

Servo Drive System

SD100&SD300N/P



FRECON



ABOUT US

FRECON Electric (Shenzhen) Co., Ltd. is a national key high-tech enterprise, a dual-soft enterprise in Shenzhen, and a professional company in the fields of industrial automation, high efficiency and energy saving, and green new energy which was founded in 2013. We have more than 16 years of experience in the development and application of inverters, servo drives, energy-saving control cabinets, solar inverter systems etc.





Product Overview

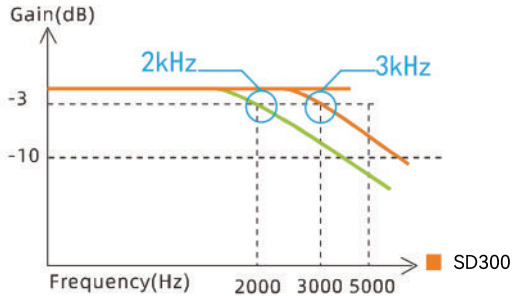


SD100P/SD300 series is FRECON new generation servo drive, supports pulse type (SD100P, SD300P) and bus type (SD300N). The pulse type supports various pulse input mode (pulse + direction, pulse + pulse, quadrature input), and support single-ended and differential signal inputs. The bus type uses EtherCAT communication, with synchronization cycle of 250 μ s. with thin and light appearance design, superior performance, and multiple interfaces. Widely used in CNC machine, woodworking, laser, packaging, robots, 3C and other industries.

Features

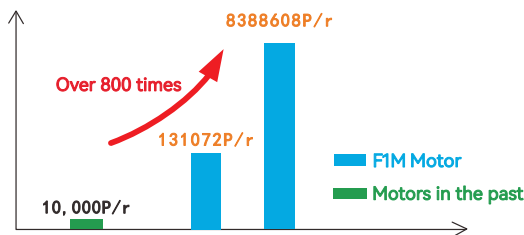
Superior performance

- Use high-performance motor control dedicated ARM chip (480 MHz) and large-scale programmable gate array (FPGA) dual-chip platform, the speed loop bandwidth is 3 kHz.



Precise positioning

- The F1M series motor supports 17bit and 23bit single-turn/multi-turn absolute encoders with high resolution and flexible response for different applications.



High protection, High speed, High overload

- The motor is IP65 protection grade, Maximum speed is 6000rpm, Maximum torque is 3.5 times rated torque



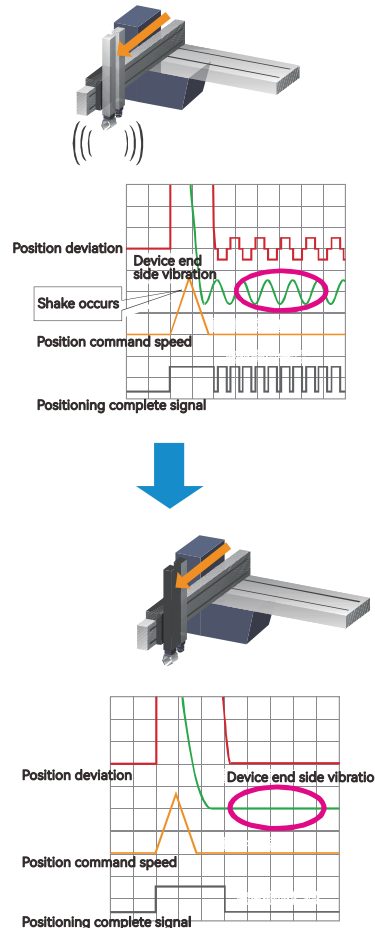
Use easy

- Support parameter upload/download, waveform analysis function, mode debugging function, which makes debugging more convenient..



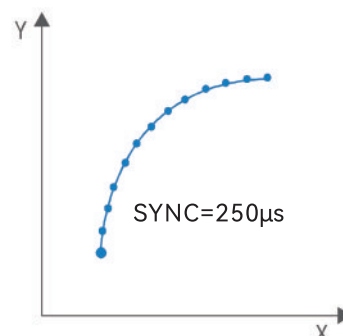
Suppress device vibration

- The servo drive can simultaneously suppress the two vibrations at the end of the device, which can bring higher mechanical response.

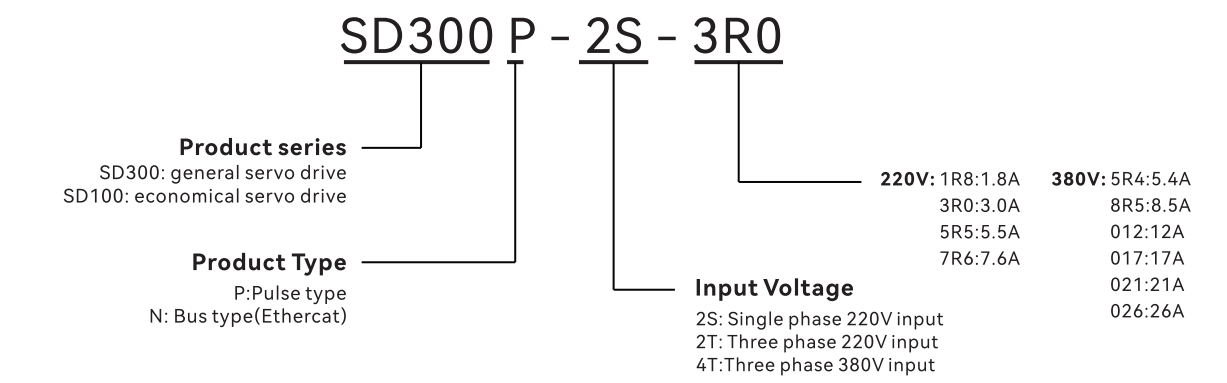


Synchronization cycle

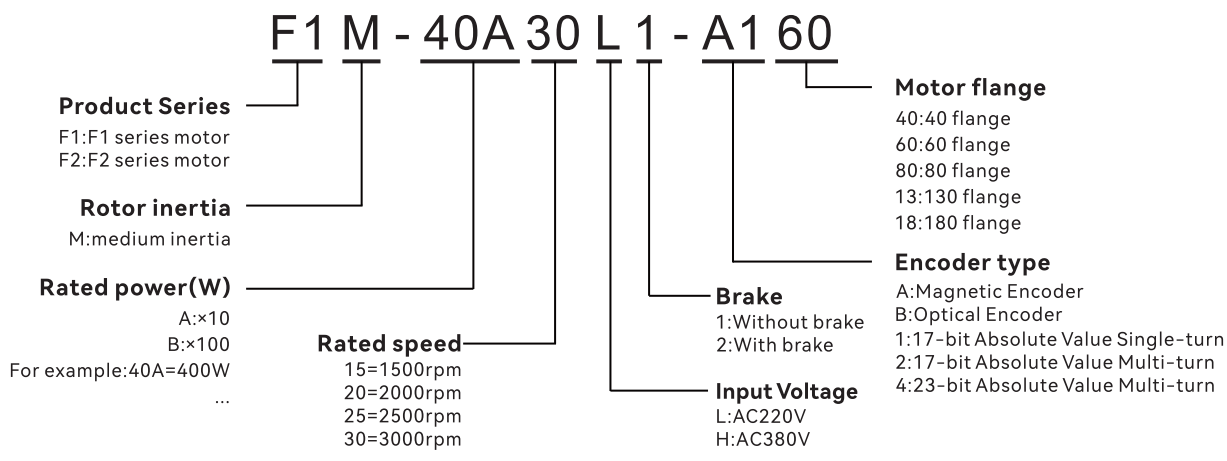
- Use high-performance control chip to improve communication ability, supports 250μs synchronization cycle for EtherCAT type



Servo Drive Model Description



Motor Model Description



Cable Model Description

LPG - 0 075 0 - 3.0 - G

① ② ③ ④ ⑤ ⑥

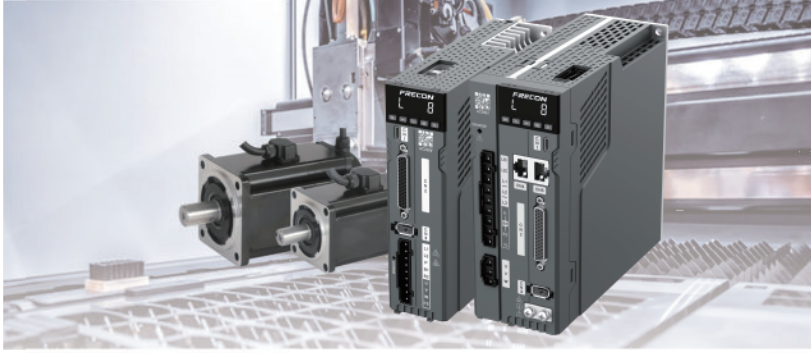
①Motor Power Cable	④Motor Side Plug Type
LPG:General 4-core power LPB: Power cable with brake	0:4P-core Amp head 1: SC-MC6S(Gecko Head) 2: Aviation head18-6Z 3: Aviation head 22-A6 4: SC-MC6P-AB2G(Gecko Head)
②Drive Side Plug Type	⑤Cable Length
0:U-shaped type terminal 1:Needle type terminal	3.0: 3m 5.0: 5m 10.0: 10m ...
③Wire Diameter(mm²)	⑥Cable Type
050: 0.5 075: 0.75 100: 1.0 150: 1.5 250: 2.5 ...	G:General Cable H:Super High-flex Cable(Bend endurance over 10 million cycles)

