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Innovation Integrity Service

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Due to the delayed update of the paper version, please refer to the official website for the latest product information.



HCFA



ATC

SV730/730W Series

Advanced AC Servo Drive



HCFA

Evolution 7.0: Power Reimagined



SV730 Single-axis Series



SV730W Multi-axis Series

SV730, a new-generation AC servo family, includes SV730 Single-axis Series and SV730W Multi-axis Series drives. With a unified family-oriented design language, it fulfills users' demands for enhanced response and precision in servo systems. It is ideal for high-end applications such as lasers, photovoltaics, and lithium batteries.

EtherCAT
Technology Group



Evolution

The entire series is designed to conform to international top-tier product standards, meeting users' needs for equipment export overseas.

The entire series complies with the following standards:

- EN IEC 61800-3:2018
- EN IEC 61800-3:2023
- EN IEC 61800-5-1:2023
- UL 61800-5-1 2022
- CSA C22.2 No.274-17

Notes:

1. For the latest information during product certification, please refer to our official website or contact our sales personnel.
2. SV730 only supports the STO function without functional safety certification. For functionally safe certified products, please use SV760 and SV760W.



Power



Ultimate Precision & Superior Performance: Integrating robust power with ultra-fast response, the new servo system injects surging momentum into the equipment and ushers in a new era of intelligent manufacturing.



Precision capture & High-speed response: Featuring dual built-in high-speed probes and 150kHz input frequency testing, the servo system achieves a hardware latency as low as **1µs**. It empowers high-end manufacturing and caters to the high-speed, high-precision requirements of packaging, printing, and semiconductor sectors.



Intelligent & Fast self-tuning !



Supporting multiple self-tuning modes, users only need to set the rigidity level. The servo drive instantly auto-matches optimal parameters: precisely adjusts gain, identifies inertia online, and intelligently enables notch filters — balancing speed and stability. Achieve a leap in efficiency with greatly reduced debugging time!

Reimagined



- Brand-new A-face Wiring Design: Effortless wiring saves space in electrical cabinets.



- Dedicated Heat Dissipation Air Duct Design: Boosts cooling efficiency while preventing dust, high humidity, and other contaminants from entering the drive unit, which effectively enhancing product reliability.
- Reinforced Three-proof Coating: Provides resistance to moisture, dust, and light corrosion.
- Built-in Braking Resistor: Models 750W and above come with built-in braking resistors that dissipate regenerative energy generated during motor deceleration, which ensuring rapid stops and reliable operation of servo motors.



- European-standard Power Terminals: Enable fast installation and reliable connections.
- Pre-reserved Battery Box Expansion: Supports quick disassembly and replacement.



- Black-box-level Monitoring & Intelligent Diagnosis: Makes risks visible and security tangible.

SV730 Single-axis Series



Naming Rule

SV730 A A - 2R8 - S 0 0 - 00

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①	Product series
SV730	SV730 series

②	Product type
A	Pulse type
B	EtherCAT bus type

③	Voltage class
A	AC220V
T	AC380V

④ Current specification/Power		
AC 220V		
R90	1.2A	100W
1R6	1.7A	200W
2R8	2.8A	400W
5R5	5.5A	750W
7R6	7.6A	1KW
012	11.6A	1.5KW
016	15.6A	2KW
AC 380V		
3R5	3.5A	1KW
5R4	5.4A	1.5KW
8R4	8.4A	2KW
012	11.9A	3KW
017	16.5A	5KW
021	20.8A	6KW
026	25.7A	7.5KW

⑤	Functional safety configuration
0	Without STO
S	STO model

⑥	Specification configuration
0	Without DB, no secondary encoder
1	With DB, no secondary encoder

⑦	Braking resistor
0	Without
1	With

⑧	Manufacturer-defined ID
00	-

Voltage Class & Power Planning



Product Series Configuration

Functional configuration	Single-axis product series	
	SV730	
Control mode	Pulse	EtherCAT bus
IO control	9DI/6DO	5DI/3DO
STO function	-	√
DB dynamic braking	√	√
Frequency division output	√	-
Secondary encoder	-	-
Analog input	2AI	-
Analog output	-	-
RS485	√	-
Built-in regenerative resistor	√	√
Encoder bits	20bit	
CE certification	√ Certification in progress	
UL certification	√ Certification in progress	
Functional safety certification	For STO function (SIL 3 Certification) , the 730 series are not available, and the 760 series are undergoing.	

Bus Drive Product Ordering Guide



Power supply	Rated current (A)	Maximum current (A)	Recommended motor power (kW)	Structure (Size)	Bus ordering model
AC220V	1.2	4.6	0.1	A	SV730BA-R90-S10
	1.7	6.5	0.2	A	SV730BA-1R6-S10
	2.8	9.3	0.4	A	SV730BA-2R8-S10
	5.5	16.9	0.8	B	SV730BA-5R5-S11
	7.6	17.0	1.0	B	SV730BA-7R6-S11
	11.6	28.0	1.5	C	SV730BA-012-S11
	15.6	39.0	2.0	C	SV730BA-016-S11
AC380V	3.5	10.5	1.0	B	SV730BT-3R5-S11
	5.4	17.0	1.5	B	SV730BT-5R4-S11
	8.4	20.0	2.0	C	SV730BT-8R4-S11
	11.9	31.0	3.0	C	SV730BT-012-S11
	16.5	44.0	5.0	D	SV730BT-017-S11
	20.8	52.0	6.0	D	SV730BT-021-S11
	25.7	65.0	7.5	D	SV730BT-026-S11

*Note: Gray-marked bus product models are scheduled for sequential release in 2026.

Pulse Drive Product Ordering Guide

Power supply	Rated current (A)	Maximum current (A)	Recommended motor power (kW)	Structure (Size)	Pulse ordering model
AC220V	1.2	4.6	0.1	A	SV730AA-R90-010
	1.7	6.5	0.2	A	SV730AA-1R6-010
	2.8	9.3	0.4	A	SV730AA-2R8-010
	5.5	16.9	0.8	B	SV730AA-5R5-011
	7.6	17.0	1.0	B	SV730AA-7R6-011
	11.6	28.0	1.5	C	SV730AA-012-011
	15.6	39.0	2.0	C	SV730AA-016-011
AC380V	3.5	10.5	1.0	B	SV730AT-3R5-011
	5.4	17.0	1.5	B	SV730AT-5R4-011
	8.4	20.0	2.0	C	SV730AT-8R4-011
	11.9	31.0	3.0	C	SV730AT-012-011
	16.5	44.0	5.0	D	SV730AT-017-011
	20.8	52.0	6.0	D	SV730AT-021-011
	25.7	65.0	7.5	D	SV730AT-026-011

*Note: Pulse products are scheduled for sequential release in 2026.

■ Bus Technology Specifications

Item		Specifications		
Basic specifications	Control mode	IGBT PWM control, sine wave current drive		
		220V/380V: Single-phase or three-phase full-bridge rectification		
Encoder feedback	SV730	20-bit multi-turn absolute encoder		
Speed/Torque control	Performance	Load variation rate	≤0.5% (at rated speed, 0~100% load)	
		Voltage variation rate	≤0.5% (at rated speed, ±10% rated voltage)	
		Speed control range	1~7000 rpm (lower limit requires motor to maintain rotation under rated torque)	
	Input signal	Speed command input	CSV/PV mode	
Torque command input		CST/PT mode		
Position control	Performance	Feedforward compensation	0~100.0% (resolution 0.1%)	
	Input signal	EtherCAT Communication Mode	CSP/PP/HM mode	
I/O signals	Digital input (DI)	Input signal function selection	5DI DI1~DI3: General-purpose DI DI4~DI5: High-speed DI DI functions: Alarm reset, forward/reverse overtravel, origin switch, emergency stop, probe, etc.	
		Digital output	Output signal function selection	3DO DO load capacity: 50mA; Voltage range: DC 5V~30V DO functions: Servo ready, motor rotation output, comparison/brake/communication forced output, fault/warning
			Overtravel prevention function	Immediate stop when P-OT/N-OT activates
General servo functions	DB dynamic braking		Built-in, supported by some models	
	Electronic gear ratio		Numerator/denominator, min. 1/1000, max. resolution×0.4	
	Regeneration function		Built-in braking resistor in some models, supports external high-power resistors	
	Protection functions		Overcurrent, overvoltage, undervoltage, overload, main circuit detection abnormality, heatsink overheating, phase loss, overspeed, encoder abnormality, excessive position deviation, parameter abnormality, etc.	
	Functional safety	Input signal function selection	STO1/STO2: Input blocking for safety module	
		Applicable standards	EN 61508:2010, parts 1-7、EN ISO 13849-1、EN 61800-5-2	
	EDM output		Safety output signal from safety module	
	LED display function		5-digit LED display	
	Vibration suppression function		5 sets of notch filters, Type A vibration suppression	
	Ease-of-use functions		One-key parameter adjustment, adaptive tuning, speed observer, model tracking, friction compensation, and inertia auto-tuning	
	Communication functions	Backstage commissioning interface	Type-C (for HCServoWorks.exe connection)	
		Multi-station communication protocol	EtherCAT	
		Functions	Status display, user parameter setting, monitoring/alarm trace, JOG/auto-tuning; communication/motion control commands	
	Others		Gain adjustment, alarm logging, JOG operation, etc.	

