



HSD6 Series High Performance Servo System

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ABOUT US >>>

HNC ELECTRIC LIMITED is a company dedicated to the development and production of intelligent industrial automation solutions based on national strategic needs. Supported by its outstanding electrical and electronic technology and strong control technology, it provides control, display, drive and system solutions and other related products and services to customers worldwide.

With 29 years of hard work, we have developed and produced professional CNC systems, industrial robots, servo drives, servo motors, reducers, inverters, PLCs, HMIs, etc. In more than 80 countries and regions around the world, we have established a comprehensive agent system and after-sales service system. In the future, we will, as always, provide more professional services for global industrial automation.

Quality commitment

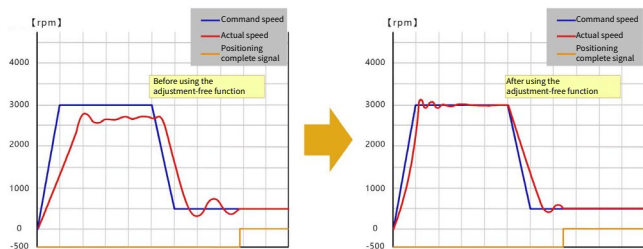
We have strict control over production management, process technology, equipment maintenance and quality control. Advanced manufacturing equipment, testing instruments, professional technical personnel, integrated production and processing flow, we strictly follow the standard operating standards, to ensure the product quality of stability and accuracy.



Features

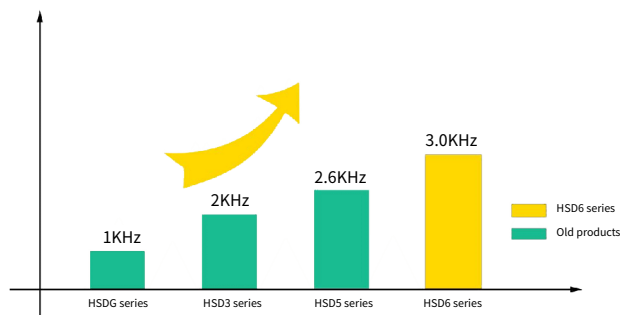
Adjustment-free function

- With the adjustment-free function, one-key automatic tuning, to achieve fast and stable operation.
- No need to be proficient in servo debugging principle, debugging is easier.
- Even if the load changes during operation, the equipment can operate stably.



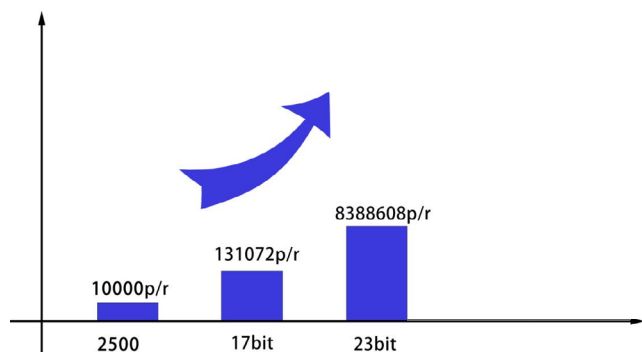
Speed response is greatly improved

- Optimization based on higher hardware performance and control algorithm.
- The speed response frequency of HSD6 series products is increased to 3.0KHz.
- Significantly improve product response performance.



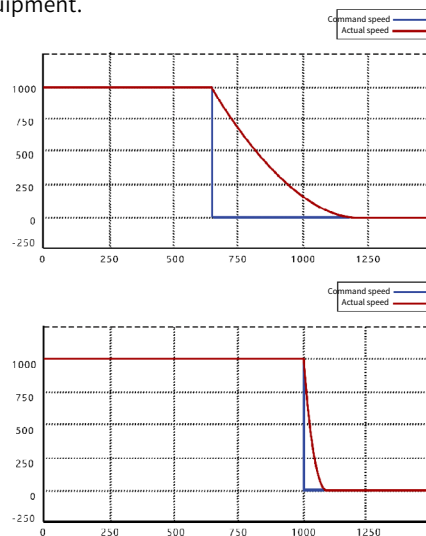
Support multiple encoder types

- Support multiple types of encoders.
- HSD6 series products support up to 23bit high-resolution encoders.
- The single-turn resolution of the encoder is 8388608 p/r.
- The encoder has higher resolution, accuracy and more precise positioning.
- Low speed performance is more stable



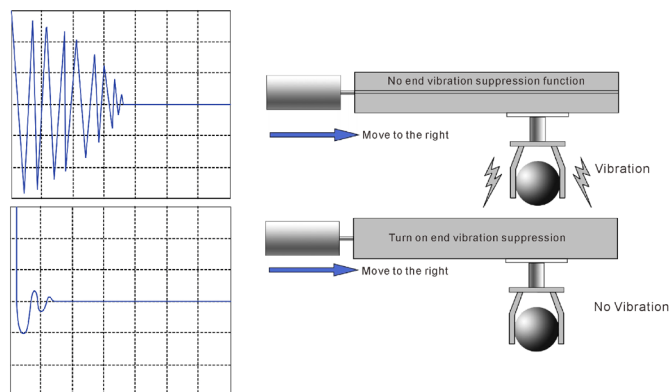
Dynamic braking function

- Dynamic braking is to short-circuit the three-phase electrodes in an emergency, and stop at the fastest speed, thereby protecting the safety of people and equipment.



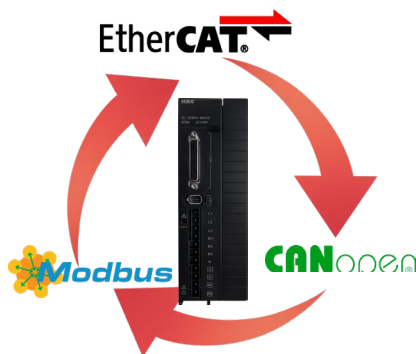
Vibration suppression function

- Built-in 5 notch filters, Effectively suppress mechanical resonance. Suppress high frequency vibration above 500Hz.
- Strengthen the end vibration suppression function, effectively suppress the machine end vibration.
- Suppress low frequency vibration of 0.5-300Hz.



Features

Support multiple communication interfaces to realize high-speed and high-precision control

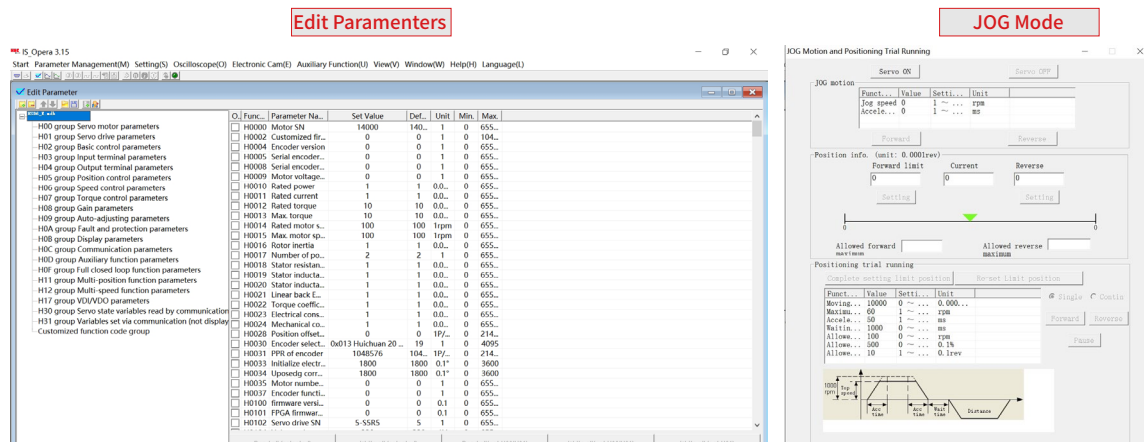


- Supported communication interface:
- RS 485 bus, using Modbus standard communication protocol.
- CANopen bus, the data transmission rate is up to 1Mbps.
- EtherCAT bus, the data transmission rate is up to 100Mbps.

Based on the EtherCAT communication method, HSD6 series products have the fastest synchronization cycle of 125us, which is 8 times shorter than the previous generation products, and meets the requirements of high-speed and high-precision control.

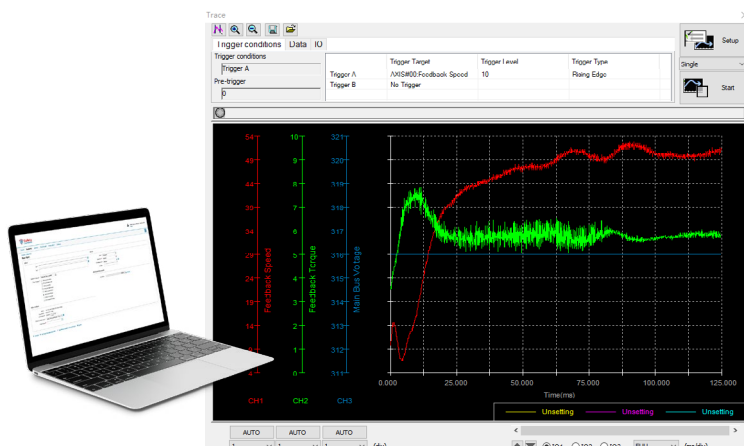
Efficient and convenient debugging software

- Through the PC software, you can realize: parameter management, status monitoring, sampling tracking, auxiliary debugging and other practical functions.
- Friendly user interface, easy to get started quickly.



Data Sampling

Status Monitor



Name	Value
☒ Main Circuit	1
☒ Effective Gain	1
☒ Encoder Ready	1
☒ Motor Power(Request)	0
☒ Dynamic Brake(DB)	1
☒ Rotation Direction	0
☒ Mode Switch	0
☒ Speed Reference(V-Ref)	0
☒ Torque Reference(T-Ref)	0
☒ Position Reference(Puls)	0
☒ Position Reference Direction	0
☒ Clear Signal	0
☒ AC Power ON	1
☒ Surge Current Limit Register Short Rel...	0
☒ Regenerative Transistor	0
☒ Regenerative Error Detection	0
☒ Motor Power ON	0
☒ Overcurrent	0
☒ Origin not Passed	0
☒ Identified Moment of Inertia	0
☒ Polarity being detected	0
☒ Polarity identification completed	1
☒ Ripple being connected	0
☒ /S-ON	0

HSD6-DS Series Servo Drive >>



■ Name Rule

HSD6	-	DS	-	02	A	00
HSD6 Series Servopack		Axis Number		Continuous Output Current	Power Supply Voltage	Interface Type

Axis Number		Continuous Output Current		Power Supply Voltage		Interface Type	
S	Single Axis	02	1.6A	A	220VAC	00	Pulse/Analog
		03	2.8A			01	CANopen
		04	3.5A				
		06	5.5A				
		08	7.6A				
		09	8.4A				
		12	12A				
		15	15A				
		17	17A				
		18	18A				
		21	21A				
		25	25A				
		26	26A				
		32	32A				
		37	37A				
		45	45A				
		60	60A				
		75	75A				

■ Product Characteristic

Type	Series	Characteristic	
Servo drive	HSD6-DS	Quickly	
		⌀ 3.0kHz Corresponding bandwidth of speed loop	
		Convenient	
		⌀ Wiring is simple and convenient	⌀ Eliminate limit and origin
		⌀ One-touch adjustment	⌀ Easy to replace encoder battery
		Precise	
		⌀ The encoder resolution reaches 17/23bit	
		Strong adaptability to the environment	
		⌀ Meet safety standards	
		⌀ The motor reaches a higher waterproof level	
		⌀ Safe and reliable to use, Wiring is simple and convenient	

Servo System Wiring connection

Circuit breaker for wiring

Used to protect the power line and cut off the circuit if over current.

Noise filter

Install a noise filter to prevent external noise.

Electromagnetic contactor

Turns on/off servo power. Please install a surge suppressor.

Electromagnetic contactor

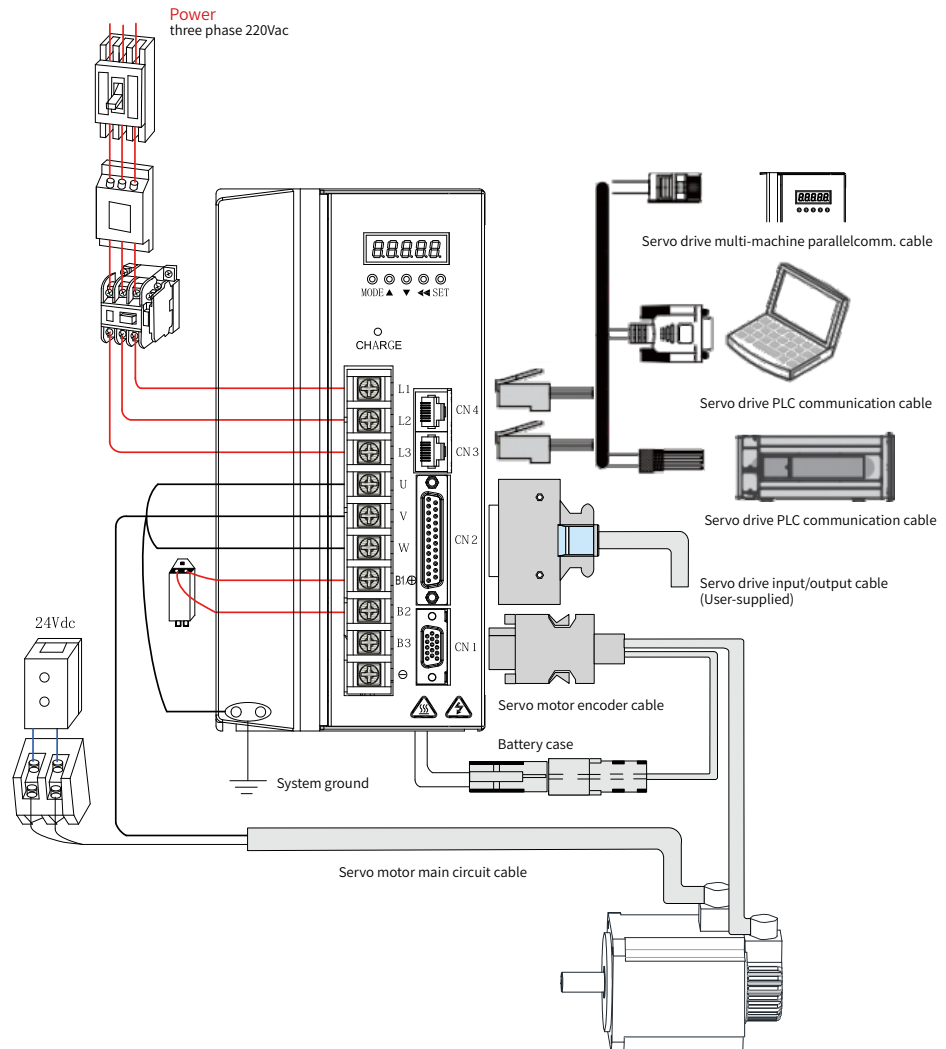
Use external resistor, remove the B2 and B3 tabs, connect the braking resistor between B1+ and B2; use an internal braking, short circuit B2 and B3.

Brake power

24Vdc voltage source, used as the motor has a hold brake.

Electromagnetic contactor

Brake control signal, turn on/off brake power. Install a surge suppressor.



Please pay attention to the power supply capacity when connecting external control power supply or 24Vdc power supply, especially when supplying power to several drives or multiple brakes at the same time, insufficient power supply capacity will lead to insufficient supply current and failure of the drive or the brake. The braking power supply is a 24V DC voltage source. The power should refer to the motor model and meet the braking power requirements.

System wiring precautions:

1. When connecting an external braking resistor, please remove the short-circuit wire between terminals B2 and B3 of the servo drive before connecting. Pay attention to modify the internal parameters.
2. CN3 and CN4 define exactly the same communication interface for the two pins, which can be used arbitrarily between the two.
3. In single-phase 220V wiring, the main circuit terminals are L1 and L2, and the reserved terminals should not be connected.

HSD6-DS Series Servo Drive

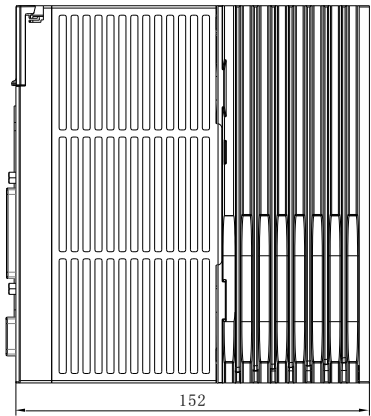
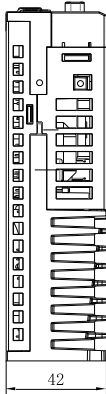
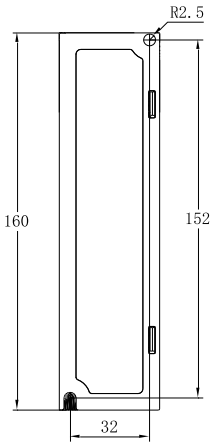
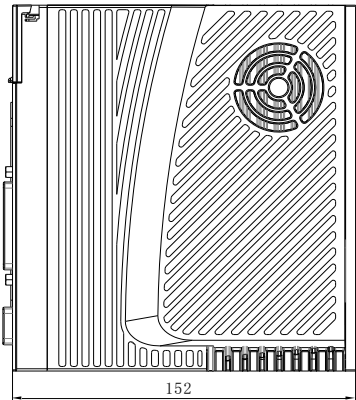
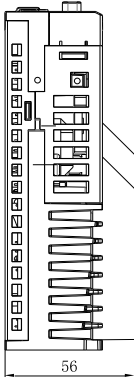
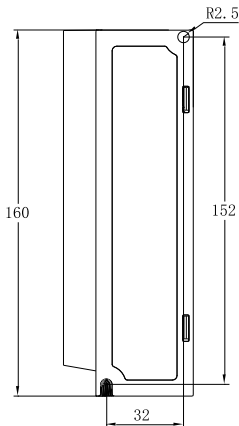
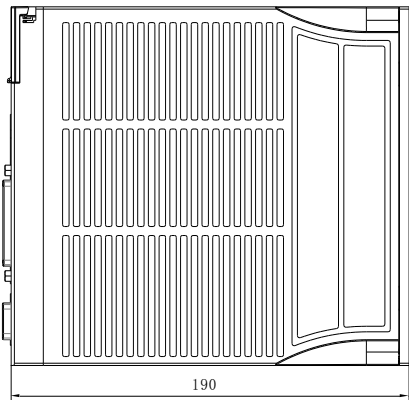
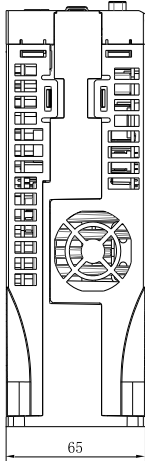
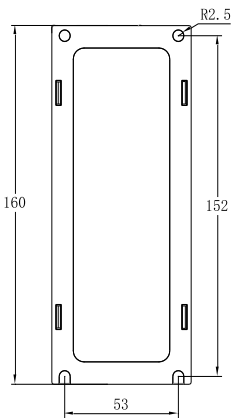
Servo drive specifications

