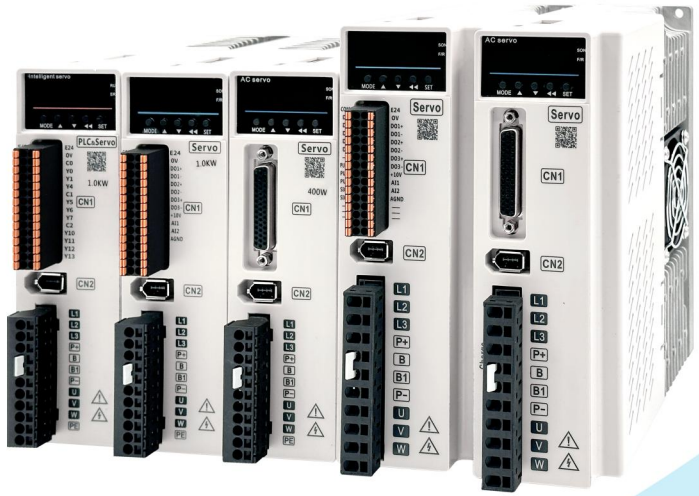


Craftsmanship forges excellence,
and quality builds a brand.

The product information outlined in this manual is for reference only and is subject to the actual product. Any changes will not be notified separately. Our company reserves the right of final interpretation.

edition
V1.0

PS Series AC Servo system





All components utilized are of industrial grade, with all core power components sourced exclusively from imported brands. The surface treatment employs military-grade three-proof paint, suitable for harsh working conditions.

All PCBAs undergo high and low temperature aging processes, and 100% of them are subject to automated testing using detection equipment.



Reliable quality Assurance system





After assembly, all complete units must undergo a simulation test under full load conditions on the motor coupling platform to ensure their normal operation. Subsequently, they will undergo a 12-hour high-temperature aging test.

Upon completion of the aging process, each unit will undergo another comprehensive test before being packaged and stored in the warehouse.

Application occasion

PS700 driver is widely used in packaging, hardware processing, winding machine, wire harness processing, woodworking machinery and other industries.



Packaging industry



Packaging industry



Winding machine industry



Wire harness processing industry



Woodworking machinery industry



Servo tool magazine



Truss manipulator



Servo electric cylinder

PS700/702 Series AC Servo

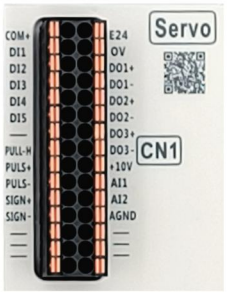
Driver functions

- Standard position, speed, torque mode
- Multi-section speed and position functions
- Built-in simple tension winding and unwinding control function
- Two types of control terminal connectors: Built-in RS485 communication port
- Built-in RS485 communication port
- Supporting MODBUS-RTU protocol
- Two-channel analog input, built-in 10V power supply
- Built-in brake resistor

DB solder joint



European terminal block



Servo motor

- Five pairs of extremely high response servomotors;
- Motor of 60/80 specification supports butt plug Ample connector and direct compression connector;
- Pressure joints shall be used in severe environment such as damp and dust;

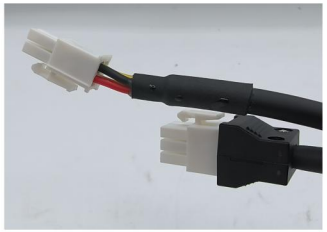
Direct compression joint motor



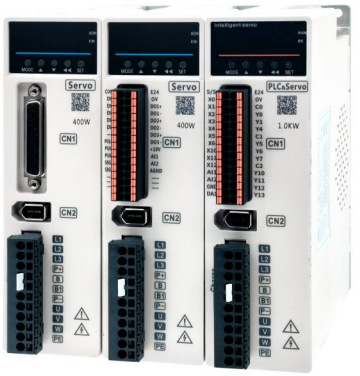
Encoder

- 17 bit absolute value encoder, with 131072 pulses per revolution,
- Can remember 65535 cycles of absolute position Support magnetic encoders and photoelectric encoders
- When using a multi turn absolute value encoder, the device upper limit and origin switch can be eliminated