■ AC220V Basic Specifications

Item		Specifications				
Dimension specifications		Size A			Size B	
Model: SV7**BA-***-***		R90	1R6	2R8	5R5	7R6
Drive power [kW]		0.1	0.2	0.4	0.75	1
Maximum applicable motor capacity [kW]		0.1	0.2	0.4	0.75	1
Continuous output current [Arms]		1.2	1.7	2.8	5.5	7.6
Maximum output current [Arms]		4.6	6.5	9.3	16.9	17
Main circuit	Power supply	Single-phase AC180~264V/50/60Hz			Three-phase AC180~264V/50/60Hz	
	Continuous input current [Arms]	0.8	1.3	2.5	4.1	5.7
Control power supply		Internal power supply				
Braking resistor	Resistance value (Ω)	-	-	-	50	50
	Resistance power (W)	-	-	-	80	80
	Minimum external allowable resistance [Ω]	40	40	40	40	35
Cooling method		Natural cooling			Forced air cooling	
Overvoltage class		III				

■ CN6 EtherCAT bus communication interface definition

Terminal	Pin number	Signal name	Terminal	Pin number	Signal name
CN6 (IN)	1	TD+	CN6 (OUT)	1	TD+
	2	TD-		2	TD-
	3	RD+		3	RD+
	4	-		4	-
	5	-		5	-
	6	RD-		6	RD-
	7	-		7	-
	8	-		8	-



■ CN1 user IO interface*

*Note: Users can assign DI/DO functions themselves; please refer to the user manual for detailed definitions..

■ CN2 encoder connection terminal interface definition

Terminal	Pin number	Function
1	PG 5V	Encoder power supply +5V
2	PG 0V	Encoder power supply 0V
3	-	-
4	-	-
5	PS	Serial data (+)
6	/PS	Serial data (-)
Housing	Shield	Shield

■ Cn3 STO safety interface definition

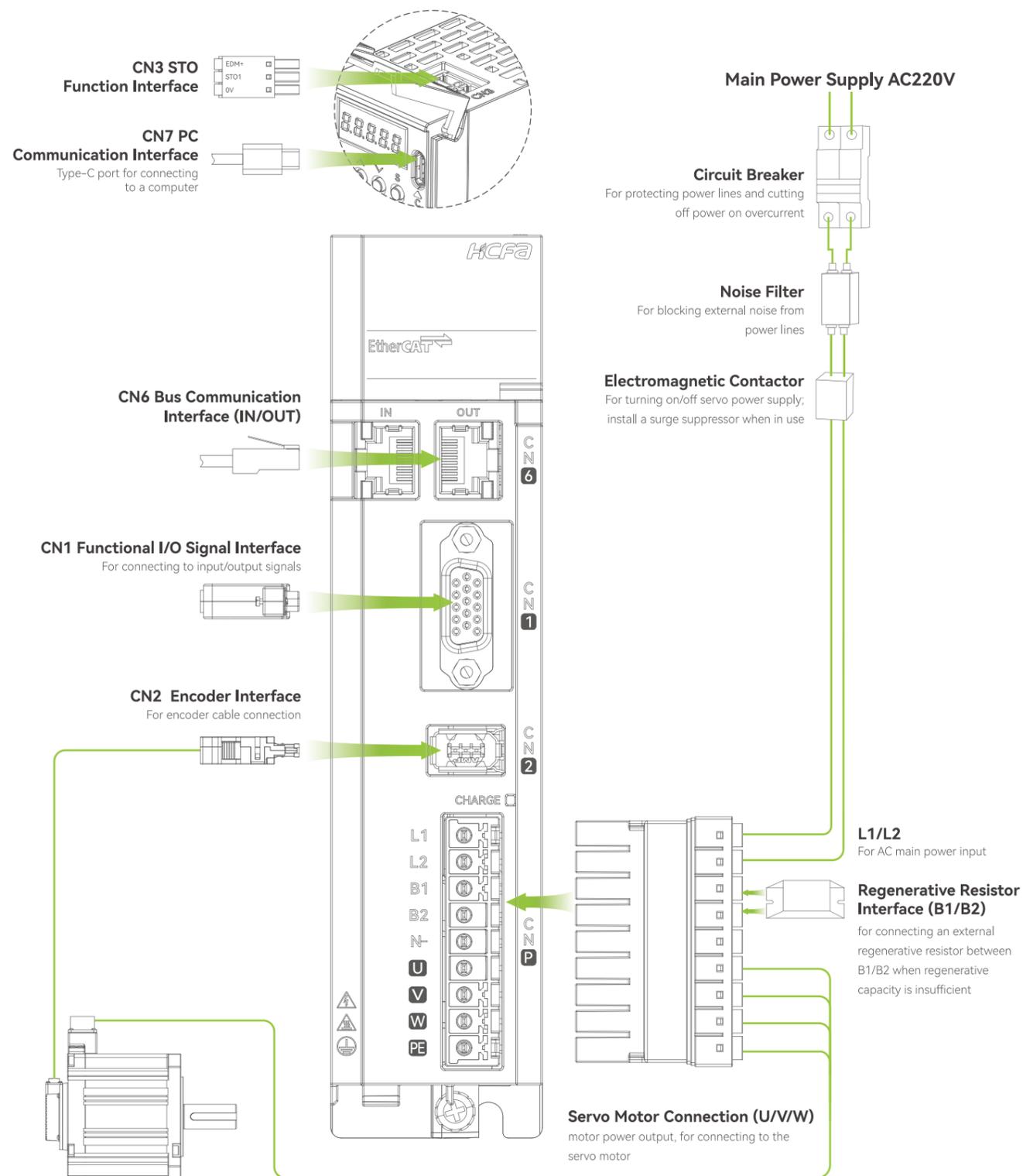
Diagram	Terminal	Pin number	Signal name
	1	0V	Internal 24V power supply -
	2	24V	Internal 24V power supply +
	3	STO1	Functional safety STO1 signal input
	4	STO2	Functional safety STO2 signal input
	5	EDM+	/STO1 and /STO2 are both input and ON when sto status is active.
	6	EDM-	