Item				Specifications												
HSD6-DS				02	03	06	08	12	15	18	25	32	45	60	75	
outlook	A(mm)			32		32	53				88		130	190		
	B(mm)			152		152	152				248		352	447		
	W(mm)			148		148	186				215		215	215		
	H(mm)			160		160	160				258		368	463		
	D(mm)			42		56	65				110		206	224		
	R(mm)			2.5		2.5	2.5				2.8		3.5	3.5		
	Weight(kg)			0.8		1.0	1.5				5.1		8.3	12		
	Input Power			Single phase/ three phase AC200V-240V, -15%~10%,50/60Hz			Three phase AC200V-240V,-15%~10%,50/60Hz									
HSD6-DS				04	06	09	12	17	21	26	32	37	45	60	75	
outlook	A(mm)			49		70		88			130		190			
	B(mm)			162		193		248			352		447			
	W(mm)			177		204		215			215		215			
	H(mm)			174		203		258			368		463			
	D(mm)			60		92		110			206		224			
	R(mm)			2.5		2.8		2.8			3.5		3.5			
	Weight(kg)			1.3		2.7		5.1			8.3		12			
	Input Power			Three phase AC380V-440V, -15%~ 10%, 50/ 60Hz												
Basic information	Environment	Temp °C	Use environment temperature	0~+55°C (decrease if the ambient temperature is between 40°C and 50°C)												
			Storage environment temperature	-20 ~ 65°C												
		Humidity	Use environment humidity	20~85% RH below(No condensation)												
			Storage environment humidity	20~85% RH below(No condensation)												
		Use and preserve ambient air		indoor(no sunshine)、No corrosive gas, flammable gas, oil mist, dust												
		altitude		Below 1000m												
		vibration		5.8m/s2(0.6G)below 10~60Hz(Can not be used continuously at resonance frequency)												
		Insulation withstand voltage			Basic-FG between AC1500V 1min											
	Control way			Three-phase PWM converter sine wave drive												
	Encoder feedback			1. 2500ppr incremental type (saving line/non-saving line) 2. 17/23bit type (after adding a battery, it can be used as a multi-turn absolute)												
	Control signal	Input	9 inputs (DC24V optocoupler isolation) switch according to the control mode function													
		Output	5 output (DC24V optocoupler isolation, open collector output) switch according to the control mode function													
	Pulse signal	Input	2 inputs (optocoupler isolation, RS-422 differential, open collector output)													
		Output	4 outputs (A/B/Z phase RS-422 differential; Z phase open collector output)													
	Comm. function	RS232	For PC communication (for "Servostudio" connection)													
		RS-485	For upper remote control communication (1:n)													
		CAN	CANOPEN bus communication													
	Regeneration function				Optional regenerative resistor, external regenerative resistor. Pay attention to modify internal parameters											
	Control model				6 control modes: speed control, position control, torque control, torque/speed control, speed/position control, torque/position, torque/speed/position hybrid control											

Item			Specifications
Function	Control input		Alarm reset, proportional action switching, zero fixed function enable, forward drive prohibited, reverse drive prohibited, external torque limit for forward rotation, external torque limit for reverse rotation, forward jog, reverse jog, forward Reset switch, reverse reset switch, origin switch, emergency stop, servo enable, gain switch
	Control output		Servo ready, motor rotating, zero speed signal, speed reached, position reached, positioning approach signal, torque limit, speed limit, brake output, warning, servo failure, alarm code (3-digit output)
	Position control	Maximum command pulse frequency	Differential input: high-speed maximum 4Mpps, pulse width cannot be less than 0.125μs The maximum low speed is 500Kpps, and the pulse width cannot be less than 1μs Open collector: maximum 200Kpps, pulse width cannot be less than 2.5μs
		Input pulse signal form	Differential input; open collector
		Input pulse signal method	Pulse + direction, right angle phase difference (A phase + B phase), CW + CCW pulse
		Command pulse division/multiplication (Electronic gear ratio setting)	$0.1048576 < B/A < 419430.4$
		Command filter	Smoothing filter, FIR filter
		Pulse output	Output pulse form Phase A, Phase B: Differential output Z phase: differential output or open collector output
			Frequency division ratio Arbitrary frequency division
			Output pulse function Encoder position pulse and position pulse command (can be set)
	Speed control	Control input	Servo ON, alarm reset, speed command reverse, zero speed clamp, internal command selection input 1, internal command selection input 2, internal command selection input 3, internal command selection input 4, forward rotation external torque limit input, reverse rotation External torque limit input, emergency stop
		Control output	Alarm status, servo preparation, brake release, torque limit output, speed limit output speed reached, speed consistent, motor rotation output, zero-speed signal output
	Torque Control	Control input	Servo ON, alarm reset, torque command reverse, zero speed clamp
		Control output	Alarm status, servo preparation, brake release, torque limit, speed limit output, emergency stop
		Torque command input	(Factory default setting, the range can be set by function code)
		Speed limit function	Positive and negative internal speed limit P03.27, P03.28
	Common	Speed observer function	YES
		Damping control function	YES
		Adaptive notch filter	YES
		Automatic adjustment function	YES
		Encoder output frequency division	YES
		Internal location planning function	YES
		Adjustment/function setting	Use the host computer setting software "Servo studio" to adjust
		Protection	Over voltage, abnormal power supply, over current, overload, abnormal encoder, over speed, excessive position deviation, abnormal parameters, etc.

HSD6-DS Series Servo Drive

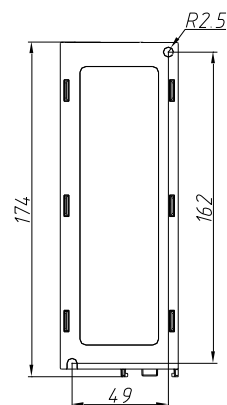
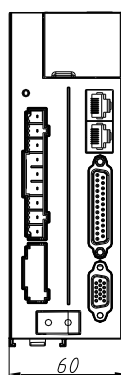
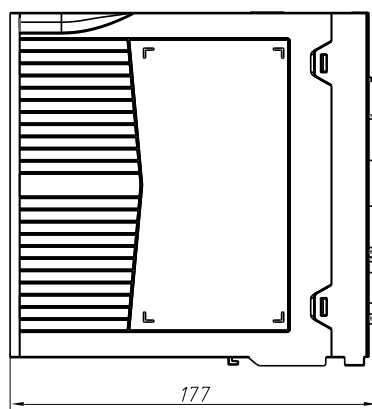
Servo drive installation dimensions

HSD6-DS-02A00 HSD6-DS-03A00			
HSD6-DS-06A00			
HSD6-DS-08A00 HSD6-DS-12A00 HSD6-DS-15A00 HSD6-DS-18A00			

Servo drive installation dimensions

HSD6-DS-04D00

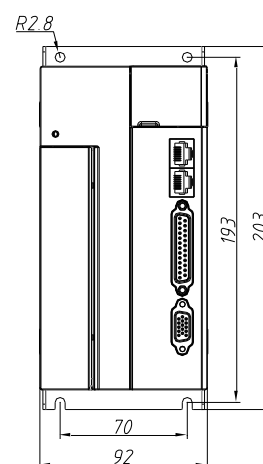
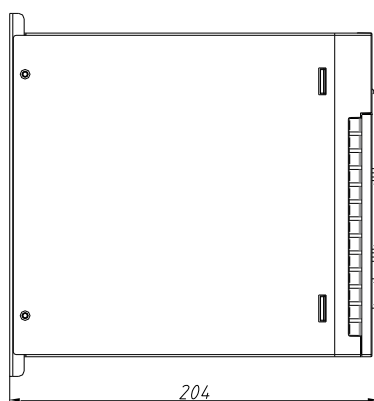
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HSD6-DS-09D00

HSD6-DS-12D00

HSD6-DS-17D00



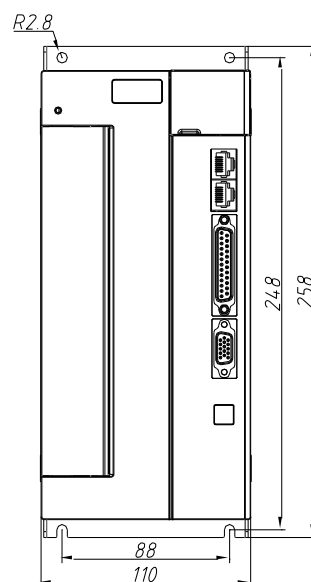
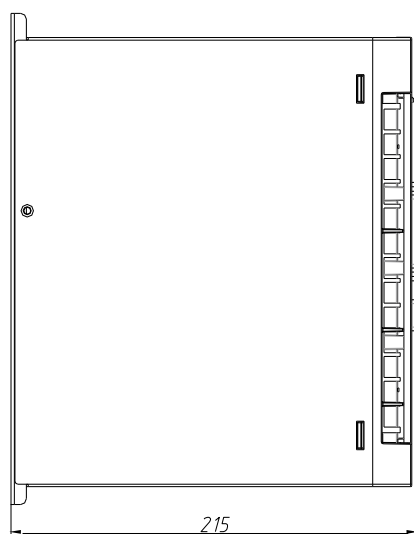
HSD6-DS-25A00

HSD6-DS-32A00

HSD6-DS-21D00

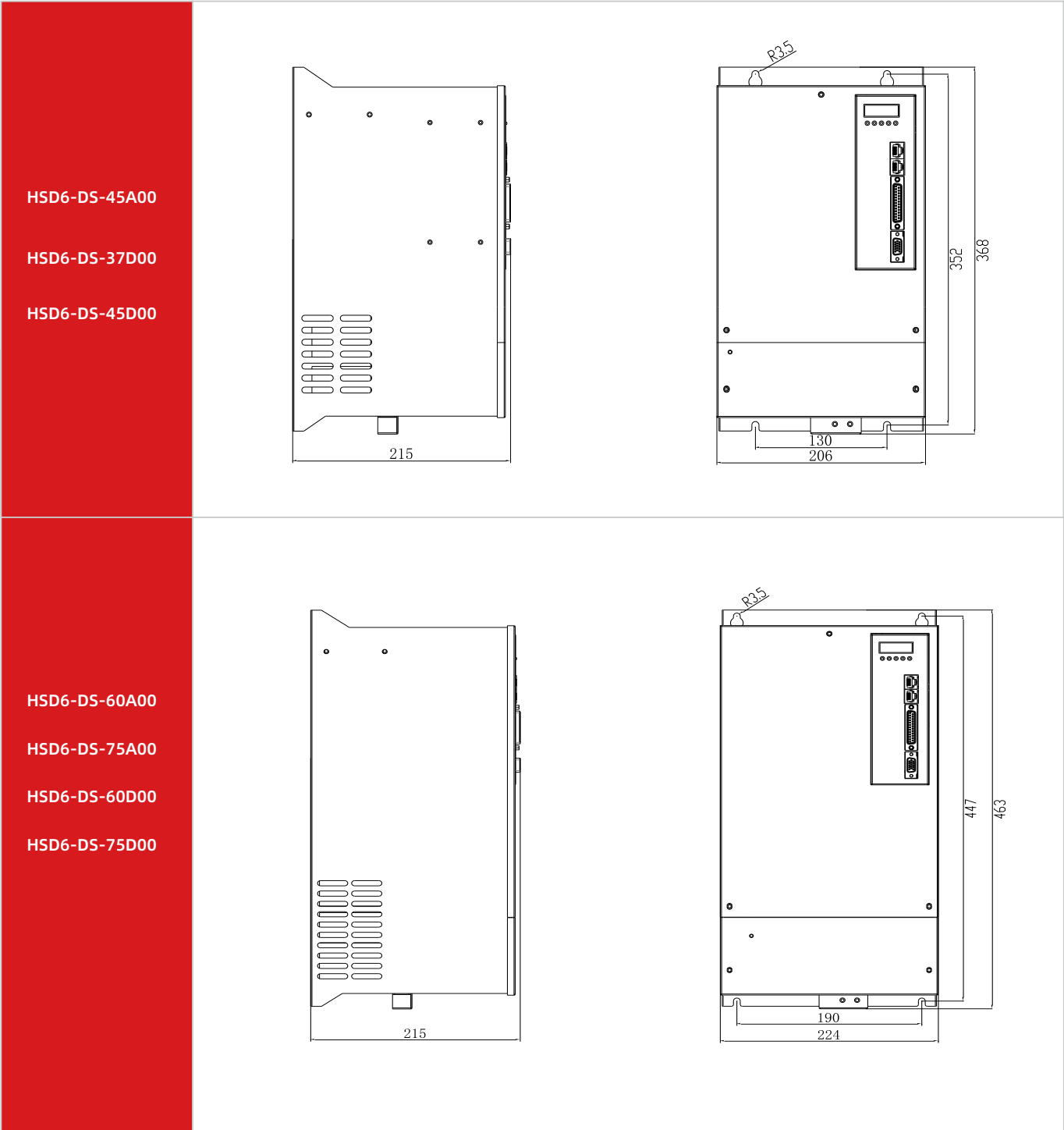
HSD6-DS-26D00

HSD6-DS-32D00



HSD6-DS Series Servo Drive

Servo drive installation dimensions



HSD6-DS EtherCAT Series Servo Drive



Product Characteristic

Type	Series	Characteristic
Servo drive	HSD6-DS EtherCAT	Quickly
		Ø 3.0kHz Corresponding bandwidth of speed loop
		Convenient
		Ø Wiring is simple and convenient Ø Eliminate limit and origin Ø One-touch adjustment Ø Easy to replace encoder battery
		Precise
		Ø The encoder resolution reaches 17/23bit
		Strong adaptability to the environment
		Ø Meet safety standards Ø The motor reaches a higher waterproof level Ø Safe and reliable to use, Wiring is simple and convenient

HSD6-DS EtherCAT Series Servo Drive

Name Rule

HSD6		-	DS		-	02		-	A		-	30	
HSD6 Series Servopack			Axis Number			Continuous Output Current			Power Supply Voltage			Interface Type	
Axis Number			Continuous Output Current			Power Supply Voltage						Interface Type	
S	Single Axis	02	1.6A	A	220VAC	30	EtherCAT						
		03	2.8A										
		04	3.5A										
		06	5.5A										
		08	7.6A										
		09	8.4A										
		12	12A										
		15	15A										
		17	17A										
		18	18A										
		21	21A										
		25	25A										
		26	26A										
		32	32A										
		37	37A										
		45	45A										
		60	60A										
		75	75A										
				D	380VAC	30	EtherCAT						

Servo System Wiring connection

Circuit breaker for wiring

Used to protect the power line and cut off the circuit if over current.

Noise filter

Install a noise filter to prevent external noise.

Electromagnetic contactor

Turns on/off servo power. Please install a surge suppressor.

Electromagnetic contactor

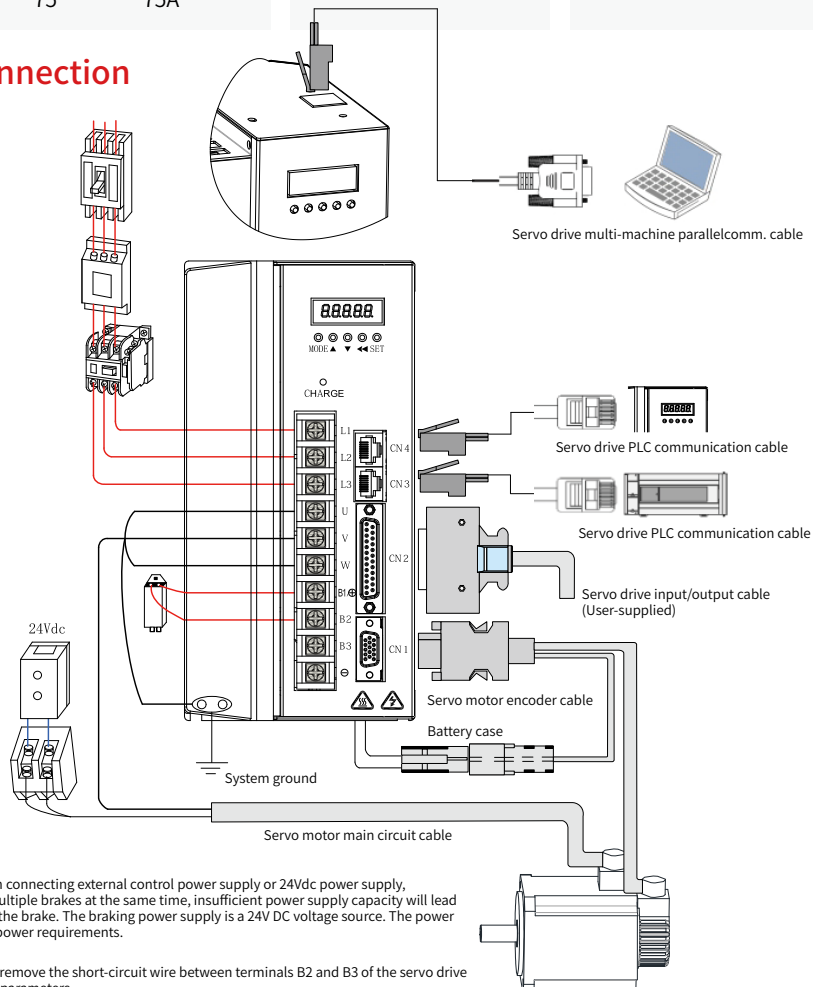
Use external resistor, remove the B2 and B3 tabs, connect the braking resistor between B1+ and B2, use an internal braking, short circuit B2 and B3.

Brake power

24Vdc voltage source, used as the motor has a hold brake.

Electromagnetic contactor

Brake control signal, turn on/off brake power. Install a surge suppressor.



Please pay attention to the power supply capacity when connecting external control power supply or 24Vdc power supply, especially when supplying power to several drives or multiple brakes at the same time, insufficient power supply capacity will lead to insufficient supply current and failure of the drive or the brake. The braking power supply is a 24V DC voltage source. The power should refer to the motor model and meet the braking power requirements.

System wiring precautions:

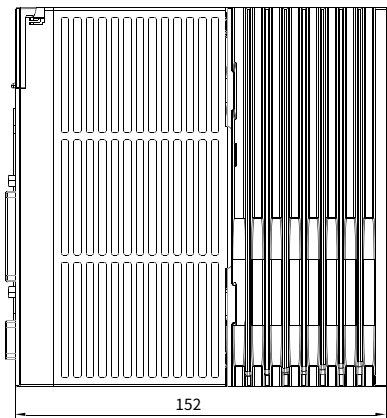
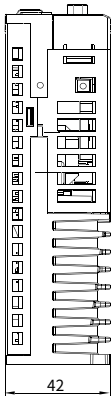
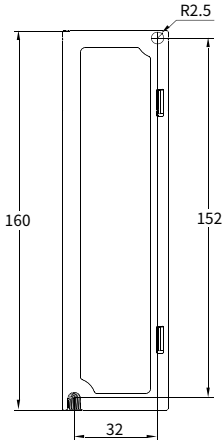
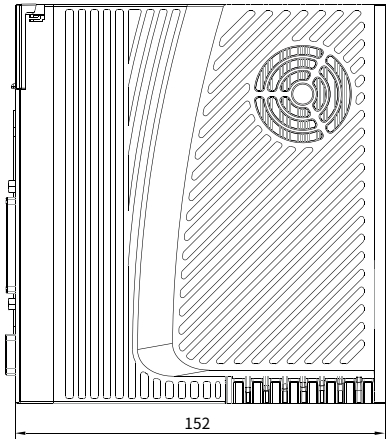
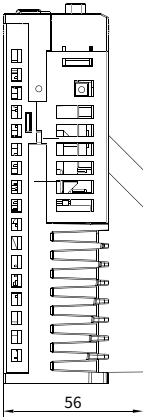
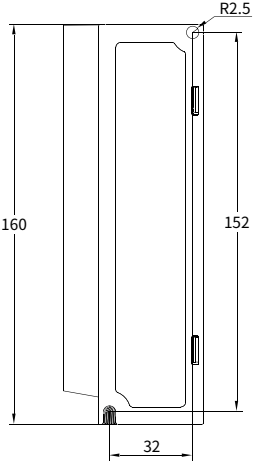
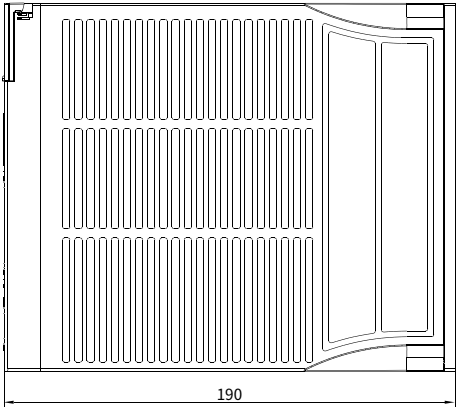
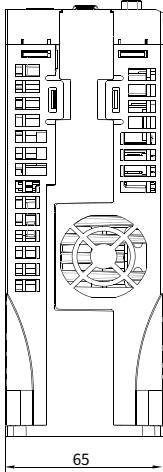
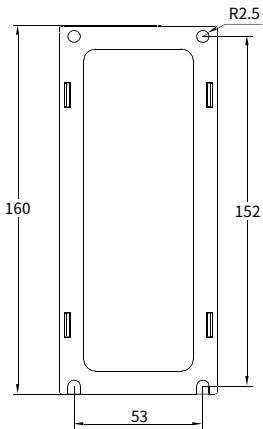
- When connecting an external braking resistor, please remove the short-circuit wire between terminals B2 and B3 of the servo drive before connecting. Pay attention to modify the internal parameters.
- CN3 and CN4 define exactly the same communication interface for the two pins, which can be used arbitrarily between the two.
- In single-phase 220V wiring, the main circuit terminals are L1 and L2, and the reserved terminals should not be connected.

