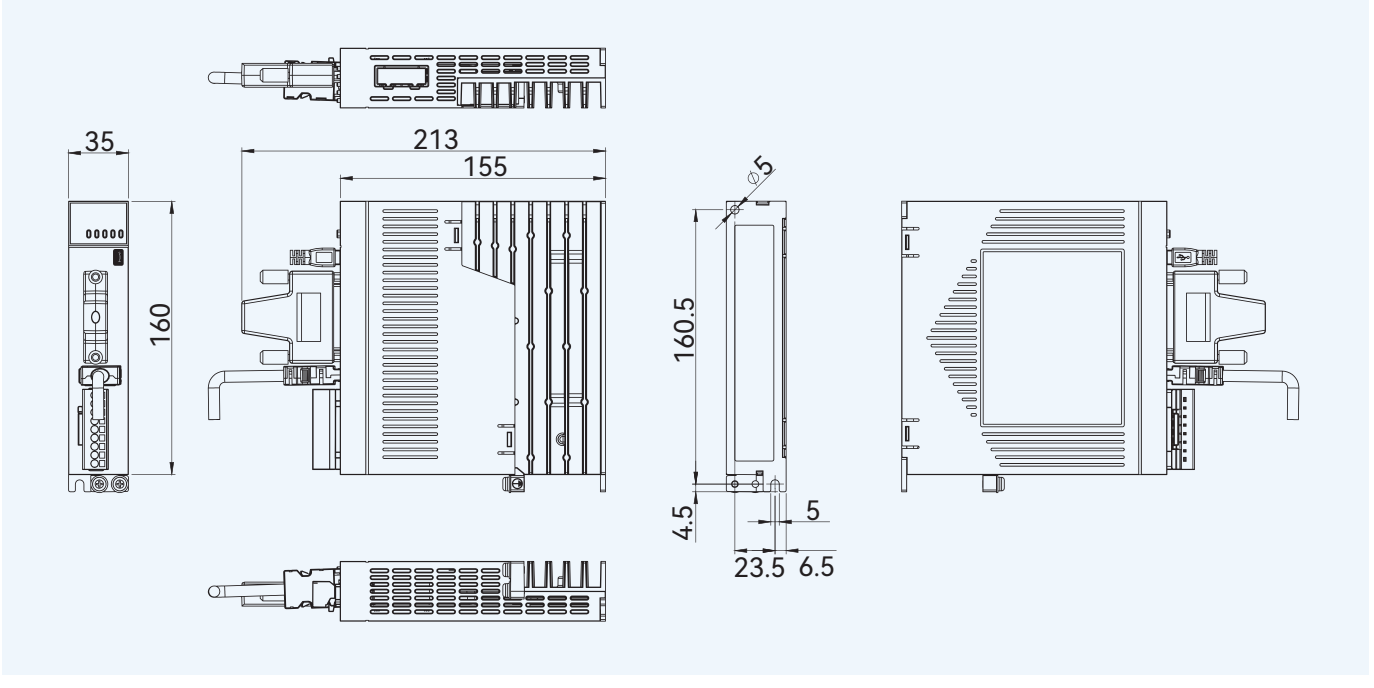
[1] Higher power drivers will be released soon.
[2] All models support external regenerative resistors.

