



## Servo System

### Product Selection Guide

- R8 Series Servo Drive
- HK Series Servo Motor



## About Samkoon Technology

Focus on the R&D and manufacturing of automation products, and provide complete solutions for Industry 4.0



### Human Machine Interface

- SK Series
- EA Series



### Control Unit

- FAs Series PLC
- FAT Series PLC
- FGR Series MINI PLC
- PRO、MAX series Bus PLC
- FGs Series Standard PLC
- FGm Series Motion Controller PLC
- GT Series All-in-one



### Drive Element

- R8 series servo drive
- HK series servo motor



## Company Introduction

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# 简介

Quality

professional

efficiency

performance

Shenzhen Samkoon Technology Co., Ltd. (referred to as "Samkoon Technology") was established in March 2007. It is a national high-tech enterprise, a dual-soft enterprise, a "specialized, refined, and new" small and medium-sized enterprise in Shenzhen. The R&D center is located at the High-tech Park, Nanshan District, Shenzhen; and the production base is located at the Fashion Brand Industrial Park of the Shenzhen-Shantou Special Cooperation Zone.

Samkoon Technology has been deeply involved in the field of industrial automation for more than ten years, focusing on the research and development, production and sales of technology and products in the fields of industrial human-machine interface (HMI), programmable logic controller (PLC), servo drives, motion controllers and robots. All software and hardware of products have 100% independent intellectual property rights. At present, Samkoon Technology has accumulatively obtained 72 national patents, including 16 invention patents, 31 software copyrights, 24 utility model patents, and 1 design patent.

## 显控科技





**2007**

Samkoon founded and released 260000 true color LCD HMI series products

**2009**

Honored as "Industrial, Control Research Demonstration Base" by National Sciences and Technology regulatory Commission

**2011**

Awarded as "National High-tech Enterprise"



**2012**

Succeeded in the development of Samkoon PLC, and released compiled PLC after three years, which increases 10 times of scanning speed periodically



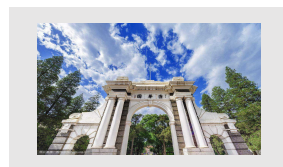
**2017**

Cooperated with HUST and built research base for postgraduates



**2017**

Held new product launch in Shenzhen Xilihu Conference Center to announce the dominance of having four core technologies of industrial control



**2018**

Signed cooperative agreement with THU and formally became the practice base for PhD students in automation



**2019**

Built 20000m<sup>2</sup> production plant in Shenzhen-Shantou cooperation zone, speeding up in industrialization and standardization



**2021**

Samkoon Technology was elected as the governing unit of Shenzhen Advanced Manufacturing Federation



**2022**

Samkoon Technology has been recognized by Shenzhen "specialized, refined and new" small and medium-sized enterprises





## Samkoon industrial automation & digital comprehensive solution

**Industry Solutions:**



Intelligent Manufacturing    Intelligent Vehicle    Intelligent Environmental Protection    Smart Energy    Smart Medical Care    Smart Agriculture    .....

**Samkoon Cloud:**



Industrial IoT    Digital Factory    Equipment Operation    Data Empowerment    Data Visualization

**Human-computer interaction layer:**



Waterproof HMI    HD HMI    IoT HMI    Serial port isolated HMI    Handheld HMI    SK Series HMI    EA Series HMI

**Control layer:**




FAs Series PLC    FAT Series PLC    All-in-one (HMI+PLC)    PRO Series Bus PLC    FGR Series MINI PLC    FGs Series Standard PLC

**Driver layer:**



R8 Series Servo Driver (Ethercat bus type)    R8 Series Servo Driver (Pulse type)

**Execution/Sensor:**



HK Series Motors    Industrial Robots    Temperature Sensors    Encoders    Solenoid Valves    Temperature Control Meters





# Contents

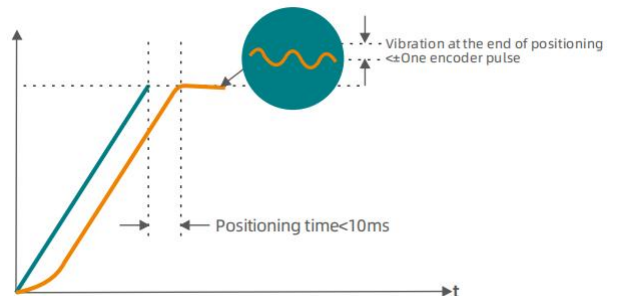
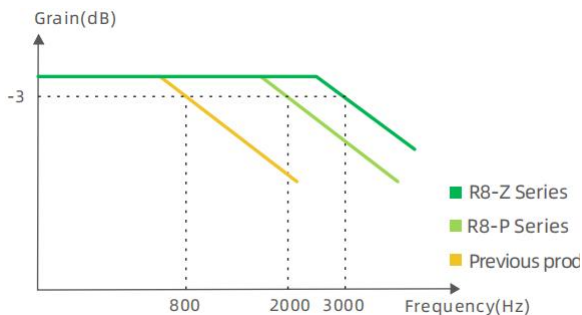
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## Product Features

### Fast response

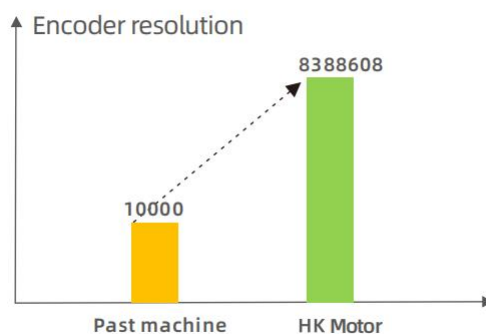
- Current sampling up to 16kHz
- Pulse-type velocity loop bandwidth up to 1.3kHz
- Bus-type speed loop bandwidth up to 1.6kHz
- High response control based on torque feedforward can reduce the position adjustment time to 5-6ms



Note: The speed loop bandwidth is the frequency of the fastest speed command to which the servo system can respond.

### High precision

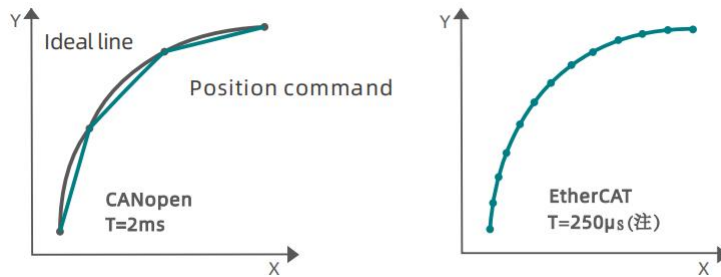
- Support 17 bit single-turn/multi-turn absolute encoding
- Support 23 bit single-turn/multi-turn absolute encoding
- Multiple turns can memorize the absolute position of 65, 535 turns



**Excellent EtherCAT bus performance**

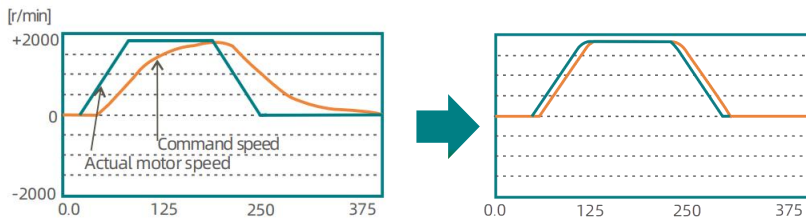
- 2x100Mbps (full duplex)
- Simple wiring
- Refreshing time: 100 axes × 1us/axis transmission delay = 0.1ms:
- Support 1ms synchronization period, less than 1ms can support 250μs integer multiples of the same period

Provides control accuracy through high-speed interpolation control



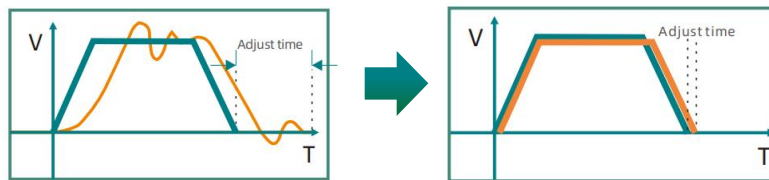
**Easy to debug**

- Self-adjustment of rigidity table parameters + feedforward to improve response



Rigidity meter parameter adjustment + feedforward

- Offline/online inertia identification optimization response curve



Inertia inaccuracy

- Mechanical property recognition + notch filter to suppress vibration

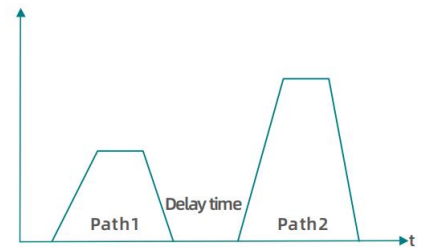


High flexibility of mechanical characteristics



### Internal multi-segment position

- Provide 16 sections of internal position, which can plan multi-point continuous motion
- Change point parameters during operation
- Support relative position and absolute position
- DI enable control
- With the origin return, some basic positioning actions can be realized



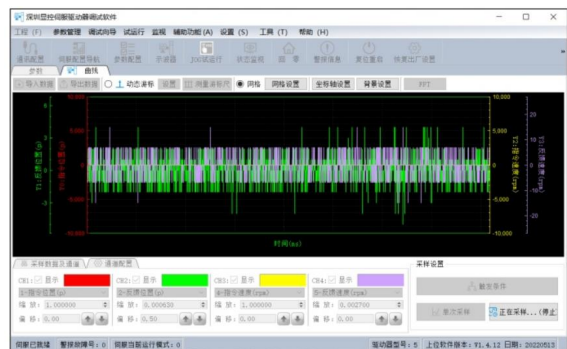
### Upper software

- Parameter modification, importing and exporting
- Real-time capture of waveform data
- Alarm information is clear at a glance
- Inertia identification is simple and easy to use
- Accurate and effective mechanical analysis

### Parameter configuration



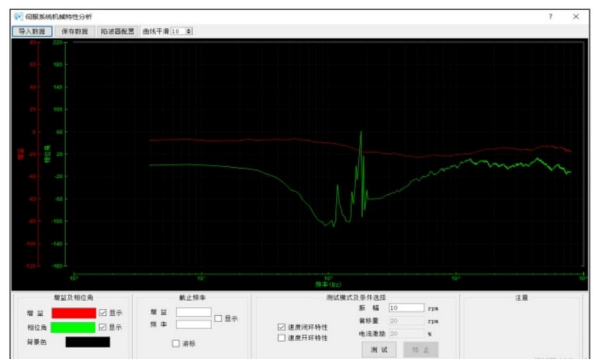
### Virtual oscilloscope



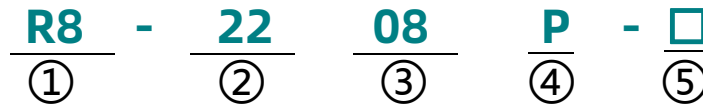
### Alarm records



### Mechanical characteristics



## Naming Rules



### ① Product Line

R8: R8 Series Servo Drive

### ② Rated voltage

22: Single/three-phase 220V  
38: Three-phase 380V

### ③ Rated power

02: 200w  
04: 400w  
08: 800w  
10: 1.0kw  
15: 1.5kw  
22: 2.2kw  
26: 2.6kw  
30: 3.0kw