■ CNP power supply & motion interface definition

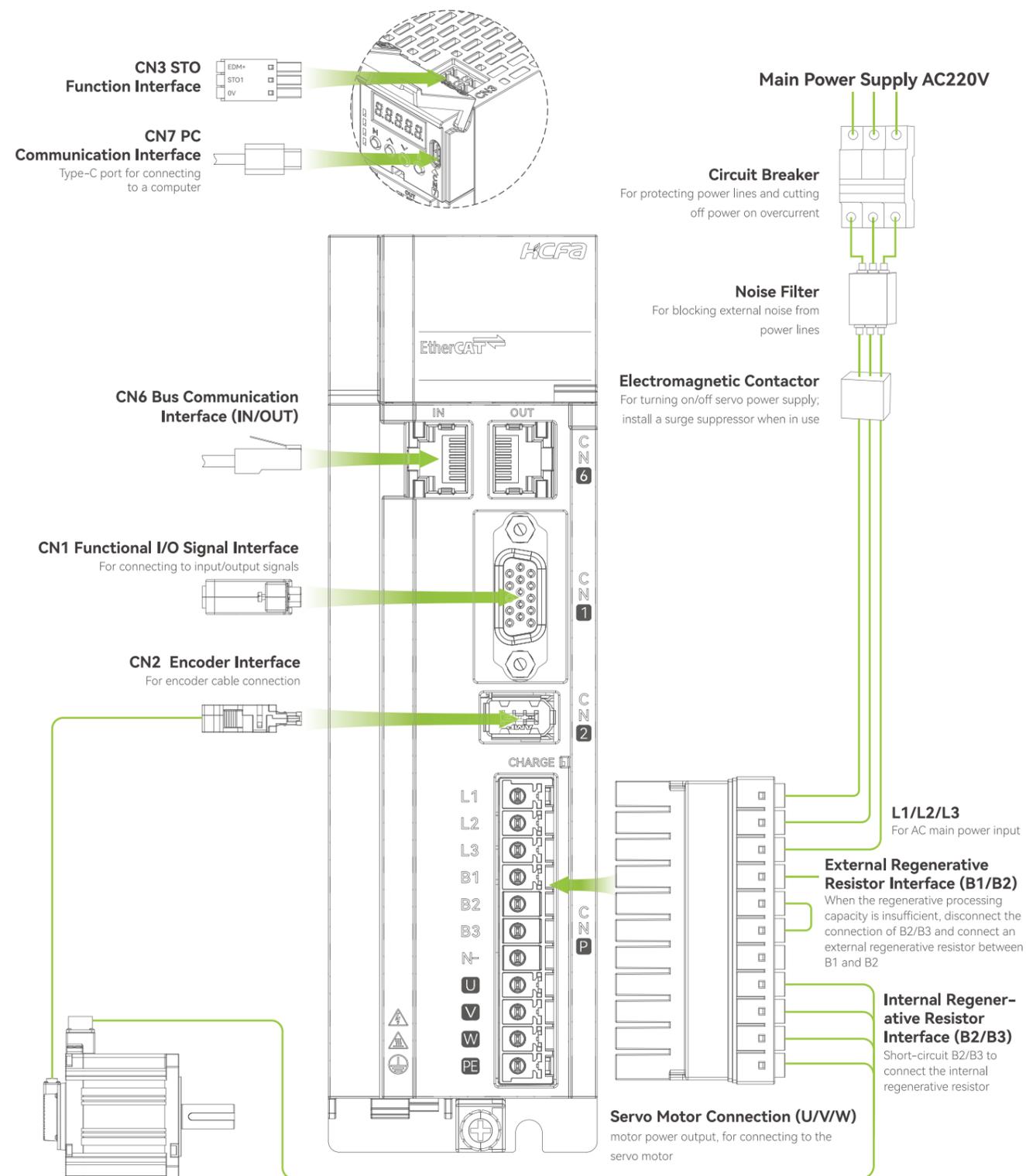
A size diagram	Pin number	Function
	L1	Main circuit power supply input terminal
	L2	
	B1	External braking resistor connection terminal
	B2	
	N-	For common bus only
	U	Servo motor power connection terminal
	V	
	W	
PE	Motor PE ground terminal	

B size diagram	Pin number	Function
	L1	Main circuit power supply input terminal
	L2	
	L3	
	B1	B1/B2 external braking resistor connection terminals. Short-circuit B2 and B3 to enable the built-in regenerative resistor.
	B2	
	B3	
	N-	For common bus only
	U	Servo motor power connection terminal
	V	
	W	
PE	Motor PE ground terminal	

Size A Model



Size B Model



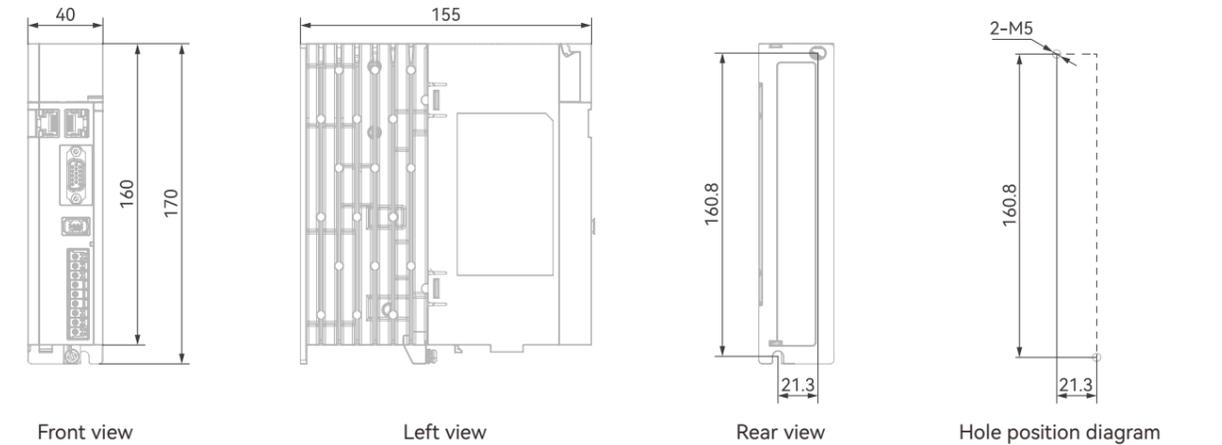
Environmental specifications

Item	Specifications
Installation environment requirements	Open-type and indoor use
Installation/operating temperature	-5°C to +55°C; no derating for -5°C to +45°C; derate by 2% per 1°C above 45°C.
Storage temperature	-20°C to +80°C (maximum temperature guarantee: 80°C for 72h without condensation)
Operating & storage humidity	Below 90% RH (no condensation). For better reliability, use in a stable-temperature location.
Altitude	Maximum 2000m. No derating up to 1000m; derate by 1% per 100m above 1000m.
Vibration	Below 5.88m/s ² (0.6G), 10-60hz (avoid connection at resonance)
Shock resistance	Acceleration below 19.6m/s ²
Atmospheric pressure	Above 900hPa
Pollution degree	2
Overvoltage category	III
IP rating	IP20 (except terminals: IP00)
Cleanliness	In environments free of corrosive/flamable gases, water, oil, chemical splashes, dust, dirt, salt, or metal powder.
Others	No electrostatic interference, strong electric field, strong magnetic field, radiation, etc.

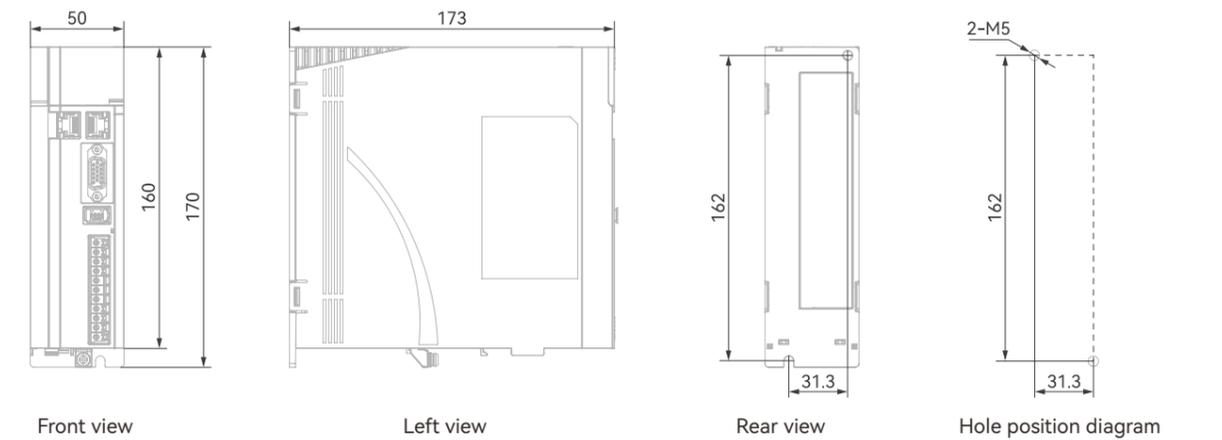
Environmental conditions

Dimensions

Size A overall dimensions (mm)



Size B overall dimensions (mm)





Exquisite **Integration** &

Flexible **Expansion**

The Optimal Choice for Multi-axis

Motion Control



The SV730W multi-axis integrated advanced AC servo system is a sub-series of the SV730 family. It is designed with a minimum of dual axes and a maximum of 4 axes. Boasting product features such as integrated installation, convenient commissioning, and scalability, it can effectively reduce users' TCO (Total Cost of Ownership). The entire product series is developed in compliance with international first-class standards, meeting the demands for equipment exports overseas. It stands as the ultimate choice for cutting-edge multi-axis motion control solutions and ushers servos into the bus-enabled multi-axis era!

sv730w

Multi-axis AC Servo Drive System



Exquisite **Integration**
Effectively reducing **TCO** cost!



Integration

Installation space



40mm 40mm 40mm 40mm



Saving



65mm



Face width reduced by 60%, saving installation space.



Fast Wiring

Engineering wiring



One unit's wiring time \approx four units' wiring time, saving installation costs while greatly reducing installation man-hours.



Convenient Commissioning

- Multi-axis integration. The integrated multi-axis control platform enables concurrent parameter configuration, gain tuning, test runs, and real-time status monitoring across axes A/B/C/D—significantly shortening commissioning time and improving deployment efficiency.
- Enhanced auto-tuning capability. Integrates multiple self-tuning modes—users simply set the rigidity level, and the servo drive instantly auto-matches optimal parameters: precise gain adjustment, real-time inertia identification, and intelligent notch filter activation—delivering both rapid response and stability. This achieves an efficiency leap, with commissioning time reduced by up to 80% or more.