Plug in Ampu connector



Model Numbering Rule – Drive Series



PS 700 – S 0R7 – X

① ② ③ ④ ⑤

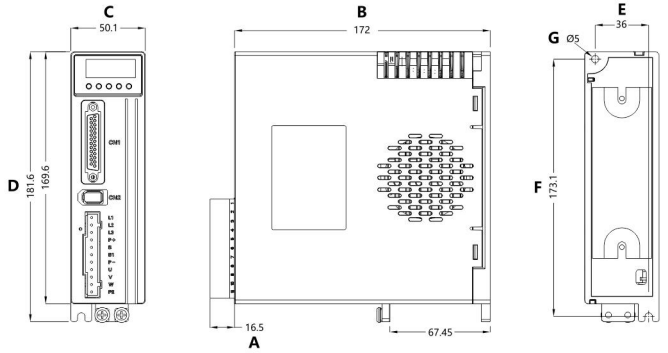
① **Brand Name** PS Series Servo Drives	③ **Power Supply Voltage Codes** S: Single-phase 220V 3S: Three-phase 220V T: Three-phase 380V	④ **Power Code** 0R1 = 100W 1R5 = 1500W 0R2 = 200W 2R3 = 2300W 0R4 = 400W 3R0 = 3000W 0R7 = 750W 4R5 = 4500W 1R0 = 1000W 5R5 = 5500W 1R3 = 1300W 7R5 = 7500W
② **Functional Differentiation** 700 : Standard type with DB solder-type connector 702 : With European-style terminal block 770 : Servo drive with built-in PLC		⑤ **Non-standard Code** Blank for standard product

Power Rating and Enclosure Size Classification of Drives

Power Supply	Power Range	Mechanical Dimensions
AC220V	0.1 - 1.3kW	SIZE A
	1. 5 - 3. 8kW (3S included as standard)	SIZE B
AC380V	1 - 3kW	
	3 - 4.5kW	SIZE C
	4.3 - 11kW	SIZE D

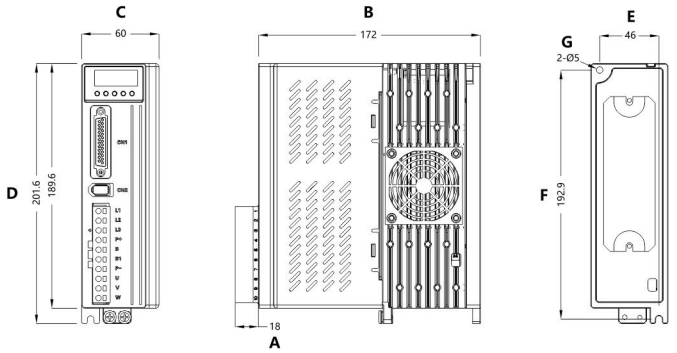
Outline dimension diagram

■ Single phase/Three phase 220V: 100W~1300W(SIZE A shell size)



model	weight (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
100w~1300w	1.36	16.5	172	50.1	181.6	36	173	5

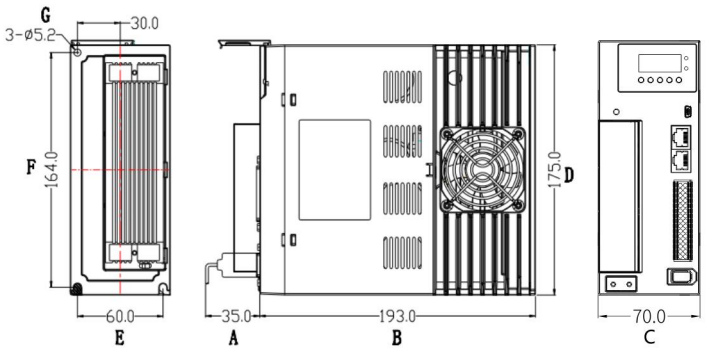
■ Single phase/Three phase 220V: 1.5kW~3.8kW,
Three phase 380V: 1kW~3kW(SIZE B shell size)



model	weight (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
1.5kw~3.8kw	1.63	18	172	60	201.6	46	192	5