LEG - 0 0 - 3.0 - G

① ② ③ ④ ⑤

①Encoder Cables	④Cable length
LEG: Universal absolute encoder cables LEB: Battery-powered absolute encoder cables	3.0:3m 5.0:5m 10.0:10m ...
②Drive Side Plug Type	⑤Cable Type
0:1394 Plug 1:DB15 Plug 2:DB9 Plug	G:General Cable H:Super High-flex Cable(Bend endurance over 10 million cycles)
③Motor Side Plug Type	
1: SC-MC7S(Gecko Head) 2: 10P aviation head	

SD100P Series Economical Servo Drive

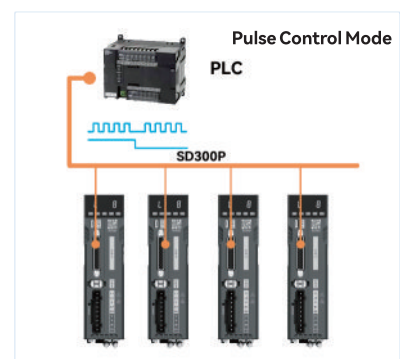


SD100P Servo Drive

SD100P is an economical pulse servo drive that supports multiple pulse input modes (pulse + direction, pulse + pulse, orthogonal input). Support single-ended and differential input.

- ▷ Compact size: thin book-like design, side-by-side installation
- ▷ Power range: 220V 100W~1.0kW
- ▷ Rich functions: 7 DI, 5 DO
- ▷ High response performance: 2kHz speed bandwidth
- ▷ Multiple pulse modes: pulse+direction, pulse+pulse, orthogonal input

SD300 General Series Servo Drive



SD300 Servo Drive



- ▷ Thin book design, side by side installation
- ▷ Rich functionality: 7 DI, 5 DO, 2 (16-bit) AI
- ▷ Responsive Performance: 3kHz speed bandwidth
- ▷ Power Range: 220V 100W~2.3kW; 380V 850W~7.5kW
- ▷ Control Type: Plus type control, EtherCAT Bus type control

SD100/SD300 Drive Models List

Frame	Model	Input voltage(V)	Rated current(A)	Maximum current(A)
SIZE A	SD100□-2S-1R8 SD300□-2S-1R8	Single phase 220V	1.8	5.4
	SD100□-2S-3R0 SD300□-2S-3R0		3	8.8
	SD100□-2S-5R5 SD300□-2S-5R5		5.5	11.3
SIZE B	SD100□-2T-7R6 SD300□-2T-7R6	Single phase or Three phase 220V	7.6	17
	SD300□-4T-5R4	Three phase 380V	5.4	12.7
SIZE C	SD300□-2T-012	Three phase 220V	12	22
	SD300□-4T-8R5	Three phase 380V	8.5	17
	SD300□-4T-012	Three phase 380V	12	28
SIZE D	SD300□-4T-017	Three phase 380V	17	35
	SD300□-4T-021	Three phase 380V	21	37
	SD300□-4T-025	Three phase 380V	25	39
	SD300□-4T-030	Three phase 380V	30	53

Note: □(P or N)

SD100/SD300 Drive Technical Parameters

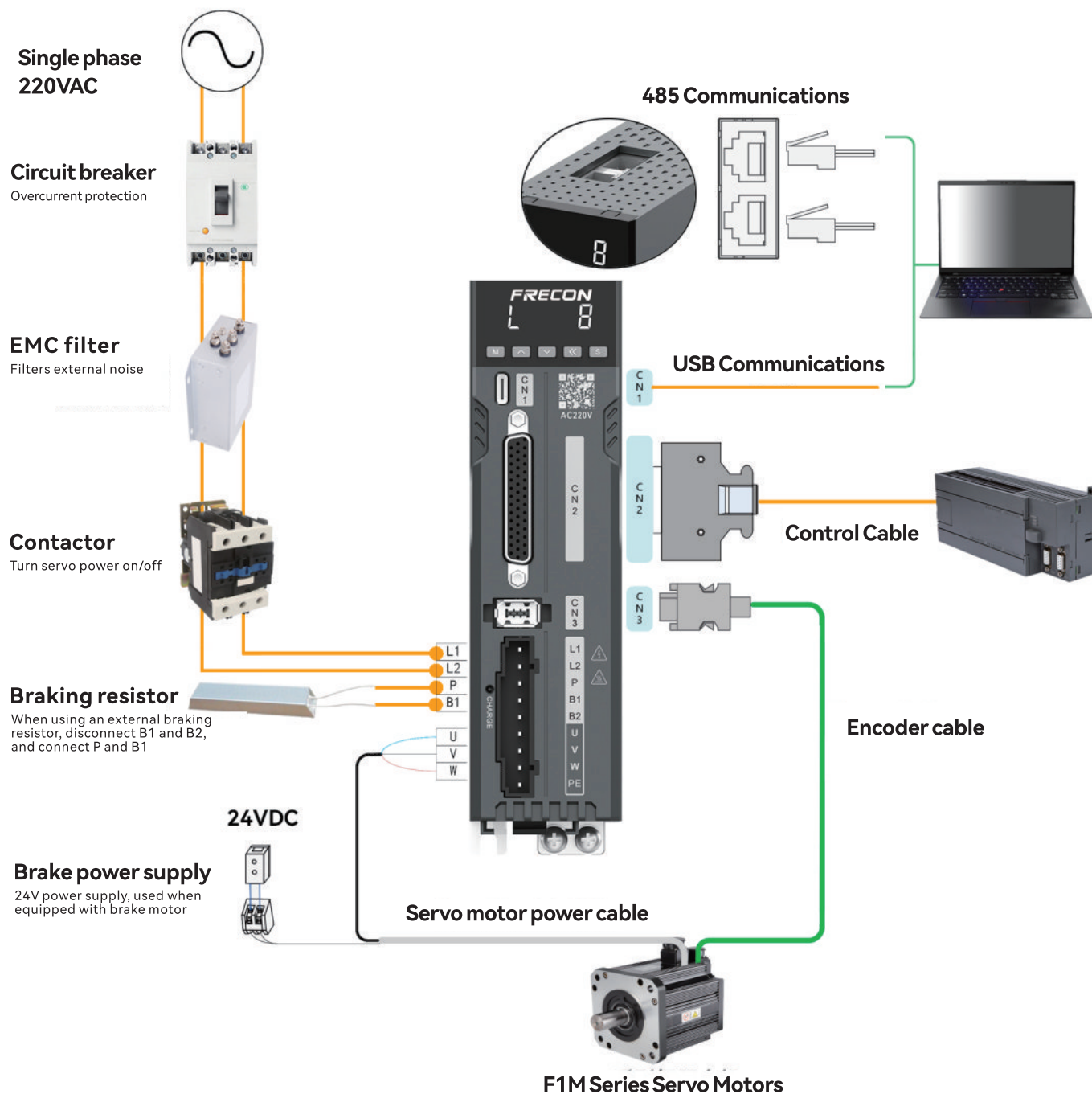
Technical items			SD300N	SD100N
Braking resistor function			Built-in, external	No built-in, external
Dynamic braking			Support	Not supported
Input and output signals	Digital input signal		4 programmable input DI terminals (photoelectric isolation) 2 high-speed optocoupler input DI terminals (high-speed latch), supporting up to 200kHz DI functions as follows: Servo enable, Alarm reset, Gain switch, Mode switch 1, Mode switch 2, Zero-point fix enable, Forward over travel switch, Reverse over travel switch, Zero command, Positive external torque limit, Forward jog, Reverse jog, Electronic gear selection, Command setting direction, Home switch, Home return enable, Emergency stop, Clear position deviation, Set current position as home	
	Digital output signal		3 programmable output DO terminals, DO load capacity 50mA, voltage range 5V ~ 30V DO functions as follows: Servo ready for output, zero speed, positioning completed, approaching position, torque limit, speed limit, brake engaged output, warning output, fault output, home return completed, electrical home return output, torque reached output, speed reached output, DB brake output	
Position Mode	Performance	Feedforward compensation	0~100%	
	Input signal	Position command input	EtherCAT communication mode: CSP (Cyclic Synchronous Position Mode) / PP (Profile Position Mode) / HM (Home Mode)	
Speed torque mode	Speed control range		1: 5000 (The lower limit of the speed control range is the condition for not stopping at rated torque load)	
	Torque control accuracy		±2%	
	Input Signal	Speed command input	EtherCAT communication mode: CSV (cyclic synchronous speed mode) / PV (contour speed mode)	
		Torque command input	EtherCAT communication mode: CST (Cyclic Synchronous Torque Mode) / PT (Profile Torque Mode)	
Built-in Function	Overtravel (OT) prevention function		P-OT and N-OT work will stop immediately	
	Protection function		Speed, current position, position deviation, motor torque, motor current, command pulse frequency, bus voltage, module internal temperature, etc.	
	LED display		5-digit LED display	
	Communication		EtherCAT, maximum number of slaves 255	
	Other		Gain adjustment, alarm recording, JOG operation, dynamic braking	