### ④ Communication type

P: Pulse type  
Z: EthterCAT bus type  
C: CANopen

### ⑤ Non-standard code

N: Standard products  
S: Condensed version  
B: Dynamic braking  
other: Nonstandard product

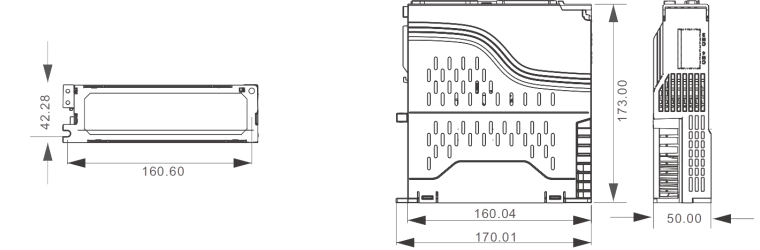
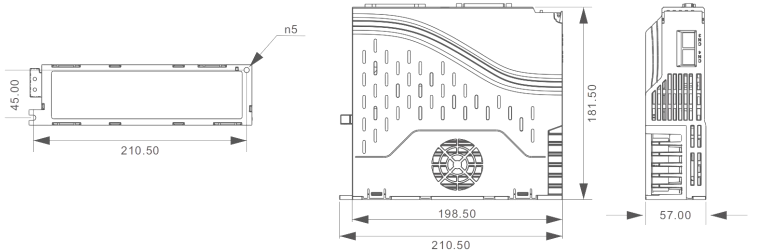
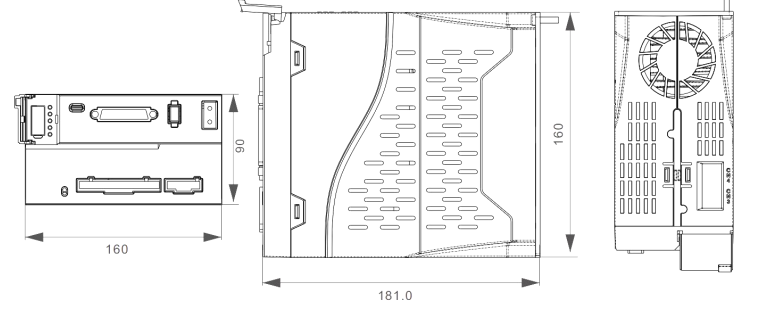
## Servo drive selection table

Servo Drive model	Input voltage	Current	Power	Control method	Encoder support	Built-in braking resistor	Dynamic braking	Size (mm)	Weight (kg)
R8-2204P-N	single-phase 220VAC	2.8A	400W	Pulse analog quantity/RS485	Tamagawa 17/23bit	NO	NO	50x160x173	1
R8-2204P-B	single-phase 220VAC	2.8A	400W	Pulse analog quantity/RS485	Tamagawa 17/23bit	NO	YES	50x160x173	1
R8-2204Z-N	single-phase 220VAC	2.8A	400W	EthterCAT bus	Tamagawa 17/23bit	NO	NO	50x160x173	1
R8-2204Z-B	single-phase 220VAC	2.8A	400W	EthterCAT bus	Tamagawa 17/23bit	NO	YES	50x160x173	1
R8-2208P-N	single-phase 220VAC	5.5A	750W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	NO	50x160x173	1
R8-2208P-B	single-phase 220VAC	5.5A	750W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	YES	50x160x173	1
R8-2208Z-N	single-phase 220VAC	5.5A	750W	EthterCAT bus	Tamagawa 17/23bit	YES	NO	50x160x173	1
R8-2208Z-B	single-phase 220VAC	5.5A	750W	EthterCAT bus	Tamagawa 17/23bit	YES	YES	50x160x173	1
R8-2210P-S	single-phase 220VAC	5.5A	1000W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	NO	50x160x173	1.5
R8-2210Z-S	single-phase 220VAC	5.5A	1000W	EthterCAT bus	Tamagawa 17/23bit	YES	NO	50x160x173	1.5
R8-2210P-N	single-phase / three-phase 220VAC	6.4A	1000W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	NO	57x199x182	1.5
R8-2210Z-N	single-phase / three-phase 220VAC	6.4A	1000W	EthterCAT bus	Tamagawa 17/23bit	YES	NO	57x199x182	1.5
R8-2215P-N	single-phase / three-phase 220VAC	8.4A	1500W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	NO	57x199x182	1.5
R8-2215Z-N	single-phase / three-phase 220VAC	8.4A	1500W	EthterCAT bus	Tamagawa 17/23bit	YES	NO	57x199x182	1.5
R8-2226P-N	single-phase / three-phase 220VAC	12.0A	2600W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	NO	90x160x181	2
R8-2226Z-N	single-phase / three-phase 220VAC	12.0A	2600W	EthterCAT bus	Tamagawa 17/23bit	YES	NO	90x160x181	2
R8-3830P-N	three-phase 380VAC	12.0A	3000W	Pulse analog quantity/RS485	Tamagawa 17/23bit	YES	NO	90x160x181	2
R8-3830Z-N	three-phase 380VAC	12.0A	3000W	EthterCAT bus	Tamagawa 17/23bit	YES	NO	90x160x181	2

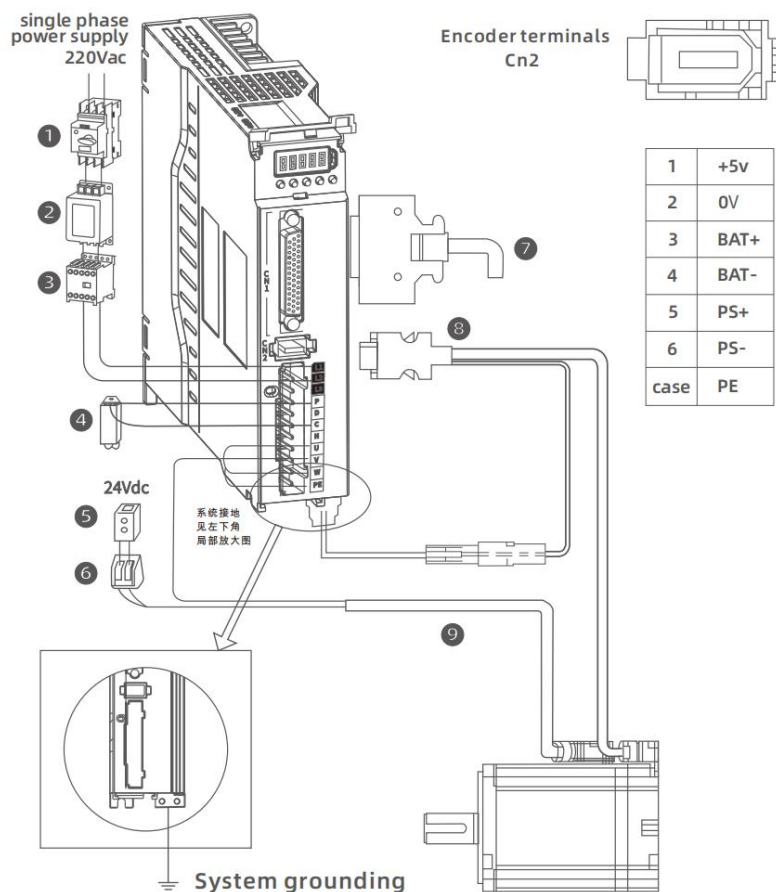
Product specifications

Voltage class		Mode R8-22/38□□P/Z-N/B/S						
Power		04	08	10	15	26	30	
EaHerCAT Specifications	Physical layer	100BASE-TX						
	Transmission rate	2X100Mbps						
	Communication protocol	CoE: CANopen over EtherCAT						
	Synchronous mode	DC Synchronous mode(SYNCO) FreeRUN						
	Synchronous jitter	<1US						
	Communication object	SDO (Mailbox data)						
		PDO (Process data)						
Control mode	CSP (Cycle Synchronized Position Mode) 1ms CSV (Cycle Synchronized Velocity Mode) 500us CST (Cycle Synchronized Torque Mode) 125us PP (Profile Position Mode) 1ms PV (Profile Velocity Mode) 500us PT (ProfileTorque Mode) 125us HM (Homing Mode) 1ms							
other	Control mode	PWM sine wave vector control						
	Regenerative braking	Built-in, external optional						
	Feedback method	Absolute encoders						
	Control mode	Position/speed/torque						
	Control inputs	4 configurable input terminals (opto-isolated), functions can be configured as: servo enable, proportional control, forward drive disable, reverse drive disable, alarm clear, forward torque limit, reverse torque limit, position deviation clear, home return trigger, home return reference point, and 32 other input signals						
	Control output	4 configurable output terminals (opto-isolated), functions can be configured for 20 signal outputs: speed consistency, motor rotation detection, servo ready, torque limit detection, brake interlock, encoder Z pulse, overtravel, servo enable motor excitation, home return completion, torque detection, etc.						
	Encoder signal output	Signal type	A, B, Z differential output, Z signal open collector output					
		Crossover ratio	Parameter setting					
	location	Input frequency	Differential input ≤500kpps, single-ended input ≤200kpps;					
		Command mode	Direction+pulse sequence, CW+CCW pulse sequence, two-phase A/B quadrature pulse; internal position command					
		Electronic gear ratio	Numerator: 1 ~ 1073741824 Denominator: 1 ~ 1073741824					
	Speed	Mapping command input	-10~+10V Input					
		Command acceleration and deceleration	Parameter setting					
		Command source	Internal speed commands, analog commands					
Torque	Analog command input	-10~+10V Input						
	Speed limit	Parameter setting						
	Command source	Internal torch command, analog command						
Special features	Automatic tuning, home return, gain switching, mechanical resonance trap filter, alarm recording, JOG operation, load inertia recognition, etc.							
Monitoring function	Speed, current position, position deviation, motor torque, motor current, command pulse frequency, etc.							
Protection function	Over-voltage, under-voltage, over-current, overload, abnormal encoder, over-positioning, etc.							
Display function	Digital tube display							
Characteristics	Speed frequency response	≥1200Hz						
	Velocity volatility	≤±0.03% (Load 0 ~ 100%) ≤±0.02% (Power supply -15 ~ +10%)						
	Ratio of speed regulation	1:5000						