Driver Installation Dimension Drawings

■ AR4-E-020 / 040

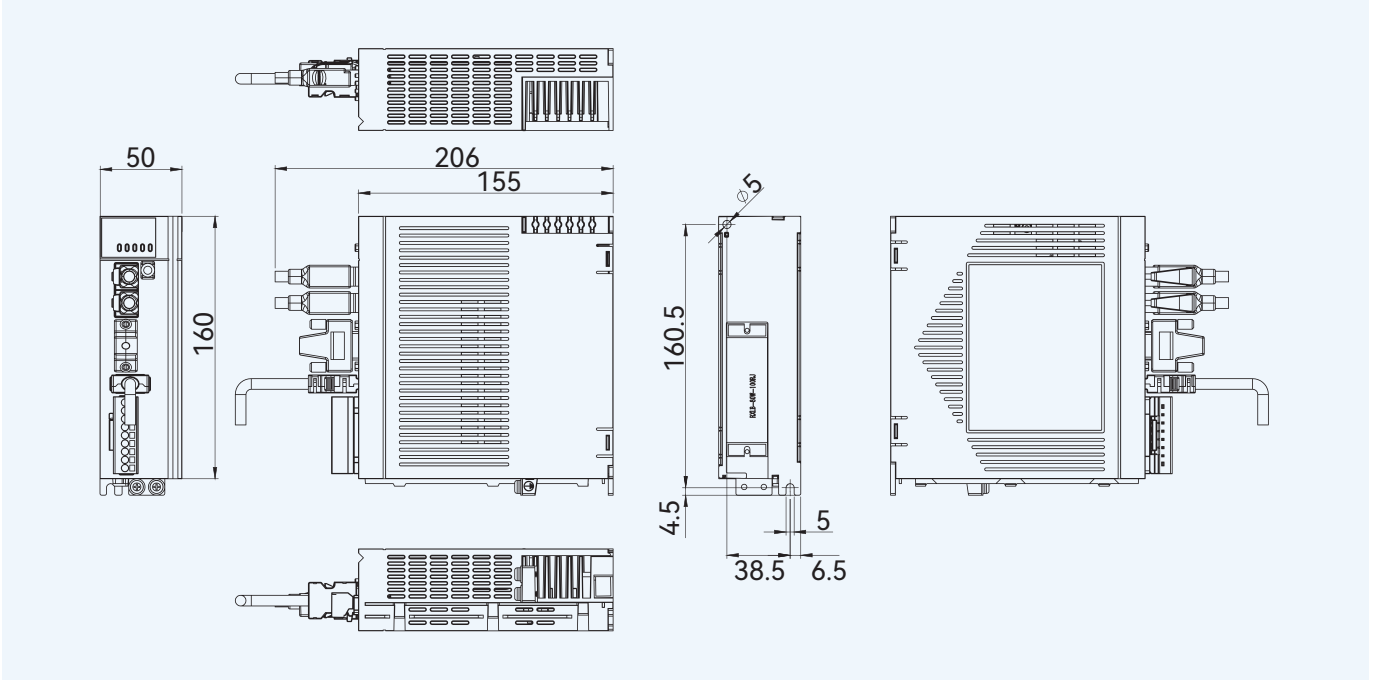


■ AR4-P-020 / 040

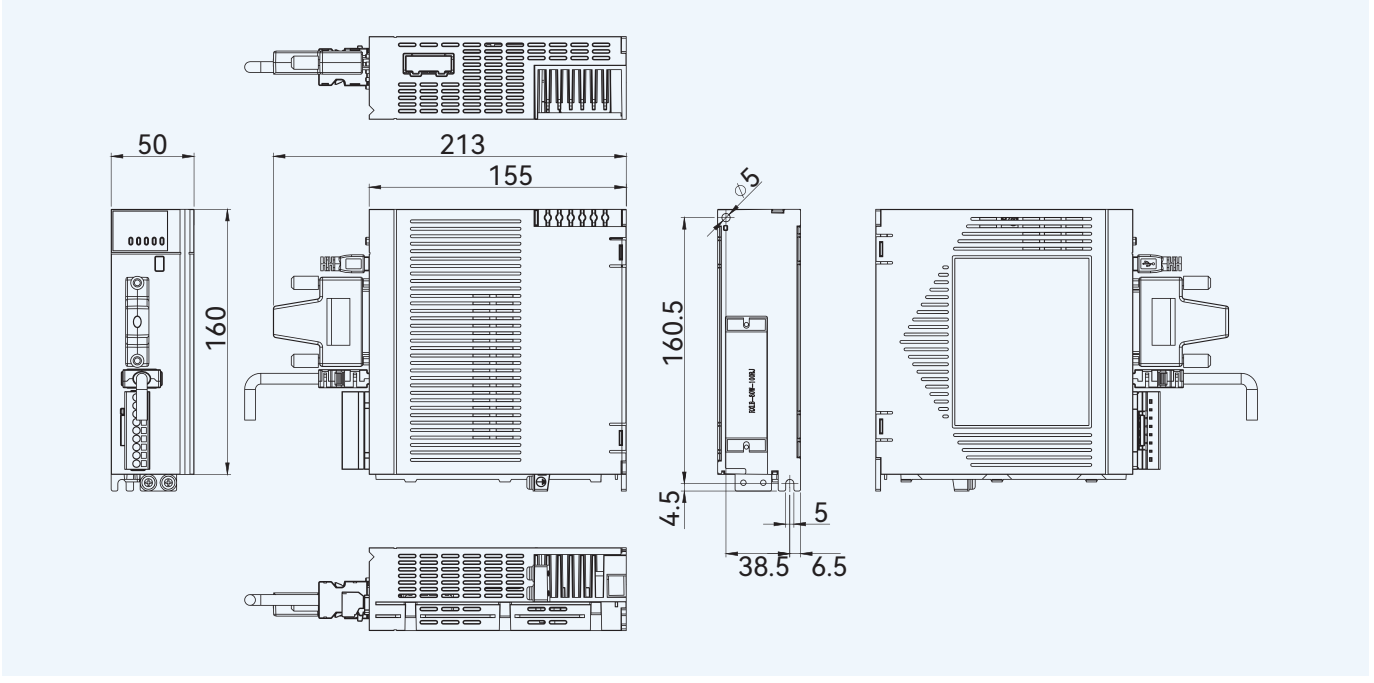