SD100/SD300 Drive Technical Parameters

SD100/SD300 drive general technical specifications				
Control method		IGBT PWM Control, sine wave current drive method, 220V, 380V: single-phase or three-phase full-wave rectification		
Environ ment	Temperature	Working/Storage: 0°C~55°C (the ambient temperature is above 45°C, derate by 10% for every 5°C increase)/-20°C~70°C		
	Humidity	Working/Storage: Below 90%RH (no condensation)		
	Vibration	4.9m/s ² / 19.6m/s ²		
	Atmospheric	86kPa ~ 106kPa		
IP grade		IP20		
Altitude		Maximum altitude is up to 2000m. No derating is required for use at 1000m and below. Derating by 1% for every 100m above 1000m.		
Encoder		Single-turn/multi-turn absolute encoder (Tamagawa protocol)		
Technical items		SD300P		SD100P
Braking resistor function		Internal, External		No internal, external
Dynamic braking		Support		Not Supported
Position Mode	Input Signal	Input pulse type	Three command formats:Direction + Pulse; A, B Phase Quadrature Pulse;Forward/Reverse Pulse	
		Input form	Differential input, Collector Open Circuit	
		Input frequency	Low speed:≤500kHz(differential input) ; ≤200kHz(single-ended input); High speed:≤4MHz(differential input)	
	Built-in open collector power supply		Drive(B, Driver (B, C, D type) supports 24V power output	
	Position output	Output mode	Phase A, Phase B: differential output Phase Z: differential output or open collector output	Phase A, Phase B: Differential output Phase Z: OC output
		Frequency division ratio	Any frequency division ratio	
Speed Mode	Analog command input		-10V ~ +10V, input impedance 10kΩ	No analog input
	Command acceleration and deceleration		Parameter settings	
	Instruction source		Analog quantity, parameter setting	Parameter settings
Torque mode	Analog command input		-10V ~ +10V, input impedance 10kΩ	No analog input
	Speed Limit		Parameter settings	
	Instruction source		Analog quantity, parameter setting	Parameter settings
Input and output signals	Digital input signal	Input signal function selection	7-channel DI DI1~DI5 digital signal input maximum frequency 1kHz (will decrease when the current limiting resistor is greater than 2.4kΩ).DI8~DI9 digital signal input hardware delay is less than 1ms (current limiting resistor is 2.4kΩ)	6-channel DI DI1~DI5 digital signal input maximum frequency 1kHz (will decrease when the current limiting resistor is greater than 2.4kΩ).DI8 digital signal input hardware delay is less than 1ms (current limiting resistor is 2.4kΩ)
			DI functions are as follows: servo enable, alarm clear, forward drive prohibition, reverse drive prohibition, forward torque limit, reverse torque limit, emergency stop, electronic gear selection 1, electronic gear selection 2, position deviation clear, pulse input prohibition, etc.	
	Digital output signal	Output signal function selection	5-way DO, programmable output terminal (photoelectric isolation)	4-way DO, programmable output terminals (photoelectric isolation)
			DO functions are as follows: servo ready, alarm, positioning completed, speed reached, electromagnetic brake, torque limit, etc.	
	Analog input signal		Voltage input specification: -10V ~ +10V; Maximum allowable voltage: ±12V	Not Supported
Built-in functions	Overtravel(OT) prevention function		Stop immediately when P-OT, N-OT is in action	
	Electronic gear ratio		Numerator/denominator: 1-32767/1-32767	
	LED Display		5-digit LED display	
	Monitoring function		Speed, current position, position deviation, motor torque, motor current, command pulse frequency, bus voltage, module internal temperature, etc.	
	Protective function		Overspeed, overvoltage, overcurrent, overload, abnormal braking, encoder abnormality, position error, etc.	
	Communication		Modbus RTU	
Host computer interface		USB, supports parameter reading and writing, waveform recording, and online upgrade		

SD100P/SD300P Driver peripheral connections

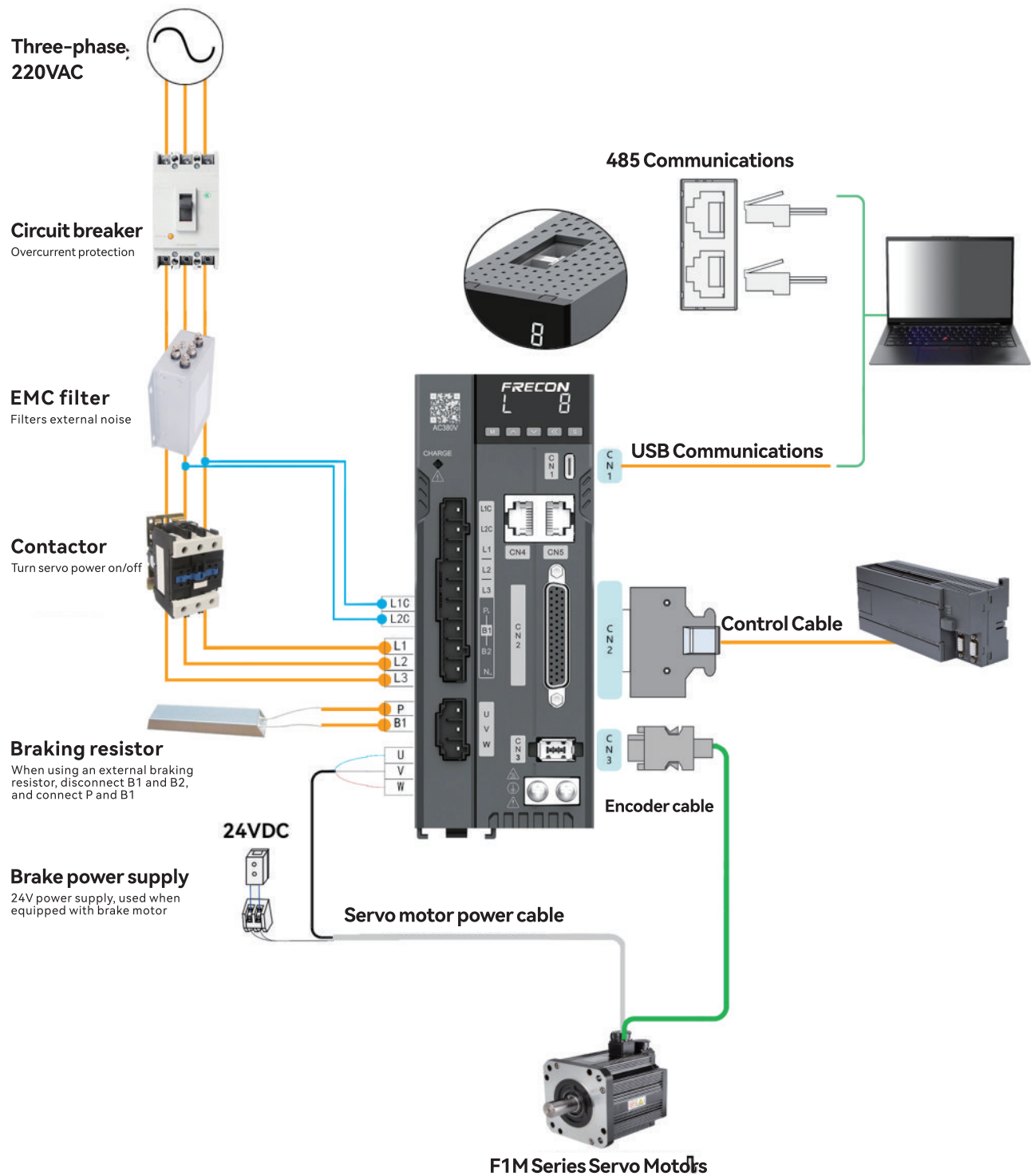
SD100P/SD300P Drive Wiring-Signal Phase 220V



Note: SD100 does not have a built-in braking resistor, so there is no shorting piece between B1 and B2. If necessary, an external braking resistor can be connected (P, B1).

SD100P/SD300P Driver peripheral connections

SD100P/SD300P Drive Wiring - Three Phase 220V



Note:

1. The SD100 does not have a built-in brake resistor, so there is no jumper between B1 and B2. If needed, an external brake resistor (P, B1) can be connected.
2. The three-phase 220V drive can be used as a single-phase drive. For single-phase operation, connect any two of L1, L2, or L3.

