

VEICHI

SD710 Series General-purpose Servo Drive



VEICHI

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Official Website

*Version: Y5/2-11

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Stock code:688698

About Us



Veichi Electric (Stock Code: 688698) specializes in electrical transmission and industrial control, operating as an integrated high-tech enterprise in R&D, production, and sales of industrial automation products. With a vision to lead in smart industry and green energy solutions, the company leverages its R&D and manufacturing hubs in Suzhou, additional R&D centers in Shenzhen and Xi'an, and wholly-owned subsidiaries overseas, consistently serving customers worldwide with competitive and reliable solutions.

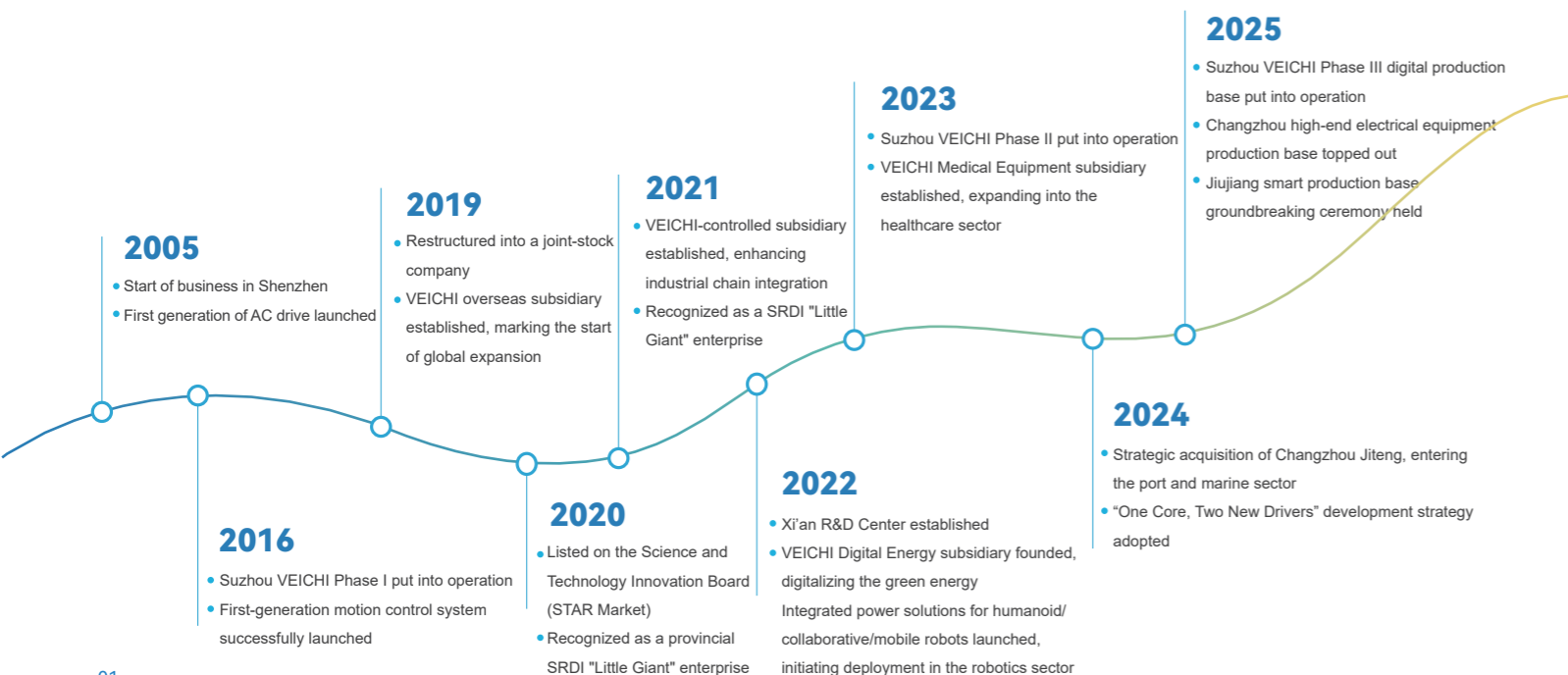
Under the "One Core, Two New Drivers" strategy, Veichi focuses on industrial automation, offering AC drives, servo systems, and control systems widely applied across heavy and light industries, as well as high-end equipment sectors, supporting the digital and intelligent transformation of manufacturing with its tailored solutions. Simultaneously, in two emerging fields, it provides one-stop solutions for humanoid, collaborative, and mobile robots in embodied intelligence, while in green energy, it delves into segments like photovoltaic, energy storage, and hydrogen energy, to "connect every device with green power," fostering a synergistic growth between core operations and new ventures.