Driver Parameters and Dimension Drawings

■ AR4-E-075/100

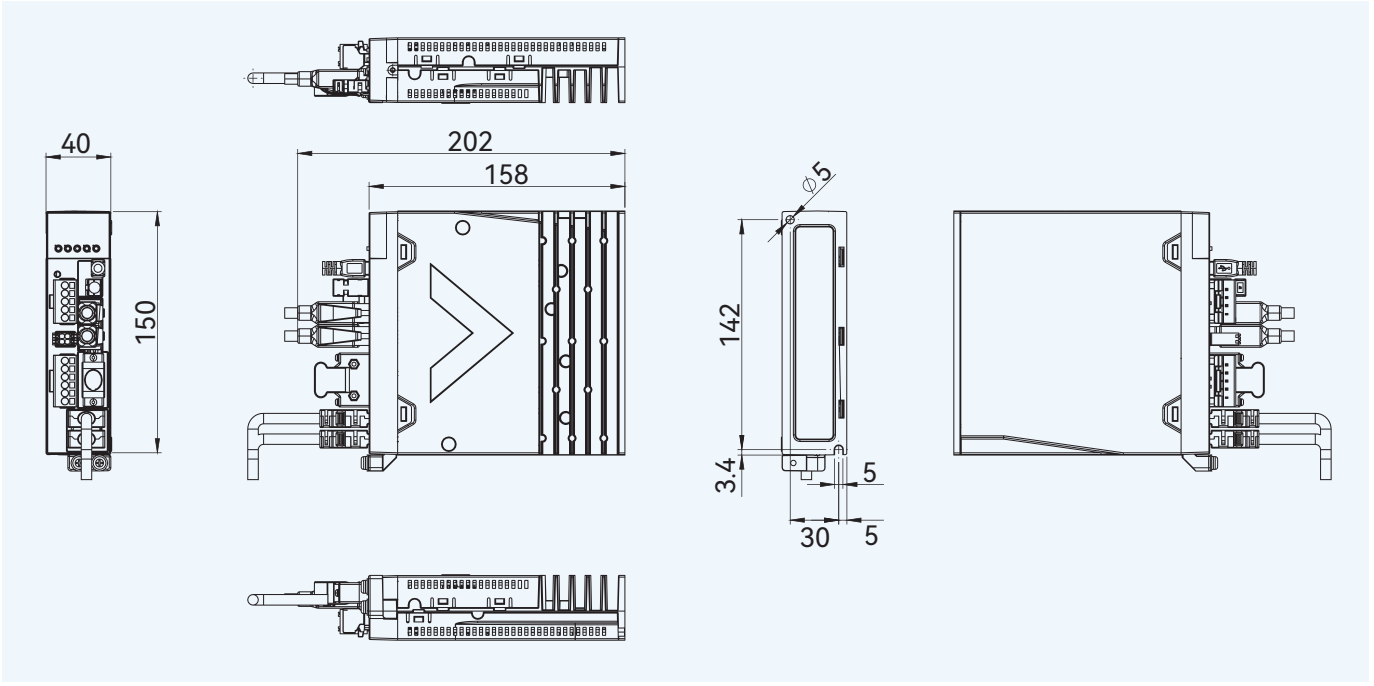


■ AR4-P-075/100

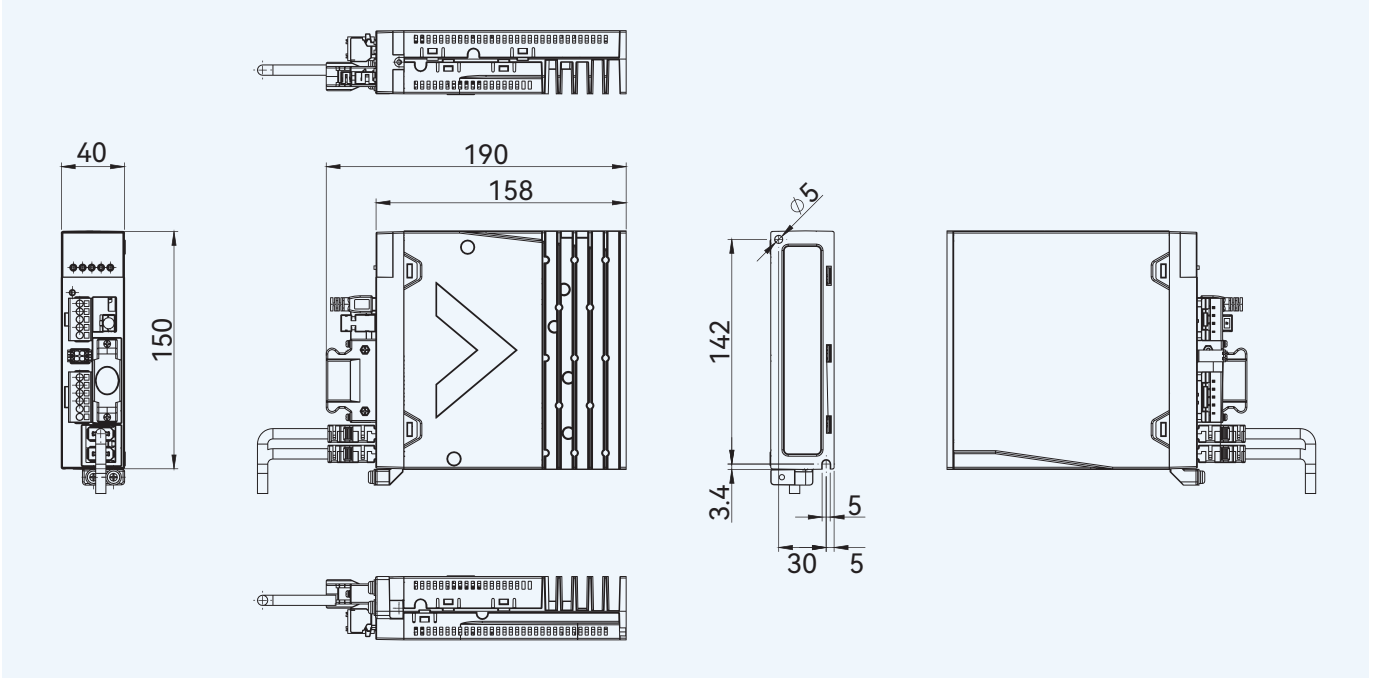


Driver Parameters and Dimension Drawings