SD100P/SD300P Drive Port Definition



③ Main circuit terminal definition

Terminal Identification	Terminal function
L1C、L2C	Control circuit power input terminal
L1、L2、L3	Main circuit power input terminal
P+、N-	Servo bus terminal
P、B1、B2	When use external brake resistor, disconnect between B1 and B2, and connect the external brake resistor across P and B1, not connected to B2
U、V、W	Output to motor U V W power
PE	PE motor ground terminal

② CN3 encoder connection terminal

Pin number	Definition	Describe
1	+5V	5V Power
2	GND	
3	Reserve	-
4	Reserve	-
5	SD+	Encoder signal
6	SD-	

① CN2 Control terminal definition

Signal Name		Default function	Pin Number	Terminal Function
Universal terminals signal	DI1	S-ON	9	Servo enable
	DI2	ALM-RST	10	Alarm fault reset
	DI3	P-OT	24	Forward overtravel
	DI4	N-OT	8	Reverse overtrave
	DI5	ClrPosErr	33	Clear position deviation
	DI8	Reserve	30	-
	DI9	Reserve	12	-
	COM+		11	DI input terminal common end
	DO1+	S-RDY+	7	Servo ready
	DO1-	S-RDY-	6	
	DO2+	COIN+	5	Positioning completed
	DO2-	COIN-	4	
	DO3+	ZERO+	3	Zero speed signal
	DO3-	ZERO-	2	
	DO4+	ALM+	1	Fault output
	DO4-	ALM-	26	
DO5+	HomeAttain+	28	Home return completion	
DO5-	HomeAttain-	27		
Position command	PULSE+		41	Input pulse command mode: Differential drive input, collector open circuit
	PULSE-		43	
	SIGN+		37	Input pulse form: Direction + pulse, A, B phase orthogonal pulse, CW/CCW pulse
	SIGN-		39	
	HPULSE+		38	High-speed input pulse command
	HPULSE-		36	
	HSIGN+		42	
	HSIGN-		40	
	PULLHI		35	External power input interface for command pulse
GND		29	Signal ground	

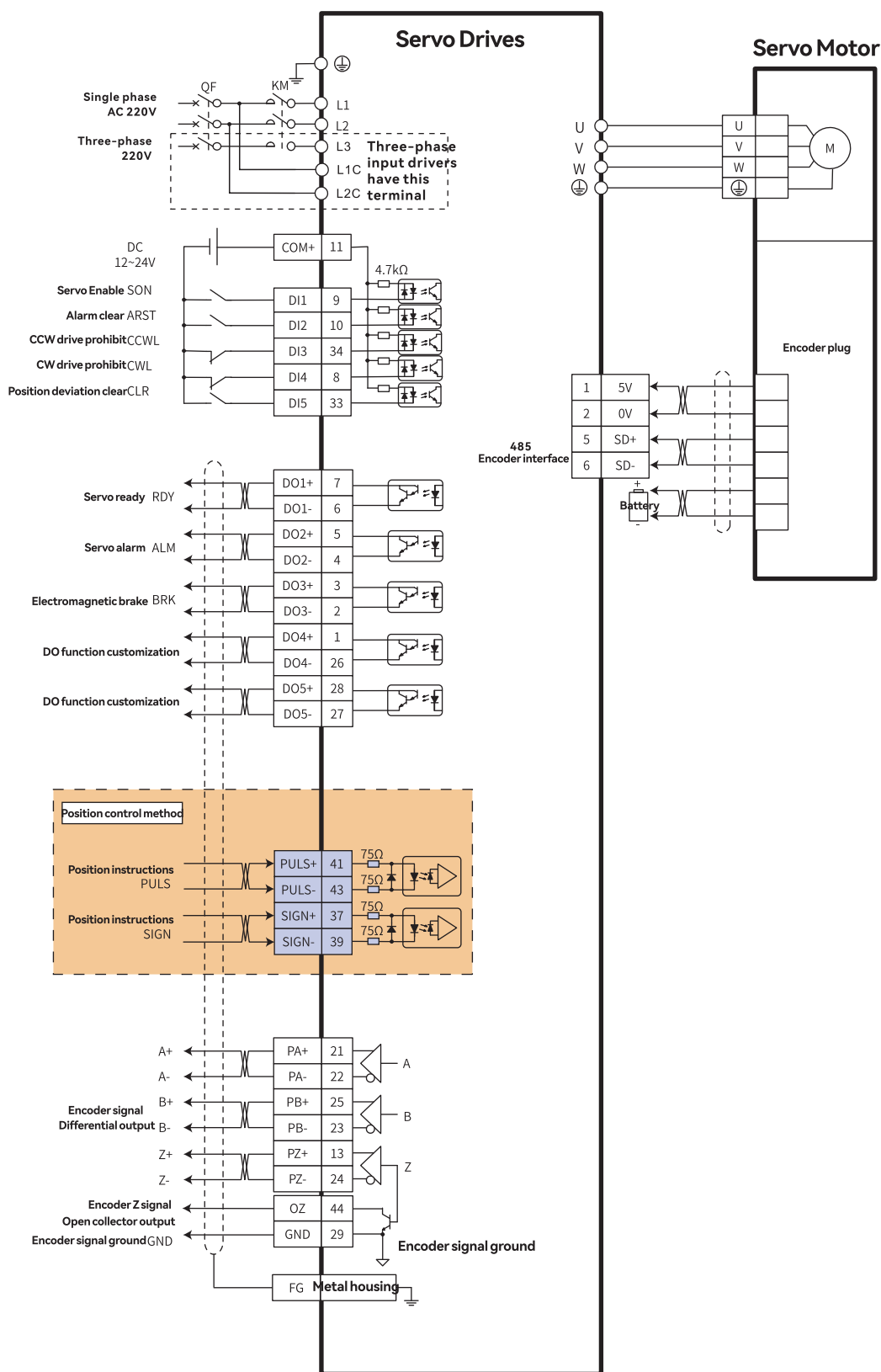
④ CN4/CN5 Communication terminal

Pin Number	Signal name	Describe
1	MBS-	Modbus communication data negative terminal
2	MBS+	Modbus communication data positive terminal
3	PE	Ground terminal
4	NC	Reserve
5	NC	Reserve
6	GND	Internal power ground
7	PE	The drive is grounded and connected to the power supply and motor ground terminals
8	NC	Reserve

Note: For single-phase 220V models, there is no L1C, L2C control loop terminal, and no N-terminal