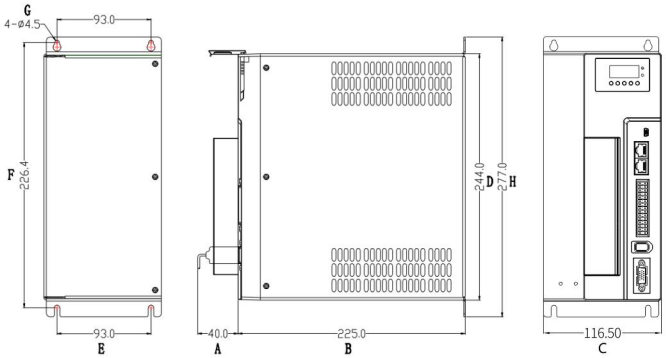
Outline dimension diagram

■ Three phase 380V: 3kW~4.5kW(SIZE C shell size)



model	weight (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
3kw~4.5kw	1.85	35	193	70	175	60	164	5.2

■ Three phase 380V: 4.3kW~11kW(SIZE D shell size)



model	weight (kg)	A (mm)	B (mm)	C (mm)	D (mm)	E (mm)	F (mm)	G (mm)
4.3kw~11kw	4.55	40	225	116.5	244	93	226	4.5

Naming rules for servo motors



D	M	4	–	W	08	M	07	S	30	S	–	B	N
①	②	③		④	⑤	⑥	⑦	⑧	⑨	⑩		⑪	⑫

① **Company Product Name**
D: DPSON Motor Series

② M: Magnetic encoder
P: Photoelectric encoder

③ 4 = 17 bits on a lap
5 = multiturn 17 bits

④ **Number of motor poles**
W=Five pairs of poles
Empty=four pairs of poles

⑤ **Flange size**
04=40 06=60 08=80
13=130 18=180

⑥ **Motor inertia level**
M: Medium inertia
L: Low inertia;
H: High inertia

⑦ **Power code**
01=100W 15=1500W
02=200W 18=1800W
04=400W 20=2000W
07=750W 23=2300W
10=1000W 29=2900W
13=1300W 44=4400W

⑧ **Voltage level**
S: 220V T: 380V

⑨ **Speed * 100**
15=1500 revolutions per minute
20=2000 revolutions per minute
30=3000 revolutions per minute