Sustained R&D has yielded a portfolio of proprietary patented technologies including silicon carbide application, HF injection, motor controls and protections (auto-tuning, flying-start, high-speed flux-weakening, V/F control, vector control), high-density water-cooling layout, and IGBT drive protection. As of September 30, 2025, Veichi holds 234 patents, with 66 for invention.

Over two decades of steady growth, Veichi has earned numerous certifications and accolades from national and regulatory authorities, including "High-Tech Enterprise," "Postdoctoral Research Workstation," and provincial honors like "Engineering Technology Research Center," "Enterprise Technology Center," and "Industrial Internet Development Demonstration Enterprise (Benchmark Factory Category)."

Guided by its mission to "Drive Smart Industry, Co-create a Green Future," Veichi will continue to intensify R&D and advance into high-performance, high-reliability fields to propel global progress.

SD710 Series General-purpose Servo Drive



Product Feature

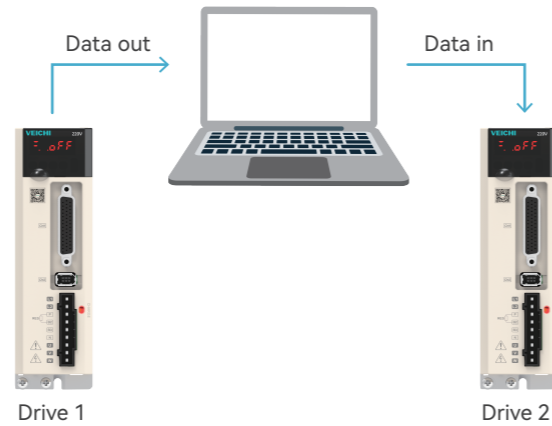
Easy Debugging & Upgrade

Step-by-step installation wizard for simplified servo commissioning



Parameter Copy Function

One-click copy of drive settings for identical machines

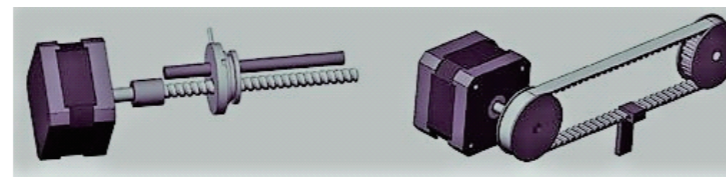


Clean Debugging Interface



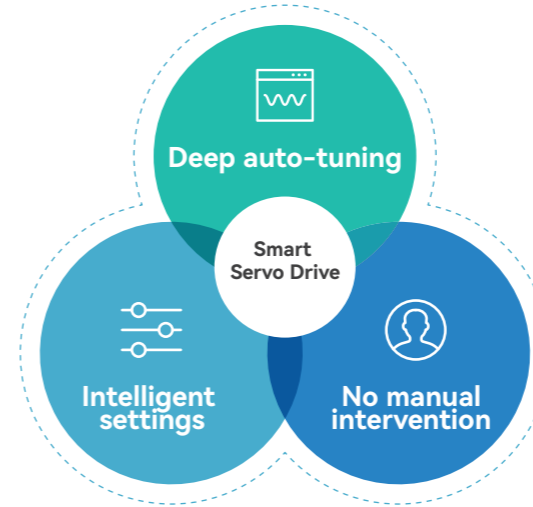
Auto Motor Tuning

1. Adapted to different mechanical structures
2. Auto setting of various complex loop parameters
3. Smart parameter configuration based on mechanical load
4. Position tuning in just 10ms