SD100P/SD300P Control wiring

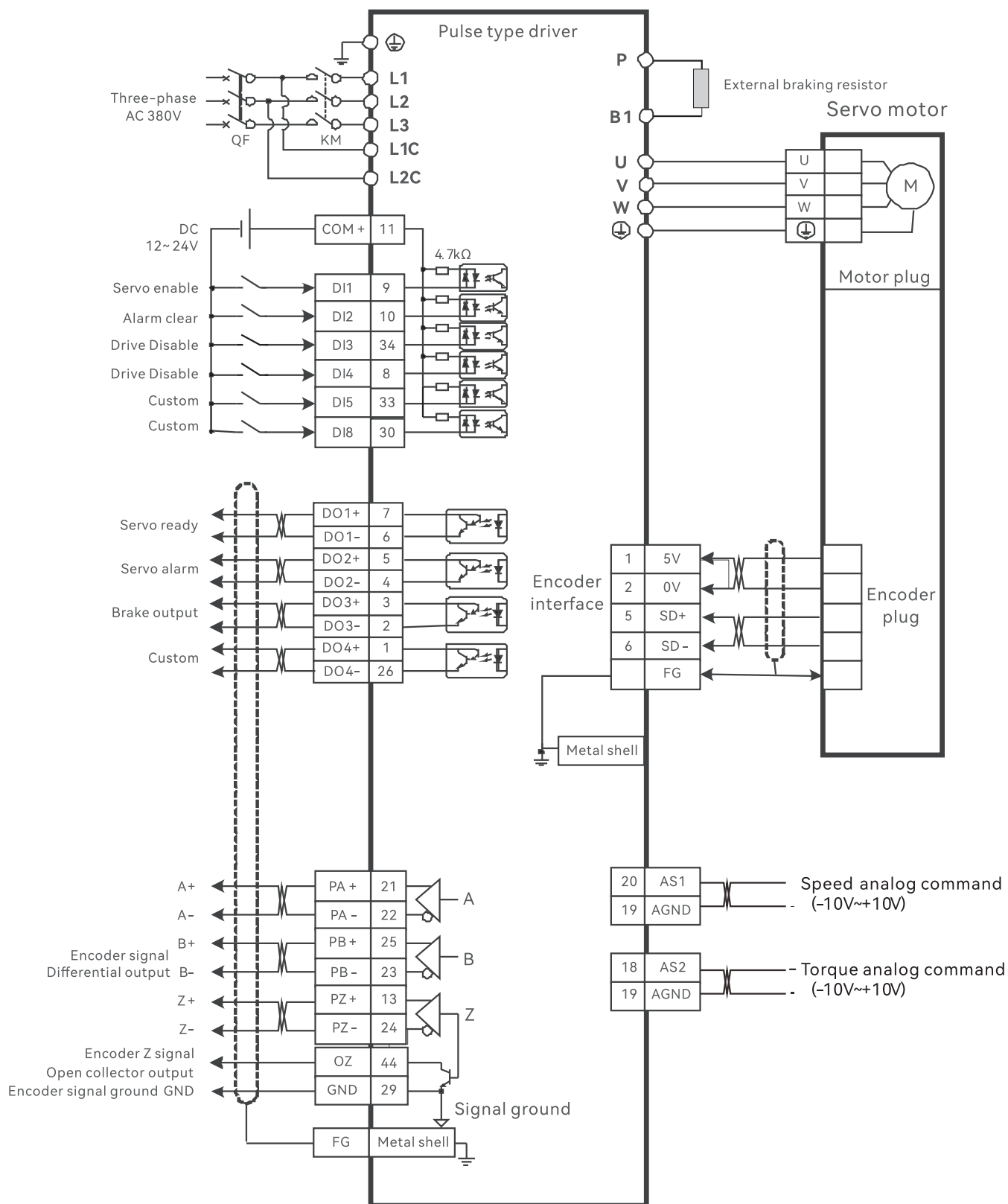
Position mode control wiring



Note: Please use shielded twisted pair wire for pulse input

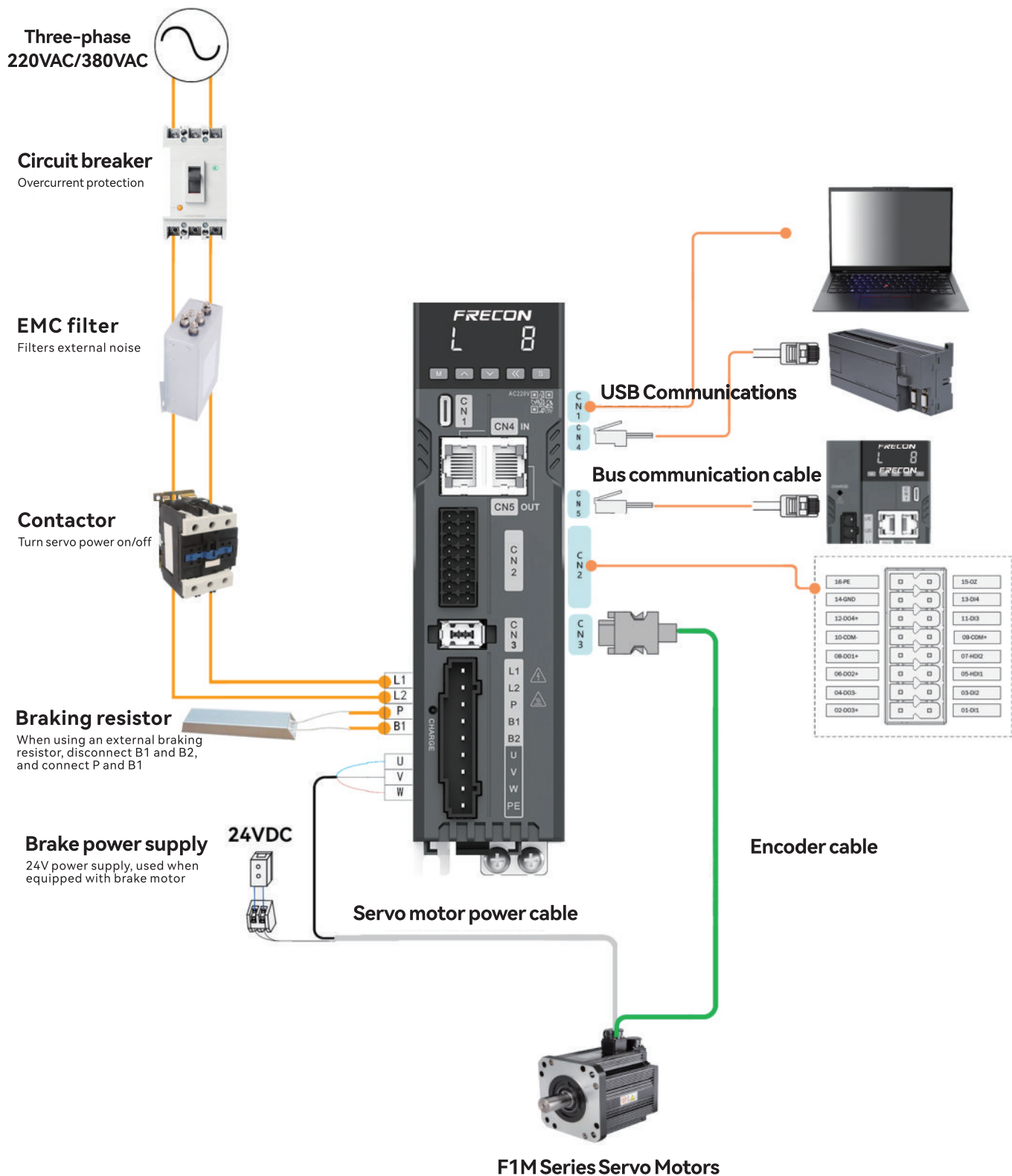
SD100P/SD300P Control wiring

Speed mode/torque mode control wiring



SD100N/SD300N EtherCAT Driver peripheral connections

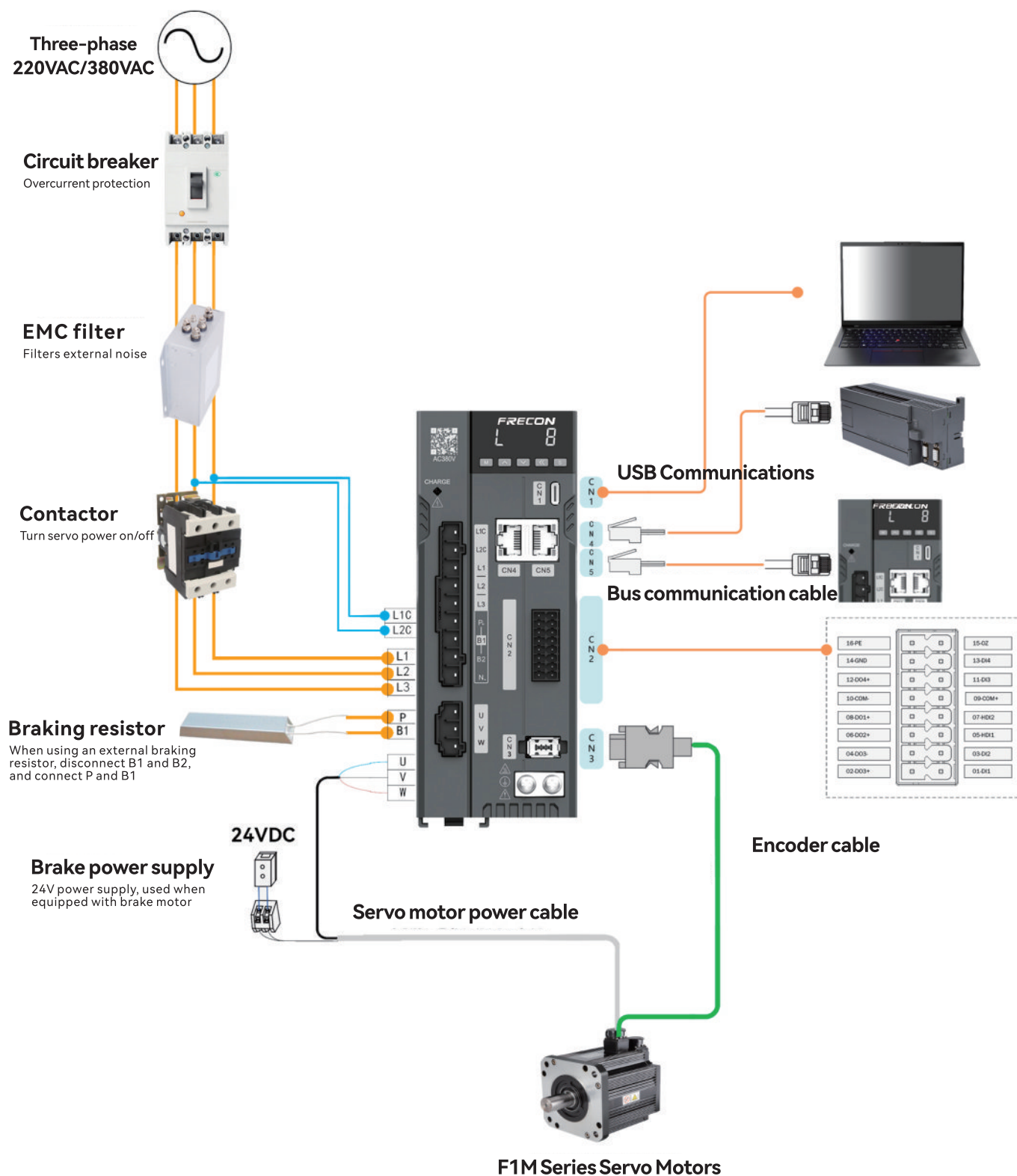
SD100N/SD300N Single-phase 220V



Note: SD100 does not have a built-in braking resistor, so there is no shorting piece between B1 and B2. If necessary, an external braking resistor can be connected (P, B1).