⑩ S:Direct compression joint motor
Empty:Docked Anpu plug aviation head motor

⑪ B=With brake motor
Empty=standard motor

⑫ **Non-standard code**
Empty represents standard product

Motor Model and Specification Table

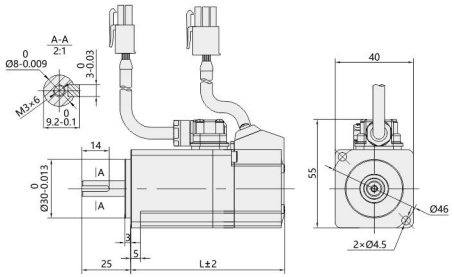
Serial Number	Motor Specification Parameters					Matching Driver
	Model	Rated Power (kW)	Rated Current (A)	Rated Torque (N.M)	Rated Speed (r/min)	Model
1	DM4-W04M01S30	0.1	0.9	0.32	3000	PS700-S0R1
2	DM4-W06M02S30	0.2	1.2	0.64	3000	PS700-S0R2
3	DM4-W06M04S30	0.4	2.8	1.27	3000	PS700-S0R4
4	DM4-W06M06S30	0.6	4	1.91	3000	PS700-S0R7
5	DM4-W08M07S30	0.75	4.6	2.39	3000	PS700-S0R7
6	DM4-W08M10S30	1	5.5	3.2	3000	PS700-S1R0
7	DM4-W13L13S25	1.3	7	5	2500	PS700-S1R3
8	DM4-W11M13S30		8	5	3000	
9	DM4-W13L15S25	1.5	7	6	2500	PS700-S1R5
10	DM4-W11M15S30		8	6	3000	
11	DM4-W13L15S15		9.5	10	1500	
12	DM4-W13L22S25	2.2	9.5	8.34	2500	PS700-S2R3
13	DM4-13M23S15	2.3	9.5	15	1500	
14	DM4-W13L30S25	3	12	11.5	2500	PS700-S3R0
15	DM4-13M38S25	3.8	13.5	15	2500	PS700-S3R8L
16	DM4-18M30S15	3	12	19	1500	
17	DM4-W13L13T25	1.3	4.5	5	2500	PS700-T1R3
18	DM4-W13L15T25	1.5	4.5	6	2500	PS700-T1R5
19	DM4-W13L15T15	1.5	8	10	1500	
20	DM4-W13L22T25	2.2	5.8	8.34	2500	PS700-T2R3
21	DM4-13M23T15	2.3	5	15	1500	
22	DM4-W13L30T25	3	8.5	11.5	2500	PS700-T3R0
23	DM4-13M38T25	3.8	9.5	15	2500	PS700-T3R8
24	DP5-18M30T15	3	7.5	19	1500	
25	DP5-18M43T15	4.3	10	28	1500	PS700-T4R5
26	DP5-18M45T20	4.5	9.5	21.5	2000	
27	DP5-18M55T15	5.5	12	35	1500	PS700-T5R5
28	DP5-18M75T15	7.5	20	48	1500	PS700-T7R5

Explain:
1. The above table is a commonly used motor configuration table. If you have other specification requirements, please contact the manufacturer's sales and service personnel
2. Motor insulation grade: F
3.Conventional motor protection level: IP65
4.Operating environment: -20-+40 degrees Celsius, humidity<90%
5. Other working environments: indoor, no corrosive gases, no flammable or explosive materials.

Naming rules for servo motors

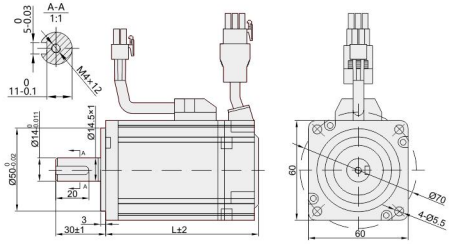
Motor model (40 flange)

Motor model	power	L without band-type brake(mm)	L band brake (mm)
DM4-W04M01S30	100W	80	113



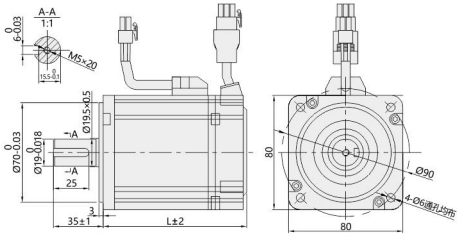
Motor model (60 flange)

Motor model	power	L without band-type brake(mm)	L band brake (mm)
DM4-W06M02S30	200W	77	109
DM4-W06M04S30	400W	94	126
DM4-W06M06S30	600W	110	140



Motor model (80 flange)

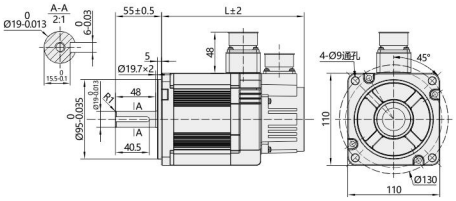
Motor model	power	L without band-type brake(mm)	L band brake (mm)
DM4-W08M07S30	750W	105	142
DM4-W08M10S30	1000W	123	160