■ AR6-E/F-020 / 040

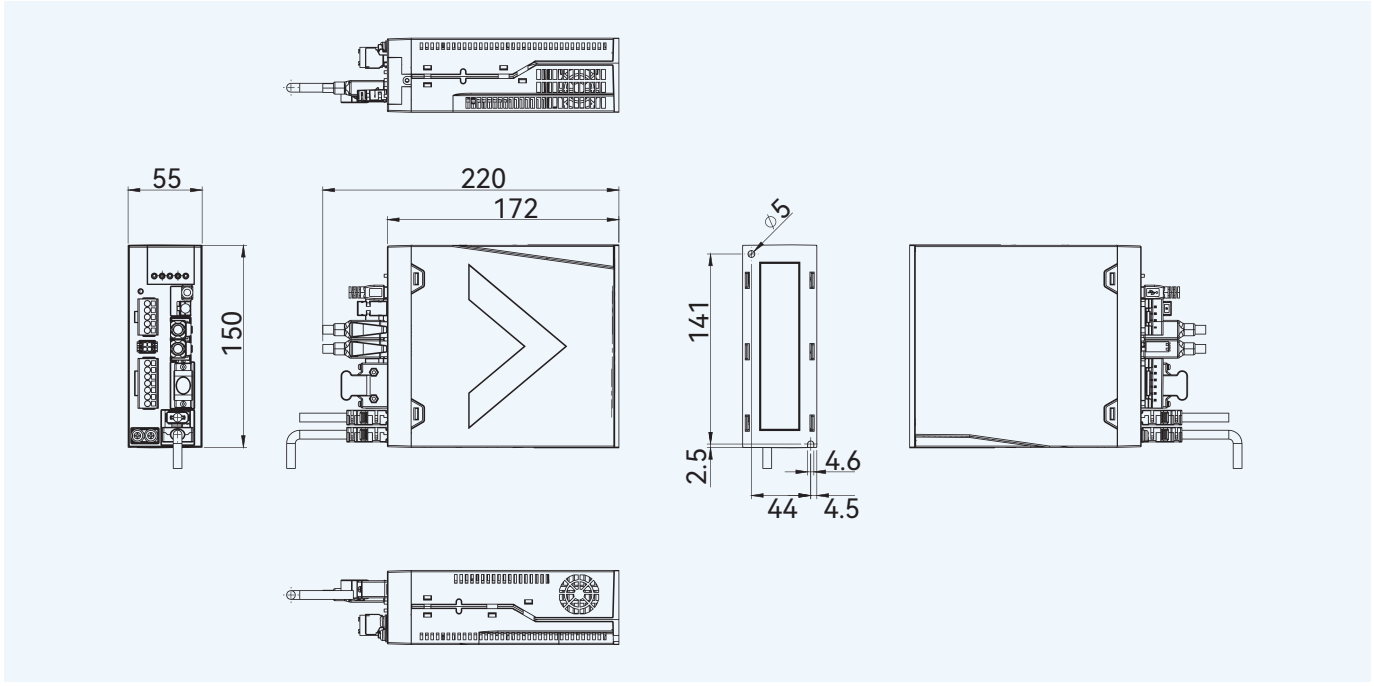


■ AR6-P-020 / 040

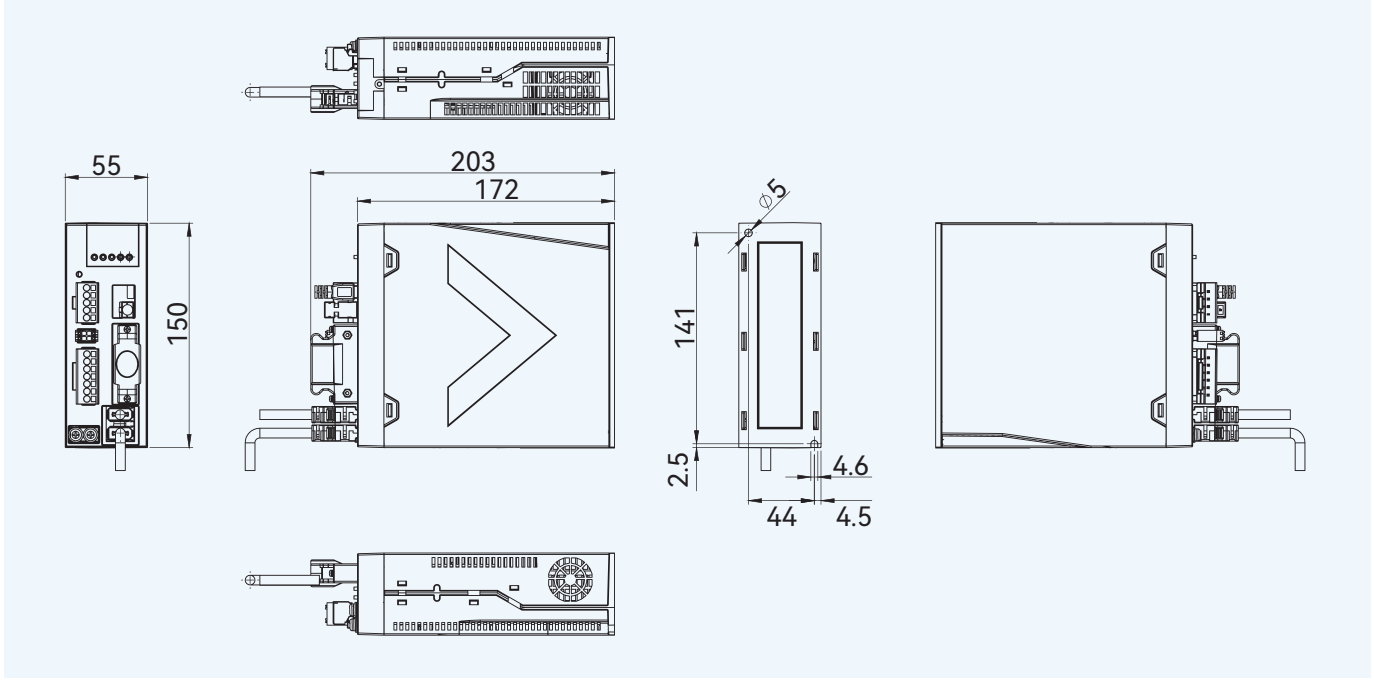


Driver Parameters and Dimension Drawings