Servo drive specifications

Item		Specifications												
HSD6-DS EtherCAT		02	03	06	08	12	15	18	25	32	45	60	75	
outlook	A(mm)	32		32	53				88		130	190		
	B(mm)	152		152	152				248		352	447		
	W(mm)	148		148	186				215		215	215		
	H(mm)	160		160	160				258		368	463		
	D(mm)	42		56	65				110		206	224		
	R(mm)	2.5		2.5	2.5				2.8		3.5	3.5		
	Weight(kg)	0.8		1.0	1.5				5.1		8.3	12		
	Input Power	Single phase/ three phase			Three phase									
		AC200V-240V, -15%~ 10%, 50/ 60Hz												
HSD6-DS EtherCAT		04	06	09	12	17	21	26	32	37	45	60	75	
outlook	A(mm)	49		70			88			130		190		
	B(mm)	162		193			248			352		447		
	W(mm)	177		204			215			215		215		
	H(mm)	174		203			258			368		463		
	D(mm)	60		92			110			206		224		
	R(mm)	2.5		2.8			2.8			3.5		3.5		
	Weight(kg)	1.3		2.7			5.1			8.3		12		
	Input Power	Three phase AC380V-440V, -15%~ 10%, 50/ 60Hz												
control mode		IGBT PWM control, sine wave current drive mode 220V, 380V: single-phase or three-phase full-wave rectification												
Encoder feedback		17/23bit type (after adding a battery, it can be used as a multi-turn absolute)												
Basic information	Service conditions	Use/storage temperature	0~+45 °C (please derate if the ambient temperature is above 45C, and the average load rate cannot be higher than 80%)/40~+70C											
		Use/storage humidity	90%RH below(No condensation)											
		Vibration/impact resistance	4.9m/s² / 19. 6m/s²											
		Protection level	IP10											
		altitude	Below 1000m											
		Environmental pollution level	PD2											
		Overvoltage level	OVCI											
		EtherCAT slave specifications	EtherCAT Basic performance of slave station	communication protocol	EtherCAT protocol									
Support Services	CoE (PDO、 SDO)													
Synchronization mode	DC-Distributed clock													
physical layer	100BASE-TX													
Baud rate	100Mbit/s (100Base-TX)													
Duplex mode	full duplex													
topological structure	Circular, linear													
Transmission medium	Shielded Cat 5 or better network cable													
Number of slave stations	The protocol supports up to 65535, and the actual use is not more than 100													
EtherCAT Frame length	44 bytes~1498 bytes													
process data	1486 bytes maximum for a single Ethernet frame													
Synchronous jitter of two slave stations	< 1us													
Refresh time	1000 switch inputs and outputs about 30us; About 100us for 100 servo axes													
Communication error rate	10 ⁻¹⁰ Ethernet standard													
EtherCAT Configuration unit	FMM Uunit		8											
	Storage Synchronization Snap-in		8											
	Process data RAM		8KB											
	Distributed clock		64-bit											
	EEPROM volume		32Kbit											

HSD6-DS Series Servo Drive

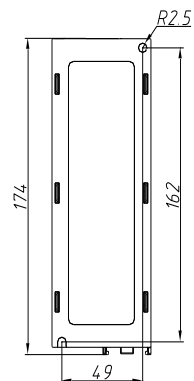
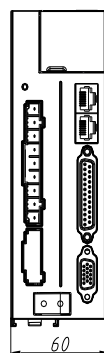
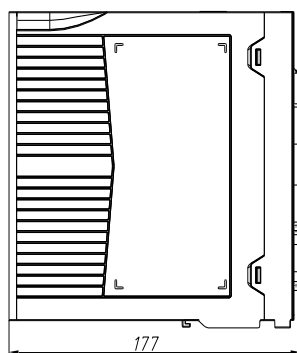
Servo drive installation dimensions

HSD6-DS-02A30 HSD6-DS-03A30			
HSD6-DS-06A30			
HSD6-DS-08A30 HSD6-DS-12A30 HSD6-DS-15A30			

Servo drive installation dimensions

HSD6-DS-04D30

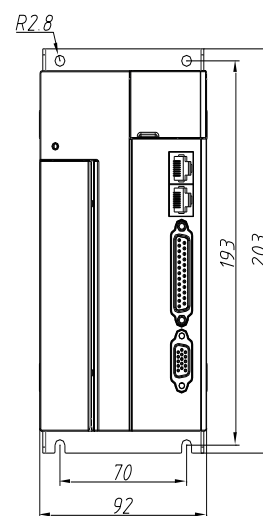
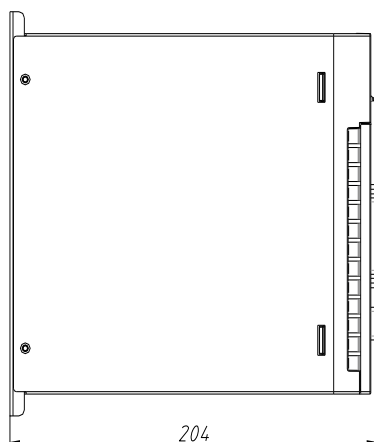
HSD6-DS-06D30



HSD6-DS-09D30

HSD6-DS-12D30

HSD6-DS-17D30



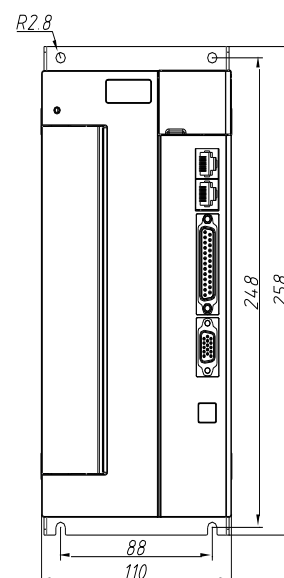
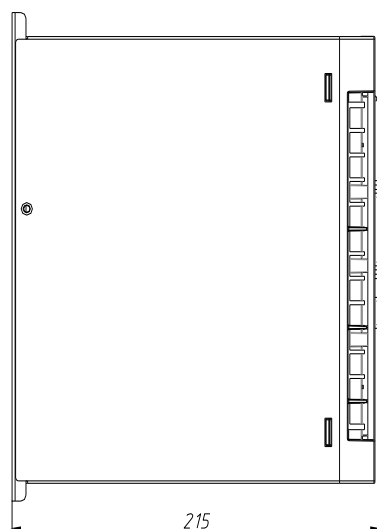
HSD6-DS-25A30

HSD6-DS-32A30

HSD6-DS-21D30

HSD6-DS-26D30

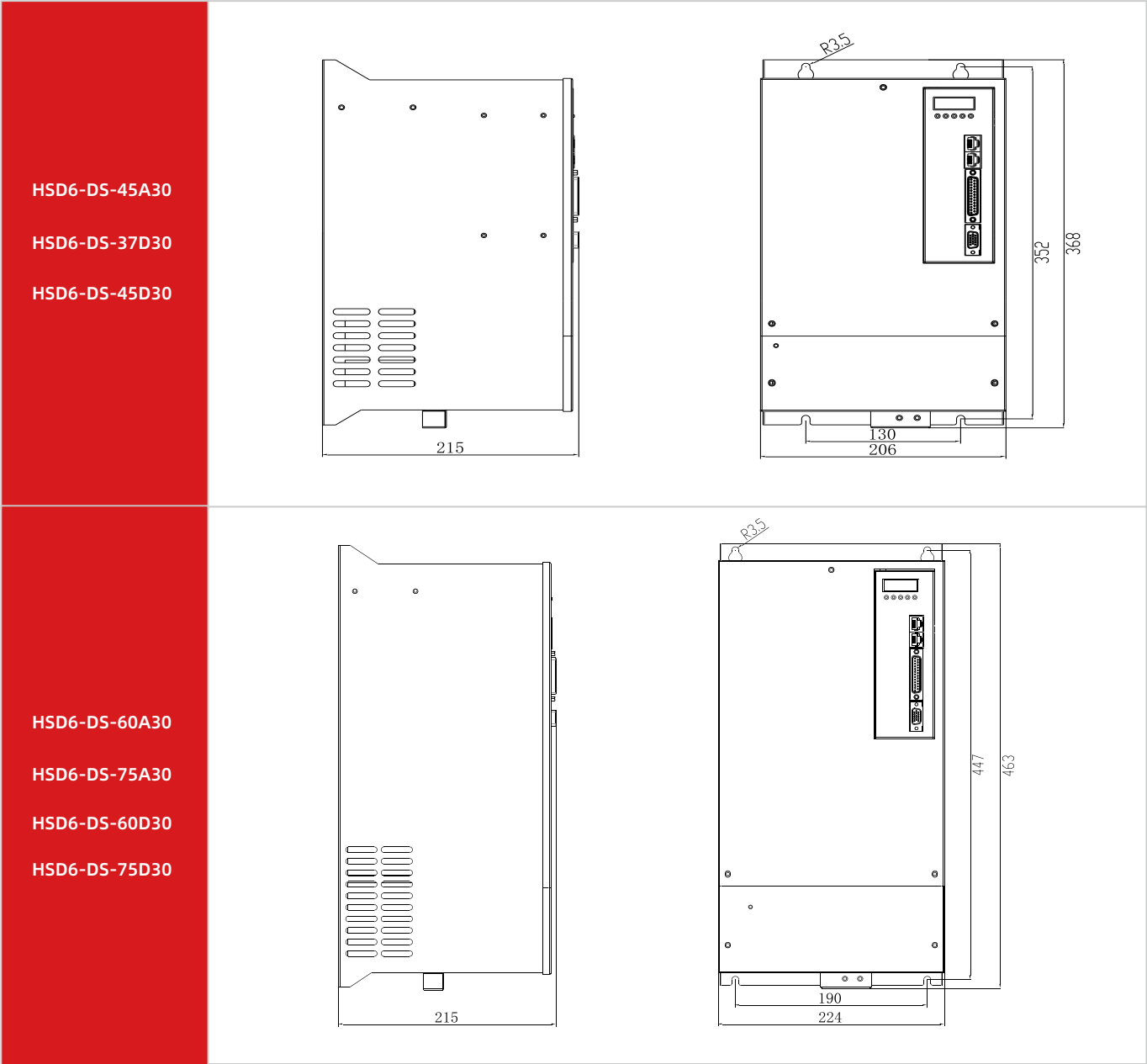
HSD6-DS-32D30



HSD6-DS Series Servo Drive



Servo drive installation dimensions



HSD6-BS Series Servo Drive



Name Rule

HSD6		-	BS		-	02		-	A		-	00	
HSD6 Series Servopack			Axis Number			Continuous Output Current			Power Supply Voltage			Interface Type	
Axis Number			Continuous Output Current			Power Supply Voltage						Interface Type	
S	Single Axis	02	1.6A			A	220VAC		00	Pulse/Analog			
		03	2.8A					01	CANopen				
		06	5.5A										
		08	7.6A										
		12	12A										
		15	15A										
		18	18A										

Servo System Wiring connection

Circuit breaker for wiring

Used to protect the power line and cut off the circuit if over current.

Noise filter

Install a noise filter to prevent external noise.

Electromagnetic contactor

Turns on/off servo power .
Please install a surge suppressor.

Electromagnetic contactor

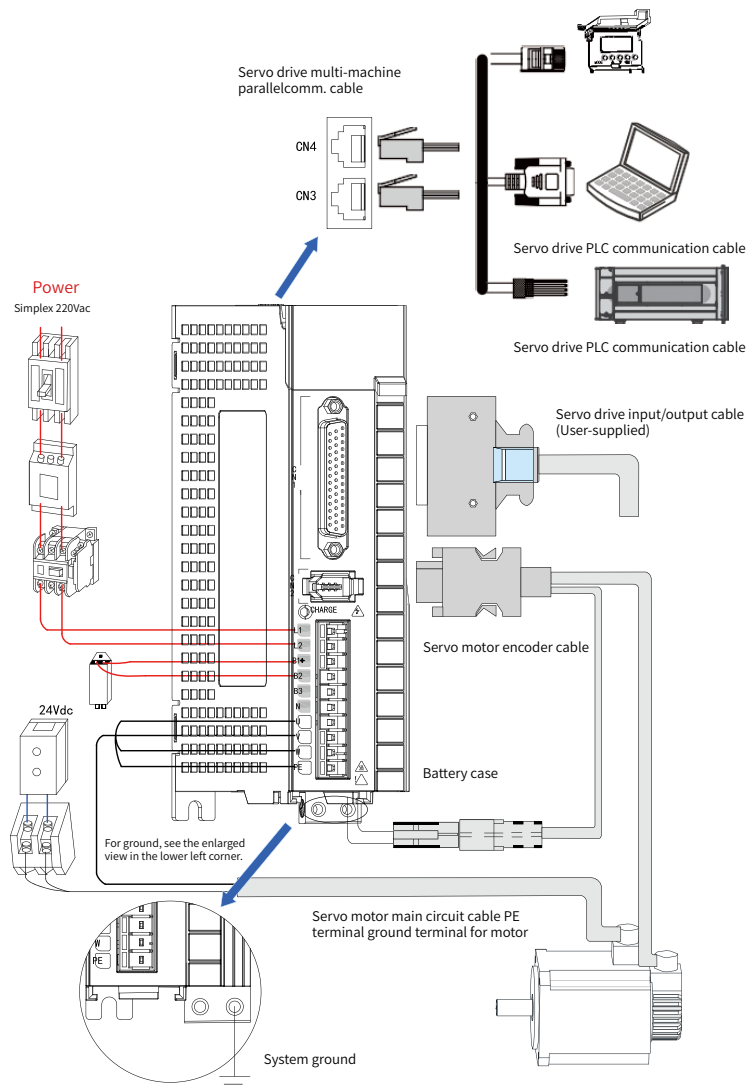
Use external resistor,remove the B2 and B3 tabs, connect the braking resistor between B1+ and B2;use an internal braking,short circuit B2 and B3.

Brake power

24Vdc voltage source, used as the motor has a hold brake.

Electromagnetic contactor

Brake control signal, turn on/off brake power.Install a surge suppressor.



Please pay attention to the power supply capacity when connecting external control power supply or 24Vdc power supply, especially when supplying power to several drives or multiple brakes at the same time, insufficient power supply capacity will lead to insufficient supply current and failure of the drive or the brake. The braking power supply is a 24V DC voltage source. The power should refer to the motor model and meet the braking power requirements.

System wiring precautions:

1. When connecting an external braking resistor, please remove the short-circuit wire between terminals B2 and B3 of the servo drive before connecting. Pay attention to modify the internal parameters.
2. CN3 and CN4 define exactly the same communication interface for the two pins, which can be used arbitrarily between the two.
3. In single-phase 220V wiring, the main circuit terminals are L1 and L2, and the reserved terminals should not be connected.

HSD6-BS Series Servo Drive

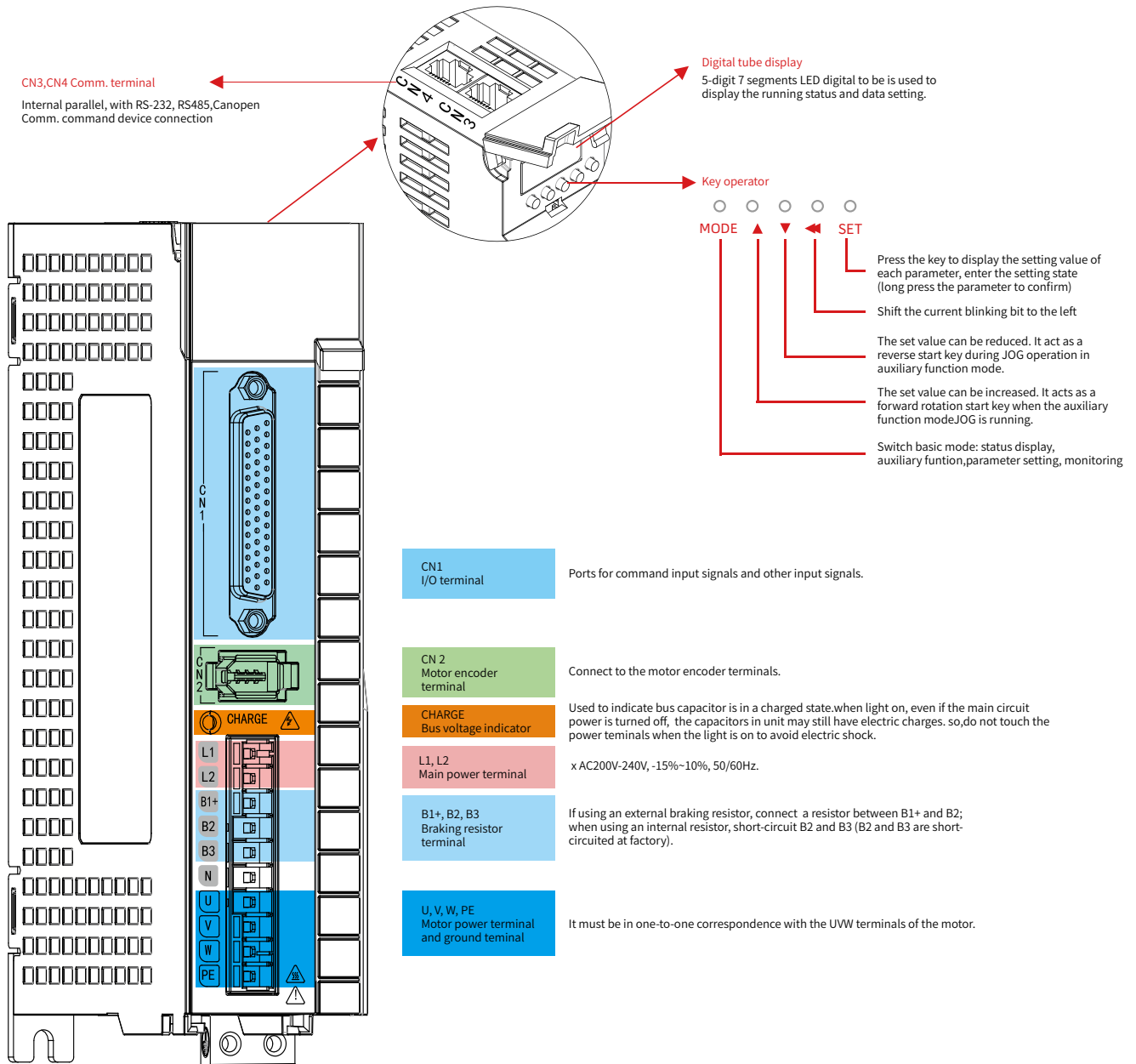
Servo drive specifications

Item			Specifications						
HSD6-BS			02	03	06	08	12	15	18
outlook	A(mm)		27				52		
	B(mm)		162				185		
	W(mm)		154				177		
	H(mm)		171				196		
	D(mm)		51				66		
	R(mm)								
	Weight(kg)		0.9				1.5		
	Input Power		Single phase AC200V-240V, -15%~10%,50/60Hz				Three phase AC200V-240V, -15%~10%,50/60Hz		
Basic information	Environment	Temp °C	Use environment temperature	0~+55°C (decrease if the ambient temperature is between 40°C and 50°C)					
			Storage environment temperature	-20~65°C					
		Humidity	Use environment humidity	20~85% RH below(No condensation)					
			Storage environment humidity	20~85% RH below(No condensation)					
		Use and preserve ambient air		indoor(no sunshine)、No corrosive gas, flammable gas, oil mist, dust					
		altitude		Below 1000m					
		vibration		5.8m/s2(0.6G)below 10~60Hz(Can not be used continuously at resonance frequency)					
	Insulation withstand voltage		Basic-FG between AC1500V 1min						
	Control way		Three-phase PWM converter sine wave drive						
	Encoder feedback		17bit、 23bit (after adding a battery, it can be used as a multi-turn absolute encoder)						
	Control signal	Input	9 inputs (DC24V optocoupler isolation) switch according to the control mode function						
		Output	5 output (DC24V optocoupler isolation, open collector output) switch according to the control mode function						
	Pulse signal	Input	2 inputs (optocoupler isolation, RS-422 differential, open collector output)						
		Output	4 outputs (A/B/Z phase RS-422 differential; Z phase open collector output)						
	Comm. function	RS232	For PC communication (for "Servostudio" connection)						
		RS-485	For upper remote control communication (1:n)						
		CAN	CANOPEN bus communication						
	Regeneration function			Optional regenerative resistor, external regenerative resistor. Pay attention to modify internal parameters					
	Control model			6 control modes: speed control, position control, torque control, torque/speed control, speed/position control, torque/position, torque/speed/position hybrid control					