Product Size

Model	Dimensions
<p>R8-2204P-N                      R8-2204P-B                      R8-2204Z-N                      R8-2204Z-B                      R8-2208P-N                      R8-2208P-B                      R8-2208Z-N                      R8-2208Z-B                      R8-2210P-S                      R8-2210Z-S</p>	
<p>R8-2210P-N                      R8-2210Z-N                      R8-2215P-N                      R8-2215Z-N</p>	
<p>R8-2226P-N                      R8-2226Z-N                      R8-3830P-N                      R8-3830Z-N</p>	

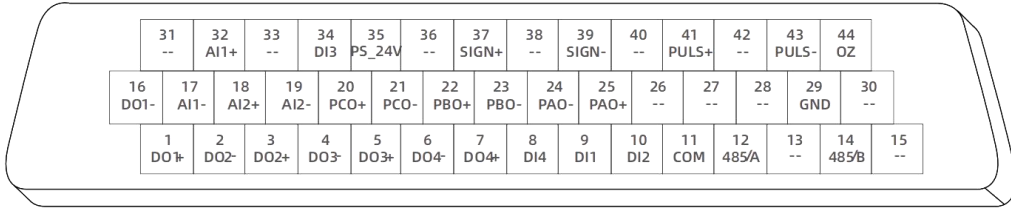
Servo system wiring diagram



Serial number	Name	Description
1	Circuit breaker for wiring	Cut off the circuit in case of overcurrent in the power line
2	Noise filters	Install a noise filter to prevent noise from outside the power line
3	Electromagnetic contactors	Turn on/off the servo power. Please install surge suppressor when using
4	Braking resistance	When the bus capacitance is insufficient, the P-C terminal is connected to an external braking resistor
5	Power supply for holding brake	24Vdc voltage source, used when the servo motor has a holding brake
6	Electromagnetic contactors	Brake control signal to turn on/off the brake power, please install surge suppress or when using. Recommended for servo DO control: electromagnetic contactor
7	Control cables	Non-standard, terminals provided, cable to be made or purchased separately
8	Encoder cable	Motor wiring, please purchase the appropriate length of cable according to actual needs
9	Motor power cable	



Definition of control terminal CN1



Control terminal CN1 signal description

Function	Terminal markings	Name	Description
Pulse input	35	PS_24V	Connect PLC power supply 24V
	43	PULS-	Single-ended pulse input signal/ differential pulse input negative
	41	PULS+	Differential pulse input positive
	39	SIGN-	Single-ended directional input signal/ differential pulse input minus
	37	SIGN+	Differential pulse input positive
Input and output	9	DI1	Input 1 (default function: servo enable)
	10	DI2	Input 2 (default function: alarm reset)
	34	DI3	Input 3 (default function: forward overtravel)
	8	DI4	Input 4 (default function: negative overtravel)
	11	COM	Input common
	1	DO1+	Output 1 (default function: servo-ready)
	16	DO1-	
	3	DO2+	Output 2 (default function: position arrival)
	2	DO2-	
	5	DO3+	Output 3 (default function: holding brake output)
	4	DO3-	
	7	DO4+	Output 4 (default function: fault output)
6	DO4-		
Analog	32	AI1+	Analog input channel 1, -10V~+10V (can be used as speed and torque commands)
	17	AI1-	
	18	AI2+	Analog input channel 2, -10V~+10V(can be used as speed and torque commands)
	19	AI2-	
Crossover output	25	PAO+	Frequency division differential output (5V level), The signal source can be selected as encoder or command pulse)
	24	PAO-	
	22	PBO+	
	23	PBO-	
	20	PCO+	
	21	PCO-	
	44	OZ	Single-ended Z pulse output
29	GND	Drive digital ground	
RS485	12	485/A	Modbus communication support
	14	485/B	

### Definition of strong electrical terminals

Terminal markings	Description	Name
L1	When using the internal braking resistor, P and D need to be shorted.	Power supply input
L2		
L3		
P	When using an external braking resistor, disconnect P and D, and connect the external braking resistor between P and C.	Braking resistor terminals
D		
C		
N	The DC bus terminals of the servo are P and N, which can be connected to a common bus when multiple machines are connected in parallel.	Negative end of DC bus
U	Must be connected to the motor U, V, W, PE terminals corresponding to.	Motor connection line
V		
W		
PE		

### Definition of EtherCAT communication terminals CN3/CN4

CN3		CN4	
Stitch No.	Signal Name	Stitch No.	Signal Name
1	TX+	1	TX+
2	TX-	2	TX-
3	RX+	3	RX+
6	RX-	6	RX-
Housing	PE	Housing	PE



### Naming rules

80 HK - A 024 30 - C S 2 A 2 - A

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪

**① Flange size (unit: mm)**

40: 40x40  
60: 60x60  
80: 80x80  
110: 110x110  
130: 130x130

**② Product Line**

HK: HK Series motor

**③ Encoder type**

A: Absolute 17-bit encoding  
B: Absolute 23-bit encoding

**④ Rated torque**

006: 0.6N.m  
013: 1.3N.m  
024: 2.4N.m  
190: 19N.m

**⑤ Rated speed**

15: 1500rpm  
20: 2000rpm  
30: 3000rpm

**⑥ Encoder category**

C: Magnetic Editor  
L: Light Editor

**⑦ Encoder category**

S: Single lap  
M: Multi-lap

**⑧ Input voltage**

2: AC 220V  
3: AC 380V

**⑨ Shaft end structure**

A: Flat key, key width 6mm  
B: Flat key, key width 5mm  
C: Flat key, key width 4mm  
D: Flat key, key width 3mm

**⑩ Brake**

2: Without brake  
3: With brake

**⑪ Motor version number**

A: Standard motor  
N: Three-pin terminal  
F: Three-pin+ waterproof special treatment

Servo motor selection table

Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg.cm <sup>2</sup> )	Encoder	Voltage (VAC)
40HK-A00330-CS2B2	40	100	0.32	3000	1	NO	81.5	0.06	Split single-turn 17-bit absolute value magnetic encoding	220
40HK-A00330-CS2B3	40	100	0.32	3000	1	YES	101.5	0.08	Split single-turn 17-bit absolute value magnetic encoding	220
40HK-A00330-CM2B2	40	100	0.32	3000	1	NO	81.5	0.06	Multi-turn 17-bit absolute value magnetic encoding	220
40HK-A00330-CM2B3	40	100	0.32	3000	1	YES	101.5	0.08	Multi-turn 17-bit absolute value magnetic encoding	220
40HK-B00330-LM2B2	40	100	0.32	3000	1	NO	81.5	0.06	Multi-turn 23-bit optical encoding	220
40HK-B00330-LM2B3	40	100	0.32	3000	1	YES	101.5	0.08	Multi-turn 23-bit optical encoding	220
60HK-A00630-CS2B2	60	200	0.64	3000	1.6	NO	78	0.3	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2B3	60	200	0.64	3000	1.6	YES	118	0.32	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CM2B2	60	200	0.64	3000	1.6	NO	78	0.3	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CM2B3	60	200	0.64	3000	1.6	YES	118	0.32	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2N2	60	200	0.64	3000	1.6	NO	78	0.3	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2F2	60	200	0.64	3000	1.6	NO	78	0.3	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2L2	60	200	0.64	3000	1.6	NO	78	0.3	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2B2-A	60	200	0.64	3000	1.7	NO	75	0.28	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2B3-A	60	200	0.64	3000	1.7	YES	105	0.28	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CM2B2-A	60	200	0.64	3000	1.7	NO	75	0.28	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CM2B3-A	60	200	0.64	3000	1.7	YES	105	0.28	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2B2-N	60	200	0.64	3000	1.7	NO	75	0.28	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CS2B3-N	60	200	0.64	3000	1.7	YES	105	0.28	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CM2B2-N	60	200	0.64	3000	1.7	NO	75	0.28	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A00630-CM2B3-N	60	200	0.64	3000	1.7	YES	105	0.28	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-B00630-LM2B2-A	60	200	0.64	3000	1.7	NO	75	0.28	Multi-turn 23-bit optical encoding	220
60HK-B00630-LM2B3-A	60	200	0.64	3000	1.7	YES	105	0.28	Multi-turn 23-bit optical encoding	220
60HK-A01330-CS2B2	60	400	1.27	3000	2.8	NO	98	0.65	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-B01330-LS2B2	60	400	1.27	3000	2.8	NO	98	0.65	23-bit absolute value optical encoding	220
60HK-A01330-CS2B3	60	400	1.27	3000	2.8	YES	136	0.67	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B2	60	400	1.27	3000	2.8	NO	98	0.65	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B3	60	400	1.27	3000	2.8	YES	136	0.67	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CS2N2	60	400	1.27	3000	2.8	NO	98	0.65	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CS2F2	60	400	1.27	3000	2.8	NO	98	0.65	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CS2L2	60	400	1.27	3000	2.8	NO	98	0.65	Split single-turn 17-bit absolute value magnetic encoding	220

## Servo motor selection table

Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg·cm <sup>2</sup> )	Encoder	Voltage (VAC)
60HK-A01330-CS2B2-A	60	400	1.27	3000	2.5	NO	92	0.52	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CS2B3-A	60	400	1.27	3000	2.5	YES	122	0.52	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B2-A	60	400	1.27	3000	2.5	NO	92	0.52	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B3-A	60	400	1.27	3000	2.5	YES	122	0.52	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-B01330-LM2B2-A	60	400	1.27	3000	2.5	NO	92	0.52	Multi-turn 23-bit optical encoding	220
60HK-B01330-LM2B3-A	60	400	1.27	3000	2.5	YES	122	0.52	Multi-turn 23-bit optical encoding	220
60HK-A01330-CS2B2-N	60	400	1.27	3000	2.5	NO	92	0.52	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CS2B3-N	60	400	1.27	3000	2.5	YES	122	0.52	Split single-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B2-N	60	400	1.27	3000	2.5	NO	92	0.52	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B3-N	60	400	1.27	3000	2.5	YES	122	0.52	Multi-turn 17-bit absolute value magnetic encoding	220
60HK-A01330-CM2B3-F	60	400	1.27	3000	2.5	YES	122	0.52	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2A2	80	750	2.39	3000	4.8	NO	107	1.71	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2A3	80	750	2.39	3000	4.8	YES	147	1.8	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CM2A2	80	750	2.39	3000	4.8	NO	107	1.71	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CM2A3	80	750	2.39	3000	4.8	YES	147	1.8	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2N2	80	750	2.39	3000	4.8	NO	107	1.71	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2F2	80	750	2.39	3000	4.8	NO	107	1.71	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2L2	80	750	2.39	3000	4.8	NO	107	1.71	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2A2-A	80	750	2.39	3000	4.4	NO	100	1.48	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2A3-A	80	750	2.39	3000	4.4	YES	134	1.48	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CM2A2-A	80	750	2.39	3000	4.4	NO	100	1.48	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CM2A3-A	80	750	2.39	3000	4.4	YES	134	1.48	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-B02430-LM2A2-A	80	750	2.39	3000	4.4	NO	100	1.48	Multi-turn 23-bit optical encoding	220
80HK-B02430-LM2A3-A	80	750	2.39	3000	4.4	YES	134	1.48	Multi-turn 23-bit optical encoding	220
80HK-A02430-CS2A2-N	80	750	2.39	3000	4.4	NO	100	1.48	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CS2A3-N	80	750	2.39	3000	4.4	YES	134	1.48	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CM2A2-N	80	750	2.39	3000	4.4	NO	100	1.48	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A02430-CM2A3-N	80	750	2.39	3000	4.4	YES	134	1.48	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CS2A2	80	1000	3.2	3000	4.8	NO	121	2.15	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CS2A3	80	1000	3.2	3000	4.8	YES	160	2.24	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-LS2A2	80	1000	3.2	3000	4.8	NO	134	2.15	17-bit absolute value optical encoding	220