■ AR6-E/F-075



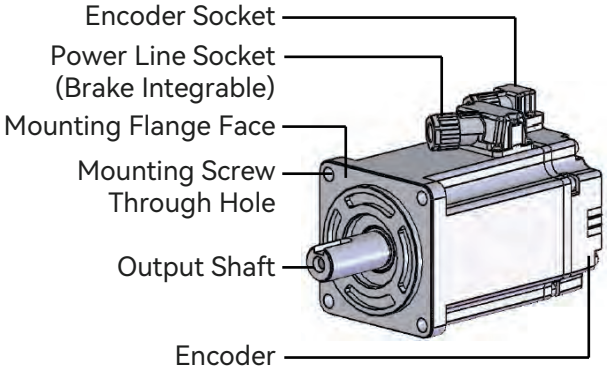
■ AR6-P-075



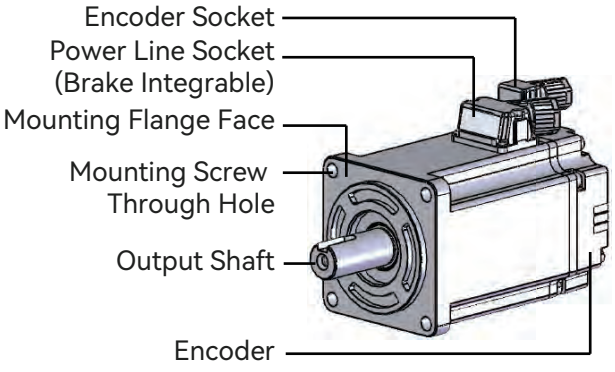
Motor Cable Matching

■ Component Description

Please note that for 50W motors, due to the shorter body length, it is recommended to select the rear outlet cable method to avoid interference between the power cable and the motor mounting surface.