Item			Specifications
Function	Control input		Alarm reset, proportional action switching, zero fixed function enable, forward drive prohibited, reverse drive prohibited, external torque limit for forward rotation, external torque limit for reverse rotation, forward jog, reverse jog, forward Reset switch, reverse reset switch, origin switch, emergency stop, servo enable, gain switch.
	Control output		Servo ready, motor rotating, zero speed signal, speed reached, position reached, positioning approach signal, torque limit, speed limit, brake output, warning, servo failure, alarm code (3-digit output)
	Position control	Maximum command pulse frequency	The maximum low speed is 500Kpps, and the pulse width cannot be less than 1μs Open collector: maximum 200Kpps, pulse width cannot be less than 2.5μs
		Input pulse signal form	Differential input; open collector
		Input pulse signal method	Pulse + direction, right angle phase difference (A phase + B phase), CW + CCW pulse
		Command pulse division/multiplication (Electronic gearratio setting)	$0.1048576 < B/A < 419430.4$
		Command filter	Smoothing filter, FIR filter
		Output pulse form	Phase A, Phase B: Differential output Z phase: differential output or open collector output
		Frequency division ratio	Arbitrary frequency division
	Pulse output	Output pulse function	Encoder position pulse and position pulse command (can be set)
	Speed control	Control input	Servo ON, alarm reset, speed command reverse, zero speed clamp, internal command selection input 1, internal command selection input 2, internal command selection input 3, internal command selection input 4, forward rotation external torque limit input, reverse rotation External torque limit input, emergency stop
		Control output	Alarm status, servo preparation, brake release, torque limit output, speed limit output speed reached, speed consistent, motor rotation output, zero-speed signal output
	Torque Control	Control input	Servo ON, alarm reset, torque command reverse, zero speed clamp
		Control output	Alarm status, servo preparation, brake release, torque limit, speed limit output, emergency stop
		Torque command input	(Factory default setting, the range can be set by function code)
		Speed limit function	Positive and negative internal speed limit P03.27, P03.28
	Common	Speed observer function	YES
		Damping control function	YES
		Adaptive notch filter	YES
		Automatic adjustment function	YES
		Encoder output frequency division	YES
		Internal location planning function	YES
		Adjustment/function setting	Use the host computer setting software "Servo studio" to adjust
	Protection		Over voltage, abnormal power supply, over current, overload, abnormal encoder, over speed, excessive position deviation, abnormal parameters, etc.

HSD6 BS Series Servo Drive

The name of each part of the drive



Braking resistor related specifications

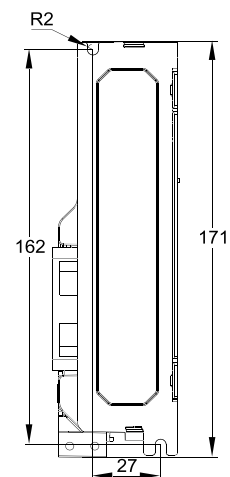
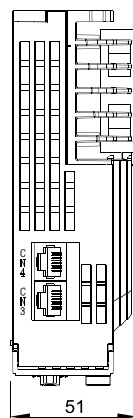
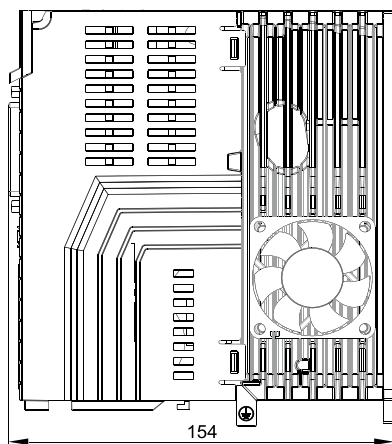
Model Type		Built-in braking resistor specifications		Min. Allowed Resistance (Ω)	Max. Braking Energy Absorbed by Capacitor (J)
		Resistance (Ω)	Power(W)		
Single phase 220V	HSD6-BS-02A00	-	-	50	9
	HSD6-BS-03A00	-	-	45	18
	HSD6-BS-06A00	50	50	40	26
	HSD6-BS-08A00	50	50	40	26
Three phase 220V	HSD6-BS-12A00	30	100	25	47
	HSD6-BS-15A00	30	100	25	47
	HSD6-BS-18A00	30	100	25	55

Note: ■ 02 and 03 models have no built-in braking resistor. If you need to use them, please configure the external braking resistor by yourself. Please consult our technical support for the power selection of the external braking resistor.

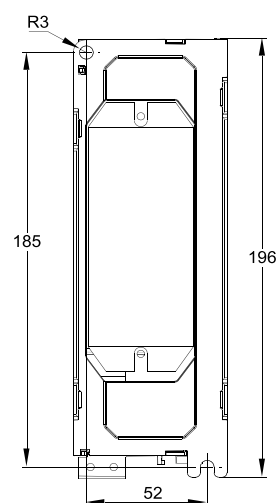
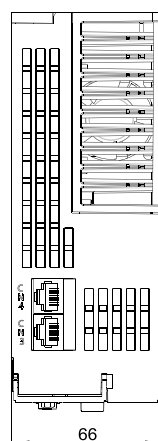
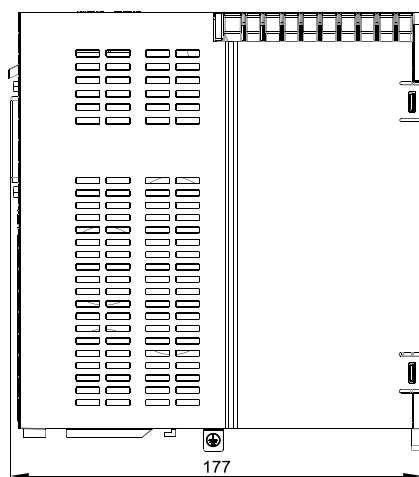
Servo drive installation dimensions

HSD6-BS(single phase 220V)(Unit:mm)

HSD6-BS-02A00
 HSD6-BS-03A00
 HSD6-BS-06A00
 HSD6-BS-08A00



HSD6-BS-12A00
 HSD6-BS-15A00
 HSD6-BS-18A00



HSD6-ES Series Servo Drive



Name Rule

HSD6		-	ES		-	02		-	A		-	00	
HSD6 Series Servopack			Axis Number			Continuous Output Current			Power Supply Voltage			Interface Type	
Axis Number			Continuous Output Current			Power Supply Voltage						Interface Type	
S	Single Axis		02	1.6A		A	220VAC		00	Pulse/Analog			
			03	2.8A				01	CANopen				
			06	5.5A									
			08	7.6A									
			12	12A									
			15	15A									
			18	18A									

Product Characteristic

Type	Series	Characteristic	
Servo drive	HSD6-ES	Quickly	
		Ø 1.2kHz Corresponding bandwidth of speed loop	
		Convenient	
		Ø Wiring is simple and convenient	Ø One-touch adjustment
		Ø Eliminate limit and origin	Ø Easy to replace encoder battery
		Precise	
		Ø The encoder resolution reaches 17/23bit	
		Strong adaptability to the environment	
		Ø Meet safety standards	
		Ø The motor reaches a higher waterproof level	
		Ø Safe and reliable to use, Wiring is simple and convenient	

Servo System Wiring connection

Circuit breaker for wiring

Used to protect the power line and cut off the circuit if over current.

Noise filter

Install a noise filter to prevent external noise.

Electromagnetic contactor

Turns on/off servo power . Please install a surge suppressor.

Electromagnetic contactor

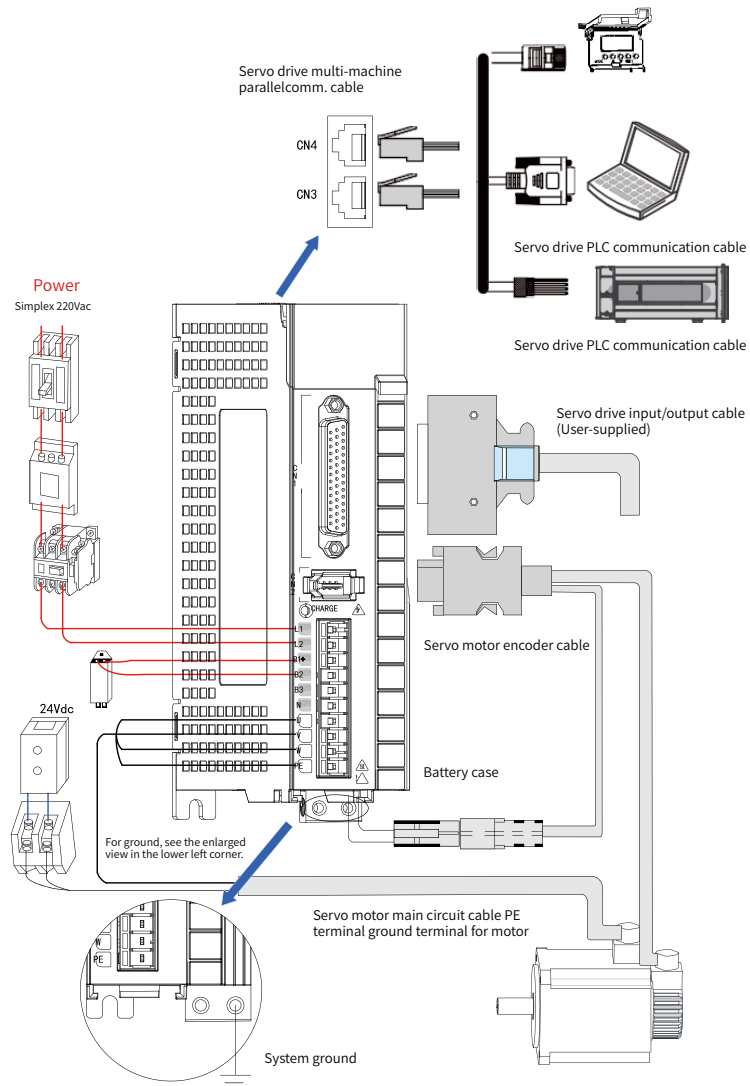
Use external resistor,remove the B2 and B3 tabs, connect the braking resistor between B1+ and B2;use an internal braking,short circuit B2 and B3.

Brake power

24Vdc voltage source, used as the motor has a hold brake.

Electromagnetic contactor

Brake control signal, turn on/off brake power.Install a surge suppressor.



Please pay attention to the power supply capacity when connecting external control power supply or 24Vdc power supply, especially when supplying power to several drives or multiple brakes at the same time, insufficient power supply capacity will lead to insufficient supply current and failure of the drive or the brake. The braking power supply is a 24V DC voltage source. The power should refer to the motor model and meet the braking power requirements.

System wiring precautions:

1. When connecting an external braking resistor, please remove the short-circuit wire between terminals B2 and B3 of the servo drive before connecting. Pay attention to modify the internal parameters.
2. CN3 and CN4 define exactly the same communication interface for the two pins, which can be used arbitrarily between the two.
3. In single-phase 220V wiring, the main circuit terminals are L1 and L2, and the reserved terminals should not be connected.

HSD6-ES Series Servo Drive

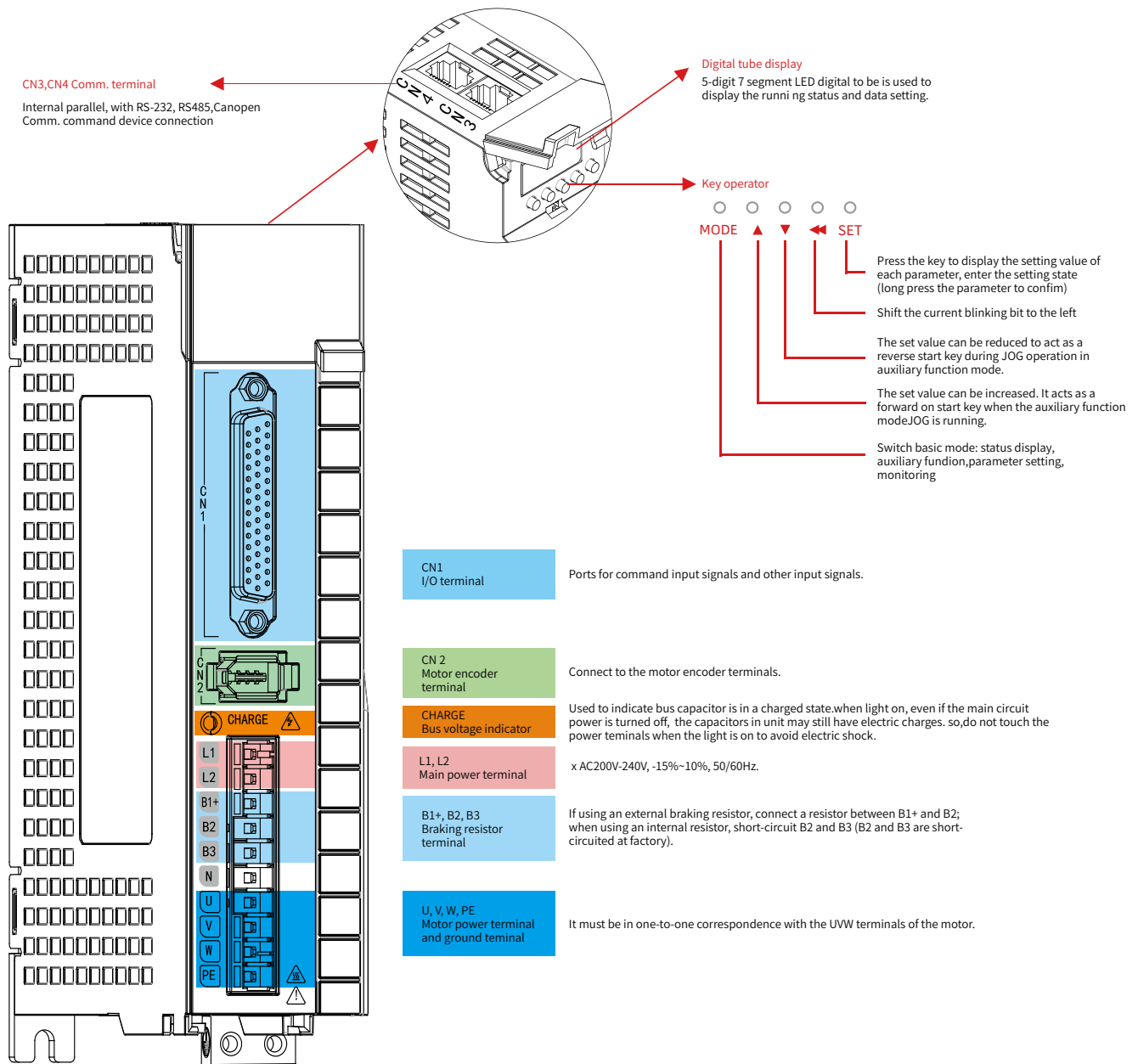
Servo drive specifications

Item				Specifications							
HSD6-ES				02	03	06	08	12	15	18	
outlook	A(mm)			27				52			
	B(mm)			162				185			
	W(mm)			154				177			
	H(mm)			171				196			
	D(mm)			51				66			
	R(mm)			2				3			
	Weight(kg)			0.9				1.5			
	Input Power			Single phase AC200V-240V,-15%~10%,50/60Hz				Three phase AC200V-240V,-15%~10%,50/60Hz			
Basic information	Environment	Temp °C	Use environment temperature	0~+55°C (decrease if the ambient temperature is between 40°C and 50°C)							
			Storage environment temperature	-20~65°C							
		Humidity	Use environment humidity	20~85% RH below(No condensation)							
			Storage environment humidity	20~85% RH below(No condensation)							
		Use and preserve ambient air		indoor(no sunshine)、 No corrosive gas, flammable gas, oil mist, dust							
		altitude		Below 1000m							
		vibration		5.8m/s2(0.6G)below 10~60Hz(Can not be used continuously at resonance frequency)							
		Insulation withstand voltage			Basic-FG between AC1500V 1min						
	Control way			Three-phase PWM converter sine wave drive							
	Encoder feedback			17bit、 23bit (after adding a battery, it can be used as a multi-turn absolute encoder)							
	Control signal	Input	9 inputs (DC24V optocoupler isolation) switch according to the control mode function								
		Output	5 output (DC24V optocoupler isolation, open collector output) switch according to the control mode function								
	Pulse signal	Input	2 inputs (optocoupler isolation, RS-422 differential, open collector output)								
		Output	4 outputs (A/B/Z phase RS-422 differential; Z phase open collector output)								
	Comm. function	RS232	For PC communication (for "Servostudio" connection)								
		RS-485	For upper remote control communication (1:n)								
		CAN	CANOPEN bus communication								
	Regeneration function				Optional regenerative resistor, external regenerative resistor. Pay attention to modify internal parameters						
	Control model				6 control modes: speed control, position control, torque control, torque/speed control, speed/position control, torque/position, torque/speed/position hybrid control						

Item			Specifications
Function	Control input		Alarm reset, proportional action switching, zero fixed function enable, forward drive prohibited, reverse drive prohibited, external torque limit for forward rotation, external torque limit for reverse rotation, forward jog, reverse jog, forward Reset switch, reverse reset switch, origin switch, emergency stop, servo enable, gain switch.
	Control output		Servo ready, motor rotating, zero speed signal, speed reached, position reached, positioning approach signal, torque limit, speed limit, brake output, warning, servo failure, alarm code (3-digit output)
	Position control	Maximum command pulse frequency	The maximum low speed is 500Kpps, and the pulse width cannot be less than 1μs Open collector: maximum 200Kpps, pulse width cannot be less than 2.5μs
		Input pulse signal form	Differential input; open collector
		Input pulse signal method	Pulse + direction, right angle phase difference (A phase + B phase), CW + CCW pulse
		Command pulse division/multiplication (Electronic gearratio setting)	$0.1048576 < B/A < 419430.4$
		Command filter	Smoothing filter, FIR filter
		Pulse output	Output pulse form Phase A, Phase B: Differential output Z phase: differential output or open collector output
			Frequency division ratio Arbitrary frequency division
			Output pulse function Encoder position pulse and position pulse command (can be set)
	Speed control	Control input	Servo ON, alarm reset, speed command reverse, zero speed clamp, internal command selection input 1, internal command selection input 2, internal command selection input 3, internal command selection input 4, forward rotation external torque limit input, reverse rotation External torque limit input, emergency stop
		Control output	Alarm status, servo preparation, brake release, torque limit output, speed limit output speed reached, speed consistent, motor rotation output, zero-speed signal output
	Torque Control	Control input	Servo ON, alarm reset, torque command reverse, zero speed clamp
		Control output	Alarm status, servo preparation, brake release, torque limit, speed limit output, emergency stop
		Torque command input	(Factory default setting, the range can be set by function code)
		Speed limit function	Positive and negative internal speed limit P03.27, P03.28
	Common	Speed observer function	YES
		Damping control function	YES
		Adaptive notch filter	YES
		Automatic adjustment function	YES
		Encoder output frequency division	YES
		Internal location planning function	YES
		Adjustment/function setting	Use the host computer setting software "Servo studio" to adjust
		Protection	Over voltage, abnormal power supply, over current, overload, abnormal encoder, over speed, excessive position deviation, abnormal parameters, etc.