Servo motor selection table

Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg.cm <sup>2</sup> )	Encoder	Voltage (VAC)
80HK-A03825-CS2A2	80	1000	3.8	2500	4.8	NO	121	2.4	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CS2A3	80	1000	3.8	2500	4.8	YES	160	2.45	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CM2A2	80	1000	3.8	2500	4.8	NO	121	2.4	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CM2A3	80	1000	3.8	2500	4.8	YES	160	2.45	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CS2A2-A	80	1000	3.2	3000	4.4	NO	113	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CS2A3-A	80	1000	3.2	3000	4.4	YES	147	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CM2A2-A	80	1000	3.2	3000	4.4	NO	113	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CM2A3-A	80	1000	3.2	3000	4.4	YES	147	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-B03230-LM2A2-A	80	1000	3.2	3000	4.4	NO	113	2.27	Multi-turn 23-bit optical encoding	220
80HK-B03230-LM2A3-A	80	1000	3.2	3000	4.4	YES	147	2.27	Multi-turn 23-bit optical encoding	220
80HK-A03230-CS2A2-N	80	1000	3.2	3000	4.4	NO	113	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CS2A3-N	80	1000	3.2	3000	4.4	YES	147	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CM2A2-N	80	1000	3.2	3000	4.4	NO	113	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03230-CM2A3-N	80	1000	3.2	3000	4.4	YES	147	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CS2A2-A	80	1000	3.8	3000	4.6	NO	113	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CS2A3-A	80	1000	3.8	3000	4.6	YES	147	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CM2A2-A	80	1000	3.8	3000	4.6	NO	113	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CM2A3-A	80	1000	3.8	3000	4.6	YES	147	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-B03825-LM2A2-A	80	1000	3.8	3000	4.6	NO	113	2.27	Multi-turn 23-bit optical encoding	220
80HK-B03825-LM2A3-A	80	1000	3.8	3000	4.6	YES	147	2.27	Multi-turn 23-bit optical encoding	220
80HK-A03825-CS2A2-N	80	1000	3.8	3000	4.6	NO	113	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CS2A3-N	80	1000	3.8	3000	4.6	YES	147	2.27	Split single-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CM2A2-N	80	1000	3.8	3000	4.6	NO	113	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A03825-CM2A3-N	80	1000	3.8	3000	4.6	YES	147	2.27	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A04025-CM2A2-A	80	1000	4.0	3000	4.4	NO	191	2.97	Multi-turn 17-bit absolute value magnetic encoding	220
80HK-A04025-CM2A3-A	80	1000	4.0	3000	4.4	YES	231	2.97	Multi-turn 17-bit absolute value magnetic encoding	220
110HK-A04030-CS2A2-A	110	1200	4.0	3000	5	NO	189	5.4	Split single-turn 17-bit absolute value magnetic encoding	220
110HK-A04030-CS2A3-A	110	1200	4.0	3000	5	YES	263	5.4	Split single-turn 17-bit absolute value magnetic encoding	220
110HK-A04030-CM2A2-A	110	1200	4.0	3000	5	NO	189	5.4	Multi-turn 17-bit absolute value magnetic encoding	220
110HK-A04030-CM2A3-A	110	1200	4.0	3000	5	YES	253	5.4	Multi-turn 17-bit absolute value magnetic encoding	220
110HK-A06030-CS2A2-A	110	1800	6.0	3000	6	NO	219	7.6	Split single-turn 17-bit absolute value magnetic encoding	220

## Servo motor selection table

Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg.cm <sup>2</sup> )	Encoder	Voltage (VAC)
110HK-A06030-CS2A3-A	110	1800	6.0	3000	6	YES	293	7.6	Split single-turn 17-bit absolute value magnetic encoding	220
110HK-A06030-CM2A2-A	110	1800	6.0	3000	6	NO	219	7.6	Multi-turn 17-bit absolute value magnetic encoding	220
110HK-A06030-CM2A3-A	110	1800	6.0	3000	6	YES	293	7.6	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CS2A2	130	1000	4.0	2500	4	NO	145.5	7.2	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CS2A3	130	1000	4.0	2500	4	YES	179.5	8.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CM2A2	130	1000	4.0	2500	4	NO	145.5	7.2	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CM2A3	130	1000	4.0	2500	4	YES	179.5	8.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CS2A2-A	130	1000	4.0	2500	4	NO	166	8.5	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CS2A3-A	130	1000	4.0	2500	4	YES	223	8.5	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CM2A2-A	130	1000	4.0	2500	4	NO	166	8.5	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A04025-CM2A3-A	130	1000	4.0	2500	4	YES	223	8.5	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A05020-CS2A2	130	1000	5.0	2000	5	NO	145.5	7.2	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A05020-CS2A3	130	1000	5.0	2000	5	YES	179.5	8.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A05020-CM2A2	130	1000	5.0	2000	5	NO	145.5	7.2	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A05020-CM2A3	130	1000	5.0	2000	5	YES	179.5	8.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A05025-CS2A2-A	130	1300	5.0	2500		NO	171	10.6	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A05025-CS2A3-A	130	1300	5.0	2500		YES	228	10.6	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A05025-CM2A2-A	130	1300	5.0	2500		NO	171	10.6	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A05025-CM2A3-A	130	1300	5.0	2500		YES	228	10.6	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CS2A2	130	1500	6.0	2500	6	NO	145.5	7.2	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CS2A3	130	1500	6.0	2500	6	YES	179.5	8.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CM2A2	130	1500	6.0	2500	6	NO	145.5	7.2	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CM2A3	130	1500	6.0	2500	6	YES	179.5	8.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CS2A2-A	130	1500	6.0	2500	6	NO	179	12.6	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CS2A3-A	130	1500	6.0	2500	6	YES	236	12.6	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CM2A2-A	130	1500	6.0	2500	6	NO	179	12.6	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CM2A3-A	130	1500	6.0	2500	6	YES	236	12.6	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A07220-CS2A2	130	1500	7.2	2000	8	NO	170	10.3	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A07220-CS2A3	130	1500	7.2	2000	8	YES	204	11.8	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A07220-CM2A2	130	1500	7.2	2000	8	NO	170	10.3	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A07220-CM2A3	130	1500	7.2	2000	8	YES	204	11.8	Multi-turn 17-bit absolute value magnetic encoding	220

## Servo motor selection table

Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg·cm <sup>2</sup> )	Encoder	Voltage (VAC)
130HK-A10015-CS2A2	130	1500	10.0	1500	7	NO	170	12.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CS2A3	130	1500	10.0	1500	7	YES	204	14.2	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CM2A2	130	1500	10.0	1500	7	NO	170	12.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CM2A3	130	1500	10.0	1500	7	YES	204	14.2	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CS2A2-A	130	1500	10.0	1500	6	NO	213	19.4	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CS2A3-A	130	1500	10.0	1500	6	YES	294	19.4	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CM2A2-A	130	1500	10.0	1500	6	NO	213	19.4	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A10015-CM2A3-A	130	1500	10.0	1500	6	YES	294	19.4	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A07725-CS2A2	130	2000	7.7	2500	8.5	NO	170	10.3	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10020-CS2A2	130	2000	10.0	2000	8.5	NO	170	12.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A15015-CS2A2	130	2300	15	1500	8.5	NO	219.5	19.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10025-CS2A2	130	2600	10	2500	8.5	NO	170	12.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A07725-CS2A2-A	130	2000	7.7	2500	7.5	NO	192	15.3	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A07725-CS2A3-A	130	2000	7.7	2500	7.5	YES	249	15.3	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A07725-CM2A2-A	130	2000	7.7	2500	7.5	NO	192	15.3	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A07725-CM2A3-A	130	2000	7.7N	2500	7.5	YES	249	15.3	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A15015-CS2A2-A	130	2300	15.0	1500	9.5	NO	241	27.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A15015-CS2A3-A	130	2300	15.0	1500	9.5	YES	322	27.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A15015-CM2A2-A	130	2300	15.0	1500	9.5	NO	241	27.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A15015-CM2A3-A	130	2300	15.0	1500	9.5	YES	322	27.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A10025-CS2A2-A	130	2600	10.0	2500	10	NO	213	19.4	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10025-CS2A3-A	130	2600	10.0	2500	10	YES	294	19.4	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A10025-CM2A2-A	130	2600	10.0	2500	10	NO	213	19.4	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A10025-CM2A3-A	130	2600	10.0	2500	10	YES	294	19.4	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-B10025-LM2A2-A	130	2600	10.0	2500	10	NO	213	19.4	Multi-turn 23-bit optical encoding	220
130HK-A19015-CS2A2-A	130	3000	19.0	1500	12.5	NO	267	35.4	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A19015-CS2A3-A	130	3000	19.0	1500	12.5	YES	347	35.4	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A19015-CM2A2-A	130	3000	19.0N	1500	12.5	NO	267	35.4	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A19015-CM2A3-A	130	3000	19.0	1500	12.5	YES	347	35.4	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A05415-CS2A2-A	130	850	5.4	1500	5.5	NO	152.5	7.2	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A05415-CS2A3-A	130	850	5.4	1500	5.5	YES	186	7.2	Split single-turn 17-bit absolute value magnetic encoding	220