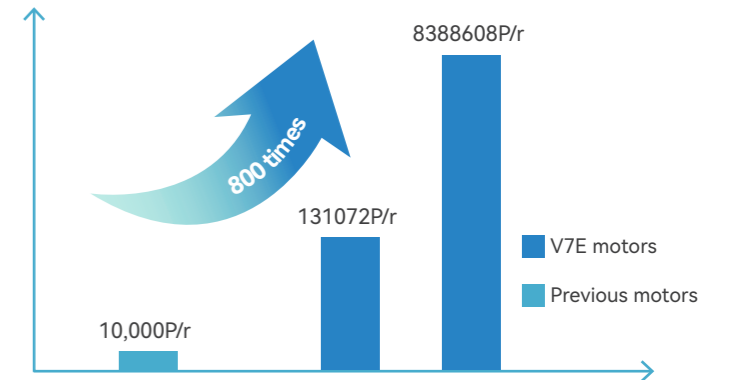
Mechanical structures such as screws, synchronous belts and rigid bodies are treated differently

Intelligent Setting

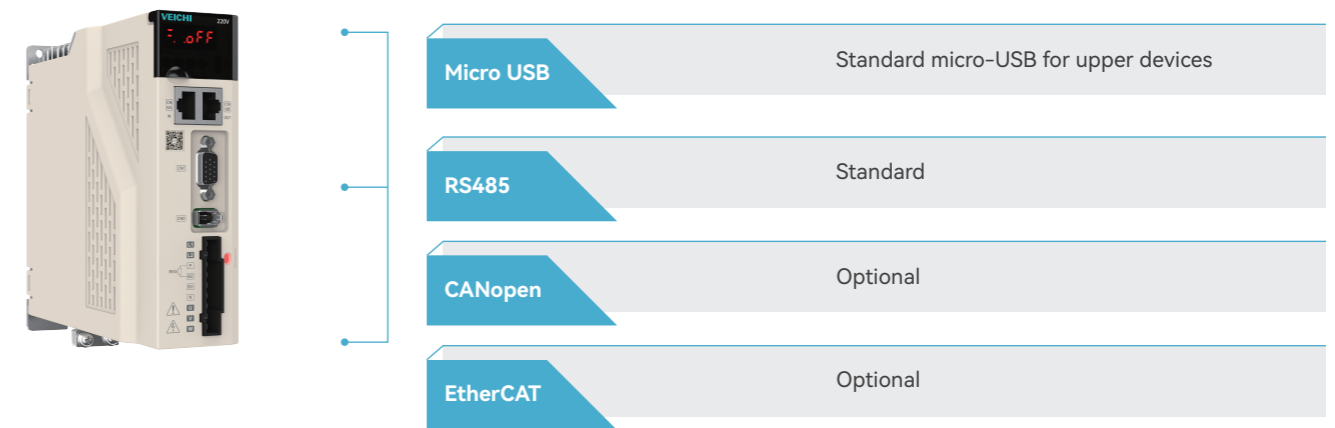


17bit/23bit Absolute Encoder

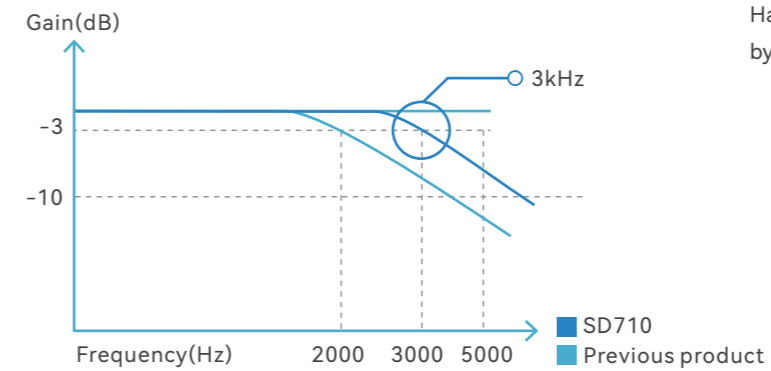
Absolute encoder with position memory after power-off
 Battery life exceeding 3 years
 Multi-resolution encoders for flexible application requirements



Various Bus Communication

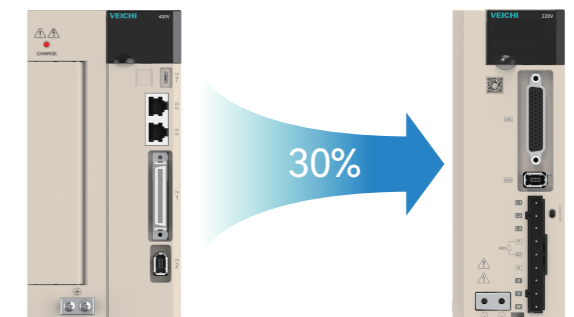


Exceptional Performance



Upgraded Hardware and Smaller Structure

Hardware and structural design are upgraded and 5R5 sizes are by 30%.