Design Compliance

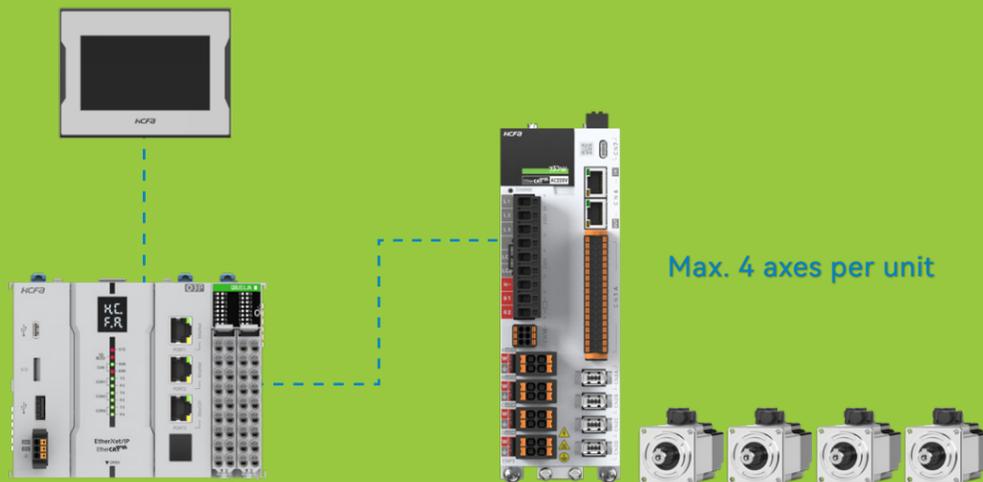
- The entire series complies with international top-tier standards, meeting your needs for overseas equipment exports.



Note: Certain 730W product models have obtained CE certification.
For the latest information, please visit our official website or contact our sales personnel.



Scalability



A single unit supports up to 4 axes and can be expanded to more.

Flexible **Expansion**

Leading Servo Drives into the
Era of Multi-axis Bus Systems!

Naming Rule

SV730 W B A - CCCC - 0000

① ② ③ ④ ⑤ ⑥

①	Product series
SV730	SV730 series

②	Product type
W	Multi-axis

③	Control mode
A	Pulse
B	EtherCAT bus

④	Drive voltage class
A	220V 1P/3P
T	380V 3P
N	380V 3P+N

⑤	Motor current per axis*		
Voltage	220V 1P/3P	380V 3P+N	380V 3P
A	0.9A	0.9A	
B	1.6A	1.6A	
C	2.8A	2.8A	
D	3.5A	3.5A	
E	4.7A	4.7A	
F	5.5A	5.5A	
G	7.6A	7.6A	
H	8.4A	8.4A	
K	11.6A	11.6A	
L	15.6A	15.6A	
M			3.5A
N			5.5A
P			8.4A

⑥	Custom code
0000	-

*Note: The number of letters corresponds to the number of axes of the drive.

Product Series Configuration

Functional configuration	Multi-axis product series
	SV730W
Control mode	EtherCAT bus
IO control	21DI/8DO
STO function	√
DB dynamic braking	√
Frequency division output	-
Analog input/output	-
High-speed probe	8 channels
Built-in regenerative resistor	-
Encoder bits	20bit
CE certification	√ Certification in progress
UL certification	√ Certification in progress
Functional safety certification	No. For functional safety certified products, please use 760W series.

Bus Drive Product Ordering Guide



Drive voltage class	Drive specifications				Recommended motor specifications		Ordering model
	Single-axis rated current (A)	Single-axis maximum current (A)	Number of axes	Size	Motor power * Number of axes	Voltage	SV730W
220V 1P/3P	2.8	9.3	2	A	400w*2	220V	SV730WBA-CC
	5.5	16.9	2	A	750w*2	220V	SV730WBA-FF
	7.6	17	2	A	1kW*2	220V	SV730WBA-GG
	11.6	28	2	B	1.5kW*2	220V	SV730WBA-KK
	15.6	39	2	B	2kW*2	220V	SV730WBA-LL
	2.8	9.3	3	A	400w*3	220V	SV730WBA-CCC
	5.5/2.8	16.9/9.3	3	A	750w*2+400W*1	220V	SV730WBA-FFC
	2.8	9.3	4	A	400w*4	220V	SV730WBA-CCCC
	5.5	16.9	4	B	750w*4	220V	SV730WBA-FFFF
380V 3P+N	7.6	17	4	B	1kW*4	220V	SV730WBA-GGGG
	2.8	9.3	4	A	400w*4	220V	SV730WBN-CCCC
	5.5	16.9	4	B	750w*4	220V	SV730WBN-FFFF
380V 3P	7.6	17	4	B	1kW*4	220V	SV730WBN-GGGG
	5.5	17	2	B	1.5kW*2	380V	SV730WBT-NN
	8.4	24	2	B	2kW*2	380V	SV730WBT-PP

Note 1: Gray-marked models of bus products are scheduled for sequential release in 2026.

Note 2: AC 380V 3P+N models only support matching with 220V motors.

Technology Specifications

Item		Specifications		
Speed/ Torque control mode	Performance	Load variation rate	≤0.5% (at rated speed, 0~100% load)	
		Speed variation rate	Voltage variation rate 0.5% (at rated speed, ±10% rated voltage)	
		Temperature variation rate	25±25°C: ≤0.5%(at rated speed)	
	Speed control range		1:10000 rpm (lower limit requires motor to maintain rotation under rated torque)	
	Torque control accuracy		±1%	
	Input signal	Speed command input	EtherCAT communication mode CSV/PV mode	
Torque command input		EtherCAT communication mode CST/PT mode		
Position control	Performance	Feedforward compensation	0~100.0% (resolution 0.1%)	
	Input signal	Timing window	1~65535 encoder units	
I/O signals	Se- quential control input signal	EtherCAT communication mode	CSP/PP/HM mode	
		Input signal function selection	21-channel DI DI1~DI21: General-purpose DI (100μs input delay on rising edge (signal transition from high to low at 24V input); 50μs input delay on falling edge (signal transition from low to high at 24V input); voltage: 21.6V~26.4V) DI functions are as follows: Forward overtravel switch (POT), Reverse overtravel switch (NOT), Home switch DEC (DEC), Probe 0 (LATCH_0), Probe 1 (LATCH_1), Emergency stop (FSTP), Forward torque limit (P_CL), Reverse torque limit (N_CL), CLINKANS, CMCANS, CONV_READY, CONV_MCON, Servo enable (SON), PLSCLR, Alarm reset signal (ALM-CLR), Power-down signal (PWRDOWN), User-defined signals 1~7 (USER1~7)	
I/O signals	Se- quential control output signal	Output signal function selection	8-channel DI DO load capacity: 50mA; Voltage range: 5V~30V DO functions are as follows: Positioning complete (COIN), Speed coincidence (V_CMP), Motor running (TGON), Servo ready (S_RDY), Torque limit (CLT), Speed limit (VLT), Brake (BK), Warning (WARN), Position proximity (NEAR), C pulse signal (C_PULSE), CLINK, CMCON, PM, DAO1, DAO2, Position comparison output 1~4 (POSCMP1~4), Alarm signal (ALM), User-defined signals 1~7 (USER1~7)	
		Overtravel (OT) limit function	Immediate stop when P-OT/N-OT actuates.	
Built-in func- tion	Electronic gear ratio		$0.001 \leq B/A \leq \text{Encoder resolution} \times 0.4$	
	Protection function		Overcurrent, overvoltage, undervoltage, overload, main circuit detection anomaly, heatsink overheating, power phase loss, overspeed, encoder anomaly, CPU anomaly, parameter anomaly, others	
	Safety function		STO	
	LED display function		IEC 61800-5-2:2016	
	Display function		Main power CHARGE status displayed on 6-digit LED	
	Vibration suppression function		5 notch filters (50Hz ~ 5000Hz), including 2 adaptive ones	
	Ease-of-use function		One-touch parameter adjustment, adaptive parameter adjustment, intelligent parameter adjustment, speed observer, model tracking	
	Com- muni- cation function	Background debugging		Type_C
		Multi-station communication protocol		EtherCAT
		Number of axes for multi-station communication		Maximum number of slave stations: 65535
		Axis address setting		No physical knobs; configured via software (0 ~ 65535)
		Function		Status display, user parameter setting, monitoring display, alarm tracing display, communication & motion control command input
Others		Gain adjustment, alarm recording, JOG operation		