Naming rules for servo motors

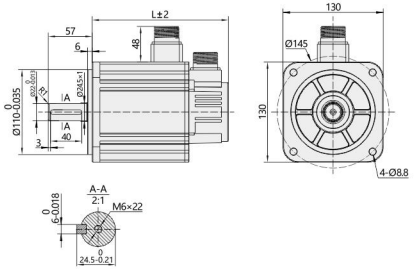
Motor model (110 flange)

Motor model	power	L without band-type brake(mm)	L band brake (mm)
DM4-W11M13S25	1300W	170	208



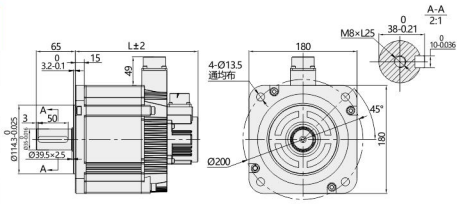
Motor model (130 flange)

Motor model	power	L without band-type brake(mm)	L band brake (mm)
DM4-W13L13S25	1300W	153	188
DM4-W13L15S25	1500W	153	188
DM4-W13L15S15	1500W	178	212
DM4-W13L22S25	2200W	178	212
DM4- 13M23S15	2300W	231	282
DM4-W13L30S25	3000W	178	212
DM4- 13M38S25	3800W	231	282



Motor model (180 flange)

Motor model	power	L without band-type brake(mm)	L band brake (mm)
DP5-18M30T15	3000W	205	252
DP5-18M45T20	4500W	215	262
DP5-18M44T15	4400W	232	279
DP5-18M55T15	5500W	260	307
DP5-18M75T15	7500W	305	352



Note:

1. The above models do not cover all motor specifications. For dimensions of unlisted models, please contact our sales representatives.
2. Due to product upgrades and improvements, the motor length may vary slightly.

Power cable naming rule

PS – PW 1 – L 3.0 – X

① ② ③ ④ ⑤ ⑥

① PS series cable	③ 1 = Ample line 28 = 130Aviation patch cord below Aviation patch cord 32 = 180 aviation plug-in line S = Direct Compression Joint Wire	④ L: Ordinary cable H: High flexible wire
		⑤ **Cable length** 3.0 = 3m 5.0 = 5m
② PW: power cable (POWER)		⑥ **Non-standard code** Blank: standard product

Encoder cable Nomenclature Rules

PS – ENC 1 – L 3.0 – X

① ② ③ ④ ⑤ ⑥

① PS series cable	③ 1 = Ample plug cable 2 = Straight plug cable 14 = Cable with small aviation connector 28 = Cable with large aviation connector S = Direct Compression Joint Wire	④ L: Ordinary cable H: High flexible wire
		⑤ **Cable length** 3.0 = 3m 5.0 = 5m
② ENC: Encoder cable (ENCODER)		⑥ **Non-standard code** Blank: standard product

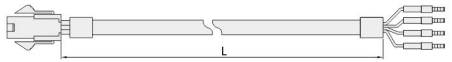
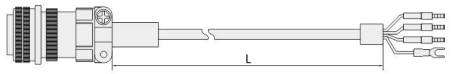
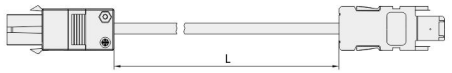
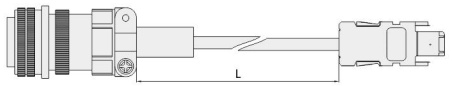
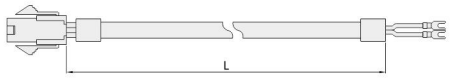
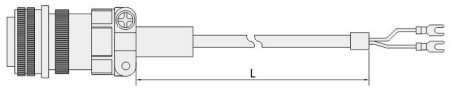
Nomenclature rule of brake cable