Cable Front Outlet Method



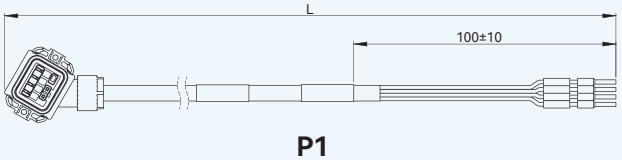
Cable Rear Outlet Method

■ Servo Motor Power Cable Matching

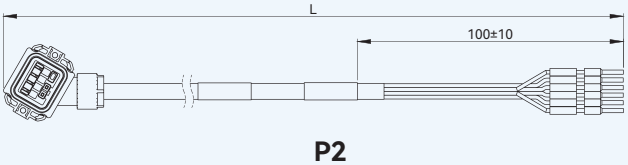
Motor Model	Cable Name			Cable Model	L Cable Length (mm)[1]	Cable Appearance Diagram
ASV40-A3/5-H-005-A-□-□-□	Front Outlet	Non-brake	Fixed cable	SVCAB-PWR-S-20-A-□□□L-00	030：3000mm	P1
			Drag chain Cable	SVCAB-PWR-S-20-A-□□□L-01		
ASV40-A3/5-H-010-A-□-□-□		Brake	Fixed cable	SVCAB-PWB-S-20-A-□□□L-00	050：5000mm	P2
			Drag chain cable	SVCAB-PWB-S-20-A-□□□L-01		
ASV60-A3/5-H-020-A-□-□-□	Rear Outlet	Non-brake	Fixed cable	SVCAB-PWR-S-20-B-□□□L-00	080：8000mm	P3
			Drag chain cable	SVCAB-PWR-S-20-B-□□□L-01		
ASV60-A3/5-H-040-A-□-□-□		Brake	Fixed cable	SVCAB-PWB-S-20-B-□□□L-00	100：10000mm	P4
			Drag chain cable	SVCAB-PWB-S-20-B-□□□L-01		

[1] For special cable length requirements, please contact sales representatives for customization.

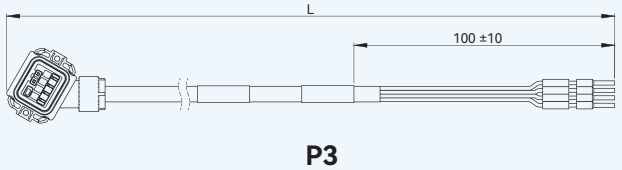
■ Cable Appearance Diagrams



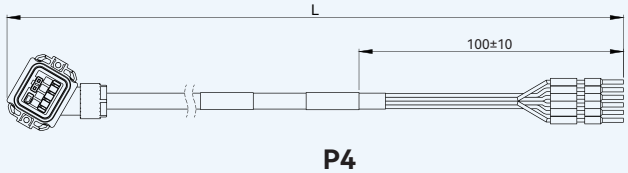
P1



P2



P3



P4

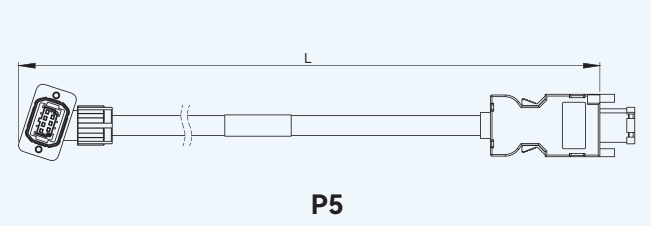
Encoder Cable Matching

■ Servo Motor Encoder Cable Matching

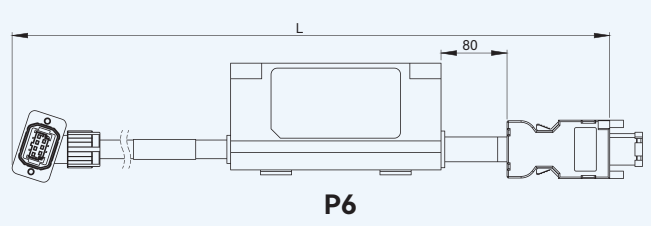
Motor Model	Cable Name				Cable Model	L Cable Length (mm)[1]	Cable Appearance Diagram
ASV40-A3/5-H-005-A-□-□-□	Front outlet	Single-turn absolute encoder	Drag chain cable	AR4 driver	SVCAB-ENC-A7-00-A-□□□L-01	030：3000mm	P5
		Multi-turn absolute encoder			SVCAB-ENB-A7-00-A-□□□L-01		P6
ASV40-A3/5-H-010-A-□-□-□	Rear outlet	Single-turn absolute encoder			SVCAB-ENC-A7-00-B-□□□L-01	050：5000mm	P7
		Multi-turn absolute encoder			SVCAB-ENB-A7-00-B-□□□L-01		P8
ASV60-A3/5-H-020-A-□-□-□	Front outlet	Single-turn absolute encoder		AR6 driver	SVCAB-ENC-A7-01-A-□□□L-01	080：8000mm	P9
		Multi-turn absolute encoder			SVCAB-ENB-A7-01-A-□□□L-01		P10
ASV60-A3/5-H-040-A-□-□-□	Rear outlet	Single-turn absolute encoder			SVCAB-ENC-A7-01-B-□□□L-01	100：10000mm	P11
		Multi-turn absolute encoder			SVCAB-ENB-A7-01-B-□□□L-01		P12