## Servo motor selection table

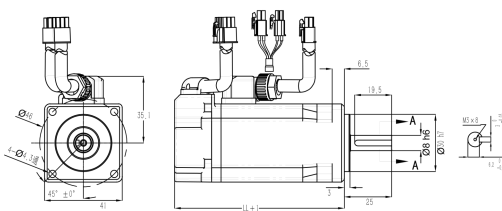
Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg.cm <sup>2</sup> )	Encoder	Voltage (VAC)
130HK-A05415-CM2A2-A	130	850	5.4	1500	5.5	NO	152.5	7.2	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A05415-CM2A3-A	130	850	5.4	1500	5.5	YES	186	7.2	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A08315-CS2A2-A	130	1300	8.34	1500	9.2	NO	177.5	10.3	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A08315-CS2A3-A	130	1300	8.34	1500	9.2	YES	211	10.3	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A08315-CM2A2-A	130	1300	8.34	1500	9.2	NO	177.5	10.3	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A08315-CM2A3-A	130	1300	8.34	1500	9.2	YES	211	10.3	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A11515-CS2A2-A	130	1800	11.5	1500	12	NO	177.5	12.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A11515-CS2A3-A	130	1800	11.5	1500	12	YES	211	12.7	Split single-turn 17-bit absolute value magnetic encoding	220
130HK-A11515-CM2A2-A	130	1800	11.5	1500	12	NO	177.5	12.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A11515-CM2A3-A	130	1800	11.5	1500	12	YES	211	12.7	Multi-turn 17-bit absolute value magnetic encoding	220
130HK-A06025-CS3A2-A	130	1500	6.0	2500	3.7	NO	179	12.6	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A06025-CS3A3-A	130	1500	6.0	2500	3.7	YES	236	12.6	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A06025-CM3A2-A	130	1500	6.0	2500	3.7	NO	179	12.6	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A06025-CM3A3-A	130	1500	6.0	2500	3.7	YES	236	12.6	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A07725-CS3A2-A	130	2000	7.7	2500	4	NO	192	15.3	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A07725-CS3A3-A	130	2000	7.7	2500	4	YES	249	15.3	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A07725-CM3A2-A	130	2000	7.7	2500	4	NO	192	15.3	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A07725-CM3A3-A	130	2000	7.7	2500	4	YES	249	15.3	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A10025-CS3A2-A	130	2600	10.0	2500	5.9	NO	213	19.4	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A10025-CS3A3-A	130	2600	10.0	2500	5.9	YES	294	19.4	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A10025-CM3A2-A	130	2600	10.0	2500	5.9	NO	213	19.4	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A10025-CM3A3-A	130	2600	10.0	2500	5.9	YES	294	19.4	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A15015-CS3A2-A	130	2300	15.0	1500	5	NO	241	27.7	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A15015-CS3A3-A	130	2300	15.0	1500	5	YES	322	27.7	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A15015-CM3A2-A	130	2300	15.0	1500	5	NO	241	27.7	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A15015-CM3A3-A	130	2300	15.0	1500	5	YES	322	27.7	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A15020-CS3A2-A	130	3100	15.0	2000	6.8	NO	231	27.7	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A15020-CS3A3-A	130	3100	15.0	2000	6.8	YES	312	27.7	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A15020-CM3A2-A	130	3100	15.0	2000	6.8	NO	231	27.7	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A15020-CM3A3-A	130	3100	15.0	2000	6.8	YES	312	27.7	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A14620-CS3A2-A	130	3000	14.6	2000	9	NO	222	19.7	Split single-turn 17-bit absolute value magnetic encoding	380

Servo motor selection table

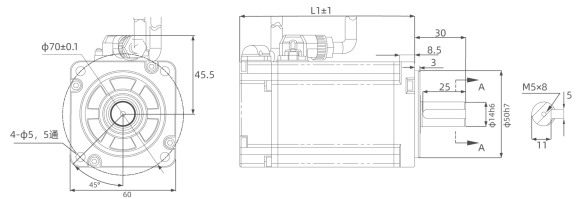
Servo motor model	Flange	Power (w)	Torque (N·m)	Speed (rpm)	Current (A)	Brakes	Length (mm)	Inertia (kg·cm <sup>2</sup> )	Encoder	Voltage (VAC)
130HK-A14620-CS3A3-A	130	3000	14.6	2000	9	YES	255.5	19.7	Split single-turn 17-bit absolute value magnetic encoding	380
130HK-A14620-CM3A2-A	130	3000	14.6	2000	9	NO	222	19.7	Multi-turn 17-bit absolute value magnetic encoding	380
130HK-A14620-CM3A3-A	130	3000	14.6	2000	9	YES	255.5	19.7	Multi-turn 17-bit absolute value magnetic encoding	380
180HK-A19015-CS3A2-A	180	3000	19.0	1500	7.5	NO	232	70	Split single-turn 17-bit absolute value magnetic encoding	380
180HK-A19015-CS3A3-A	180	3000	19.0	1500	7.5	YES	304	70	Split single-turn 17-bit absolute value magnetic encoding	380
180HK-A19015-CM3A2-A	180	3000	19.0	1500	7.5	NO	232	70	Multi-turn 17-bit absolute value magnetic encoding	380
180HK-A19015-CM3A3-A	180	3000	19.0	1500	7.5	YES	304	70	Multi-turn 17-bit absolute value magnetic encoding	380

Product Size

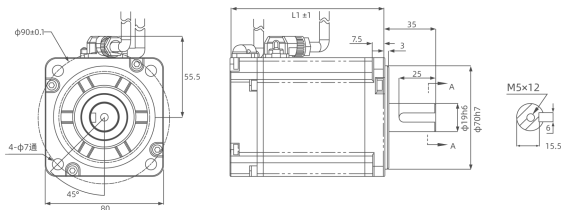
● 40HK Motor size (Unit: mm)



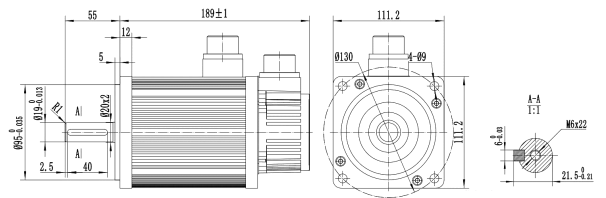
● 60HK Motor size (Unit: mm)



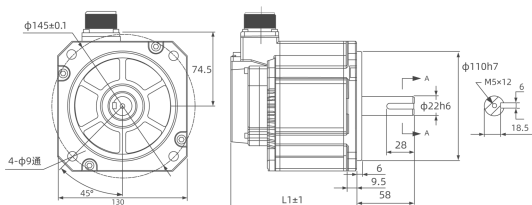
● 80HK Motor size (Unit: mm)



● 110HK Motor size (Unit: mm)



● 130HK Motor size (Unit: mm)





Control line naming rules

**HC** **015** - **P1** **I2** **O2** - **R** **A1** **E3** **Z**

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

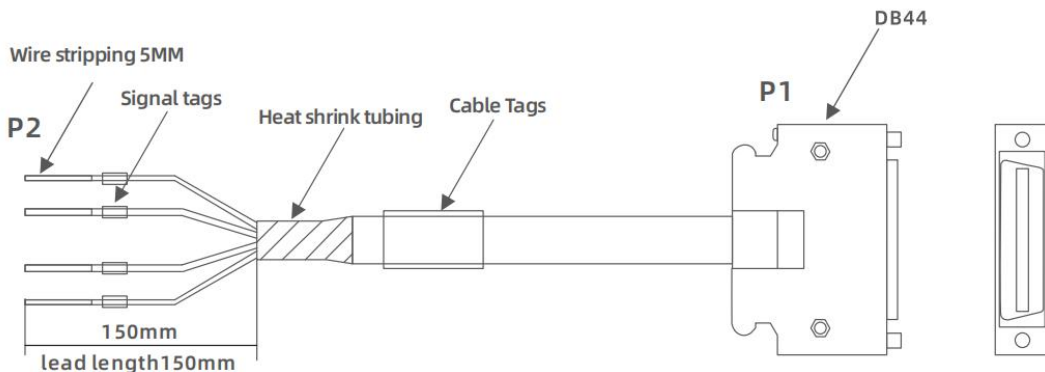
- ① **Wire type**  
HC Control Line
- ② **Wire length**  
010 1.0m  
015 1.5m  
020 2.0m  
030 3.0m
- ③ **Pulse input signal**  
No pulse input  
P1 Common 24V connection  
P2 Common 0V connection  
P3 Differential pulses
- ④ **Input point type**  
NO input point  
I1 1 input point  
I2 2 input point  
I3 3 input point  
I4 4 input point
- ⑤ **Output point type**  
Without put point  
O1 1 output point  
O2 2 output point  
O3 3 output point  
O4 4 output point
- ⑥ **485 options**  
Without 485  
R With485
- ⑦ **Analog input type**  
No analog input  
A1 1Analog input channels  
A2 2 Analog input channels
- ⑧ **Encoder crossover output signal**  
No crossover output  
E1 Output A signal only  
E2 Output A ,B signal only  
E3 Output A ,B,C signal only  
E4 Output C signal only
- ⑨ **O Z signal**  
Without O Z signal  
Z With O Z signal

Control line description

Serial number	Length	use	Model	Remark
1	1.5M	Pulse/RS485/IO	CP-N015P1-TM120	24V pulse line+2 input 2 output+RS485
2	2.5M	Pulse	HC-025P1	Pulse

Caution:

1. The CN1 control cable terminal of R8 series servo is DB44 male, included in the box, users can purchase the wire and weld the production according to the definition of the terminal and the required function.
2. If finished control lines are needed, please contact technical support to confirm the cable length/pin definition



## Encoder cable naming rules

**HF - N 030 P1 - AP04B**

①

②

③

④

⑤

## ① Encoder cable

HF/AF: Encoder cable type

## ② Bending properties

N: Not resistant to bending  
D: Bending resistance

## ③ Line length

030:3.0m  
060:6.0m  
100:10m

## ④ Wire diameter

## ⑤ Connector type and number of cores

AP: Amp Head  
AV: Aviation head  
SC: Three-pin terminal  
04: 4-core wire (usually single-turn encoder wire)  
06: 6-core wire (usually multi-turn encoder wire)  
B: Basic cable  
F: Anti-oil and anti-corrosion cable