PX – BK 1 L 3.0 – X

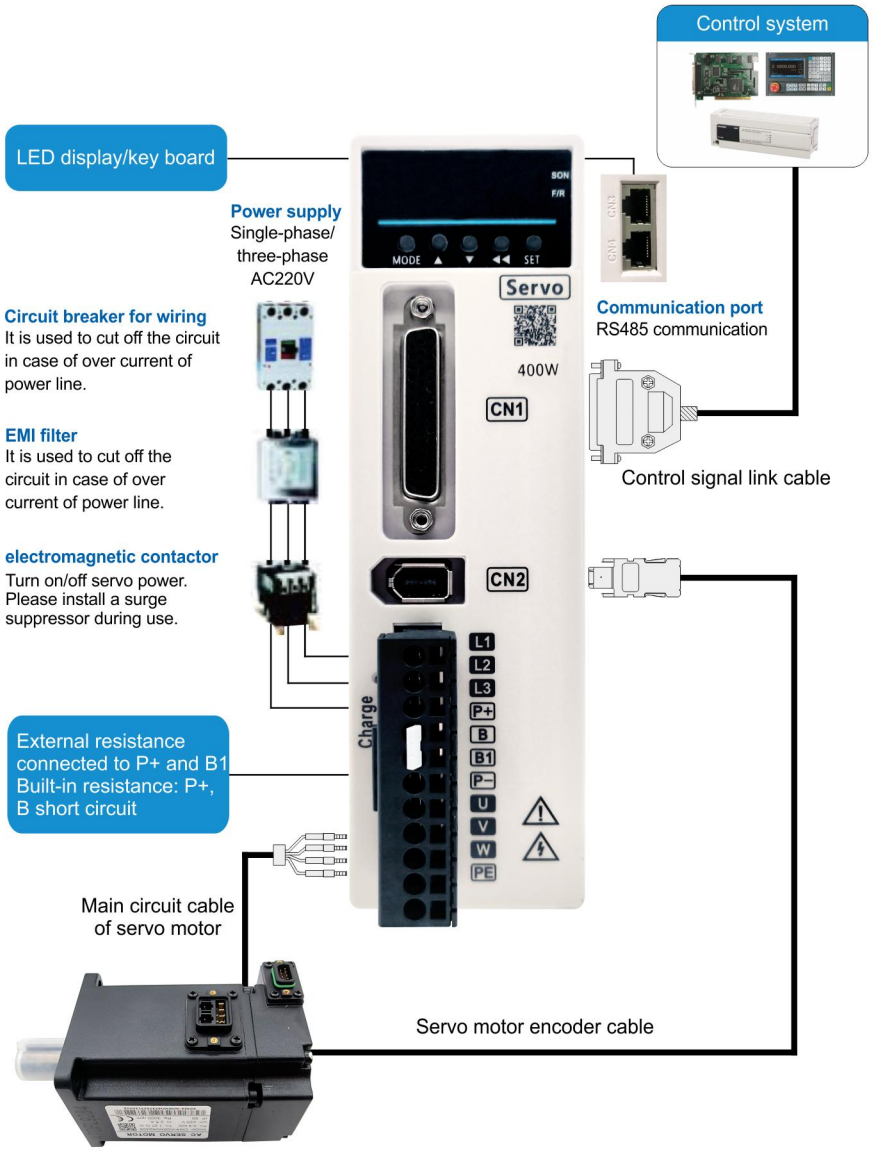
① ② ③ ④ ⑤ ⑥

① Shared by PS, DSL and DPX series	③ 1 = Ample wire 2 = aviation plug 2-core wire 3 = aviation plug 3-core wire 4 = aviation plug 4-core wire 5 = small aviation plug 2-core wire	④ L: Ordinary cable
		⑤ **Cable length** 3.0 = 3m 5.0 = 5m
② BK: Brake cable(BRAKE)		⑥ **Non-standard code** Blank: standard product