[1] For special cable length requirements, please contact sales representatives for customization.

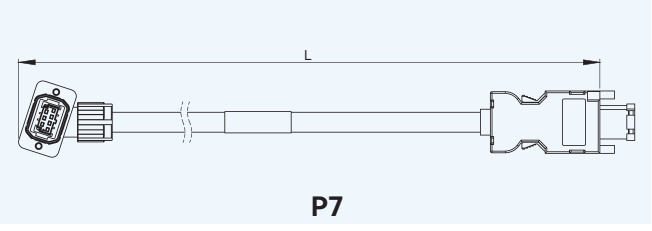
■ Cable Appearance Diagrams



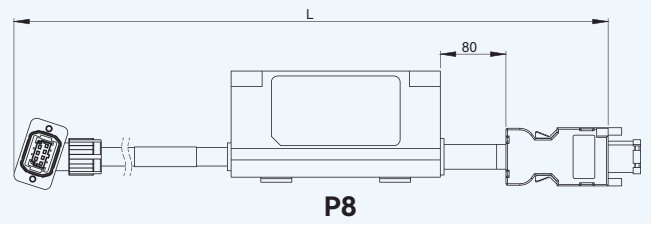
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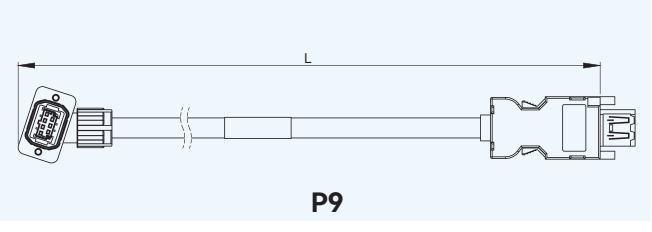
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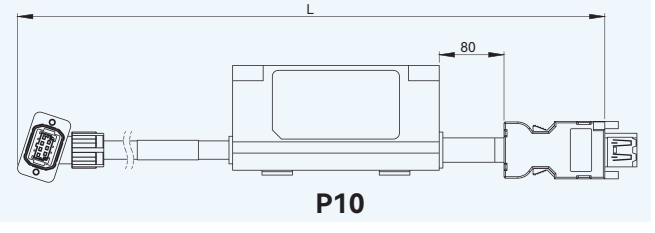
P7



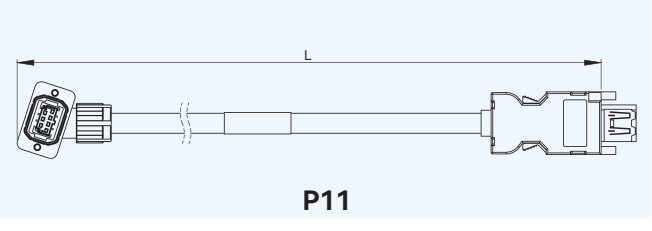
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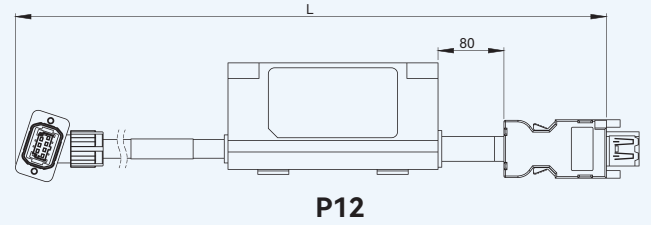
P9



P10



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P12

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