AC220V Basic Specifications

Item		Specifications				
Single-axis model specifications (AC220V)		C	F	G	K	L
Maximum applicable motor capacity [kW]		2-4 axes ≤ 1.6	2-4 axes ≤ 4	2-4 axes ≤ 4	2 axes ≤ 4	2 axes ≤ 4
Number of axes		2-4 axes	2-4 axes	2-4 axes	2 axes	2 axes
Single-axis power [kW]		0.4	0.75	1	1.5	2
Single-axis continuous output current [Arms]		2.8	5.5	7.6	11.6	15.6
Single-axis maximum output current [Arms]		9.3	16.9	17	28	39
Main circuit	Power supply voltage	Single-phase/Three-phase AC200 ~ 240V, 50/60Hz			Three-phase AC200 ~ 240V, 50/60Hz	
	Current [Arms]	7.6	14.1	19.2	11.7	16.1
Control power supply		Single-phase AC200 ~ 240V, 50/60Hz				
Power loss	Main circuit power consumption	80	150	195	135	180
	Control circuit power loss	15	17	17	17	17
	Total loss	95	167	212	152	197
Regeneration resistor	Minimum allowable external resistance	12	12	12	12	12
Cooling method		Forced air cooling				
Overvoltage class		III				

AC 380V 3P+N Basic Specifications

Item		Specifications			
Single-axis model specifications (AC380V 3P+N)		C	F	G	H
Maximum applicable motor capacity [kW]		2-4 axes ≤ 1.6	2-4 axes ≤ 4	2-4 axes ≤ 4	2 axes ≤ 4
Number of axes		2-4 axes	2-4 axes	2-4 axes	2 axes
Single-axis power [kW]		0.4	0.75	1	1.5
Single-axis continuous output current [Arms]		2.8	5.5	7.6	8.4
Single-axis maximum output current [Arms]		9.3	16.9	17	21
Main circuit	Power supply voltage	Three-phase AC330 ~ 440V, 50/60Hz			
	Current [Arms]	7.6	18.5	19.2	20.3
Control power supply		-			
Power loss	Main circuit power consumption	80	150	195	205
	Control circuit power loss	15	17	17	17
	Total loss	95	167	212	222
Regeneration resistor	Minimum allowable external resistance	12	12	12	12
Cooling method		Forced air cooling			
Overvoltage class		III			



[220V Size A]

[220V Size B]

Power supply interface definition

AC220V 1P/3P[Size A]	
L1	Main circuit power supply input AC 200 ~ 240V (50/60Hz)
L2	
L3	
-	-
LC1	Control power supply input
LC2	AC 200 ~ 240V (50/60Hz)
N-	Main circuit busbar -
B1	Main circuit busbar + / External regenerative resistor interface
B2	External regenerative resistor interface

AC220V 1P/3P[Size B]	
L1	Main circuit power supply input AC 200 ~ 240V (50/60Hz)
L2	
L3	
-	-
N-	Main circuit busbar -
P	Main circuit busbar +
LC1	Control power supply input
LC2	AC 200 ~ 240V (50/60Hz)
B1	External regenerative resistor interface
B2	External regenerative resistor interface
B3	Built-in regenerative resistor interface

Note: The silkscreen marking in the illustration is for a four-axis, AC220V model. For other silkscreen markings, please refer to the relevant instructions in the technical manual.

CN10 brake interface definition

Pin number	Signal name	Description
1	24V	24V power supply externally connected to brake
2	0V	
3	BKA+	Brake interface A
4	BKA-	
5	BKB+	Brake interface B
6	BKB-	

*Note 1: Servo brake interfaces A/B can be freely assigned to any axis.

CNP3 UVW power interface definition

Signal name/ Pin number	Description
U	Motor power U-phase output
V	Motor power V-phase output
W	Motor power W-phase output
PE	Grounding terminal, connected to the motor grounding terminal

CN2 encoder connection terminal interface definition

Pin number	Signal name	Function
1	PG 5V	Encoder power supply +5V
2	PG 0V	Encoder power supply 0V
3	-	-
4	-	-
5	PS	Serial data (+)
6	/PS	Serial data (-)
Housing	Shielding	-

CN3 STO safety interface definition

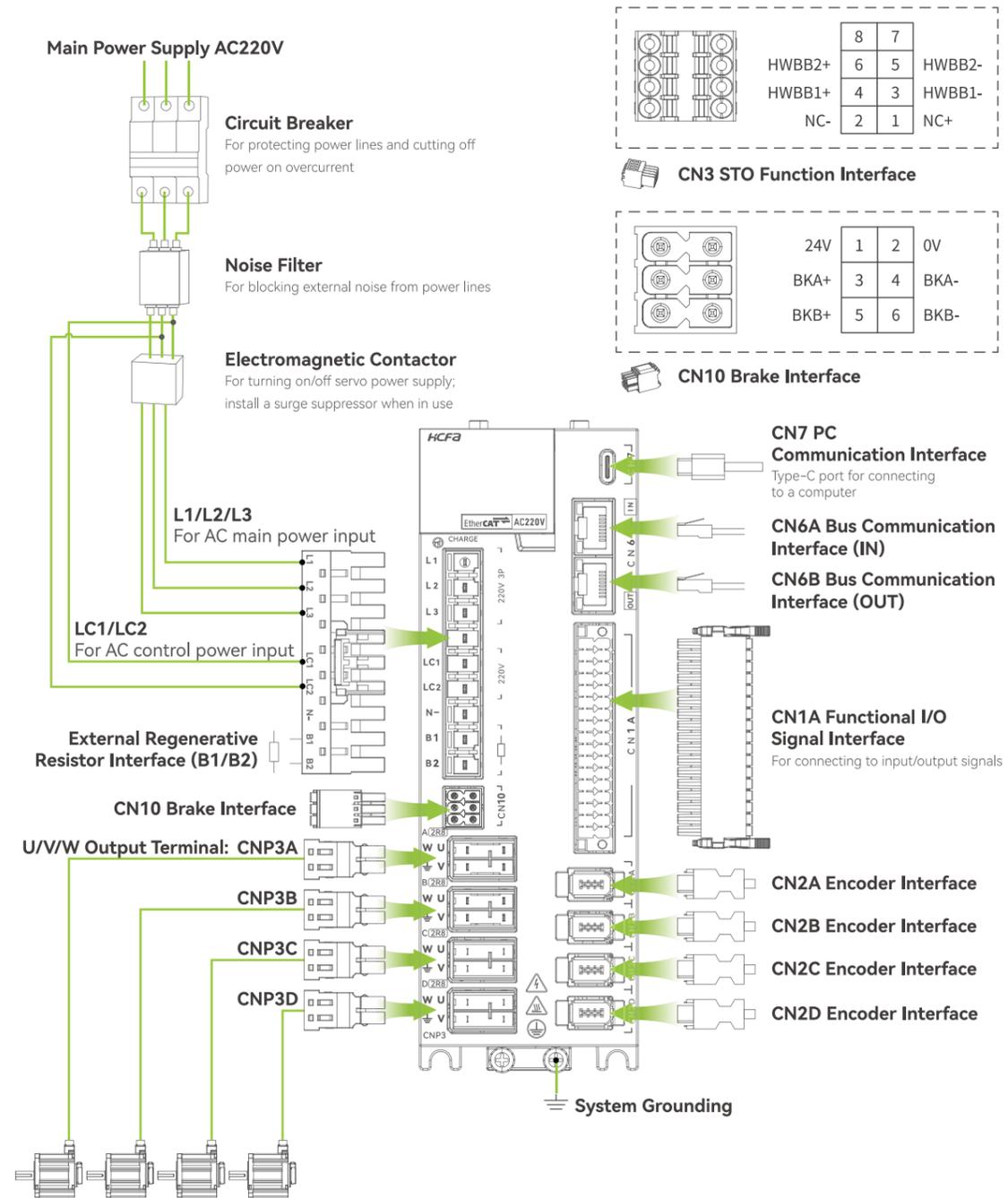
Pin number	Signal name	Function
1	NC+	For internal use only, do not connect anything.
2	NC-	
3	/HWBB1-	Hardware baseblock input: cuts off motor current by turning the signal OFF for baseblock.
4	/HWBB1+	
5	/HWBB2-	
6	/HWBB2+	
7	-	-
8	-	-