SD100N/SD300N EtherCAT Driver peripheral connections

SD100N/SD300N Three-phase 220V/380V



Note: SD100 does not have a built-in braking resistor, so there is no shorting piece between B1 and B2. If necessary, an external braking resistor can be connected (P, B1).

SD100N/SD300N Drive Port Definition



①CN2 control terminal definition

Signal Name	Default Function	Pin Number	Terminal Function
DI1	S-ON	1	Servo enable
DI2	ALM-RST	3	Alarm fault reset
DI3	P-OT	11	Forward over range
DI4	N-OT	13	Reverse over range
COM+		9	Digital input common
HDI1		5	High speed digital input 1
HDI2		7	High speed digital input 2
DO1+,COM-	S-RDY	8,10	Servo ready
DO2+,COM-	ALM	6,10	Fault output
DO3+,DO3-	BK	3,2	Brake
DO4+,COM-	Reserve	12,10	-
COM-	-	10	DO output common terminal

③Main circuit terminal definition

Terminal Identification	Terminal Function
L1C、L2C	Control circuit power input terminal
L1、L2、L3	Connect external AC power supply: Signal-phase 220V AC,-15%~+10%,50/60Hz
P+、N-	Servo bus terminal
P、B1、B2	When use external brake resistor, disconnect between B1 and B2,and connect the external brake resistor across P and B1, not connected to B2
U、V、W	Output to motor U V W power
PE	PE motor ground terminal

④CN4/CN5 connection terminal

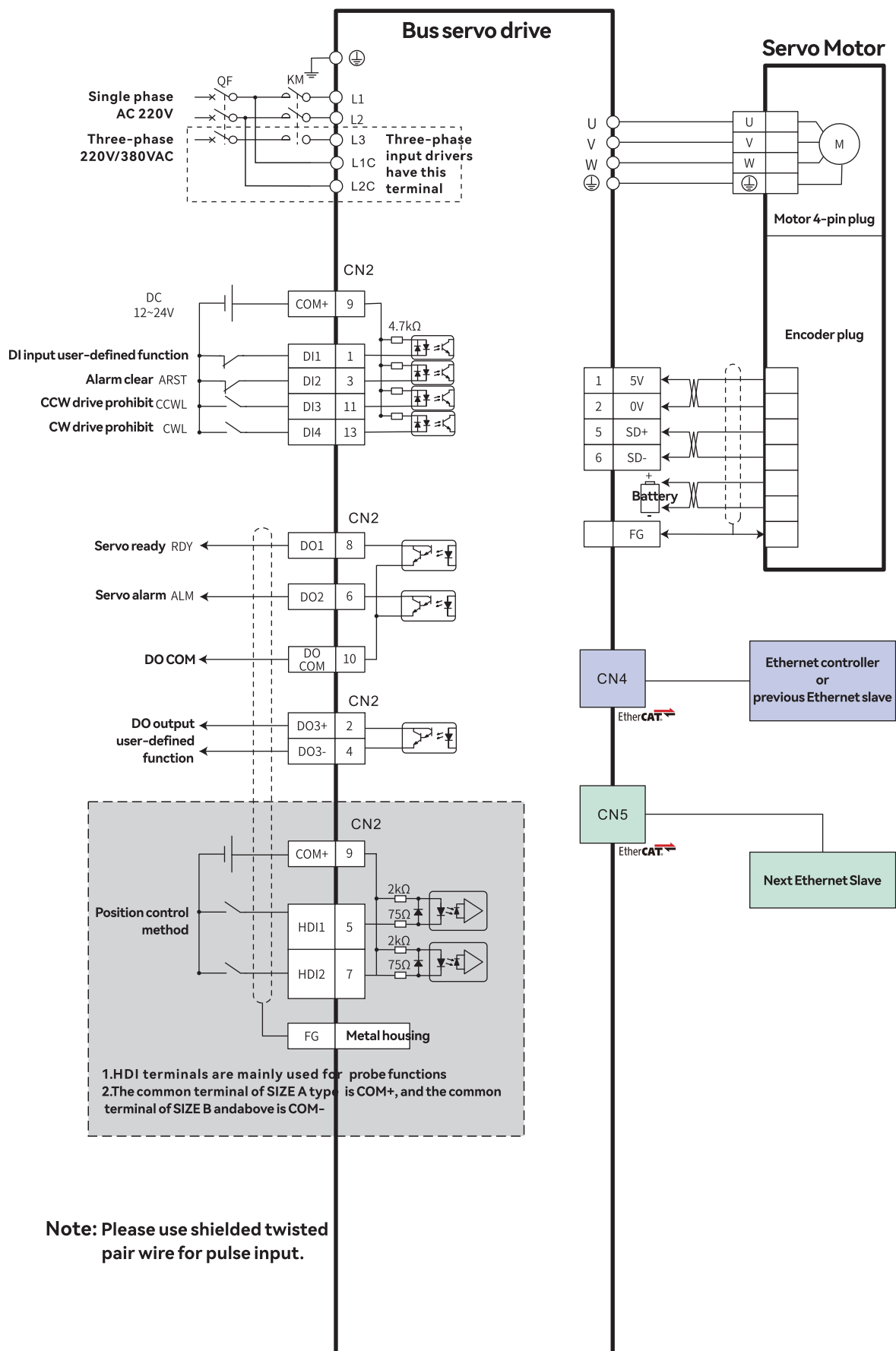
EtherCAT communication terminal, CN4 is IN, CN5 is OUT

②CN3 encoder connection terminal

Pin Number	Terminal Description	Function Description
1	+5V	5V Power
2	GND	
3	Reserve	-
4	Reserve	-
5	SD+	Encoder signal
6	SD-	

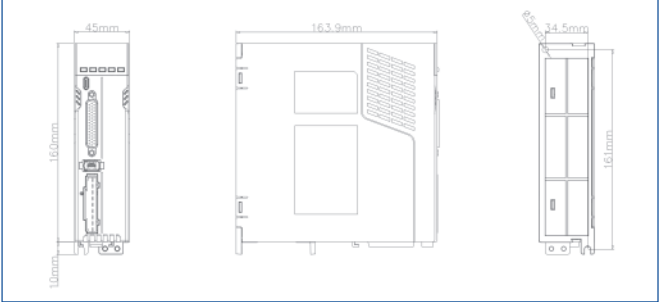
Note: For single-phase 220V models, there are no L1C, L2C control circuit terminals and no N-terminal

SD100N/SD300N Control Wiring

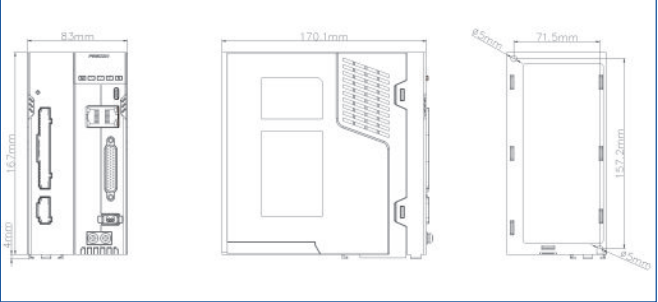


Drive Size

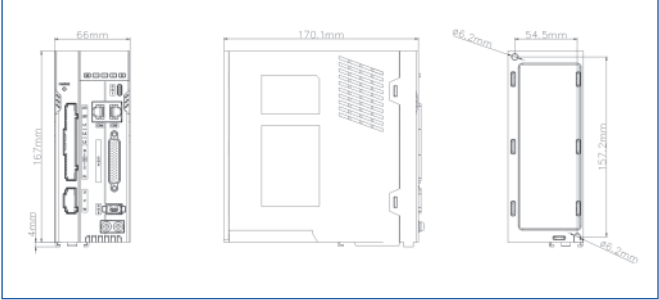
SIZE A Drive Size



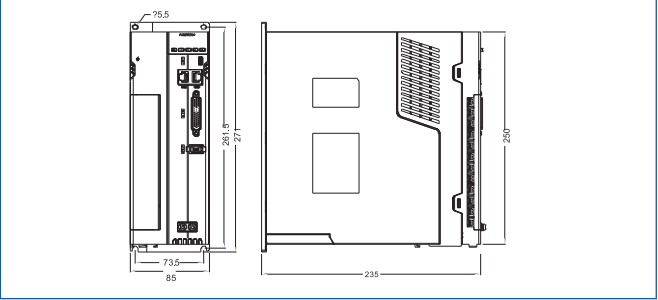
SIZE C Drive Size



SIZE B Drive Size



SIZE D Drive Size



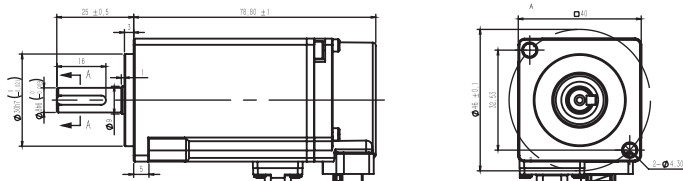
Drive Size							
Frame	Model	Production size(mm)					
		L	W	H	a	b	d
SIZE A	SD100□-2S-1R8	166	45	160	34.5	161	5
	SD100□-2S-3R0						
	SD100□-2S-5R5						
	SD300□-2S-1R8						
	SD300□-2S-3R0						
	SD300□-2S-5R5						
SIZE B	SD100□-2T-7R6	172	66	167	54.5	157.2	5
	SD300□-2T-7R6						
	SD300□-4T-5R4						
SIZE C	SD300□-2T-012	170	83	167	71.5	157.2	5
	SD300□-4T-8R5						
	SD300□-4T-012						
SIZE D	SD300□-4T-017	235	85	271	73.5	261.5	5.5
	SD300□-4T-021						
	SD300□-4T-025						
	SD300□-4T-030						