Servo Drive

SD 710 - 3R3 A - P A

SD: Servo drive products

710: Economic servo drives

Rated Current

(A) 220VAC		(D) 400VAC	
Code	Rated Current	Code	Rated Current
1R8	1.8A	3R8	3.8A
3R3	3.3A		
5R5	5.5A		
7R6	7.6A		
9R5	9.5A		

Encoder Type
A: Absolute

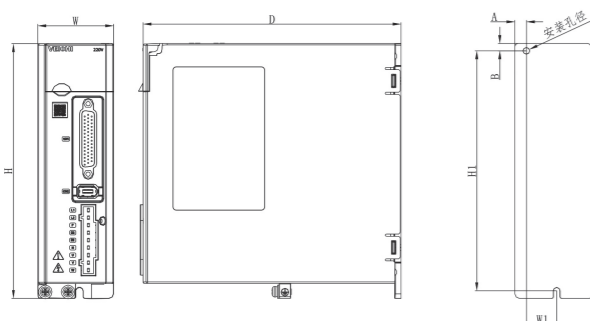
Drive Type
P: Pulse train
C: CANopen
E: EtherCAT

Rated Voltage
A: 220V AC
D: 400V AC

Drive Power and Housing

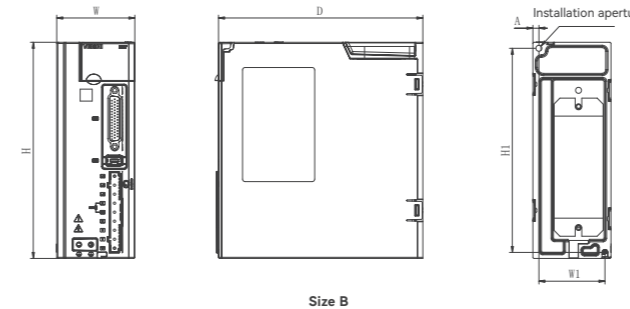
Model	Input	Output		Housing
	Rated Voltage (V)	Rated Current (A)	Instantaneous Current	
SD710-1R8A	Single-phase 220	1.8	6.3	A
SD710-3R3A	Single-phase 220	3.3	11.6	
SD710-5R5A	Single-phase 220	5.5	16.5	
SD710-7R6A	Single-phase/three-phase 220	7.6	22.8	B
SD710-9R5A	Three-phase 220	9.5	23.8	
SD710-3R8D	Three-phase 400	3.8	11.4	

Drive Size



Size A

Model	Outer Dimension (mm)			Installation Dimension (mm)				Aperture
	W	H	D	W1	H1	A	B	
SD710-1R8A-**-**								
SD710-3R3A-**-**	50	170	170	20	160	7.5	5	2-M4
SD710-5R5A-**-**								



Size B

Model	Outer Dimension (mm)			Installation Dimension (mm)				Aperture
	W	H	D	W1	H1	A	B	
SD710-7R6A-**-**								
SD710-9R5A-**-**	65	180	170	55	170	5	5	2-M4
SD710-3R8D-**-**								