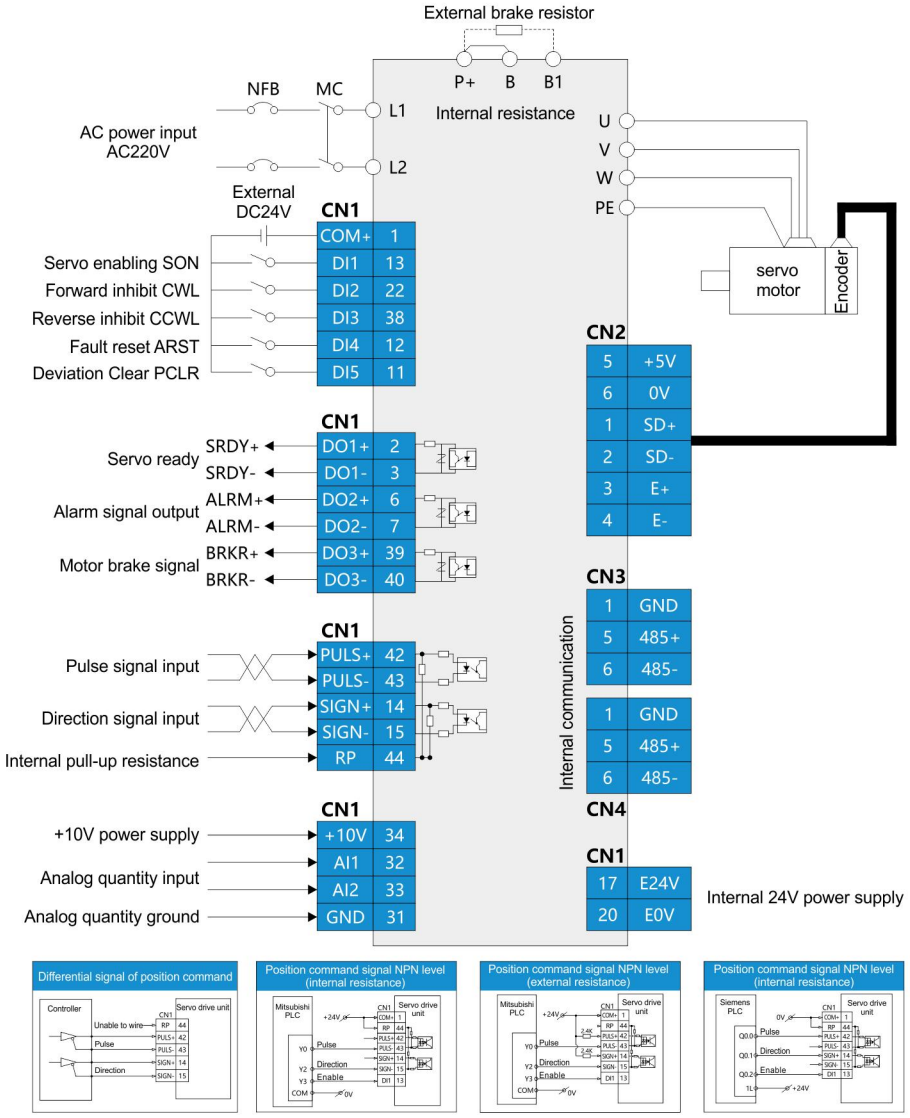
Selection of supporting connecting cables

Supporting model selection	Ordering model	L Length of cable	Outline drawing of cable
60 and 80 Engine base power cable	PS-PW1-L3.0	3m	
	PS-PW1-L5.0	5m	
	PS-PWS-L3.0	3m	
	PS-PWS-L5.0	5m	
110 and 130 Engine base power cable	PS-PW28-L3.0	3m	
	PS-PW28-L5.0	5m	
	PS-PW28-L3.0-Y	3m	
	PS-PW28-L5.0-Y	5m	
180 Engine base power cable	PS-PW32-L3.0-Y	3m	
	PS-PW32-L5.0-Y	5m	
60 and 80 Engine base encoder cable	PS-ENC1-L3.0	3m	
	PS-ENC1-L5.0	5m	
	PS-ENCS-L3.0	3m	
	PS-ENCS-L5.0	5m	
110,130 and 180 Engine base encoder cable	PS-ENC28-L3.0	3m	
	PS-ENC28-L5.0	5m	
60 and 80 Engine base brake cable	PX-BK1-L3.0	3m	
	PX-BK1-L5.0	5m	
110,130 and 180 Engine base brake cable	PX-BK3-L3.0	3m	
	PX-BK3-L5.0	5m	