CN1 user IO interface definition

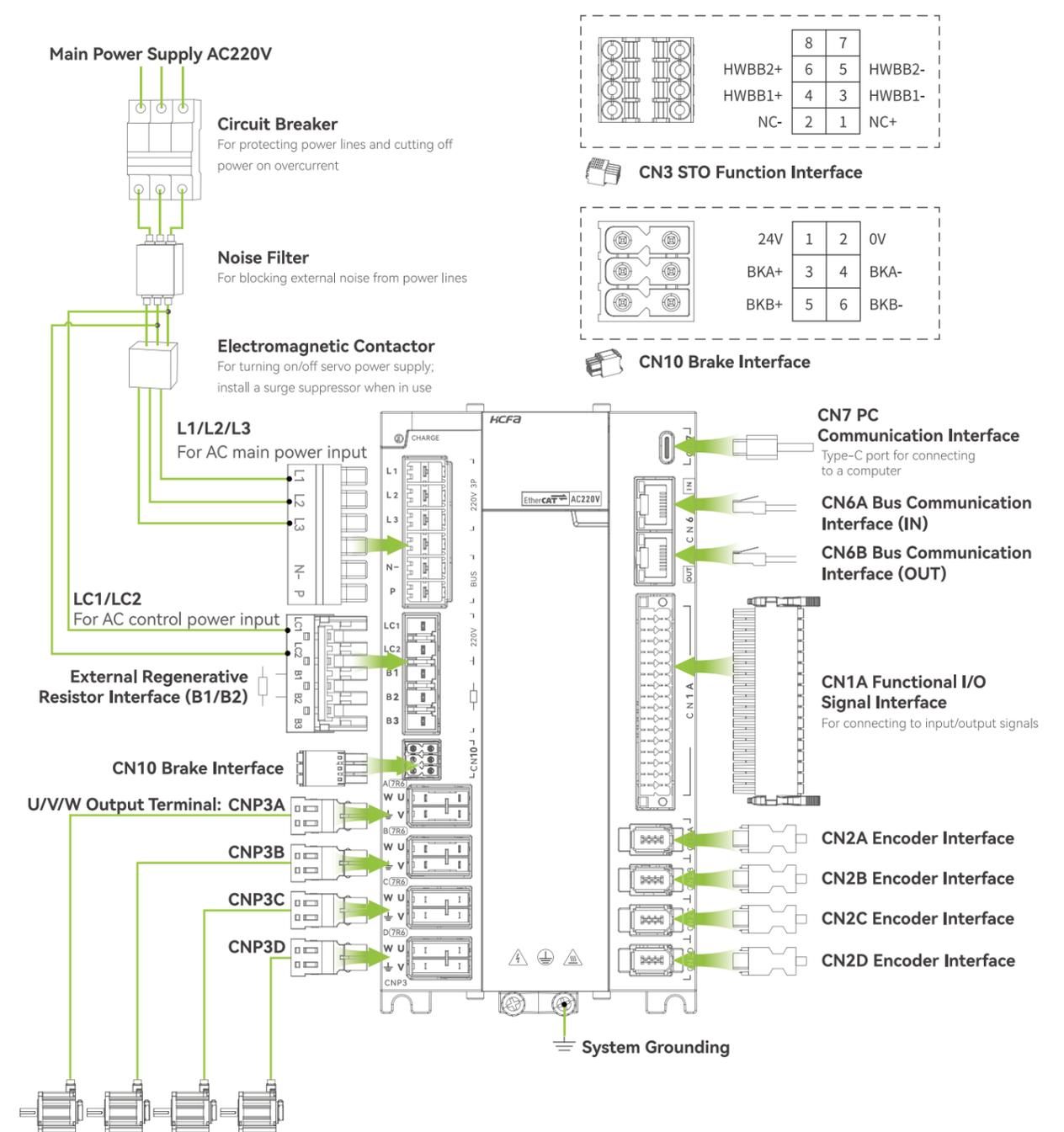
Pin number	Signal name	Pin number	Signal name
1	COM-	2	COM+
3	DO8	4	DO7
5	DO6	6	DO5
7	DO4	8	DO3
9	DO2	10	DO1
11	DI21	12	DI20
13	DI19	14	DI18
15	DI17	16	DI16
17	COM-	18	24V
19	DI15	20	DI14
21	DI13	22	DI12
23	DI11	24	DI10
25	DI9	26	DI8
27	DI7	28	DI6
29	COM+	30	DI5
31	DI4	32	DI3
33	DI2	34	DI1

Note: IO can be freely assigned to any axis. For details, refer to the technical manual.

Size A Model



Size B Model





[3P+N Size A]

[3P+N Size B]

Power supply interface definition

AC380V(3P+N) Size A	
L1	AC main circuit power supply input
L2	AC330 ~ 440V (50/60Hz)
L3	3P+N (Note: L1 to L3 connect to 380V, LN connects to neutral wire N.)
LN	
-	
-	
N-	Main circuit busbar -
B1	Main circuit busbar + / External regenerative resistor interface
B2	External regenerative resistor interface

AC380V(3P+N) Size B	
L1	Main circuit power supply input
L2	AC330 ~ 440V (50/60Hz)
L3	3P+N (Note: L1 to L3 connect to 380V, LN connects to neutral wire N.)
LN	
N-	Main circuit busbar -
P	Main circuit busbar +
-	
-	
B1	External regenerative resistor interface
B2	External regenerative resistor interface
B3	Built-in regenerative resistor interface

Note: The silkscreen marking in the illustration is for a four-axis, AC380V 3P+N model. For other silkscreen markings, please refer to the relevant instructions in the technical manual.

CN10 brake interface definition

Pin number	Signal name	Description
1	24V	24V power supply externally connected to brake
2	0V	
3	BKA+	Brake interface A
4	BKA-	
5	BKB+	Brake interface B
6	BKB-	

*Note 1: Servo brake interfaces A/B can be freely assigned to any axis.

CNP3 UVW power interface definition

Signal name/ Pin number	Description
U	Motor power U-phase output
V	Motor power V-phase output
W	Motor power W-phase output
PE	Grounding terminal, connected to the motor grounding terminal

CN2 encoder connection terminal interface definition

Pin number	Signal name	Function
1	PG 5V	Encoder power supply +5V
2	PG 0V	Encoder power supply 0V
3	-	-
4	-	-
5	PS	Serial data (+)
6	/PS	Serial data (-)
Housing	Shielding	-

CN3 STO safety interface definition

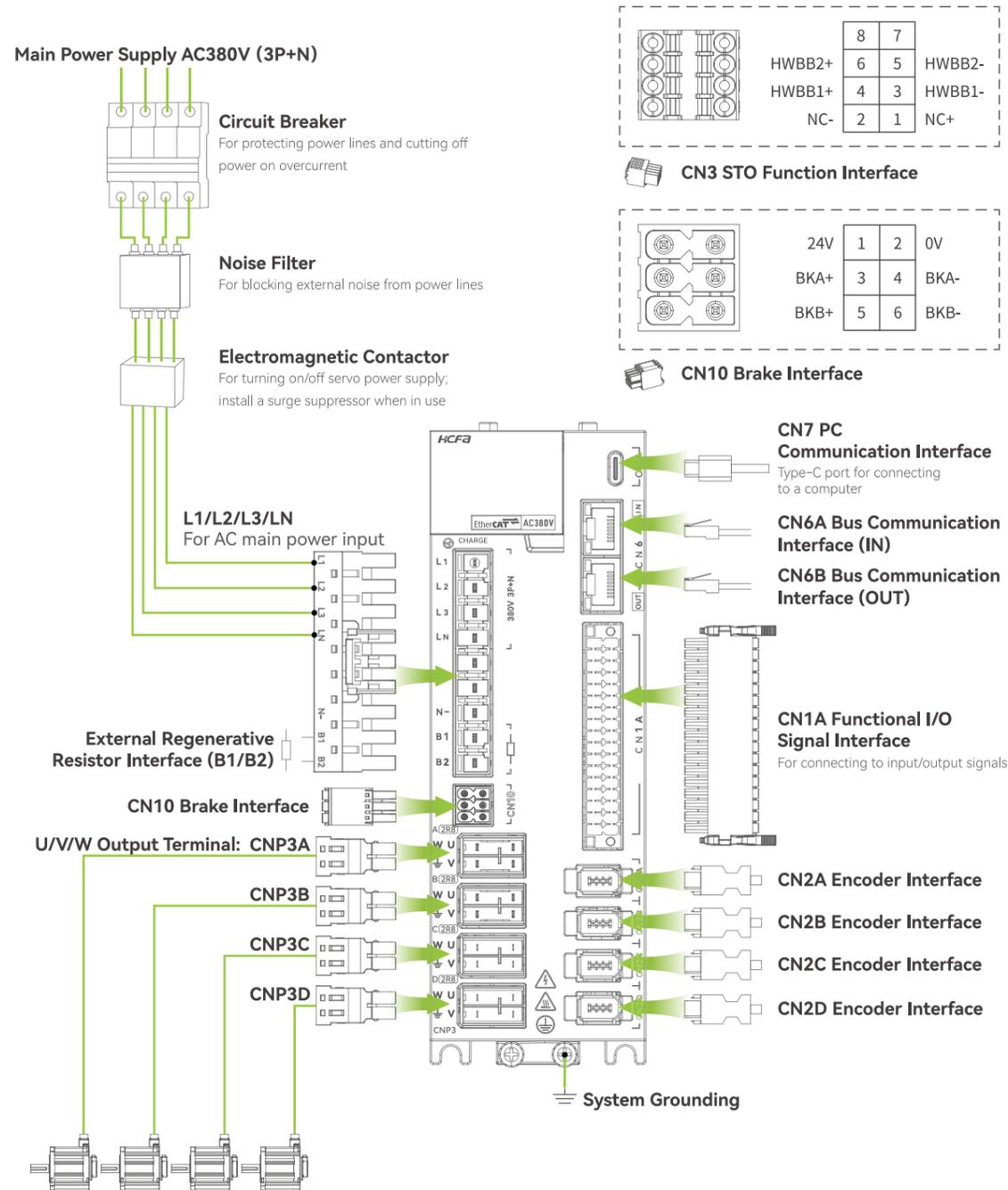
Pin number	Signal name	Function
1	NC+	For internal use only, do not connect anything.
2	NC-	
3	/HWBB1-	Hardware baseblock input: cuts off motor current by turning the signal OFF for baseblock.
4	/HWBB1+	
5	/HWBB2-	
6	/HWBB2+	
7	-	-
8	-	-