## Encoder line selection table

Model	Length	Bending resistance	Connectors	Encoder Type
Amp Head Wire				
HF-N005P1-AP04B	0.5m	NO	Amp Head	Single turn absolute without battery
HF-N010P1-AP04B	1.0m	NO	Amp Head	Single turn absolute without battery
HF-N010P1-AP06B	1.0m	NO	Amp Head	Multi-turn absolute with battery
HF-D010P1-AP04B	1.0m	YES	Amp Head	Single turn absolute without battery
HF-D010P1-AP06B	1.0m	YES	Amp Head	Multi-turn absolute with battery
HF-N015P1-AP04B	1.5m	NO	Amp Head	Single turn absolute without battery
HF-N015P1-AP06B	1.5m	NO	Amp Head	Multi-turn absolute with battery
HF-D015P1-AP04B	1.5m	YES	Amp Head	Single turn absolute without battery
HF-D015P1-AP06B	1.5m	YES	Amp Head	Multi-turn absolute with battery
HF-N030P1-AP04B	3m	NO	Amp Head	Single turn absolute without battery
HF-N030P1-AP06B	3m	NO	Amp Head	Multi-turn absolute with battery
HF-D030P1-AP04B	3m	YES	Amp Head	Single turn absolute without battery
HF-D030P1-AP06B	3m	YES	Amp Head	Multi-turn absolute with battery
HF-N035P1-AP04B	3.5m	NO	Amp Head	Single turn absolute without battery
HF-N060P1-AP04B	6m	NO	Amp Head	Single turn absolute without battery
HF-N060P1-AP06B	6m	NO	Amp Head	Multi-turn absolute with battery
HF-D060P1-AP04B	6m	YES	Amp Head	Single turn absolute without battery
HF-D060P1-AP06B	6m	YES	Amp Head	Multi-turn absolute with battery
HF-N080P1-AP04B	8m	否	Amp Head	Single turn absolute without battery
HF-D080P1-AP04B	8m	YES	Amp Head	Single turn absolute without battery

## Cable selection

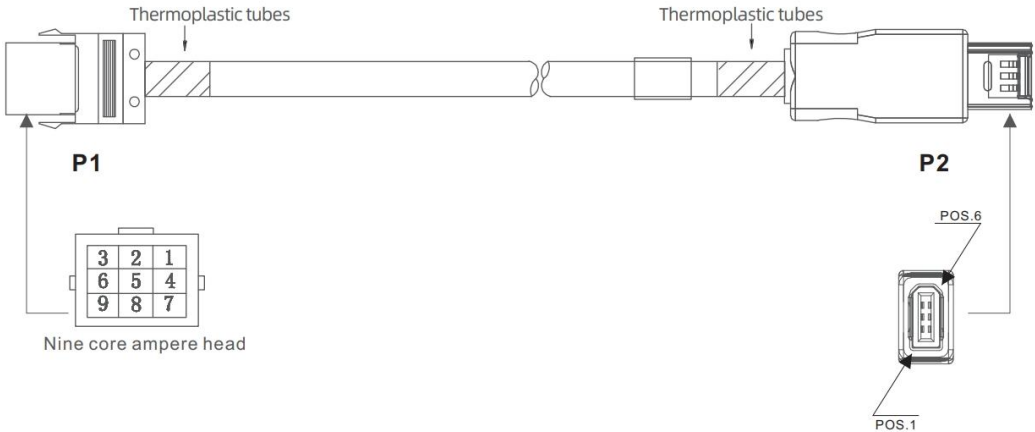
Model	Length	Bending resistance	Connectors	Encoder Type
HF-N080P1-AP06B	8m	NO	Amp Head	Multi-turn absolute without battery
HF-D080P1-AP06B	8m	YES	Amp Head	Multi-turn absolute without battery
HF-N100P1-AP04B	10m	NO	Amp Head	Single turn absolute without battery
HF-N100P1-AP06B	10m	NO	Amp Head	Multi-turn absolute with battery
HF-D100P1-AP04B	10m	YES	Amp Head	Single turn absolute without battery
HF-D100P1-AP06B	10m	YES	Amp Head	Multi-turn absolute with battery
HF-N120P1-AP04B	12m	NO	Amp Head	Single turn absolute without battery
HF-N120P1-AP06B	12m	NO	Amp Head	Multi-turn absolute with battery
HF-D120P1-AP04B	12m	YES	Amp Head	Single turn absolute without battery
HF-D120P1-AP06B	12m	YES	Amp Head	Multi-turn absolute with battery
HF-N150P1-AP04B	15m	NO	Amp Head	Single turn absolute without battery
HF-N150P1-AP06B	15m	NO	Amp Head	Multi-turn absolute with battery
HF-D150P1-AP04B	15m	YES	Amp Head	Single turn absolute without battery
HF-D150P1-AP06B	15m	YES	Amp Head	Multi-turn absolute with battery
Aerial Head Cables				
HF-N030P1-AV04B	3m	NO	Aerial Head	Single turn absolute without battery
HF-N030P1-AV06B	3m	NO	Aerial Head	Multi-turn absolute with battery
HF-D030P1-AV04B	3m	YES	Aerial Head	Single turn absolute without battery
HF-D030P1-AV06B	3m	YES	Aerial Head	Multi-turn absolute with battery
HF-N060P1-AV04B	6m	NO	Aerial Head	Single turn absolute without battery
HF-N060P1-AV06B	6m	NO	Aerial Head	Multi-turn absolute with battery
HF-D060P1-AV04B	6m	YES	Aerial Head	Single turn absolute without battery
HF-D060P1-AV06B	6m	YES	Aerial Head	Multi-turn absolute with battery
HF-N080P1-AV04B	8m	NO	Aerial Head	Single turn absolute without battery
HF-N080P1-AV06B	8m	NO	Aerial Head	Multi-turn absolute with battery
HF-D080P1-AV04B	8m	YES	Aerial Head	Single turn absolute without battery
HF-D080P1-AV06B	8m	YES	Aerial Head	Multi-turn absolute with battery
HF-N100P1-AV04B	10m	NO	Aerial Head	Single turn absolute without battery
HF-N100P1-AV06B	10m	NO	Aerial Head	Multi-turn absolute with battery
HF-D100P1-AV04B	10m	YES	Aerial Head	Single turn absolute without battery
HF-D100P1-AV06B	10m	YES	Aerial Head	Multi-turn absolute with battery
HF-N120P1-AV04B	12m	NO	Aerial Head	Single turn absolute without battery
HF-N120P1-AV06B	12m	NO	Aerial Head	Multi-turn absolute with battery
HF-D120P1-AV04B	12m	YES	Aerial Head	Single turn absolute without battery
HF-D120P1-AV06B	12m	YES	Aerial Head	Multi-turn absolute with battery
HF-N150P1-AV04B	15m	NO	Aerial Head	Single turn absolute without battery
HF-N150P1-AV06B	15m	NO	Aerial Head	Multi-turn absolute with battery
HF-D150P1-AV04B	15m	YES	Aerial Head	Single turn absolute without battery
HF-D150P1-AV06B	15m	YES	Aerial Head	Multi-turn absolute with battery

Model	Length	Bending resistance	Connectors	Encoder Type
Three-pin terminal cable				
HF-N030P1-SC04B	3m	NO	Three-pin terminal	Single turn absolute without battery
AF-N030P1-SC04B	3m	NO	Three-pin terminal	Single turn absolute without battery
AF-N030P1-SC06B	3m	NO	Three-pin terminal	Multi-turn absolute with battery
AF-D030P1-SC04B	3m	YES	Three-pin terminal	Single turn absolute without battery
AF-D030P1-SC06B	3m	YES	Three-pin terminal	Multi-turn absolute with battery
AF-N060P1-SC04B	6m	NO	Three-pin terminal	Single turn absolute without battery
AF-D060P1-SC04B	6m	YES	Three-pin terminal	Single turn absolute without battery
AF-N060P1-SC06B	6m	NO	Three-pin terminal	Multi-turn absolute with battery
AF-D060P1-SC06B	6m	YES	Three-pin terminal	Multi-turn absolute with battery

**Note:**

- 1、 Try to choose the standard length cable, other lengths and requirements of the encoder cable, please contact the business inquiry after customization; length of more than 15 meters in order to ensure that the signal line to transmit the signal quality, the wire core will be thicker, the price increases more.
- 2、 Drag chain cable (high flexibility) default 5 million times bending, other bending requirements need to contact the business inquiry after customization

**Absolute encoder cable lead composition diagram**



## Naming rules for power cables

**HP - N 030 P2 - AP04B**

①                      ②                      ③                      ④                      ⑤

**① power cables**

HP/AP: power cables type

**② Bending properties**

N: Not resistant to bending  
D: Bending resistance

**③ Line length**

030:3.0m  
060:6.0m  
100:10m

**④ Wire diameter**

**⑤ Connector type and number of cores**

AP: Amp Head  
AV: Aviation head  
SC: Three-pin terminal  
04: 4-core wire (Generally without holding brake power line)  
06: 6-core wire (Generally with holding brake power line)  
B: Basic cable  
F: Anti-oil and anti-corrosion cable

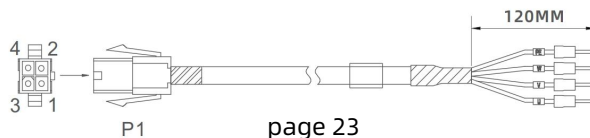
## power cable selection table

Model	Length	Bending resistance	Brake	Connectors	Power rating
Amp Head Wire					
HP-N005P2-AP04B	0.5m	NO	NO	Amp Head	200W-750W
HP-N010P2-AP04B	1.0m	NO	NO	Amp Head	200W-750W
HP-D010P2-AP04B	1.0m	YES	NO	Amp Head	200W-750W
HP-N015P2-AP04B	1.5m	NO	NO	Amp Head	200W-750W
HP-D015P2-AP04B	1.5m	YES	NO	Amp Head	200W-750W
HP-N030P2-AP04B	3m	NO	NO	Amp Head	200W-750W
HP-D030P2-AP04B	3m	YES	NO	Amp Head	200W-750W
HP-N035P2-AP04B	3.5m	NO	NO	Amp Head	200W-751W
HP-N060P2-AP04B	6m	NO	NO	Amp Head	200W-750W
HP-D060P2-AP04B	6m	YES	NO	Amp Head	200W-750W
HP-N080P2-AP04B	8m	NO	NO	Amp Head	200W-750W
HP-D080P2-AP04B	8m	YES	NO	Amp Head	200W-750W
HP-N100P2-AP04B	10m	NO	NO	Amp Head	200W-750W
HP-D100P2-AP04B	10m	YES	NO	Amp Head	200W-750W
HP-N120P2-AP04B	12m	NO	NO	Amp Head	200W-750W
HP-D120P2-AP04B	12m	YES	NO	Amp Head	200W-750W
HP-N150P2-AP04B	15m	NO	NO	Amp Head	200W-750W
HP-D150P2-AP04B	15m	YES	NO	Amp Head	200W-750W
Aerial Head Cables					
HP-N030P3-AV04B	3m	NO	NO	Aviation head	1000W-3000W