Servo Motor Specifications

Motor model	Rated output (W)	Input voltage (V)	Rated torque (N.m)	Max torque (N.m)	Rated current (A)	Moment max Current (A)	Rotor inertia (x10 ⁻⁴ kg.m ²)	Rated speed/Most speed(rpm)
F1M-10A30L□-□40	100W	220V	0.318	0.954	1.1	3.5	0.066	3000/6000
F1M-20A30L□-□60	200W	220V	0.64	1.92	1.7	5.7	0.28	3000/6000
F1M-40A30L□-□60	400W	220V	1.27	3.81	2.5	8.4	0.52	3000/6000
F1M-60A30L□-□60	600W	220V	1.91	5.73	3.6	11.2	0.76	3000/6000
F1M-75A30L□-□80	750W	220V	2.39	7.17	4.4	13.8	1.48	3000/6000
F1M-10B30L□-□80	1000W	220V	3.18	9.54	5.8	18.1	1.97	3000/6000
F1M-12B30L□-□11	1200W	220V	3.82	11.46	5.2	16.4	5.2	3000/4500
F1M-12B30H□-□11	1200W	380V	3.82	11.46	3.1	9.3	5.2	3000/4500
F1M-18B30L□-□11	1800W	220V	5.73	17.19	6.8	20.5	7.8	3000/4000
F1M-18B30H□-□11	1800W	380V	5.73	17.19	4	12	7.8	3000/4000
F1M-85A15L□-□13	850W	220V	5.41	16.23	4.6	14.2	12.1	1500/3000
F1M-85A15H□-□13	850W	380V	5.41	16.23	3.1	9.5	12.1	1500/3000
F1M-13B15L□-□13	1300W	220V	8.28	24.84	7.7	23.7	17.5	1500/3000
F1M-13B15H□-□13	1300W	380V	8.28	24.84	5.1	15.6	17.5	1500/3000
F1M-18B15L□-□13	1800W	220V	11.46	34.38	9.8	30.2	23.7	1500/3000
F1M-18B15H□-□13	1800W	380V	11.46	34.38	6.3	19.2	23.7	1500/3000
F1M-23B15L□-□13	2300W	220V	14.64	43.92	12.4	38.4	31.2	1500/3000
F1M-23B15H□-□13	2300W	380V	14.64	43.92	8.5	26.2	31.2	1500/3000
F2M-30B15H□-□18	2900W	380V	18.6	54	10	29	44	1500/2500
F2M-45B15H□-□18	4400W	380V	28.65	71	12.8	31.8	66	1500/2000
F2M-55B15H□-□18	5500W	380V	35	87.5	14	35	102	1500/2000
F2M-75B15H□-□18	7500W	380V	47.76	96	23	46	146	1500/2000

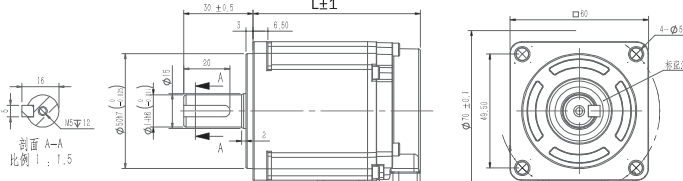
Servo Motor Appearance and Installation Dimensions

40 Flange

Model	L(mm)	Brake	
F1M-10A30L1-□40	78.8	Without	
F1M-10A30L2-□40	105.5	With	

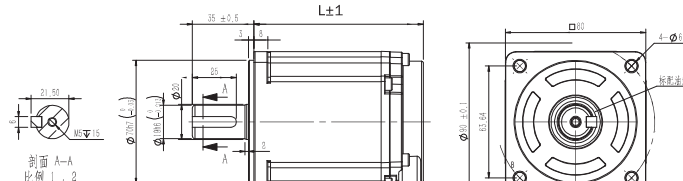
Note: If need other encoder types, please contact FRECON.

60 Flange

Model	L(mm)	Brake	
F1M-20A30L1-□60	73	Without	
F1M-20A30L2-□60	102.5	With	
F1M-40A30L1-□60	90	Without	
F1M-40A30L2-□60	119.5	With	
F1M-60A30L1-□60	107	Without	
F1M-60A30L2-□60	136.5	With	

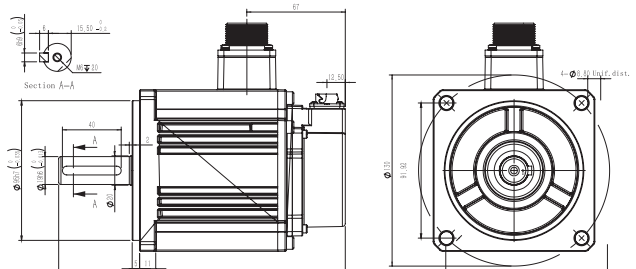
Note: If need other encoder types, please contact FRECON.

80 Flange

Model	L(mm)	Brake	
F1M-75A30L1-□80	96.5	Without	
F1M-75A30L2-□80	130.5	With	
F1M-10B30L1-□80	109.5	Without	
F1M-10B30L2-□80	143.5	With	

Note: If need other encoder types, please contact FRECON.

110 Flange

Model	L(mm)	Brake	
F1M-12B30□1-□11	140	Without	
F1M-12B30□2-□11	165.5	With	
F1M-18B30□1-□11	163	Without	
F1M-18B30□2-□11	188.5	With	

Note: If need other encoder types, please contact FRECON.

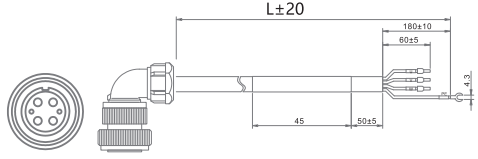
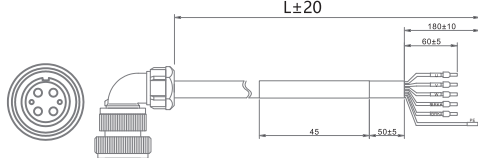
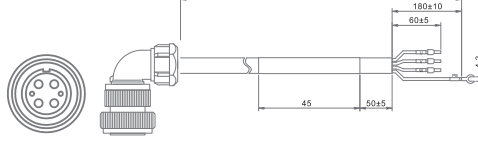
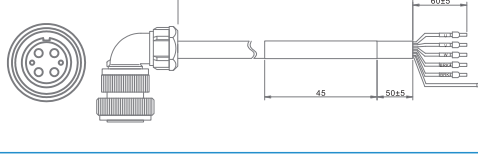
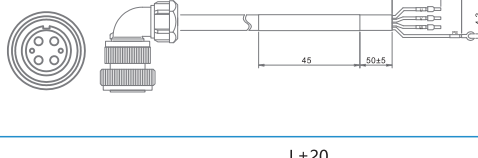
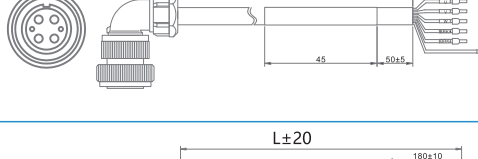
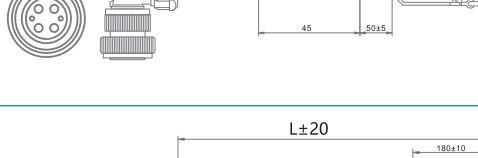
130 Flange

Note: If need other encoder types, please contact FRECON.

Note: If need other encoder types, please contact FRECON.