CN1 user IO interface definition

Pin number	Signal name	Pin number	Signal name
1	COM-	2	COM+
3	DO8	4	DO7
5	DO6	6	DO5
7	DO4	8	DO3
9	DO2	10	DO1
11	DI21	12	DI20
13	DI19	14	DI18
15	DI17	16	DI16
17	COM-	18	24V
19	DI15	20	DI14
21	DI13	22	DI12
23	DI11	24	DI10
25	DI9	26	DI8
27	DI7	28	DI6
29	COM+	30	DI5
31	DI4	32	DI3
33	DI2	34	DI1

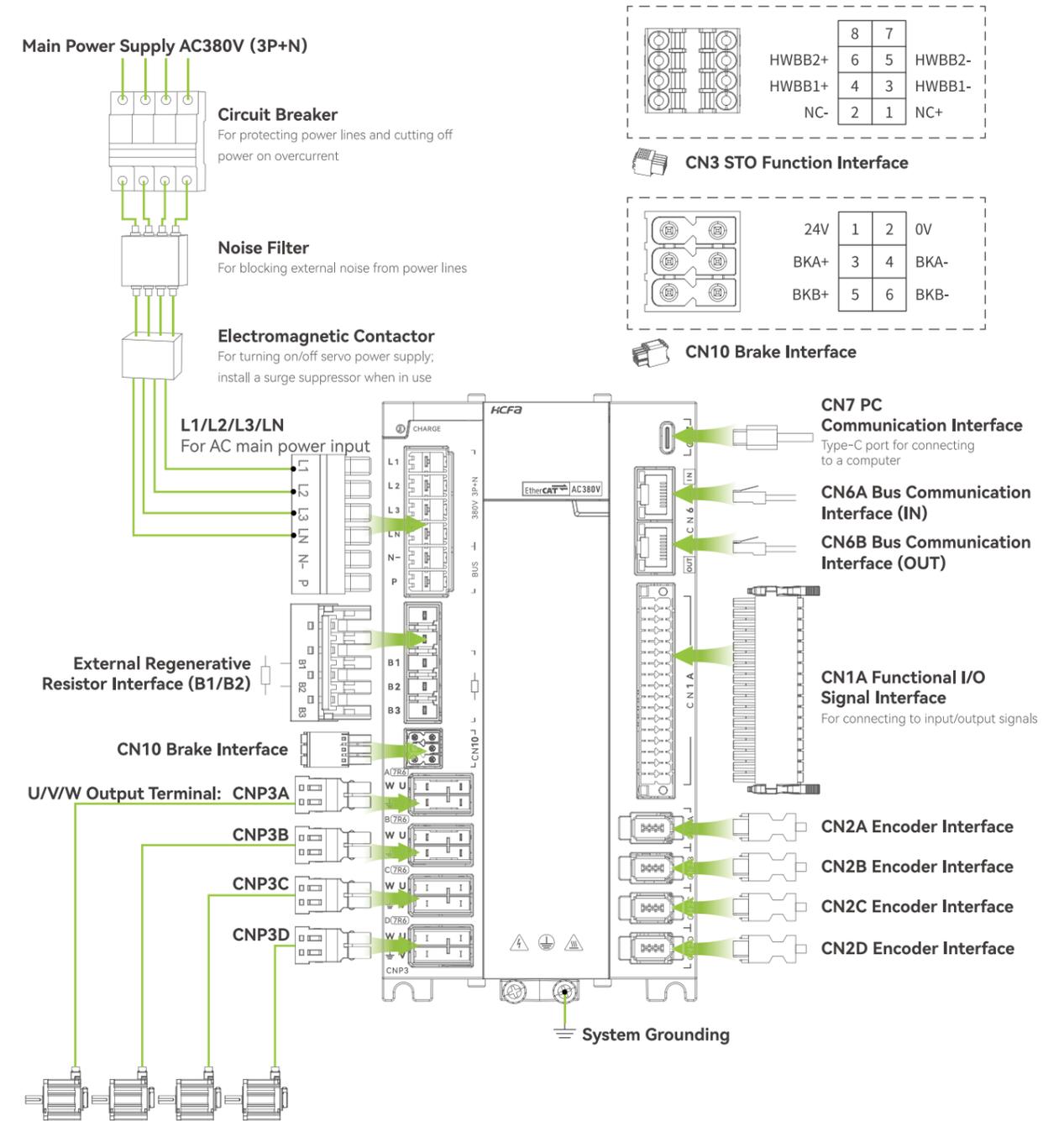
Note: IO can be freely assigned to any axis. For details, refer to the technical manual.

Size A Model



Note: The 730W3P+N motor specification is 220V.

Size B Model



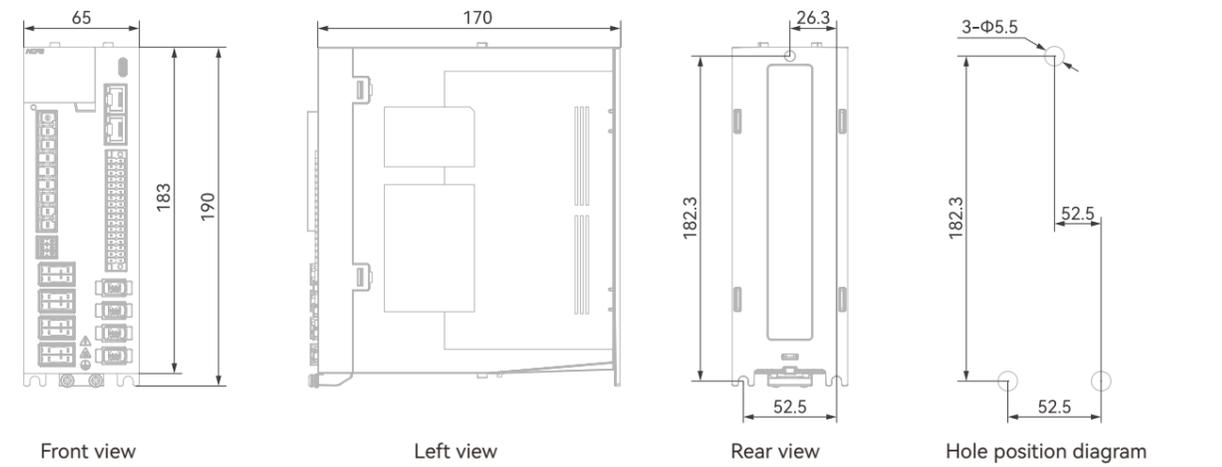
Note: The 730W3P+N motor specification is 220V.