Model	Length	Bending resistance	Brake	Connectors	Power rating
HP-N030P3-AV06B	3m	NO	YES	Aviation head	1000W-3000W
HP-D030P3-AV04B	3m	YES	NO	Aviation head	1000W-3000W
HP-D030P3-AV06B	3m	YES	YES	Aviation head	1000W-3000W
HP-N060P3-AV04B	6m	NO	NO	Aviation head	1000W-3000W
HP-N060P3-AV06B	6m	NO	YES	Aviation head	1000W-3000W
HP-D060P3-AV04B	6m	YES	NO	Aviation head	1000W-3000W
HP-D060P3-AV06B	6m	YES	YES	Aviation head	1000W-3000W
HP-N080P3-AV04B	8m	NO	NO	Aviation head	1000W-3000W
HP-N080P3-AV06B	8m	NO	YES	Aviation head	1000W-3000W
HP-D080P3-AV04B	8m	YES	NO	Aviation head	1000W-3000W
HP-D080P3-AV06B	8m	YES	YES	Aviation head	1000W-3000W
HP-N100P3-AV04B	10m	NO	NO	Aviation head	1000W-3000W
HP-N100P3-AV06B	10m	NO	YES	Aviation head	1000W-3000W
HP-D100P3-AV04B	10m	YES	NO	Aviation head	1000W-3000W
HP-D100P3-AV06B	10m	YES	YES	Aviation head	1000W-3000W
HP-N120P3-AV04B	12m	NO	NO	Aviation head	1000W-3000W
HP-N120P3-AV06B	12m	NO	YES	Aviation head	1000W-3000W
HP-D120P3-AV04B	12m	YES	NO	Aviation head	1000W-3000W
HP-D120P3-AV06B	12m	YES	YES	Aviation head	1000W-3000W
HP-N150P3-AV04B	15m	NO	NO	Aviation head	1000W-3000W
HP-N150P3-AV06B	15m	NO	YES	Aviation head	1000W-3000W
HP-D150P3-AV04B	15m	YES	NO	Aviation head	1000W-3000W
HP-D150P3-AV06B	15m	YES	YES	Aviation head	1000W-3000W
Three-pin terminal cable					
HP-N030P2-SC04B	3m	NO	NO	Three-pin terminal	200W-750W
AP-N030P2-SC04B	3m	NO	NO	Three-pin terminal	200W-750W
AP-D030P2-SC04B	3m	YES	NO	Three-pin terminal	200W-750W
AP-N030P2-SC06B	3m	NO	YES	Three-pin terminal	200W-750W
AP-D030P2-SC06B	3m	YES	YES	Three-pin terminal	200W-750W
AP-N060P2-SC04B	6m	NO	NO	Three-pin terminal	200W-750W
AP-D060P2-SC04B	6m	YES	NO	Three-pin terminal	200W-750W
AP-N060P2-SC06B	6m	NO	YES	Three-pin terminal	200W-750W
AP-D060P2-SC06B	6m	YES	YES	Three-pin terminal	200W-750W

**NOTE:**

1. Drag chain wire (high flexibility wire) default 5 million times bending, other bending times required to contact the business inquiry after customization.
2. Note that the Amp head terminals do not include the holding brake wire, aviation head terminals include the holding brake wire.



## Naming rules for Brake cable

**HB - N 030 P2 - AP02B**

①      ②      ③      ④      ⑤

**① Brake cable**

**② Bending properties**

N: Not resistant to bending  
D: Bending resistance

**③ Line length**

030:3.0m  
060:6.0m  
100:10m

**④ Wire diameter**

**⑤ Connector type and number of cores**

AP: Amp Head  
AV: Aviation head  
XS: Four-pole motor holding wire  
CM: Five-pole motor holding wire  
02: 2-core wire  
04: 4-core wire  
B: Basic cable  
F: Anti-oil and anti-corrosion cable

## Brake cable selection table

Model	Length	Bending resistance	Brake	Connectors	Power rating
Amp Head Wire					
HB-N010P2-AP02B	1.0m	NO	/	Amp Head	200W-750W
HB-D010P2-AP02B	1.0m	YES	/	Amp Head	200W-750W
HB-N015P2-AP02B	1.5m	NO	/	Amp Head	200W-750W
HB-D015P2-AP02B	1.5m	YES	/	Amp Head	200W-750W
HB-N030P2-AP02B	3m	NO	/	Amp Head	200W-750W
HB-D030P2-AP02B	3m	YES	/	Amp Head	200W-750W
HB-N060P2-AP02B	6m	NO	/	Amp Head	200W-750W
HB-D060P2-AP02B	6m	YES	/	Amp Head	200W-750W
HB-N080P2-AP02B	8m	NO	/	Amp Head	200W-750W
HB-D080P2-AP02B	8m	YES	/	Amp Head	200W-750W
HB-N100P2-AP02B	10m	NO	/	Amp Head	200W-750W
HB-D100P2-AP02B	10m	YES	/	Amp Head	200W-750W
HB-N120P2-AP02B	12m	NO	/	Amp Head	200W-750W
HB-D120P2-AP02B	12m	YES	/	Amp Head	200W-750W
HB-N150P2-AP02B	15m	NO	/	Amp Head	200W-750W
HB-D150P2-AP02B	15m	YES	/	Amp Head	200W-750W
Four pairs of poles motor air head terminals					
HB-N030P2-XS02B	3m	NO	/	Aviation head	200W-750W
HB-D030P2-XS02B	3m	YES	/	Aviation head	200W-750W
HB-N060P2-XS02B	6m	NO	/	Aviation head	200W-750W



Model	Length	Bending resistance	Brake	Connectors	Power rating
HB-D060P2-XS02B	6m	YES	/	Aviation head	200W-750W
HB-N080P2-XS02B	8m	NO	/	Aviation head	200W-750W
HB-D080P2-XS02B	8m	YES	/	Aviation head	200W-750W
HB-N100P2-XS02B	10m	NO	/	Aviation head	200W-750W
HB-D100P2-XS02B	10m	YES	/	Aviation head	200W-750W
HB-N120P2-XS02B	12m	NO	/	Aviation head	200W-750W
HB-D120P2-XS02B	12m	YES	/	Aviation head	200W-750W
HB-N150P2-XS02B	15m	NO	/	Aviation head	200W-750W
HB-D150P2-XS02B	15m	YES	/	Aviation head	200W-750W
Five pairs of poles motor air head terminals					
HB-N030P2-CM02B	3m	NO	/	Aviation head	200W-750W
HB-D030P2-CM02B	3m	YES	/	Aviation head	200W-750W
HB-N060P2-CM02B	6m	NO	/	Aviation head	200W-750W
HB-D060P2-CM02B	6m	YES	/	Aviation head	200W-750W
HB-N080P2-CM02B	8m	NO	/	Aviation head	200W-750W
HB-D080P2-CM02B	8m	YES	/	Aviation head	200W-750W
HB-N100P2-CM02B	10m	NO	/	Aviation head	200W-750W
HB-D100P2-CM02B	10m	YES	/	Aviation head	200W-750W
HB-N120P2-CM02B	12m	NO	/	Aviation head	200W-750W
HB-D120P2-CM02B	12m	YES	/	Aviation head	200W-750W
HB-N150P2-CM02B	15m	NO	/	Aviation head	200W-750W
HB-D150P2-CM02B	15m	YES	/	Aviation head	200W-750W

**NOTE:**

- 1、 80 flange and the following servo motor using a separate Amp connector of the two-core holding brake line, 110 flange and above flange servo motor power line can contain the holding brake line, no need to select a separate type; in addition, no holding brake motor does not need to purchase the holding brake line;
- 2、 Drag chain line (high flexibility line) default 5 million times bending, other bending times required to contact the business inquiry after customization;
- 3、 Note that the Amp head terminal does not contain the holding brake line, the aviation head terminal contains the holding brake line.

# HK Series Servo Motol、R8 Series Servo Drive、Cable matching table

Power	Motor model	Encoder	Suitable for servo	Voltage	Encoder cable	Power cable	Brake cable	Control Cables Option			
100W	40HK-A(B)00330-C(L)S2B2(3)	Single-turn	R8-2204P(Z/C)-N 400W drive	220VAC	HF-N(D)length P1-AP04B	HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line				
	40HK-A(B)00330-C(L)S2B2(3)	Multi-turn			HF-N(D)length P1-AP06B						
200W	60HK-A(B)00630-C(L)S2B2(3)	Single-turn			HF-N(D)length P1-AP04B						
	60HK-A(B)06030-C(L)S2B2(3)	Multi-turn			HF-N(D)length P1-AP06B						
400W	60HK-A(B)01330-C(L)S2B2(3)	Single-turn			HF-N(D)length P1-AP04B						
	60HK-A(B)01330-C(L)M2B2(3)	Multi-turn			HF-N(D)length P1-AP06B						
	60HK-A01330-CS2N(F)2 Three-pin terminal	Single-turn			HF-N(D)length P1-SC04B	HP-N(D)length P2-SC04B	There is currently no brake motor model				
750W	80HK-A(B)02430-C(L)S2A2(3)	Single-turn			R8-2208P(Z/C)-N 750W drive	220VAC	HF-N(D)length P1-AP04B		HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line	
	80HK-A(B)02430-C(L)M2A2(3)	Multi-turn					HF-N(D)length P1-AP06B				
	80HK-A02430-CS2N(F)2 Three-pin terminal	Single-turn	HF-N(D)length P1-SC04B	HP-N(D)length P2-SC04B			There is currently no brake motor model				
1000W	80HK-A(B)03230-C(L)S2A2(3)	Single-turn	R8-2210P(Z/C)-S 1000W May be considered for occasions of low-speed operation of the drive: R8-2208P(Z/C)-N 750W drive	220VAC	HF-N(D)length P1-AP04B	HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line	The control line terminal of the R8 series servo is DB44, which is included when purchasing the complete machine. Control lines with specific pin definitions are currently provided. For other pin definitions, it is recommended to purchase wires and solder them by yourself according to the terminal definitions and required functions.			
	80HK-A(B)03230-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AP06B						
	80HK-A(B)03825-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AP04B						
	80HK-A(B)03825-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AP06B						
1000W	130HK-A(B)04025-C(L)S2A2(3)	Single-turn	R8-2210P(Z/C)-N 1000W May be considered for occasions of low-speed operation of the drive: R8-2210P(Z/C)-S 1000W drive	220VAC	HF-N(D)length P1-AV04B	Matching of brakeless motor: HP-N(D)length P3-AV04B(Without brake)	HK series 130 flange motor does not have a separate brake line				
	130HK-A(B)04025-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
	130HK-A(B)05020-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AV04B	Matching of motor with holding brake: HP-N(D)length P3-AV06B(With brake)					
	130HK-A(B)05020-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
1500W	130HK-A(B)06025-C(L)S2A2(3)	Single-turn	R8-2215P(Z/C)-N 1500W drive	220VAC	HF-N(D)length P1-AV04B	Matching of brakeless motor: HP-N(D)length P3-AV04B(Without brake)					
	130HK-A(B)06025-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
	130HK-A(B)07220-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AV04B	Matching of motor with holding brake: HP-N(D)length P3-AV06B(With brake)					
	130HK-A(B)07220-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
	130HK-A(B)10015-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AV04B						
	130HK-A(B)10015-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
2000W	130HK-A(B)07725-C(L)S2A2(3)	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B	Matching of brakeless motor: HP-N(D)length P3-AV04B(Without brake)					
	130HK-A(B)07725-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
	130HK-A(B)10020-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AV04B						
	130HK-A(B)10020-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
2300W	130HK-A(B)15015-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AV04B	Matching of motor with holding brake: HP-N(D)length P3-AV06B(With brake)					
	130HK-A(B)15015-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						
2600W	130HK-A(B)10025-C(L)S2A2(3)	Single-turn			HF-N(D)length P1-AV04B						
	130HK-A(B)10025-C(L)M2A2(3)	Multi-turn			HF-N(D)length P1-AV06B						