HSD6-ES Series Servo Drive

The name of each part of the drive



Braking resistor related specifications

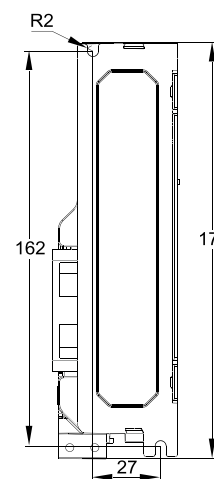
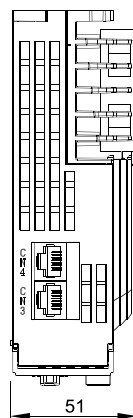
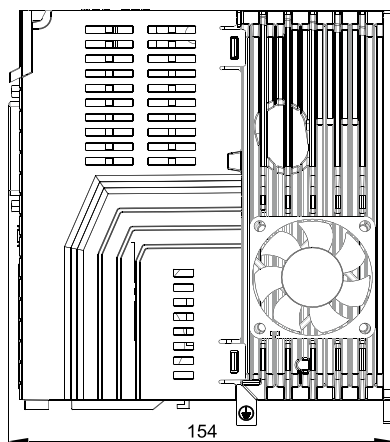
Model Type		Built-in braking resistor specifications		Min. Allowed Resistance (Ω)	Max. Braking Energy Absorbed by Capacitor (J)
		Resistance (Ω)	Power(W)		
Single phase 220V	HSD6-ES-02A00	-	-	50	9
	HSD6-ES-03A00	-	-	45	18
	HSD6-ES-06A00	50	50	40	26
	HSD6-ES-08A00	50	50	40	26
Three phase 220V	HSD6-ES-12A00	30	100	25	47
	HSD6-ES-15A00	30	100	25	47
	HSD6-ES-18A00	30	100	25	55

Note: ■ 02 and 03 models have no built-in braking resistor. If you need to use them, please configure the external braking resistor by yourself. Please consult our technical support for the power selection of the external braking resistor.

Servo drive installation dimensions

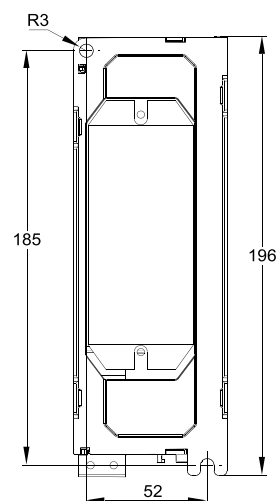
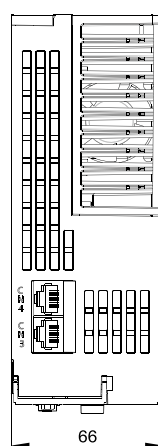
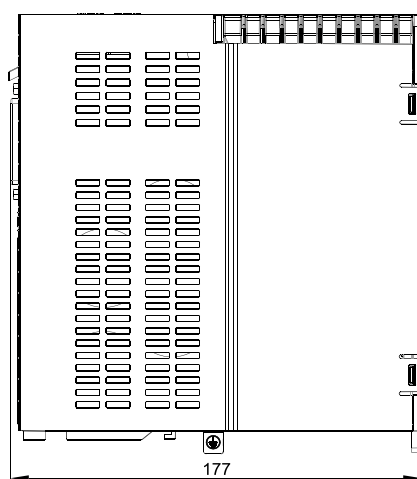
HSD6-ES(single phase 220V)(Unit:mm)

HSD6-ES-02A00
 HSD6-ES-03A00
 HSD6-ES-06A00
 HSD6-ES-08A00



HSD6-ES(three phase 220V) (Unit:mm)

HSD6-ES-12A00
 HSD6-ES-15A00
 HSD6-ES-18A00



SG&SJ Series Servo Motor



Name Rule

SG	60	-	2	-	006	H	30	65	B	-	A
SG/SJ Series Servo motor	Flange Dim.		Power Voltage		Rated Torque	Rotor Inertia	Rated Speed	Maximum Speed	Brake		Encoder type

Flange Dim.		Inertia		Rated Torque		Power Voltage		Rated /Max. Speed		Brake		Encoder Type	
40	40mm	M	Medium	003	0.32N.m	2	AC220V	15	1500 rpm	B	With brake	A	23bit absolute
60	60mm	H	High	006	0.64N.m	4	AC380V	18	1800 rpm			A2	17bit absolute
80	80mm			013	1.27N.m			20	2000 rpm				
110	110mm			024	2.39N.m			30	3000 rpm				
130	130mm			032	3.18N.m			50	5000 rpm				
180	180mm			048	4.77N.m			60	6000 rpm				
200	200mm			072	7.16N.m			65	6500 rpm				
				096	9.55N.m								
				143	14.3N.m								

Note:
Motors with flange size 130 and below are SG series; Motors with flange size 180 and above are SJ series.

Product Characteristic

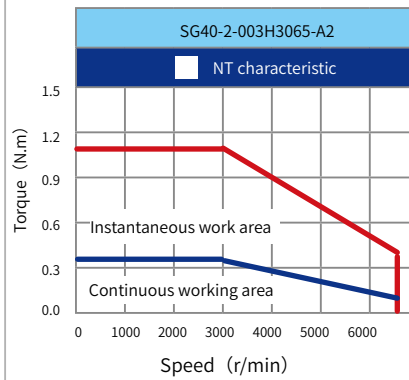
Power range: 50w-40kw	
Design: adopt the latest design	
Intelligence	- Equipped with photoelectric/magnetic encoder - The maximum resolution of encoder is 23b it (8388608ppr) - High quality environmental resistance (dust, oil, vibration, etc.) - Simple structure of mass production - The economic cost advantage of mass production is more significant - The special structure of encoder installation has strong anti-interference ability - Four-wire and six-wire support single-loop and multi-loop communication, convenient wiring
High overload capacity: up to 3 times the instantaneous maximum overload capacity	
High-speed small servo motor: rated speed 3000 rpm, maximum speed 6000 rpm/6500 rpm	
Miniaturization: embedded structure, integrated structure design, small size, equivalent power saving of 20%	

Servo Motor SG40-2-003H3065-A2 Specifications

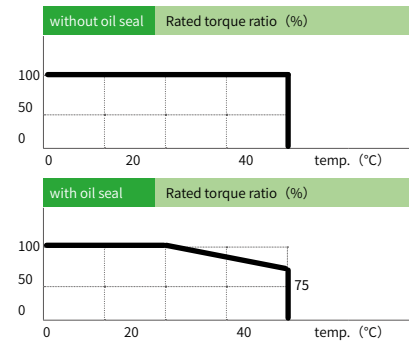
SG40-2-003H3065-A2 outline



NT characteristic



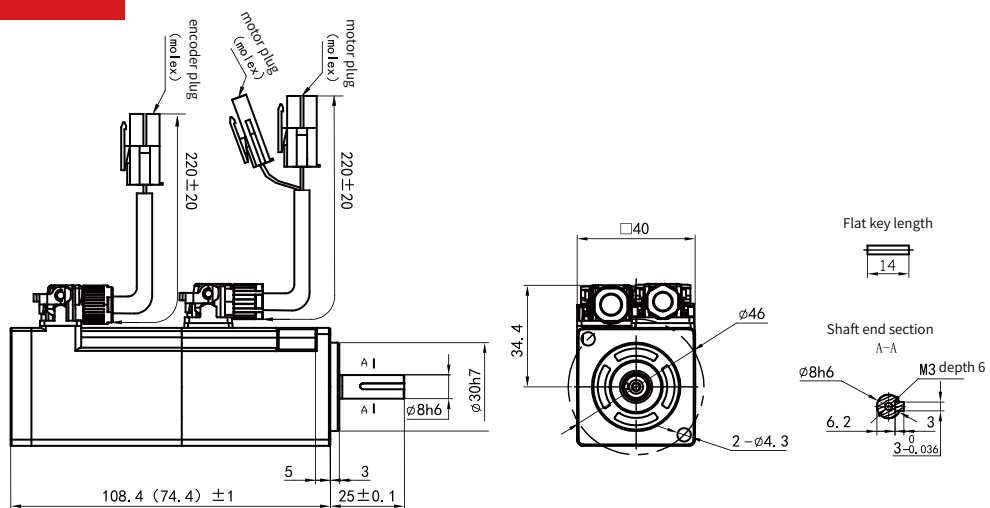
Continuous torque-ambient temperature



Specification Table

Model type: SG40-2-003H3065-A2		Unit	100W High inertia
Flange size		mm	□ 40
Rated voltage		V	AC220
Rated power		W	100
Rated torque		N.m	0.32
Instantaneous peak torque		N.m	0.96
Rated current		Arms	1.1
Max current		Arms	3.3
Rated speed		r/min	3000
Maximum speed		r/min	6500
Torque constant		N.m/A	0.327
Three-phase induced voltage constant		MV(r/min)	10.43
Rated power change rate (without brake)		KW/S	14.5
Rated power change rate (with brake)		KW/S	13.9
Mechanical time constant (without brake)		ms	2.19
Mechanical time constant (with brake)		ms	2.28
Electrical time constant		ms	1.35
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	0.071
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	0.074
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	v	DC24 $\pm$ 10%
	Rated power	w	6.1
	Static friction torque	N.m	≥ 0.38
	Attract time	ms	< 50
	Release time	ms	< 20
	Release voltage	V	> 0.5
	Running noise	dB	< 55

Drawing

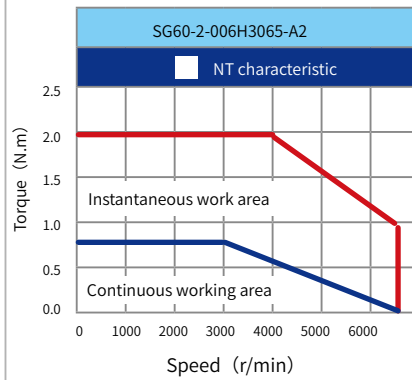


Servo Motor **SG60-2-006H3065-A2** Specifications

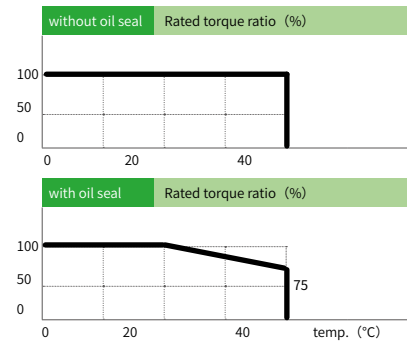
SG60-2-006H3065-A2 outline



NT characteristic



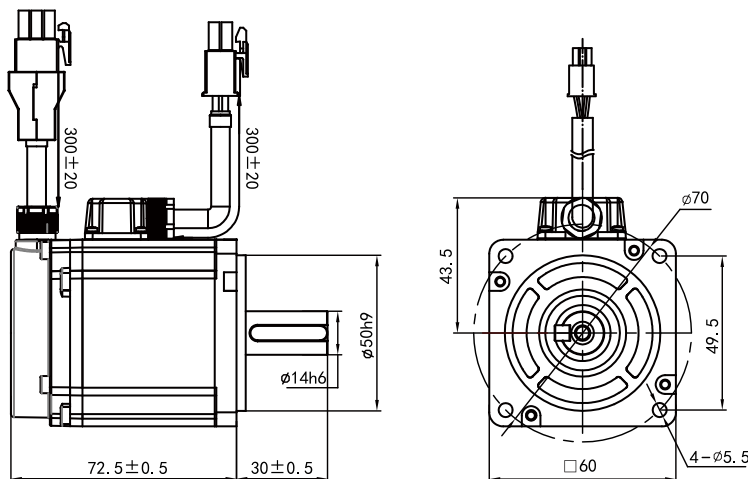
Continuous torque-ambient temperature



Specification Table

Model type: SG60-2-006H3065-A2		Unit	200W High inertia
Flange size		mm	□ 60
Rated voltage		V	AC220
Rated power		W	200
Rated torque		N.m	0.64
Instantaneous peak torque		N.m	1.92
Rated current		Arms	1.4
Max current		Arms	6.2
Rated speed		r/min	3000
Maximum speed		r/min	6500
Torque constant		N.m/A	0.46
Three-phase induced voltage constant		MV(r/min)	23.5
Rated power change rate (without brake)		KW/S	14.3
Rated power change rate (with brake)		KW/S	13.5
Mechanical time constant (without brake)		ms	1.42
Mechanical time constant (with brake)		ms	1.52
Electrical time constant		ms	3.8
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	0.29
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	0.31
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	v	DC24 $\pm$ 10%
	Rated power	w	7.3
	Static friction torque	N.m	≥ 1.53
	Attract time	ms	< 50
	Release time	ms	< 20
	Release voltage	V	> 1.5
	Running noise	dB	< 55

Drawing

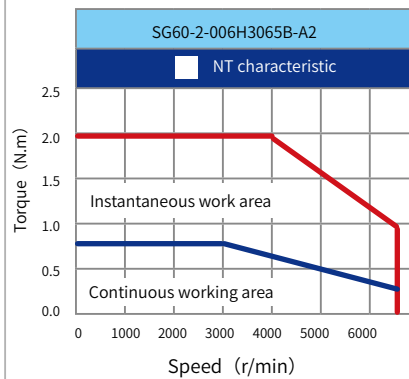


Servo Motor SG60-2-006H3065B-A2 Specifications

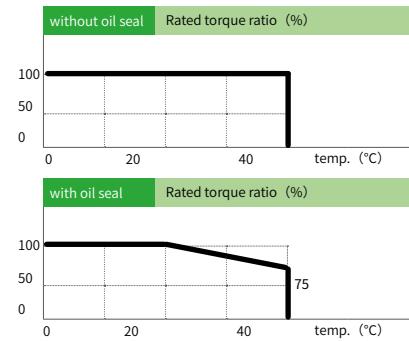
SG60-2-006H3065B-A2 outline



NT characteristic



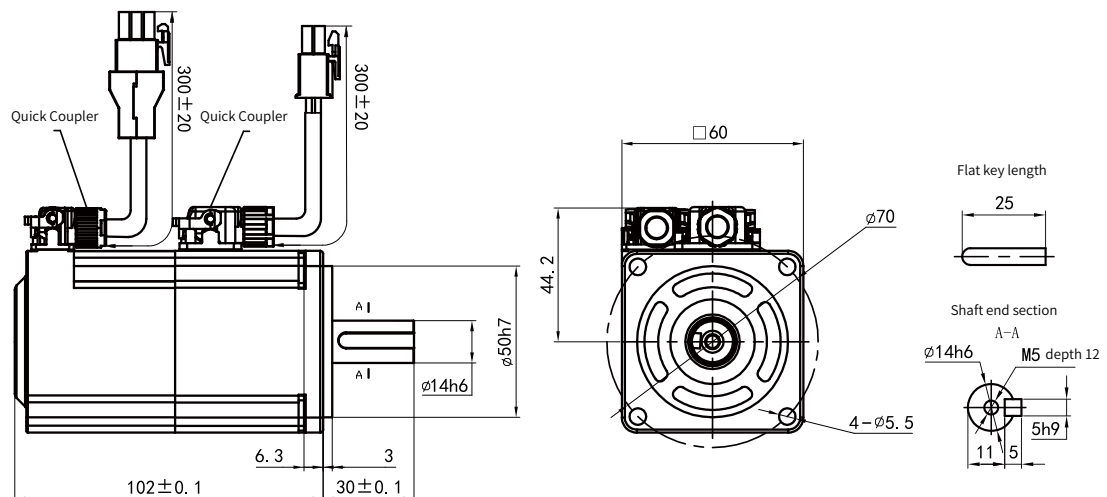
Continuous torque-ambient temperature



Specification Table

Model type: SG60-2-006H3065B-A2		Unit	200W High inertia
Flange size		mm	□ 60
Rated voltage		V	AC220
Rated power		W	200
Rated torque		N.m	0.64
Instantaneous peak torque		N.m	1.92
Rated current		Arms	1.4
Max current		Arms	6.2
Rated speed		r/min	3000
Maximum speed		r/min	6500
Torque constant		N.m/A	0.46
Three-phase induced voltage constant		MV/(r/min)	23.5
Rated power change rate (without brake)		KW/S	14.3
Rated power change rate (with brake)		KW/S	13.5
Mechanical time constant (without brake)		ms	1.42
Mechanical time constant (with brake)		ms	1.52
Electrical time constant		ms	3.8
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	0.29
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	0.31
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	V	DC24 $\pm$ 10%
	Rated power	W	7.3
	Static friction torque	N.m	≥ 1.53
	Attract time	ms	< 50
	Release time	ms	< 20
	Release voltage	V	> 1.5
	Running noise	dB	< 55