Servo Drive Technical Specifications

Item	Specification		
Control mode	IGBT, PWM with sine wave current		
Encoder type	Serial encoder and absolute encoder		
Environmental condition	Working temperature	0°C~55°C (Derate between 55°C~60°C)	
	Storage temperature	-20°C~65°C	
	Working humidity	<95%RH (No freezing or condensation)	
	Storage humidity	<95%RH (No freezing or condensation)	
	Vibration resistance	4.9m/s	
	Impact resistance	19.6m/s ²	
	IP	IP20	
	Altitude	<1000m (Derate between 1000m~2000m)	
	Others	No electrostatic interference, strong electric field, strong magnetic field, radiation, etc.	
	Speed control	Speed control range	1:5000 (minimum controllable speed under rated torque without stopping)
Speed fluctuation rate		Load fluctuation	<±0.01% of rated speed (load fluctuation: 0%~100%)
		Voltage fluctuation	0% of rated speed (voltage fluctuation: ±10%)
Torque control	Temperature fluctuation	<±0.01% of rated speed (temperature fluctuation: 25°C ± 25°C)	
	Torque control accuracy	±1% (reproducible)	
	Soft startup time	0s~10s (separate ACC/DEC time setting)	
Position control	Feedforward compensation	0%~100%	
	Reference pulse	Pulse pattern	Sign + Pulse Train, CW+CCW Pulse Train, 90°-Difference Two-Phase Pulse
		Input pattern	Linear drive, open collector
		Max. input frequency	Differential input: 4Mpps max.; Open collector: 200Kpps max.
Communication	RS485	Standard	
	CANopen	Optional	
	USB	Standard Type-C port for PC (12Mbps) in conformity to USB2.0	
Display	CHARGE, 8-segment LED × 5-bit		
Keypad functions	Button switches × 4 pcs		
Regenerative brake	Built-in/external regenerative brake resistor supported		
Protections	Overcurrent, overvoltage, undervoltage, overload, regeneration error, encoder disconnection, anti-overtravel etc.		
Auxiliary functions	Gain adjustment, error history, JOG, etc		
Encoder dividing pulse output	Phase A/Phase B/Phase C: linear output, number of frequency division pulses: 35~32767		

Servo Drive

V7E - L 06 A - R40 30 - D 1 □

Product Series
V7E

Inertia Level
L: Low
M: Medium
H: High

Flange
04: 40mm
06: 60mm
08: 80mm
11: 110mm
13: 130mm

Rated Voltage
A: 220V AC
D: 380V AC

Rated Power

Code	Power	Code	Power	Code	Power
R10	100W	R75	750W	1R3	1.3KW
R20	200W	R85	850W	1R5	1.5KW
R40	400W	1R0	1.0KW	1R8	1.8KW
R60	600W	1R2	1.2KW	2R0	2KW

Product Management Code

Item	Axis Key	Oil Seal	Brake
1	YES	YES	YES
2	YES	YES	NO

Encoder Type

D: 23-bit multi-turn optical encoder
Q: 17-bit single-turn magnetic encoder
R: 17-bit multi-turn magnetic encoder

Rated Speed (RPM) Motor Brake Power Table (Estimated):

Rated Speed (RPM)	Flange	Brake Power
15: 1500	40	7W
20: 2000	60	10W
25: 2500	80	15W
30: 3000	110	15W
	130	20W



Servo Motor Technical Specifications (General-purpose)