Environmental specifications

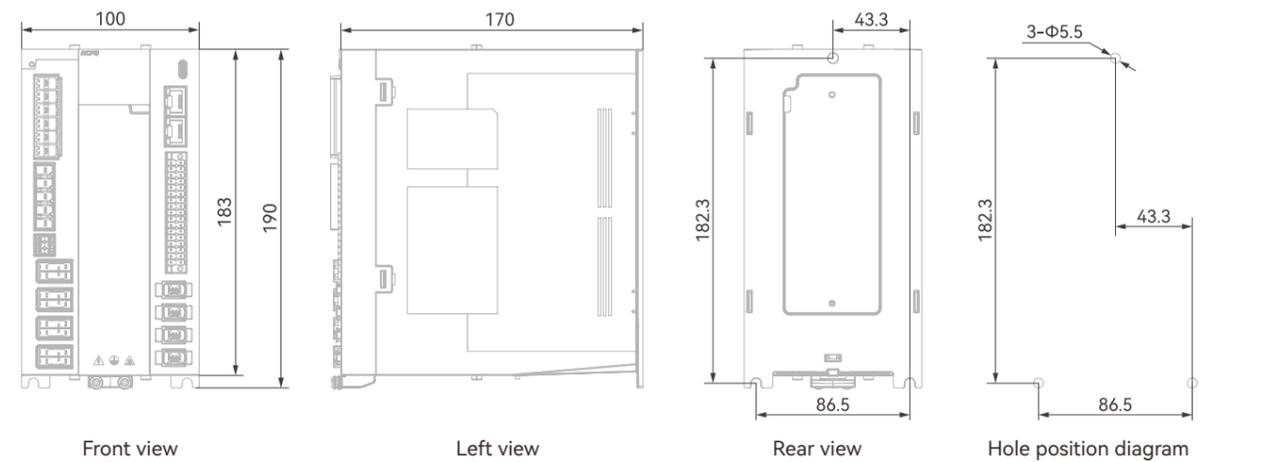
Item	Specifications
Operating temperature	0 ~ +55°C (for temperature above 45°C, derate by 10% for every 5 degrees increase in ambient temperature)
Storage temperature	-20°C to +80°C (maximum temperature guarantee: 80°C for 72h without condensation)
Operating humidity	20% to 85% RH or less (no condensation)
Storage humidity	20% to 85% RH or less (no condensation)
Vibration resistance	Below 5.88m/s ² (0.6G), 10-60 Hz (avoid operation at resonance)
Shock resistance	Acceleration ≤ 100m/s ² (XYZ)
IP rating	IP20
Cleanliness	<ul style="list-style-type: none"> Free of corrosive and flammable gases. Free of water, oil, and chemical splashes.
Altitude	Below 1000m; for altitudes 1000m ~ 2000m, derate by 1% per 100m.
Pollution degree	2
Overvoltage category	III
Fault short-circuit current	5Ka
Others	No electrostatic interference, strong electric field, strong magnetic field, radiation, etc.

Dimensions

Size A overall dimensions (mm)

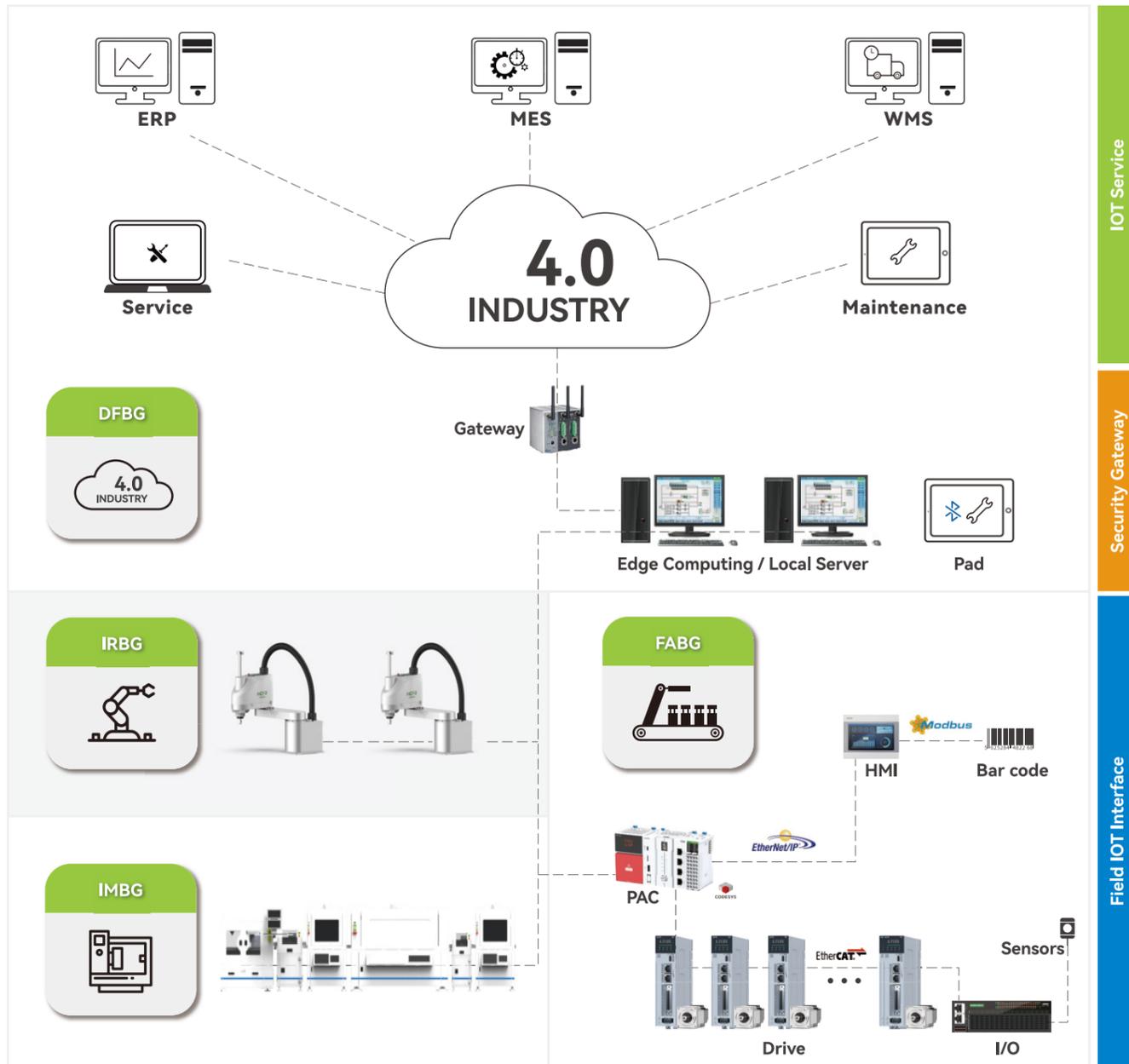


Size B overall dimensions (mm)



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We not only provide essential components for industrial automation, but also engage in industrial robots, industrial machinery, and digital factories. We can offer businesses comprehensive solutions integrating **automation, intelligent equipment, and digitalization.**

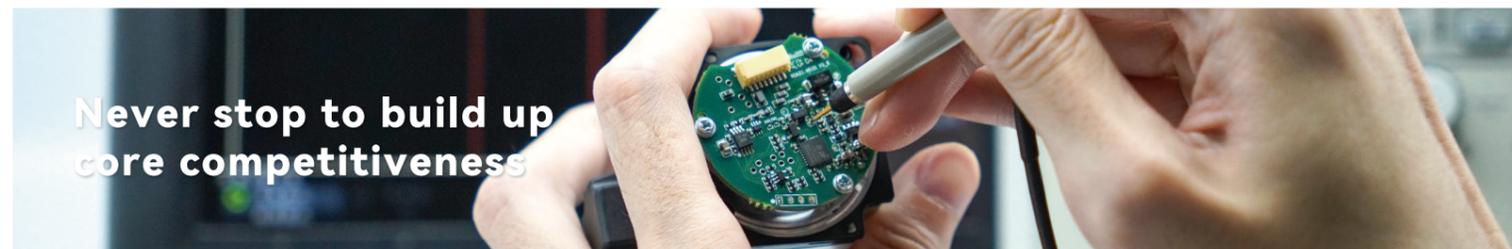


Delivering Core Components & Solutions as the Essential Partner

Zhejiang Hechuan Technology Co., Ltd. (HCFA Technology), founded in 2011, is a company dedicated to developing, manufacturing, sales, and application-integration of industrial automation products. It is committed to supplying core components and system-integration solutions for smart factories.

Its product range encompasses controllers, servo systems, vision systems, encoders, variable-frequency drives (VFDs), human-machine interfaces (HMIs), electric rollers, and precision transmission components, covering the entire spectrum of the industrial automation field.

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6

Number of Establishments

R&D Investment

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Proportion of Revenue

R&D Personnel

300+

Elite Talent Pool

- Six R&D centers across Longyou, Hangzhou, Shenzhen, Dalian, Suzhou, and Germany