Wiring diagram of servo driver and peripheral equipment



PS700/PS702 Drive System Wiring Diagram

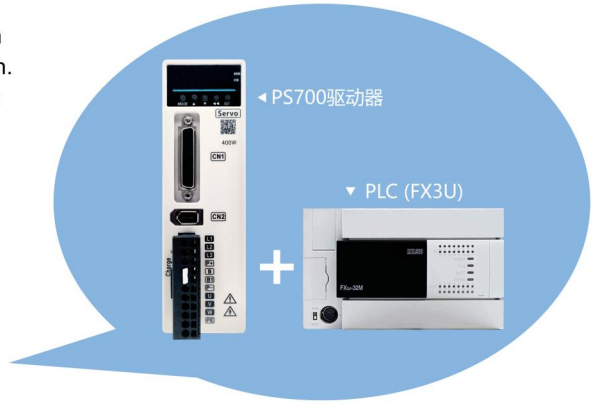


Description:

1. Standard drive is single-phase AC220 power input, only connected to L1 and L2 terminals (three-phase power supply shall be described when ordering)
2. When NPN 24V pulse control is used,+24V is directly connected to pin 44, and pin 42 and pin 14 are not connected; +24V power supply cannot be directly connected to pins 42 and 14.
3. The 24V power supply provided inside can only output 100mA power supply at most, without relay, touch screen and other loads.

PS770 intelligent servo driver PLC&Servo

This servo driver has built-in standard 20-point PLC function. PLC system is compatible with FX3U version. Users can use GX works2 software for programming and debugging.

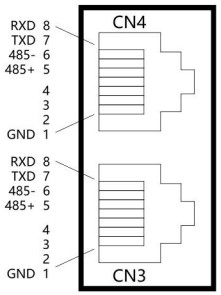


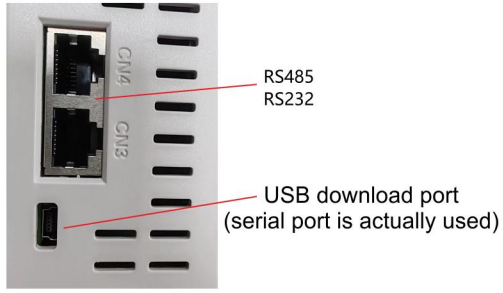


Hardware Configuration

- ☑ 10-Point Universal Input
- ☑ 10-point universal output (including 2-channel 100K pulse output)
- ☑ 2-Channel 0~10V analog input
- ☑ Channel 0~10V analog output
- ☑ 2-channel 100K pulse output
- ☑ 16K Steps Program capacity
- ☑ Two serial communication ports, one RS232 and one RS485 respectively. RS485 supports ODBUS-RTU master and slave protocols.
- ☑ One MINI USB download port
- ☑ Suitable for 100W-1300W drives
- ☑ Support electronic gear synchronous following function (also as hand wheel input)

PLC communication port description







RS232 download cable



Mini USB download cable

Serial port pin definition

CN3/4 Pin Tag No.	Signal function	explain	Remarks
5	485+	RS485 interface	Supporting MODBUS - RTU master and slave protocols
6	485-		
1	GND	RS232 interface	Touch screen or download program available
7	TXD		
8	RXD		

Terminal description

Name	Terminal Definition	Explain
Input power terminal	S/S	Support NPN and PNP input level
Switching value input	X0~X12	10-Points in total (X0~X6 supports high-speed counting and interruption)
Switching value output	Y0~Y13	10-Points in total (YO/Y1 can output 100K pulse)
Output common terminal	C0,C1,C2	Support NPN output level
Analog quantity input	AI1,AI2	Total two 0~10V voltages
Analog quantity output	DA1	Total 1 circuit 0~10V voltage
Common terminal of analog quantity	GND	
Internal 24V power supply	E24,0V	Maximum output power 100mA