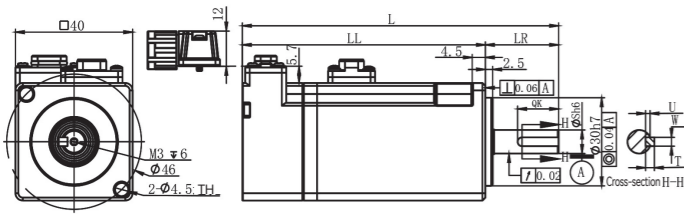
V7E Models	Voltage (V)	Power (W)	Rated Torque (N·m)	Rated Speed (RPM)	Max. Speed (RPM)	Rated Current (A)	Max. Current (A)	Moment of Inertia (kg·cm ²)
V7E-L04A-R1030-□1	220	100	0.32	3000	6000	1	3	0.051
V7E-L04A-R1030-□2	220	100	0.32	3000	6000	1	3	0.052
V7E-L06A-R2030-□1	220	200	0.64	3000	6000	1.7	5.1	0.18
V7E-L06A-R2030-□2	220	200	0.64	3000	6000	1.7	5.1	0.2
V7E-L06A-R4030-□1	220	400	1.27	3000	6000	2.6	7.8	0.34
V7E-L06A-R4030-□2	220	400	1.27	3000	6000	2.6	7.8	0.36
V7E-M06A-R4030-□1	220	400	1.27	3000	6000	2.6	7.8	0.67
V7E-M06A-R4030-□2	220	400	1.27	3000	6000	2.6	7.8	0.69
V7E-L06A-R6030-□1	220	600	1.91	3000	5000	3.3	9.9	0.51
V7E-L06A-R6030-□2	220	600	1.91	3000	5000	3.3	9.9	0.53
V7E-L08A-R7530-□1	220	750	2.38	3000	6000	4.6	13.8	1.02
V7E-L08A-R7530-□2	220	750	2.38	3000	6000	4.6	13.8	1.13
V7E-M08A-R7530-□1	220	750	2.38	3000	6000	4.6	13.8	2.3
V7E-M08A-R7530-□2	220	750	2.38	3000	6000	4.6	13.8	2.41
V7E-L08A-1R030-□1	220	1000	3.18	3000	5000	5	16.5	1.34
V7E-L08A-1R030-□2	220	1000	3.18	3000	5000	5	16.5	1.45
V7E-M11A-1R230-□1	220	1200	3.82	3000	5000	6.3	18.9	4.91
V7E-M11A-1R230-□2	220	1200	3.82	3000	5000	6.3	18.9	5.52
V7E-M11A-1R530-□1	220	1500	4.78	3000	5000	7.6	22.8	6.1
V7E-M11A-1R530-□2	220	1500	4.78	3000	5000	7.6	22.8	6.71
V7E-M11A-1R830-□1	220	1800	5.73	3000	5000	9.3	27.9	7.28
V7E-M11A-1R830-□2	220	1800	5.73	3000	5000	9.3	27.9	7.89
V7E-M13A-1R020-□1	220	1000	4.78	2000	3000	4.9	14.7	12.98
V7E-M13A-1R020-□2	220	1000	4.78	2000	3000	4.9	14.7	15.12
V7E-M13A-1R520-□1	220	1500	7.16	2000	3000	7.1	21.3	18.38
V7E-M13A-1R520-□2	220	1500	7.16	2000	3000	7.1	21.3	20.52
V7E-M13A-2R020-□1	220	2000	9.55	2000	3000	9.4	28.2	25.58
V7E-M13A-2R020-□2	220	2000	9.55	2000	3000	9.4	28.2	27.72
V7E-M13D-1R020-□1	380	1000	4.78	2000	3000	3.2	9.6	12.98
V7E-M13D-1R020-□2	380	1000	4.78	2000	3000	3.2	9.6	15.12

Servo Motor Technical Specifications (Specific-purpose)

V7E Models	Voltage (V)	Power (W)	Rated Torque (N·m)	Rated Speed (RPM)	Max. Speed (RPM)	Rated Current (A)	Max. Current (A)	Moment of Inertia (kg·cm ²)
V7E-L08A-R7520-□1L	220	750	3.58	2000	2500	2.8	8.4	1.34
V7E-L08A-R7520-□2L	220	750	3.58	2000	2500	2.8	8.4	1.45
V7E-L08A-R7530-□1L	220	750	2.38	3000	4000	3.1	9.3	1.02
V7E-L08A-R7530-□2L	220	750	2.38	3000	4000	3.1	9.3	1.13
V7E-M13A-R8515-□1B	220	850	5.41	1500	3000	5.4	16.2	12.98
V7E-M13A-R8515-□2B	220	850	5.41	1500	3000	5.4	16.2	15.12
V7E-M13A-R8515-□1	220	850	5.41	1500	3000	5.4	16.2	12.98
V7E-M13A-R8515-□2	220	850	5.41	1500	3000	5.4	16.2	15.12
V7E-M13A-1R315-□1	220	1300	8.28	1500	3000	8.2	24.6	18.38
V7E-M13A-1R315-□2	220	1300	8.28	1500	3000	8.2	24.6	20.52
V7E-M13D-R8515-□1	380	850	5.41	1500	3000	3.3	9.9	12.98
V7E-M13D-R8515-□2	380	850	5.41	1500	3000	3.3	9.9	15.12
V7E-M13D-R8515-□1B	380	850	5.41	1500	3000	3.3	9.9	12.98
V7E-M13D-R8515-□2B	380	850	5.41	1500	3000	3.3	9.9	15.12

Servo Motor Installation Dimensions

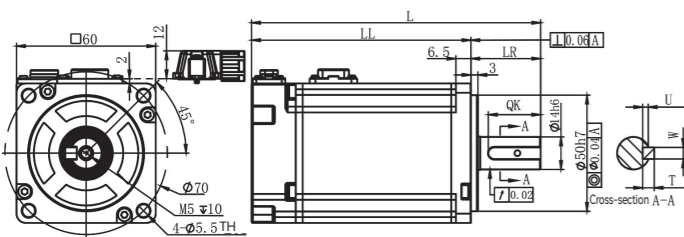
40mm flange



Unit: mm

Motor Model	L	LL	LR	S	QK	U	W	T
V7E-L04A-R1030-□1	108	83	25	8	14	1.5	3	3
V7E-L04A-R1030-□2	134	109	25	8	14	1.5	3	3