Drawing

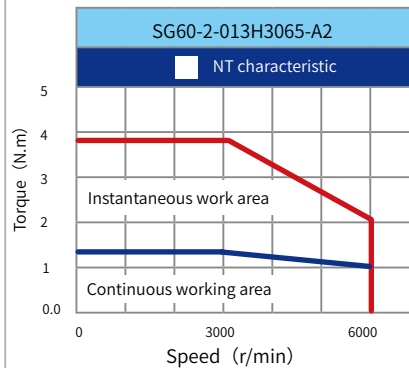


Servo Motor SG60-2-013H3065-A2 Specifications

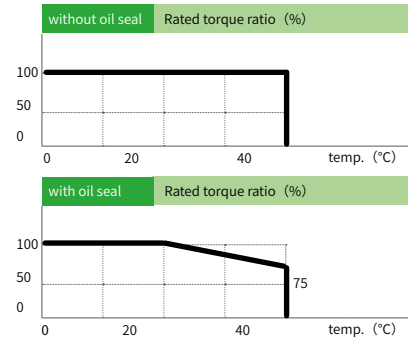
SG60-2-013H3065-A2 outline



NT characteristic



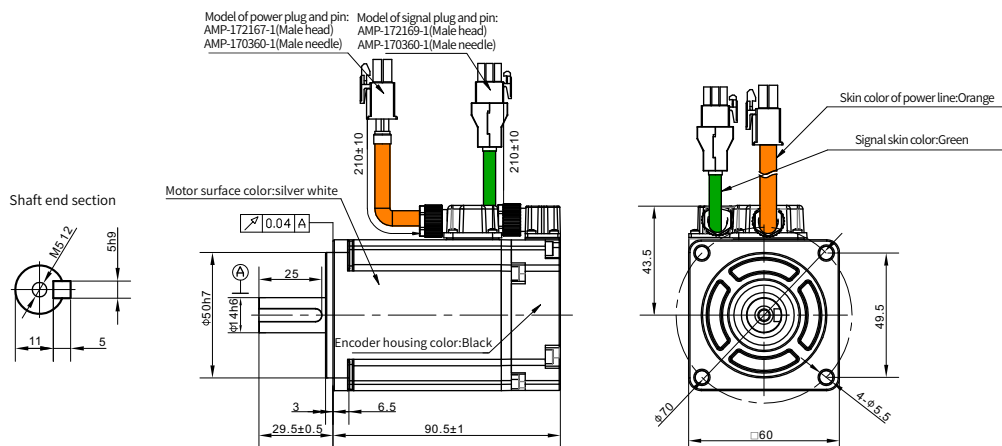
Continuous torque-ambient temperature



Specification Table

Model type: SG60-2-013H3065-A2	Unit	400W
Flange size	mm	□ 60
Rated voltage	V	AC220
Rated power	W	400
Rated torque	N.m	1.27
Peak torque	N.m	3.81
Rated current	Arms	2.8
Max current	Arms	7.5
Rated speed	r/min	3000
Maximum speed	r/min	6000
Torque coefficient	N.m/Arms	0.5±10%
EMF constant	V/KRPM	31±10%
Line-to-line resistance	Ω	3.4±10%
Line-to-line inductance	mH	5.8±10%
Moment of inertia	kg.m ² ×10 ⁻⁴	0.53±10%
Polar logarithm	Pair	5
Feedback element	Incremental	17bit
Protection grade	IP65/IP67(Optional)(Except the shaft penetration part)	
Insulation class	F	
Insulation resistance	> 200MΩ DC500V	
Working temperature	-20°C -50°C	
Storage temperature	20%-80% no condensation	
Use environment	Keep away from active gas, combustible gas, oil and ash	
Altitude	Below 1000m Derating use above 1000m	
Test conditions	Fixed on 200*200*20 aluminum plate	
Cable specification	4*0.75mm ² +2p*0.2mm ² High flexible drag chain cable ,with bending times not less than 5 million times	

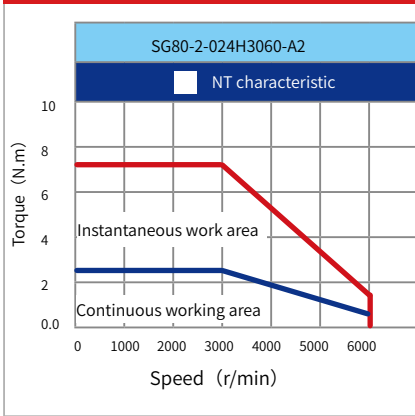
Drawing



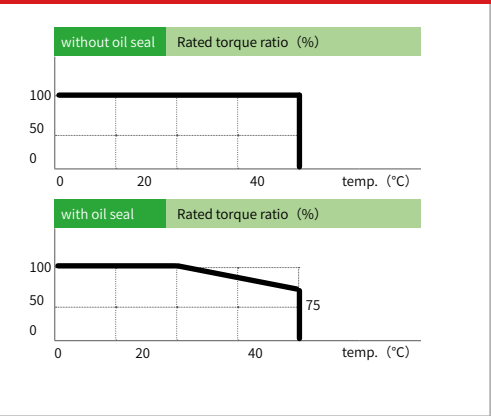
SG80-2-024H3060-A2 outline



NT characteristic



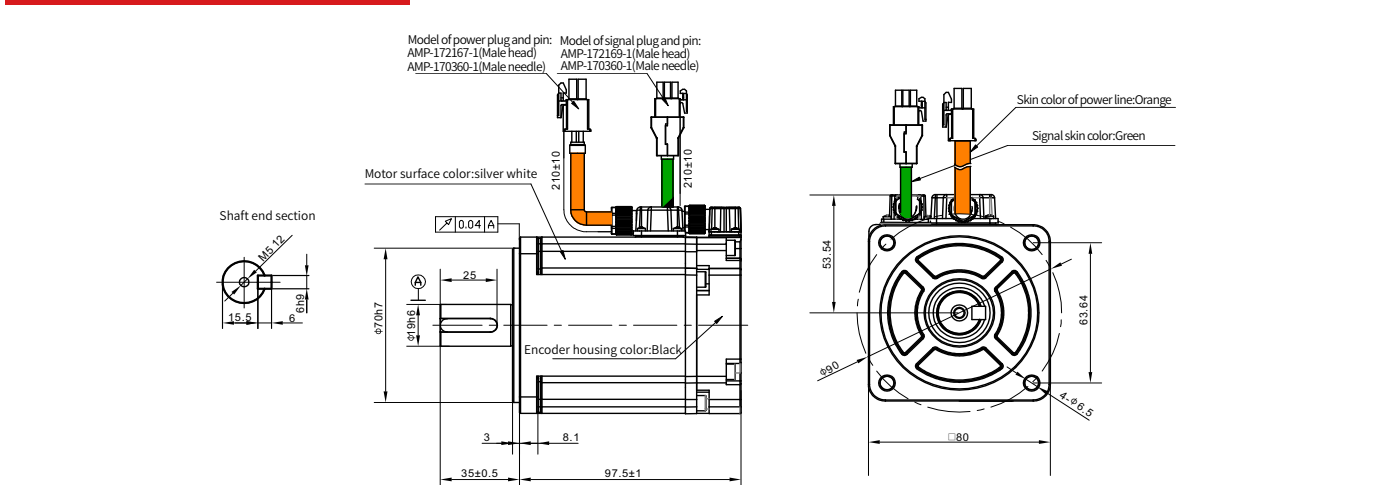
■ Continuous torque-ambient temperature



Specification Table

Model type: SG80-2-024H3060-A2	Unit	750W
Flange size	mm	□ 80
Rated voltage	V	AC220
Rated power	W	750
Rated torque	N.m	2.39
Peak torque	N.m	717
Rated current	Arms	4.4
Max current	Arms	13.3
Rated speed	r/min	3000
Maximum speed	r/min	6000
Torque coefficient	N.m/Arms	0.54±10%
EMF constant	V/KRPM	33±10%
Line-to-line resistance	Ω	1.1±10%
Line-to-line inductance	mH	2.4±10%
Moment of inertia	kg.m ² ×10 ⁻⁴	1.5±10%
Polar logarithm	Pair	5
Feedback element	Incremental	17bit
Protection grade	IP65/IP67(Optional)(Except the shaft penetration part)	
Insulation class	F	
Insulation resistance	> 200MQ DC500V	
Working temperature	-20℃ -50℃	
Storage temperature	20%-80% no condensation	
Use environment	Keep away from active gas, combustible gas, oil and ash	
Altitude	Below 1000m Derating use above 1000m	
Test conditions	Fixed on 250*250*20 aluminum plate	
Cable specification	4*0.75mm ² +2p*0.2mm ² High flexible drag chain cable ,with bending times not less than 5 million times	

■ Drawing

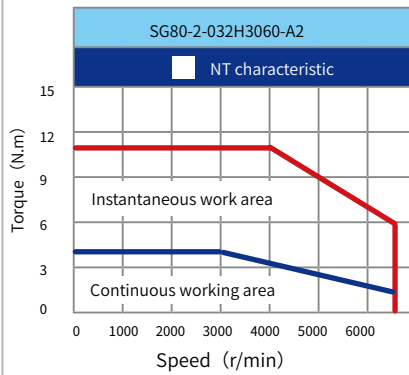


Servo Motor SG80-2-032H3060-A2 Specifications

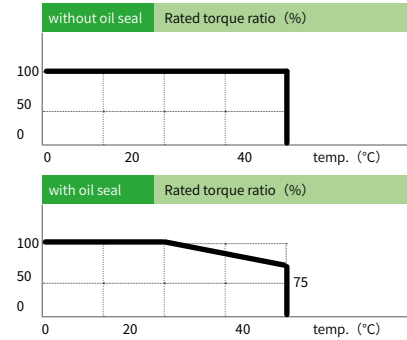
SG80-2-032H3060-A2 outline



NT characteristic



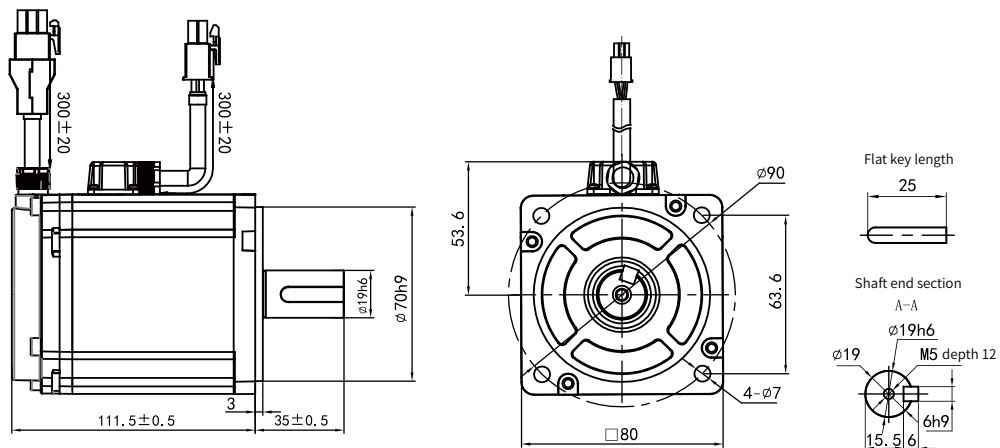
Continuous torque-ambient temperature



Specification Table

Model type: SG80-2-032H3060-A2		Unit	1000W High inertia
Flange size		mm	□ 80
Rated voltage		V	AC220
Rated power		W	1000
Rated torque		N.m	3.18
Instantaneous peak torque		N.m	9.54
Rated current		Arms	5.7
Max current		Arms	17.1
Rated speed		r/min	3000
Maximum speed		r/min	6000
Torque constant		N.m/A	0.54
Three-phase induced voltage constant		MV(r/min)	36
Rated power change rate (without brake)		KW/S	51.1
Rated power change rate (with brake)		KW/S	48.3
Mechanical time constant (without brake)		ms	0.81
Mechanical time constant (with brake)		ms	0.85
Electrical time constant		ms	4.96
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	2
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	2.1
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	v	DC24 $\pm$ 10%
	Rated power	w	8.5
	Static friction torque	N.m	≥ 3.8
	Attract time	ms	< 60
	Release time	ms	< 40
	Release voltage	V	> 1.5
	Running noise	dB	< 60

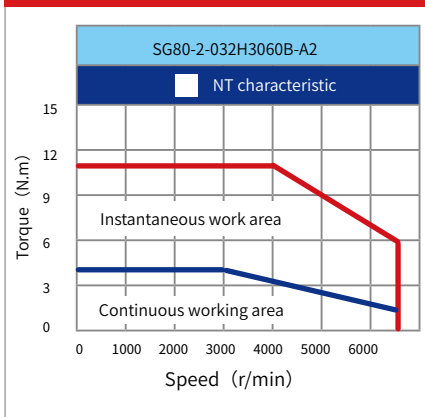
Drawing



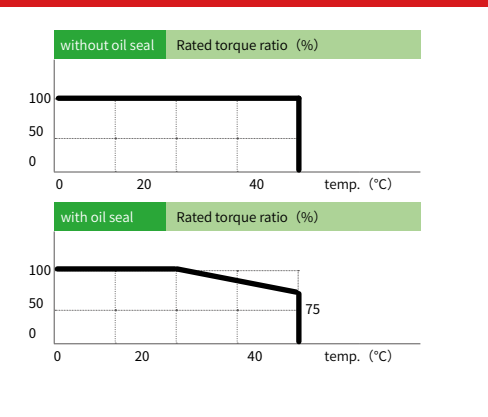
SG80-2-032H3060B-A2 outline



NT characteristic



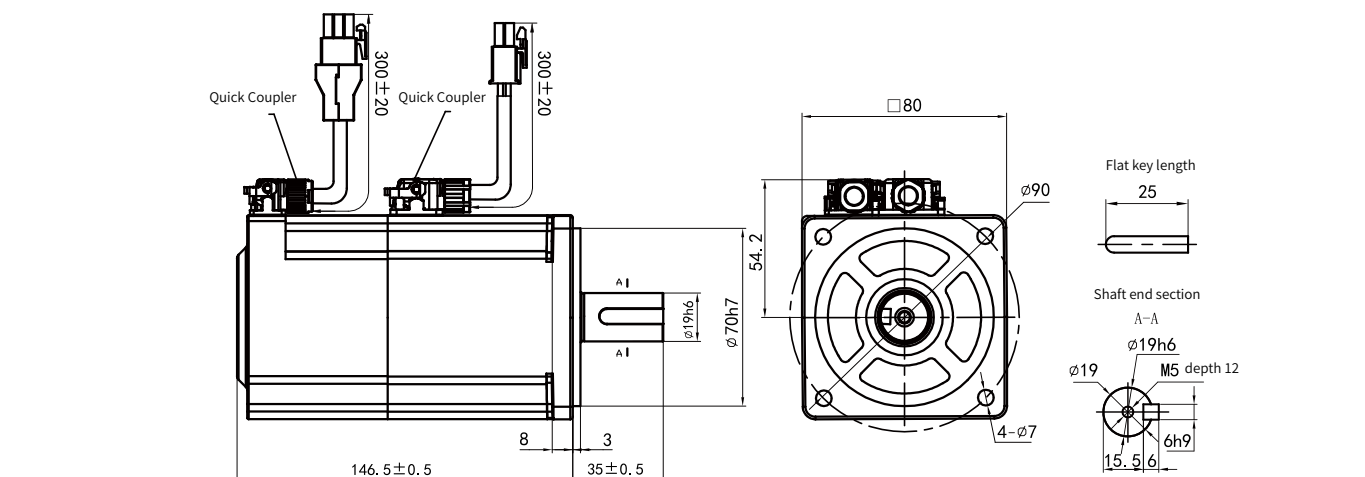
Continuous torque-ambient temperature



■ Specification Table

Model type: SG80-2-032H3060B-A2		Unit	1000W High inertia
Flange size		mm	□ 80
Rated voltage		V	AC220
Rated power		W	1000
Rated torque		N.m	3.18
Instantaneous peak torque		N.m	9.54
Rated current		Arms	5.7
Max current		Arms	17.1
Rated speed		r/min	3000
Maximum speed		r/min	6000
Torque constant		N.m/A	0.54
Three-phase induced voltage constant		MV(r/min)	36
Rated power change rate (without brake)		KW/S	51.1
Rated power change rate (with brake)		KW/S	48.3
Mechanical time constant (without brake)		ms	0.81
Mechanical time constant (with brake)		ms	0.85
Electrical time constant		ms	4.96
Motor rotor inertia (without brake)		×10 ⁻⁴ kg*m ²	2
Motor rotor inertia (with brake)		×10 ⁻⁴ kg*m ²	2.1
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	V	DC24±10%
	Rated power	w	8.5
	Static friction torque	N.m	≥ 3.8
	Attract time	ms	< 60
	Release time	ms	< 40
	Release voltage	V	> 1.5
	Running noise	dB	< 60

■ Drawing

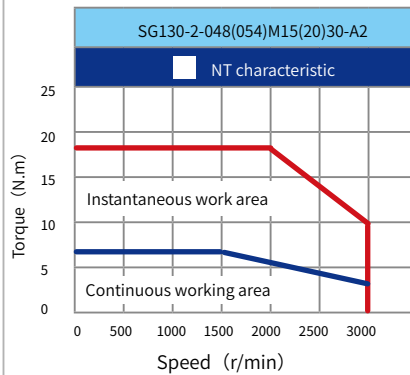


Servo Motor **SG130-2-048(054)M15(20)30-A2** Specifications

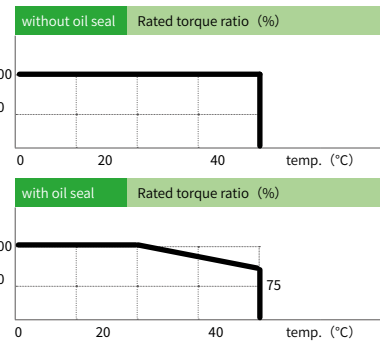
SG130-2-048(054)M15(20)30-A2 outline



NT characteristic



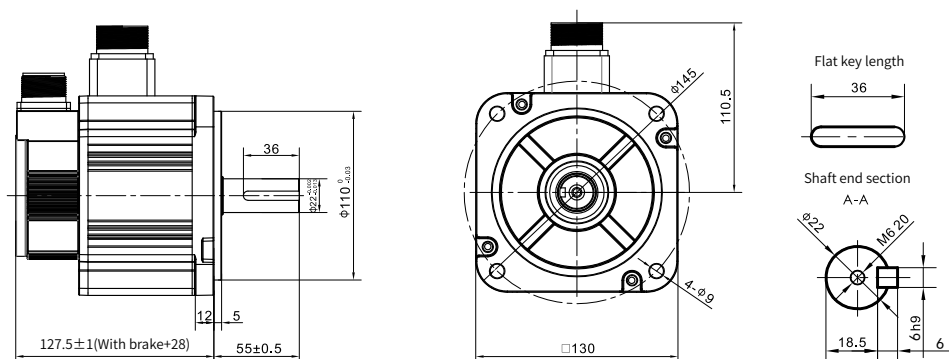
Continuous torque-ambient temperature



Specification Table

Model type: SG130-2-048(054)M15(20)30-A2		Unit	0.85KW Middle inertia	1.0KW Middle inertia
Flange size		mm	□ 130	□ 130
Rated voltage		V	AC220	AC220
Rated power		W	850	1000
Rated torque		N.m	5.4	4.77
Instantaneous peak torque		N.m	13.5	11.93
Rated current		Arms	6.7	5.2
Max current		Arms	16.75	13
Rated speed		r/min	1500	2000
Maximum speed		r/min	3000	3000
Torque constant		N.m/A	0.82	0.92
Three-phase induced voltage constant		MV(r/min)	51	51
Rated power change rate (without brake)		KW/S	21	36.9
Rated power change rate (with brake)		KW/S	18.3	30.8
Mechanical time constant (without brake)		ms	2.75	1.76
Mechanical time constant (with brake)		ms	3.15	2.11
Electrical time constant		ms	10.3	9.5
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	6.2	6.2
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	7.5	7.5
Line resistance		Ω	0.92	0.92
Inductance Ld		mH	5.2	5.2
Inductance Lq		mH	5.2	5.2
Protection grade			IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—	
	Rated voltage	v	DC24 $\pm$ 10%	
	Rated power	w	23	
	Static friction torque	N.m	≥ 16	
	Attract time	ms	< 80	
	Release time	ms	< 40	
	Release voltage	V	> 0.5	
	Running noise	dB	< 65	