## HK Series Servo Motol、R8 Series Servo Drive、Cable matching table

Power	Motor model	Encoder	Suitable for servo	Voltage	Encoder cable	Power cable	Brake cable	Control Cables Option	
200W	60HK-A(B)00630-C(L)S2B2(3)-A	Single-turn	R8-2204P(Z/C)-N 400W drive	220VAC	HF-N(D)length P1-AP04B	HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line	The control line terminal of the R8 series servo is DB44, which is included when purchasing the complete machine. Control lines with specific pin definitions are currently provided. For other pin definitions, it is recommended to purchase wires and solder them by yourself according to the terminal definitions and required functions.	
	60HK-A(B)06030-C(L)S2B2(3)-A	Multi-turn			HF-N(D)length P1-AP06B				
	60HK-A(B)00630-C(L)S2B2(3)-N	Single-turn			HF-N(D)length P1-SC04B	Without brake: HP-N(D)length P2-SC04B With brake: HP-N(D)length P2-SC06B	Three-pin terminal motor does not require separate brake motor model		
	60HK-A(B)06030-C(L)S2B2(3)-N	Multi-turn			HF-N(D)length P1-SC06B				
400W	60HK-A(B)01330-C(L)S2B2(3)-A	Single-turn			HF-N(D)length P1-AP04B	HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line		
	60HK-A(B)01330-C(L)M2B2(3)-A	Multi-turn			HF-N(D)length P1-AP06B				
	60HK-A(B)01330-C(L)S2B2(3)-N/F	Single-turn			HF-N(D)length P1-SC04B		Without brake: HP-N(D)length P2-SC04B With brake: HP-N(D)length P2-SC06B		Three-pin terminal motor does not require separate brake motor model
	60HK-A(B)01330-C(L)M2B2(3)-N/F	Multi-turn			HF-N(D)length P1-SC06B				
750W	80HK-A(B)02430-C(L)S2A2(3)-A	Single-turn	R8-2208P(Z/C)-N 750W drive	220VAC	HF-N(D)length P1-AP04B	HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line		
	80HK-A(B)02430-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AP06B				
	80HK-A(B)02430-C(L)S2B2(3)-N/F	Single-turn			HF-N(D)length P1-SC04B	Without brake: HP-N(D)length P2-SC04B With brake: HP-N(D)length P2-SC06B	Three-pin terminal motor does not require separate brake motor model		
	80HK-A(B)02430-C(L)M2B2(3)-N/F	Multi-turn			HF-N(D)length P1-SC06B				
1000W	80HK-A(B)03230-C(L)S2A2(3)-A	Single-turn	R8-2210P(Z/C)-S 1000W May be considered for occasions of low-speed operation of the drive: R8-2208P(Z/C)-N 750W drive	220VAC	HF-N(D)length P1-AP04B	HP-N(D)length P2-AP04B	HB-N(D)length P2-AP02B Brakeless motors do not need to be equipped with a separate brake line		
	80HK-A(B)03230-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AP06B				
	80HK-A(B)03825-C(L)S2A2(3)-A	Single-turn			HF-N(D)length P1-AP04B				
	80HK-A(B)03825-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AP06B				
	80HK-A(B)04025-C(L)S2A2(3)-A	Single-turn			HF-N(D)length P1-AP04B				
	80HK-A(B)04025-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AP06B				
850W	130HK-A(B)05415-C(L)S2A2(3)-A	Single-turn	R8-2215P(Z/C)-N 1500W drive or R8-2226P(Z/C)-N 2600W drive Choose a more economical combination based on actual working conditions!	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Five-pole motor holding wire HB-N(D)length P2-CM02B Brakeless motors do not need to be equipped with a separate brake line		
	130HK-A(B)05415-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
1300W	130HK-A(B)08315-C(L)S2A2(3)-A	Single-turn		220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B			
	130HK-A(B)08315-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
1800W	130HK-A(B)11515-C(L)S2A2(3)-A	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B			
	130HK-A(B)11515-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
1000W	130HK-A(B)04025-C(L)S2A2(3)-A	Single-turn	R8-2210P(Z/C)-N 1000W May be considered for occasions of low-speed operation of the drive: R8-2210P(Z/C)-S 1000W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line		
	130HK-A(B)04025-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
	130HK-A(B)05020-C(L)S2A2(3)-A	Single-turn			HF-N(D)length P1-AV04B				
	130HK-A(B)05020-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
1200W	110HK-A(B)04030-C(L)S2A2(3)-A	Single-turn	R8-2210P(Z/C)-N or R8-2215P(Z/C)-N	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line		
	110HK-A(B)04030-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
1800W	110HK-A(B)06030-C(L)S2A2(3)-A	Single-turn	R8-2226P(Z/C)-N or R8-2215P(Z/C)-N	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B			
	110HK-A(B)06030-C(L)M2A2(3)-A	Multi-turn			HF-N(D)length P1-AV06B				
1500W	130HK-A(B)06025-C(L)S2A2(3)-A	Single-turn	R8-2215P(Z/C)-N 1500W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line		
	130HK-A(B)06025-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B				
	130HK-A(B)10015-C(L)S2A2(3)-A	Single-turn		220VAC	HF-N(D)length P1-AV04B				
	130HK-A(B)10015-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B				
	130HK-A(B)06025-C(L)S3A2(3)-A	Single-turn	R8-3830P(Z/C)-N 3000W drive	380VAC	HF-N(D)length P1-AV04B				
	130HK-A(B)06025-C(L)M3A2(3)-A	Multi-turn		380VAC	HF-N(D)length P1-AV06B				

# HK Series Servo Motor、R8 Series Servo Drive、Cable matching table

Power	Motor model	Encoder	Suitable for servo	Voltage	Encoder cable	Power cable	Brake cable	Control Cables Option
2000W	130HK-A(B)07725-C(L)S2A2(3)-A	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line	The control line terminal of the R8 series servo is DB44, which is included when purchasing the complete machine. Control lines with specific pin definitions are currently provided. For other pin definitions, it is recommended to purchase wires and solder them by yourself according to the terminal definitions and required functions.
	130HK-A(B)07725-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B			
	130HK-A(B)07725-C(L)S3A2(3)-A	Single-turn	R8-3830P(Z/C)-N 3000W drive	380VAC	HF-N(D)length P1-AV04B			
	130HK-A(B)07725-C(L)M3A2(3)-A	Multi-turn		380VAC	HF-N(D)length P1-AV06B			
	130HK-A(B)10020-C(L)S2A2(3)-A	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B			
	130HK-A(B)10020-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B			
2300W	130HK-A(B)15015-C(L)M2A2(3)-A	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line	
	130HK-A(B)15015-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B			
	130HK-A(B)15015-C(L)S3A2(3)-A	Single-turn	R8-3830P(Z/C)-N 3000W drive	380VAC	HF-N(D)length P1-AV04B			
	130HK-A(B)15015-C(L)M3A2(3)-A	Multi-turn		380VAC	HF-N(D)length P1-AV06B			
2600W	130HK-A(B)10025-C(L)S2A2(3)-A	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line	
	130HK-A(B)10025-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B			
	130HK-A(B)10025-C(L)S3A2(3)-A	Single-turn	R8-3830P(Z/C)-N 3000W drive	380VAC	HF-N(D)length P1-AV04B			
	130HK-A(B)10025-C(L)M3A2(3)-A	Multi-turn		380VAC	HF-N(D)length P1-AV06B			
3000W	130HK-A(B)19015-C(L)S2A2(3)-A	Single-turn	R8-2226P(Z/C)-N 2600W drive	220VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line	
	130HK-A(B)19015-C(L)M2A2(3)-A	Multi-turn		220VAC	HF-N(D)length P1-AV06B			
	130HK-A(B)15020-C(L)S3A2(3)-A	Single-turn	R8-3830P(Z/C)-N 3000W drive	380VAC	HF-N(D)length P1-AV04B	HP-N(D)length P3-AV04B	Four-pole motor holding wire HB-N(D)length P2-XS02B Brakeless motors do not need to be equipped with a separate brake line	
	130HK-A(B)15020-C(L)M3A2(3)-A	Multi-turn		380VAC	HF-N(D)length P1-AV06B			
	130HK-A(B)14620-C(L)S3A2(3)-A	Single-turn		380VAC	HF-N(D)length P1-AV04B			
	130HK-A(B)14620-C(L)M3A2(3)-A	Multi-turn		380VAC	HF-N(D)length P1-AV06B		Five-pole motor holding wire HB-N(D)length P2-CM02B Brakeless motors do not need to be equipped with a separate brake line	

**NOTE:**

- 1、C(L) in the above table means that the model number here can be C (magnetic braiding) or L (optical braiding), 2(3) means that the model number here can be 2 (without brake) or 3 (with brake). gate, N(D) indicates that this part of the model can be N (non-drag chain) or D (drag chain line), A(B) indicates that this part of the model can be A (absolute 17 bit) or B (absolute type) 23bit, P(Z/C) indicates that the model can be P (PLC pulse analog type) or Z (EtherCAT bus type) or C (CANopen bus type);
- 2、For the meaning of the letters, please refer to the driver, motor and cable model description section; this table provides the matching relationship between commonly used motor models and drivers and cables. For other models, please contact the technical or business department for confirmation;
- 3、Drivers and motors of different powers can also be cross-matched. It is recommended to contact technical support or R&D for confirmation.
- 4、Note that the three-pin straight-out terminal motor should match the three-pin terminal cables.

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