Servo Drive

Power Cable Selection Table

Motor Model	Cable Name	Cable Model	Length(m)	Cable appearance
F1M aviation plug-in motor (110 flange, 1.2kW; 130 flange, 0.85kW, 1.5kW;)	No brake	LPG-11002-3.0-G	3	
		LPG-11002-5.0-G	5	
		LPG-11002-10.0-G	10	
	Brake	LPB-11002-3.0-G	3	
		LPB-11002-5.0-G	5	
		LPB-11002-10.0-G	10	
F1M aviation plug-in motor (110 flange, 1.8kW; 130 flange, 1.8kW, 2.3kW)	No brake	LPG-11502-3.0-G	3	
		LPG-11502-5.0-G	5	
		LPG-11502-10.0-G	10	
	Brake	LPB-11502-3.0-G	3	
		LPB-11502-5.0-G	5	
		LPB-11502-10.0-G	10	
F2M aviation plug-in motor (180 flange, 3.0kW)	No brake	LPG-11503-3.0-G	3	
		LPG-11503-5.0-G	5	
		LPG-11503-10.0-G	10	
	Brake	LPB-11503-3.0-G	3	
		LPB-11503-5.0-G	5	
		LPB-11503-10.0-G	10	
F2M aviation plug-in motor (180 flange, 4.5kW, 5.5kW, 7.5kW)	No brake	LPG-02503-3.0-G	3	
		LPG-02503-5.0-G	5	
		LPG-02503-10.0-G	10	
	Brake	LPB-02503-3.0-G	3	
		LPB-02503-5.0-G	5	
		LPB-02503-10.0-G	10	

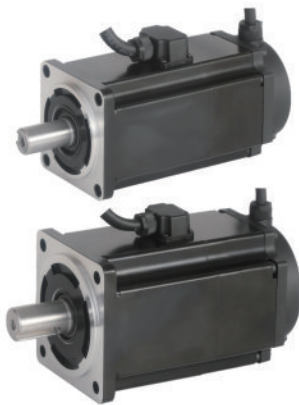
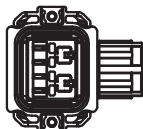
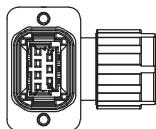
Power Cable Selection Table

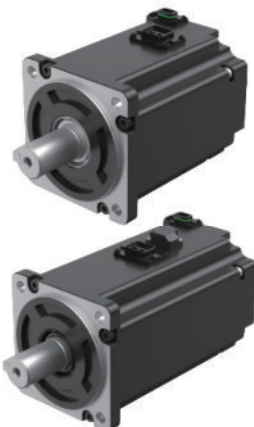
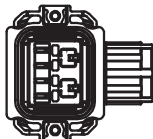
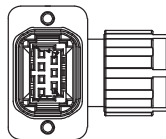
Motor Model	Cable Name	Cable Model	Length(m)	Cable Appearance Diagram
F1M terminal type motor (40 flange motor)	Power cable without brake	LPG-10504-3.0-G	3	
		LPG-10504-5.0-G	5	
		LPG-10504-10.0-G	10	
	Power cable with brake	LPB-10504-3.0-G	3	
		LPB-10504-5.0-G	5	
		LPB-10504-10.0-G	10	
F1M terminal type motor (60/80 flange motor)	Power cable without brake	LPG-10501-3.0-G	3	
		LPG-10501-5.0-G	5	
		LPG-10501-10.0-G	10	
	Power cable with brake	LPB-10501-3.0-G	3	
		LPB-10501-5.0-G	5	
		LPB-10501-10.0-G	10	

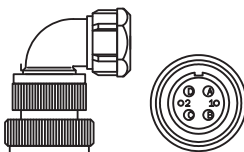
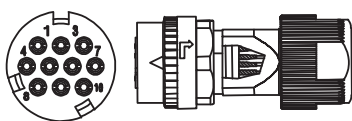
SD100P/N&SD300P/N Total configuration table

Motor Model	Flange	Rated current (A)	Rated torque (N.m)	Voltage (V)	Adapter drive SD100/SD300	Encoder line	Power Line
F1M-10A30L□-□40	40	1.1	0.32	220V	2S-1R8	LEG-01-3.0-G (Without battery) LEB-01-3.0-G (With battery)	LPG-10504-3.0-G4 LPB-10504-3.0-G (With brake)
F1M-20A30L□-□60	60	1.7	0.64		2S-3R0		LPG-10501-3.0-G LPB-10501-3.0-G (With brake)
F1M-40A30L□-□60	60	2.5	1.27				
F1M-60A30L□-□60	60	3.6	1.91				
F1M-75A30L□-□80	80	4.4	2.39				
F1M-10B30L□-□80	80	5.8	3.18				
F1M-12B30L□-□11	110	5.2	3.82		2T-7R6		
F1M-12B30H□-□11	110	3.1	3.82	380V	4T-5R4	LEG-02-3.0-G (Without battery) LEB-02-3.0-G (With battery)	LPG-11002-3.0-G LPB-11002-3.0-G (With brake)
F1M-18B30L□-□11	110	6.8	5.73	220V	4T-5R4		
F1M-18B30H□-□11	110	4.0	5.73	380V	4T-7R6		
F1M-85A15L□-□13	130	4.6	5.41	220V	2T-7R6		
F1M-85A15H□-□13	130	3.1	5.41	380V	4T-5R4		
F1M-13B15L□-□13	130	7.7	8.28	220V	2T-012		
F1M-13B15H□-□13	130	5.1	8.28	380V	4T-5R4		
F1M-18B15L□-□13	130	9.8	11.46	220V	2T-012		LPG-11502-3.0-G LPB-11502-3.0-G (With brake)
F1M-18B15H□-□13	130	6.3	11.46	380V	4T-8R5		
F1M-23B15L□-□13	130	12.4	14.64	220V	2T-012		
F1M-23B15H□-□13	130	8.5	14.64	380V	4T-012		
F2M-30B15H□-□18	180	11.6	19.1	380V	4T-012	LEG-02-3.0-G (Without battery) LEB-02-3.0-G (With battery)	LPG-11503-3.0-G LPB-11503-3.0-G (With brake)
F2M-45B15H□-□18	180	16.6	28.65	380V	4T-017		LPG-02503-3.0-G LPB-02503-3.0-G (With brake)
F2M-55B15H□-□18	180	21.4	35	380V	4T-021		
F2M-75B15H□-□18	180	26.7	47.76	380V	4T-025		

Cable Terminal

40 flange motor side terminal definition	Motor power cable 6P connector	Motor encoder 7P connector		
				
	Pin number	Signal name	Pin number	Signal name
	1	W	1	5V
	2	V	2	0
	3	U	3	SD+
	4	PE	4	SD-
	5	BK+	5	PE
6	BK-	6	BAT+	
		7	BAT-	

60/80 flange motor side terminal definition	Motor power cable 6P connector	Motor encoder 7P connector		
				
	Pin number	Signal name	Pin number	Signal name
	1	W	1	5V
	2	V	2	0
	3	U	3	SD+
	4	PE	4	SD-
	5	BK+	5	PE
6	BK-	6	BAT+	
		7	BAT-	

110/130/180 flange motor side terminal definition	Motor power 6P aviation head	Motor encoder 10P aviation head	
			
Pin number	Signal name	Pin number	Signal name
A	White U	1	/
B	Red V	2	E-
C	Black W	3	E+
D	Yellow-green PE	4	SD-
1	Brown BRK+	5	0V
2	Blue BRK-	6	SD+
		7	5V
		8	/
		9	/
		10	PE

Accessory List

Accessory Name	Accessory Parameter	Accessory Appearance
Pulse 44pin control terminal head	-	
Bus control terminal 16pin	-	
Main loop plug terminal 100-750W	L1, L2,P,B1,B2,U,V,W,PE	
Main loop plug and unplug terminals 1000-3000W	L1C,L2C,L1,L2,L3,P+,B1,B2,N-	
	U,V,W	
Plug and remove the terminal crimping clip	-	
9P/13P control cable 1.5m	9P:PULSE+, PULSE-, SIGN+, SIGN-, DI1, COM+, DO1+, DO1-, GND 13P:PULSE+, PULSE-, SIGN+, SIGN-, PULLHI, DI1, DI2, COM+, DO1+, DO1-, DO2+, DO2-, GND	
EtherCAT dedicated network cable (Category 5)	Length is 0.3m, 2m	

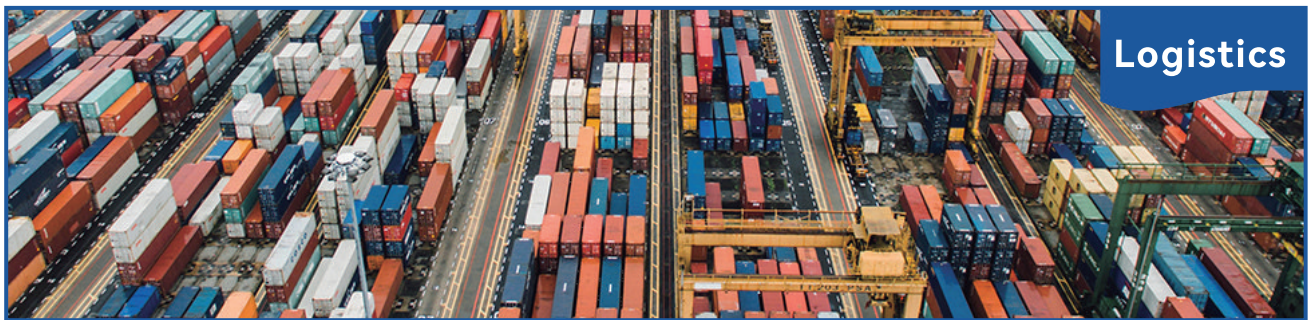
Application



Robot



Laser



Logistics



Machine
tool



Packaging



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