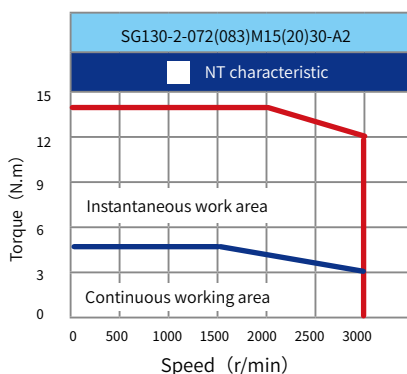
Drawing



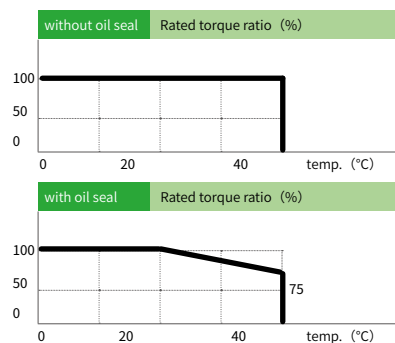
SG130-2-072(083)M15(20)30-A2 outline



NT characteristic



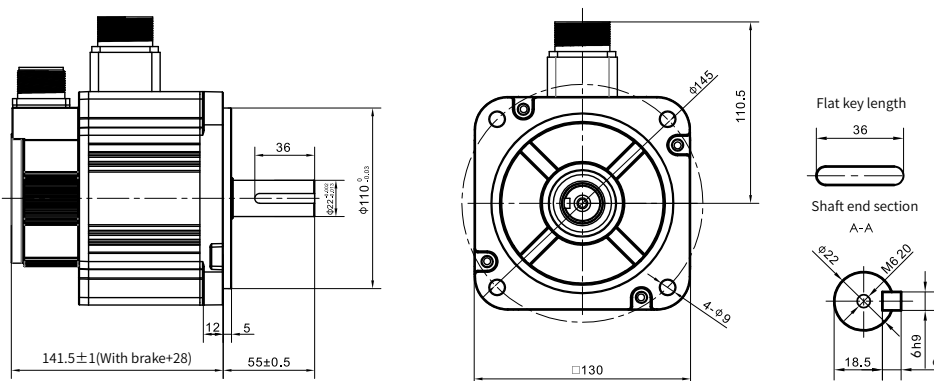
Continuous torque-ambient temperature



Specification Table

Model type: SG130-2-072(083)M15(20)30-A2		Unit	1.3KW Middle inertia	1.5KW Middle inertia
Flange size		mm	□ 130	□ 130
Rated voltage		V	AC220	AC220
Rated power		W	1300	1500
Rated torque		N.m	8.3	7.16
Instantaneous peak torque		N.m	20.75	17.9
Rated current		Arms	9.5	8
Max current		Arms	23.75	20
Rated speed		r/min	1500	2000
Maximum speed		r/min	3000	3000
Torque constant		N.m/A	0.87	0.895
Three-phase induced voltage constant		MV(r/min)	49	49
Rated power change rate (without brake)		KW/S	35	56
Rated power change rate (with brake)		KW/S	31.6	49.3
Mechanical time constant (without brake)		ms	2.23	1.41
Mechanical time constant (with brake)		ms	2.46	1.6
Electrical time constant		ms	10.7	12.7
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	9.2	9.2
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	10.5	10.5
Line resistance		Ω	0.43	0.43
Inductance Ld		mH	4.2	4.2
Inductance Lq		mH	4.2	4.2
Protection grade			IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—	
	Rated voltage	v	DC24 $\pm$ 10%	
	Rated power	w	23	
	Static friction torque	N.m	≥ 16	
	Attract time	ms	< 80	
	Release time	ms	< 40	
	Release voltage	V	> 0.5	
	Running noise	dB	< 65	

Drawing

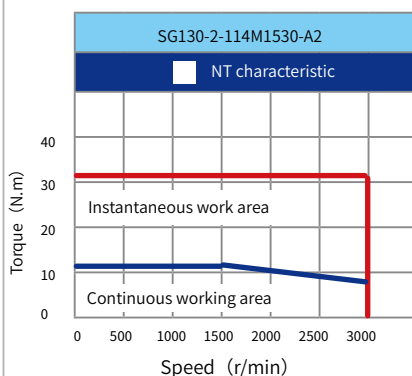


Servo Motor SG130-2-114M1530-A2 Specifications

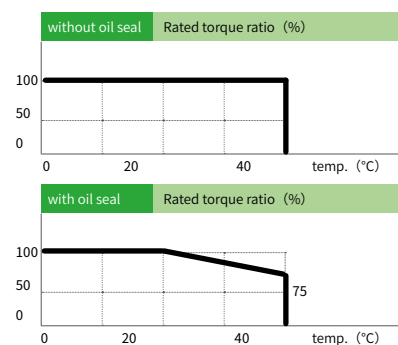
SG130-2-114M1530-A2 outline



NT characteristic



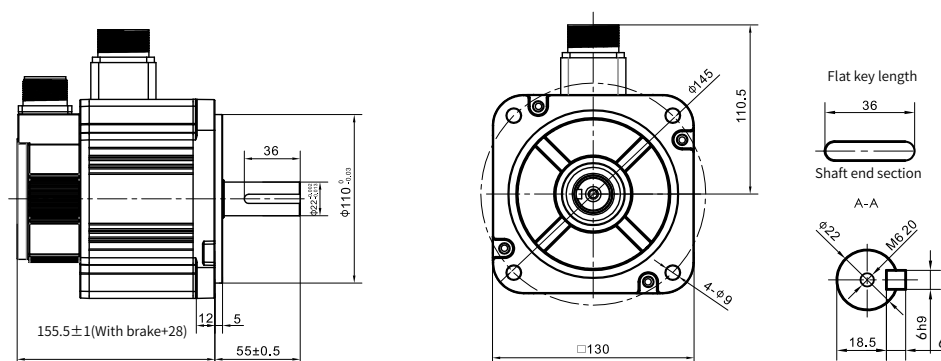
Continuous torque-ambient temperature



■ Specification Table

Model type: SG130-2-114M1530-A2		Unit	1.8KW Middle inertia
	Flange size	mm	□ 130
	Rated voltage	V	AC220
	Rated power	W	1800
	Rated torque	N.m	11.4
	Instantaneous peak torque	N.m	28.5
	Rated current	Arms	11.8
	Max current	Arms	29.5
	Rated speed	r/min	1500
	Maximum speed	r/min	3000
	Torque constant	N.m/A	0.97
	Three-phase induced voltage constant	MV(r/min)	53
	Rated power change rate (without brake)	KW/S	56
	Rated power change rate (with brake)	KW/S	18.3
	Mechanical time constant (without brake)	ms	2.52
	Mechanical time constant (with brake)	ms	2.63
	Electrical time constant	ms	14.1
	Motor rotor inertia (without brake)	$\times 10^{-4} \text{kg} \cdot \text{m}^2$	12.3
	Motor rotor inertia (with brake)	$\times 10^{-4} \text{kg} \cdot \text{m}^2$	13.5
	Line resistance	Ω	0.35
	Inductance Ld	mH	3.5
	Inductance Lq	mH	3.5
	Protection grade	IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	v	DC24 $\pm$ 10%
	Rated power	w	23
	Static friction torque	N.m	≥ 16
	Attract time	ms	< 80
	Release time	ms	< 40
	Release voltage	V	>0.5
	Running noise	dB	< 65

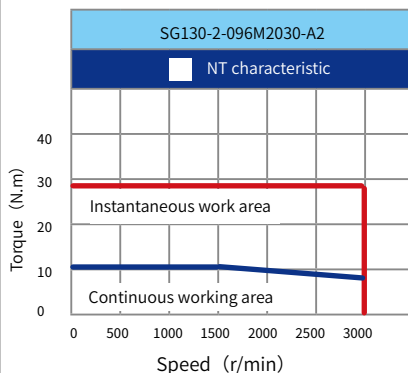
■ Drawing



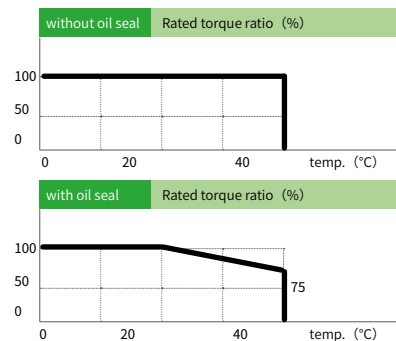
SG130-2-096M2030-A2 outline



NT characteristic



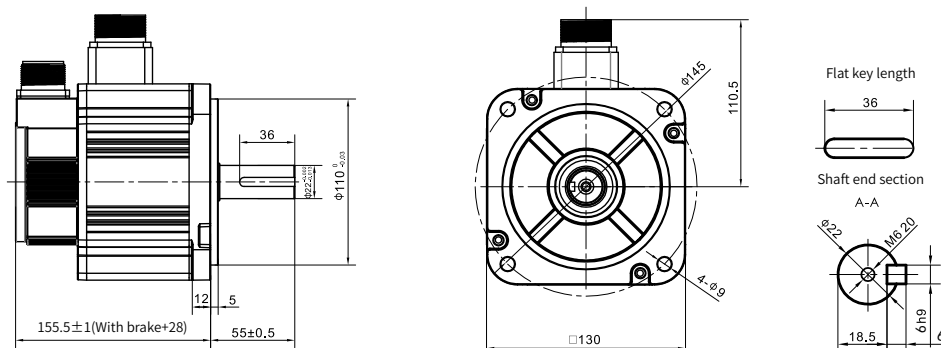
Continuous torque-ambient temperature



Specification Table

Model type: SG130-2-096M2030-A2		Unit	2.0KW Middle inertia
Flange size		mm	□ 130
Rated voltage		V	AC220
Rated power		W	2000
Rated torque		N.m	9.55
Instantaneous peak torque		N.m	23.88
Rated current		Arms	9.9
Max current		Arms	24.75
Rated speed		r/min	2000
Maximum speed		r/min	3000
Torque constant		N.m/A	0.96
Three-phase induced voltage constant		MV(r/min)	53
Rated power change rate (without brake)		KW/S	75.4
Rated power change rate (with brake)		KW/S	68.6
Mechanical time constant (without brake)		ms	1.24
Mechanical time constant (with brake)		ms	1.37
Electrical time constant		ms	13.9
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	12.3
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	13.5
Line resistance		Ω	0.35
Inductance Ld		mH	3.5
Inductance Lq		mH	3.5
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	v	DC24 $\pm$ 10%
	Rated power	w	23
	Static friction torque	N.m	≥ 16
	Attract time	ms	< 80
	Release time	ms	< 40
	Release voltage	V	> 0.5
Running noise		dB	< 65

Drawing

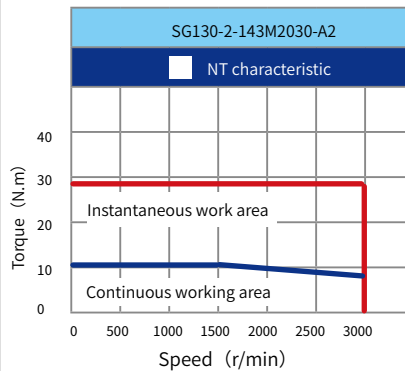


Servo Motor SG130-2-143M2030-A2 Specifications

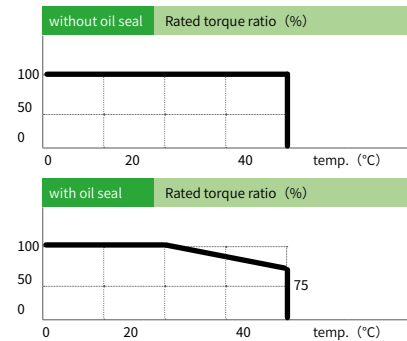
SG130-2-143M2030-A2 outline



NT characteristic



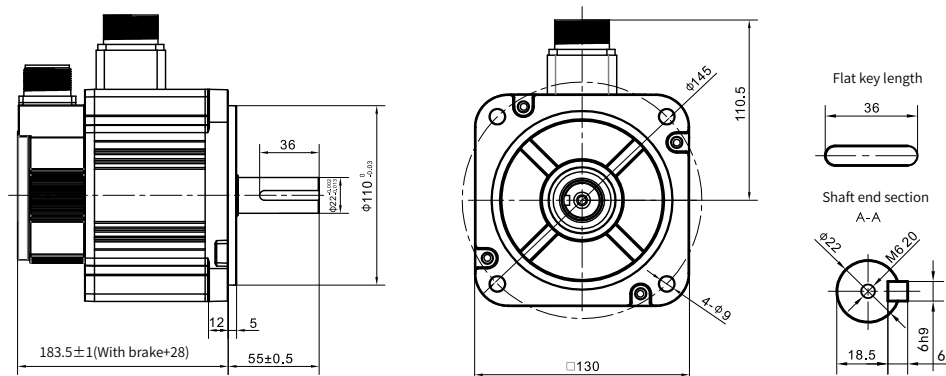
Continuous torque-ambient temperature



Specification Table

Model type: SG130-2-143M2030-A2		Unit	3.0KW Middle inertia
Flange size		mm	□ 130
Rated voltage		V	AC220
Rated power		W	3000
Rated torque		N.m	14.3
Instantaneous peak torque		N.m	35.75
Rated current		Arms	14
Max current		Arms	35
Rated speed		r/min	2000
Maximum speed		r/min	3000
Torque constant		N.m/A	0.87
Three-phase induced voltage constant		MV(r/min)	57
Rated power change rate (without brake)		KW/S	94.6
Rated power change rate (with brake)		KW/S	88
Mechanical time constant (without brake)		ms	1.08
Mechanical time constant (with brake)		ms	1.14
Electrical time constant		ms	15.2
Motor rotor inertia (without brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	18.8
Motor rotor inertia (with brake)		$\times 10^{-4} \text{kg} \cdot \text{m}^2$	19.9
Line resistance		Ω	0.23
Inductance Ld		mH	2.78
Inductance Lq		mH	2.78
Protection grade		IP65/IP67(Optional)(Except the shaft penetration part)	
Brake performance para.	Purpose	—	—
	Rated voltage	V	DC24 $\pm$ 10%
	Rated power	w	23
	Static friction torque	N.m	≥ 16
	Attract time	ms	< 80
	Release time	ms	< 40
	Release voltage	V	> 0.5
Running noise		dB	< 65

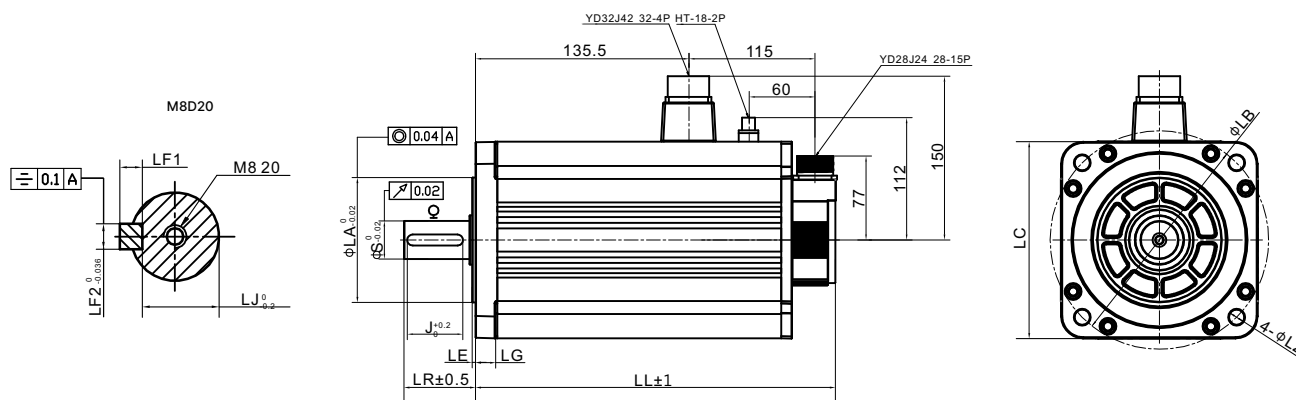
Drawing



Servo Motor **SJ180(3000W-4000W)/220V** Specifications

Model type	SJ180-2-190M1518-A	SJ180-2-286M1015-A	SJ180-2-350M1015-A	SJ180-2-255M1518-A
Rated power (W)	3000W	3000W	3700W	4000W
Rated voltage(V)	220V	220V	220V	220V
Rated current(A)	12	12	16	17
Rated torque(N.M)	19.1	28.6	35	25.5
Max torque(N.M)	47	67	88	76.5
Rated RPM(r/min)	1500	1000	1000	1500
MAX RPM(r/min)	1800	1500	1500	1800
Max current(A)	24	24	32	51
Torque constant(N.M/A)	1.8	2.7	2.4	1.67
Rotor inertia(kg*m2)	49.5×10^{-4}	63.7×10^{-4}	92×10^{-4}	63.7×10^{-4}
Number of poles	8			
Insulation class	F class(155°C)			
Protection level	IP65(Except the shaft penetration part)			
Use environment	Temperature: 0-40 °C (no freezing), humidity: 20% -80% (no condensation)			

Servo Motor **SJ180** outline drawing and dimension table

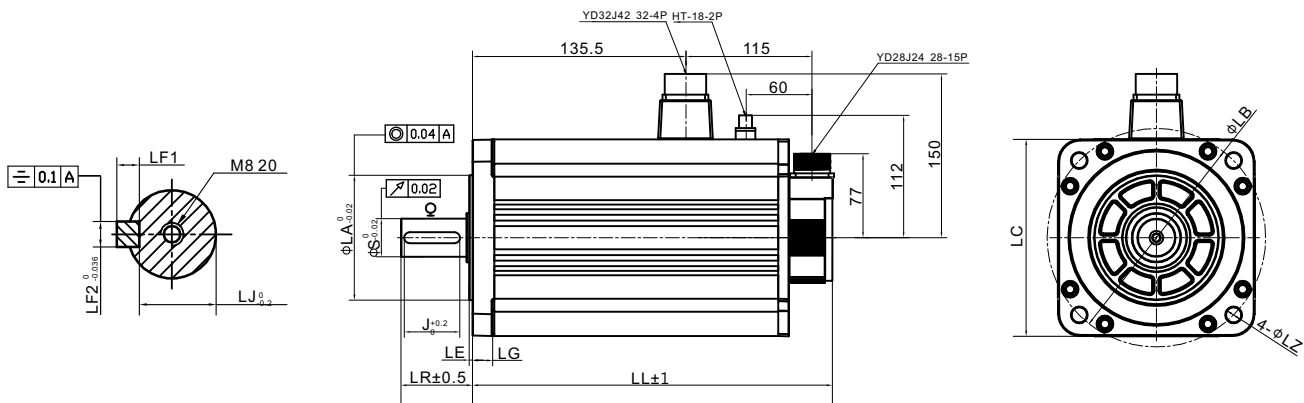


Servo motor model	Flange size					Shaft end size							
	LC	LA	LB	LZ	LL(with brake)	S	LJ	J	LF1	LF2	LR	LE	LG
SJ180-2-190M1518-A	180	114.3	200	13	216(268.5)	35	30	51	8	10	65	3	20
SJ180-2-286M1015-A	180	114.3	200	13	236(288.5)	35	30	51	8	10	65	3	20
SJ180-2-350M1015-A	180	114.3	200	13	276(328.5)	35	30	51	8	10	65	3	20
SJ180-2-225M1518-A	180	114.3	200	13	236(288.5)	35	30	51	8	10	65	3	20

Servo Motor SJ180(4500W-7500W)/220V Specifications

Model type	SJ180-2-215M2022-A	SJ180-2-286M1518-A	SJ180-2-238M2022-A	SJ180-2-350M1518-A	SJ180-2-480M1518-A
Rated power (W)	4500W	4500W	5000W	5500W	7500W
Rated voltage(V)	220V	220V	220V	220V	220V
Rated current(A)	18.4	18.4	22	23.5	23.5
Rated torque(N.M)	21.5	28.6	23.8	35	47.7
Max torque(N.M)	53	85.8	71.4	105	119.25
Rated RPM(r/min)	2000	1500	2000	1500	1500
MAX RPM(r/min)	2200	1800	2200	1800	1800
Max current(A)	34	55.2	66	70.5	58.75
Torque constant(N.M/A)	1.3	1.71	1.2	1.6	2
Rotor inertia(kg*m2)	63.7×10^{-4}	77.9×10^{-4}	63.7×10^{-4}	92×10^{-4}	104×10^{-4}
Number of poles	8				
Insulation class	F class(155°C)				
Protection level	IP65(Except the shaft penetration part)				
Use environment	Temperature: 0-40 °C (no freezing), humidity: 20% -80% (no condensation)				

Servo Motor SJ180 outline drawing and dimension table

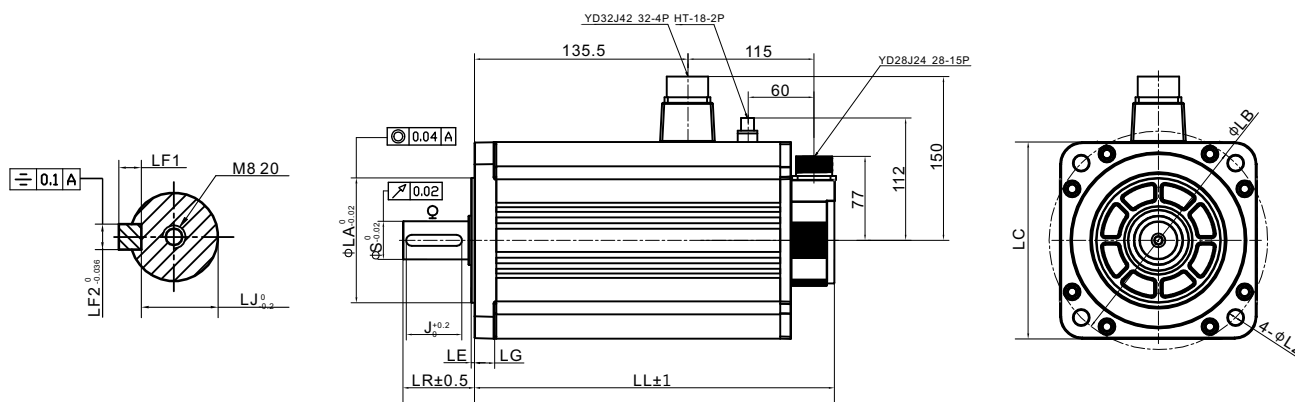


Servo motor model	Flange size					Shaft end size							
	LC	LA	LB	LZ	LL(with brake)	S	L J	J	LF1	LF2	LR	LE	LG
SJ180-2-215M2022-A	180	114.3	200	13	216(268.5)	35	30	51	8	10	65	3	20
SJ180-2-286M1518-A	180	114.3	200	13	256(308.5)	35	30	51	8	10	65	3	20
SJ180-2-238M2022-A	180	114.3	200	13	236(288.5)	35	30	51	8	10	65	3	20
SJ180-2-350M1518-A	180	114.3	200	13	276(328.5)	35	30	51	8	10	65	3	20
SJ180-2-480M1518-A	180	114.3	200	13	334(409)	35	30	51	8	10	65	3	20

!!! Servo Motor SJ180(3000W-3700W)/380V Specifications

Model type	SJ180-4-019M1518-A	SJ180-4-035M1015-A
Rated power (W)	3000W	3700W
Rated voltage(V)	380V	380V
Rated current(A)	6.8	8.5
Rated torque(N.M)	19.1	35
Max torque(N.M)	47	88
Rated RPM(r/min)	1500	1000
MAX RPM(r/min)	1800	1500
Max current(A)	24	32
Torque constant(N.M/A)	1.58	2.18
Rotor inertia(kg*m2)	49.5×10^{-4}	92×10^{-4}
Number of poles	8	
Insulation class	F class(155°C)	
Protection level	IP65(Except the shaft penetration part)	
Use environment	Temperature: 0-40 °C (no freezing), humidity: 20% -80% (no condensation)	

!!! Servo Motor SJ180 outline drawing and dimension table

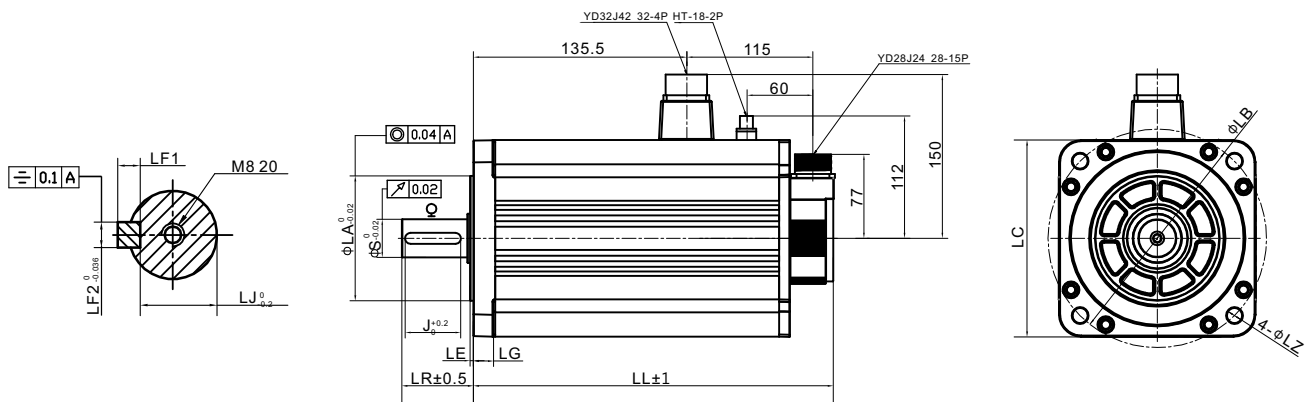


Servo motor model	Flange size					Shaft end size							
	LC	LA	LB	LZ	LL(with brake)	S	LJ	J	LF1	LF2	LR	LE	LG
SJ180-4-019M1518-A	180	114.3	200	13	216(268.5)	35	30	51	8	10	65	3	20
SJ180-4-035M1015-A	180	114.3	200	13	276(328.5)	35	30	51	8	10	65	3	20

Servo Motor **SJ180(4500W-7500W)/380V** Specifications

Model type	SJ180-4-029M1518-A	SJ180-4-035M1518-A	SJ180-4-048M1518-A
Rated power (W)	4500W	5500W	7500W
Rated voltage(V)	380V	380V	380V
Rated current(A)	10	12	17.5
Rated torque(N.M)	28.6	35	47.75
Max torque(N.M)	71.6	87.5	119.4
Rated RPM(r/min)	1500	1500	1500
MAX RPM(r/min)	1800	1850	1850
Max current(A)	25	30	43.75
Torque constant(N.M/A)	2.67	3	2.9
Rotor inertia(kg*m2)	71.6×10^{-4}	92×10^{-4}	104×10^{-4}
Number of poles	8		
Insulation class	F class(155°C)		
Protection level	IP65(Except the shaft penetration part)		
Use environment	Temperature: 0-40 °C (no freezing), humidity: 20% -80% (no condensation)		

Servo Motor **SJ180** outline drawing and dimension table

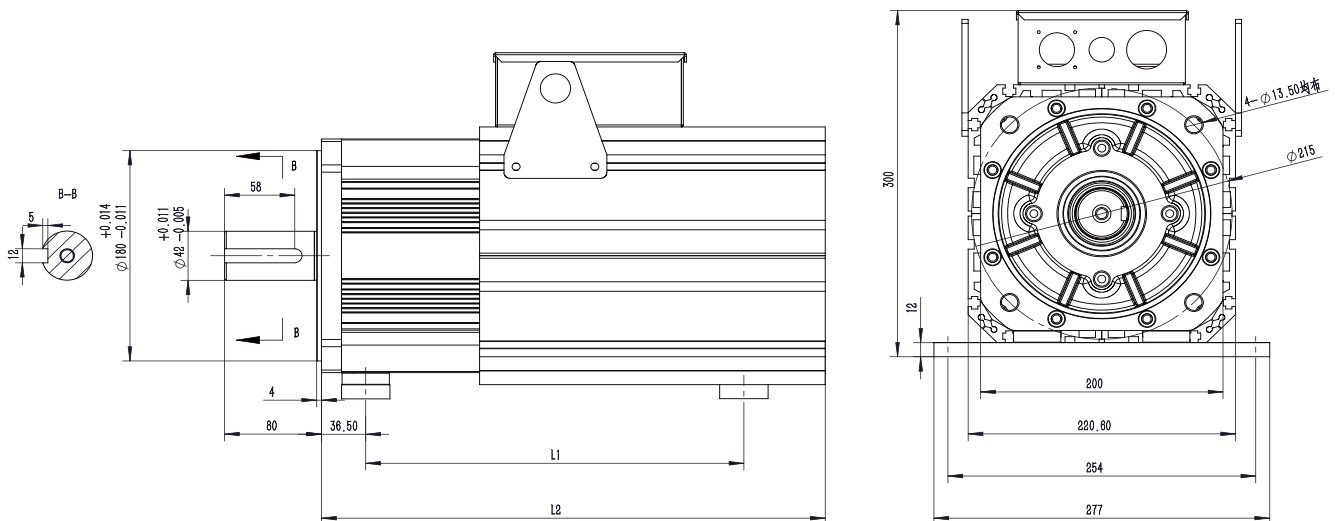


Servo motor model	Flange size					Shaft end size							
	LC	LA	LB	LZ	LL(with brake)	S	LJ	J	LF1	LF2	LR	LE	LG
SJ180-4-029M1518-A	180	114.3	200	13	236(288.5)	35	30	51	8	10	65	3	20
SJ180-4-035M1518-A	180	114.3	200	13	276(328.5)	35	30	51	8	10	65	3	20
SJ180-4-048M1518-A	180	114.3	200	13	336(388.5)	35	30	51	8	10	65	3	20

SJ200 Servo Motor Model and Specification

Product Series	Rated Power (KW)	Rated Speed (rpm)	Rated Torque (N.M)	Rated Voltage (V)	Rated Current (A)	Frequency (HZ)	Counter Electromotive Force (V/**rpm)	Max Speed (rpm)	Max Torque (N.m)	Max Current (A)	Rotor inertia Kgm2 10 ⁻³	Line Resistance (Ω)	Line Inductance Ld (mH)	Line Inductance Lq (mH)	L2(mm)
SJ200-4-045M1522-A	7.1	1500	45	380	13.6	100	312	2200	88	28	62	1.531	10.5	20.7	309
SJ200-4-065M1522-A	10.2	1500	65	380	19.1	100	321	2200	104	32.5	73	1.098	9.32	18.32	344
SJ200-4-070M1518-A	11	1500	70	380	25	100	274	1800	140	50	98	0.2	2.71	N/A	416
SJ200-4-084M1522-A	13.2	1500	84	380	24.6	100	327	2200	145	45	87	0.805	7.75	15.33	380
SJ200-4-084M1725-A	15	1700	84	380	28.3	113.3	318	2500	147	54	87	0.608	5.75	11.15	380
SJ200-4-095M1518-A	15	1500	95.5	380	32	100	295	1800	172	57.6	114	0.16	2.33	N/A	452
SJ200-4-108M1522-A	17	1500	108	380	31.8	100	327	2200	195	63	112	0.533	5.95	11.65	416
SJ200-4-130M1522-A	20.4	1500	130	380	39.2	100	312	2200	248	83	137	0.358	4.12	8.54	452
SJ200-4-129M1725-A	23	1700	129	380	28.3	113.3	309	2500	247	89	137	0.281	3.11	6.25	452
SJ200-4-156M1522-A	24.5	1500	156	380	44.7	100	327	2200	300	104	160	0.311	3.83	7.56	488
SJ200-4-156M1725-A	27.8	1700	156	380	53.3	113.3	318	2500	302	110	160	0.223	2.85	5.62	488
SJ200-4-180M1522-A	28.3	1500	180	380	52	100	327	2200	360	130	187	0.261	3.35	6.75	524
SJ200-4-205M1522-A	32.2	1500	205	380	61.8	100	312	2200	420	140	213	0.201	2.55	5.05	560
SJ200-4-230M1522-A	36	1500	230	380	73	100	312	2200	420	140		0.201	2.55	5.05	560

SJ200 Servo Motor outline drawing and dimension table



HSD6 servo system selection table

AC220V Servo System:

Motor Model	Rated Torque	Rated Speed	Max Speed	Rated Current	Rated Power	Servo Drive
SG40-2-003H3065-A2	0.32 Nm	3000 rpm	6500 rpm	1.1 A	100 W	HSD6-DS-02A ☐ ☐ HSD6-BS-02A ☐ ☐ HSD6-ES-02A ☐ ☐
SG60-2-006H3065-A2	0.64 Nm	3000 rpm	6500 rpm	1.4 A	200 W	
SG60-2-013H3065-A2	1.27 Nm	3000 rpm	6500 rpm	2.8A	400 W	HSD6-DS-03A ☐ ☐ HSD6-BS-03A ☐ ☐ HSD6-ES-03A ☐ ☐
SG80-2-024H3060-A2	2.39 Nm	3000 rpm	6000 rpm	4.4 A	750 W	HSD6-DS-06A ☐ ☐ HSD6-BS-06A ☐ ☐ HSD6-ES-06A ☐ ☐
SG80-2-032H3060-A2	3.18 Nm	3000 rpm	6000 rpm	5.7 A	1.0 Kw	HSD6-DS-08A ☐ ☐ HSD6-BS-08A ☐ ☐ HSD6-ES-08A ☐ ☐
SG130-2-054M1530-A2	5.4Nm	1500 rpm	3000 rpm	6.7 A	0.85 KW	
SG130-2-048M2030-A2	4.77 Nm	2000 rpm	3000 rpm	5.2 A	1.0 KW	
SG130-2-083M1530-A2	8.3 Nm	1500 rpm	3000 rpm	9.5 A	1.3 KW	HSD6-DS-12A ☐ ☐ HSD6-BS-12A ☐ ☐ HSD6-ES-12A ☐ ☐
SG130-2-072M2030-A2	7.16 Nm	2000 rpm	3000 rpm	8.0A	1.5KW	
SG130-2-114M1530-A2	11.4 Nm	1500 rpm	3000 rpm	11.8A	1.8 KW	
SG130-2-096M2030-A2	9.55 Nm	2000 rpm	3000 rpm	9.9A	2.0KW	
SG130-2-143M2030-A2	14.3 Nm	2000 rpm	3000 rpm	14A	3.0KW	HSD6-DS-18A ☐ ☐ HSD6-BS-18A ☐ ☐ HSD6-ES-18A ☐ ☐
SJ180-2-190M1518-A	19.1Nm	1500 rpm	1800 rpm	12A	3.0KW	
SJ180-2-286M1015-A	28.6Nm	1000 rpm	1500 rpm	12A	3.0KW	
SJ180-2-190M1015-A	35.0Nm	1000 rpm	1500 rpm	16A	3.7KW	
SJ180-2-255M1518-A	25.5Nm	1500 rpm	1800 rpm	17A	4.0KW	HSD6-DS-25A ☐ ☐ HSD6-BS-25A ☐ ☐ HSD6-ES-25A ☐ ☐
SJ180-2-215M2022-A	21.5Nm	2000 rpm	2200 rpm	18.4A	4.5KW	
SJ180-2-286M1518-A	28.6Nm	1500 rpm	1800 rpm	18.4A	4.5KW	
SJ180-2-238M2022-A	23.8Nm	2000 rpm	2200 rpm	22A	5.0KW	
SJ180-2-350M1518-A	35.0Nm	1500 rpm	1800 rpm	23.5A	5.5KW	HSD6-DS-32A ☐ ☐
SJ180-2-480M1518-A	47.7Nm	1500 rpm	1800 rpm	23.5A	7.5KW	

AC380V Servo System:

Motor Model	Rated Torque	Rated Speed	Max Speed	Rated Current	Rated Power	Servo Drive
SJ180-4-019M1518-A	19.1 Nm	1500 rpm	1800 rpm	6.8 A	3.0Kw	HSD6-DS-09D □□
SJ180-4-035M1015-A	35Nm	1000 rpm	1500 rpm	8.5 A	3.7Kw	HSD6-DS-12D □□
SJ180-4-029M1518-A	28.6 Nm	1500 rpm	1800 rpm	10.0 A	4.5Kw	
SJ180-4-035M1518-A	35.0 Nm	1500 rpm	1850 rpm	12.0 A	5.5Kw	HSD6-DS-17D □□
SJ180-4-045M1522-A	45.0 Nm	1500 rpm	2200 rpm	13.6 A	7.1Kw	
SJ180-4-048M1518-A	47.75 Nm	1500 rpm	1850 rpm	17.5 A	7.5Kw	HSD6-DS-21D □□
SJ200-4-065M1522-A	65.0 Nm	1500 rpm	2200 rpm	19.1 A	10.2Kw	
SJ200-4-070M1518-A	70.0 Nm	1500 rpm	1800 rpm	24.6 A	11.0Kw	HSD6-DS-26D □□
SJ200-4-084M1522-A	84.0 Nm	1500 rpm	2200 rpm	24.6 A	13.2Kw	
SJ200-4-084M1725-A	84.0 Nm	1700 rpm	2500 rpm	28.3 A	15.0Kw	HSD6-DS-32D □□
SJ200-4-095M1518-A	95.5 Nm	1500 rpm	1800 rpm	32.0 A	15.0Kw	
SJ200-4-108M1522-A	108.0 Nm	1500 rpm	2200 rpm	31.8A	17.0Kw	
SJ200-4-129M1725-A	129.0 Nm	1700 rpm	2500 rpm	44.8A	23.0Kw	HSD6-DS-45D □□
SJ200-4-130M1522-A	130.0 Nm	1500 rpm	2200 rpm	39.2A	20.4Kw	
SJ200-4-156M1522-A	156.0 Nm	1500 rpm	2200 rpm	44.7A	24.5Kw	
SJ200-4-156M1725-A	156.0 Nm	1700 rpm	2500 rpm	53.3A	27.8Kw	HSD6-DS-60D □□
SJ200-4-180M1522-A	180.0 Nm	1500 rpm	2200 rpm	52.0A	28.3Kw	
SJ200-4-205M1522-A	205.0 Nm	1500 rpm	2200 rpm	61.8A	32.2Kw	HSD6-DS-75D □□
SJ200-4-230M1522-A	230.0 Nm	1500 rpm	2200 rpm	73.0A	36.0Kw	



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