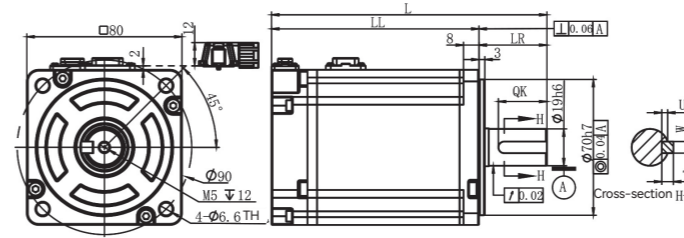
60mm flange



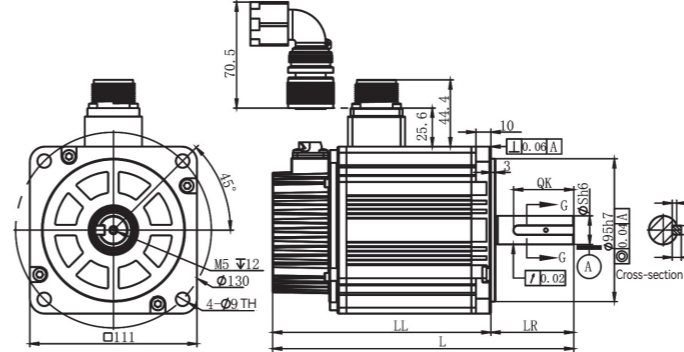
Unit: mm

Motor Model	L	LL	LR	S	QK	U	W	T
V7E-L06A-R2030-□1	105.5	75.5	30	14	22.5	2.5	5	5
V7E-L06A-R2030-□2	136.5	106.5	30	14	22.5	2.5	5	5
V7E-L06A-R4030-□1	124.5	94.5	30	14	22.5	2.5	5	5
V7E-L06A-R4030-□2	155.5	125.5	30	14	22.5	2.5	5	5
V7E-M06A-R4030-□1	134.5	104.5	30	14	22.5	2.5	5	5
V7E-M06A-R4030-□2	165.5	135.5	30	14	22.5	2.5	5	5
V7E-L06A-R6030-□1	143.5	113.5	30	14	22.5	2.5	5	5
V7E-L06A-R6030-□2	174.5	144.5	30	14	22.5	2.5	5	5

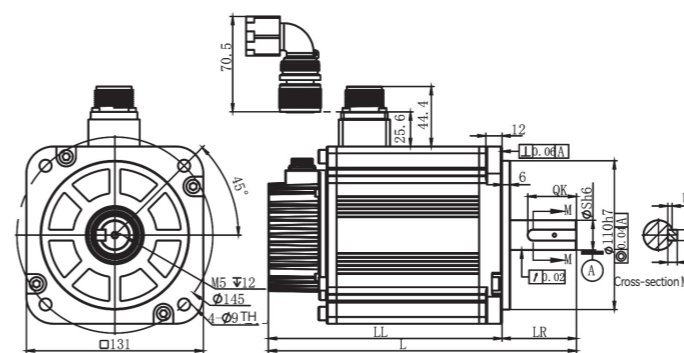
80mm



110mm flange



130mm flange



Unit: mm

Motor Model	L	LL	LR	S	QK	U	W	T
V7E-L08A-R7520-□1L	156	121	35	19	25	3	6	6
V7E-L08A-R7520-□2L	188	153	35	19	25	3	6	6
V7E-L08A-R7530-□1L	142	107	35	19	25	3	6	6
V7E-L08A-R7530-□2L	174	139	35	19	25	3	6	6
V7E-L08A-R7530-□1	142	107	35	19	25	3	6	6
V7E-L08A-R7530-□2	174	139	35	19	25	3	6	6
V7E-M08A-R7530-□1	152	117	35	19	25	3	6	6
V7E-M08A-R7530-□2	184.5	149.5	35	19	25	3	6	6
V7E-L08A-1R030-□1	156	121	35	19	25	3	6	6
V7E-L08A-1R030-□2	188	153	35	19	25	3	6	6

Unit: mm

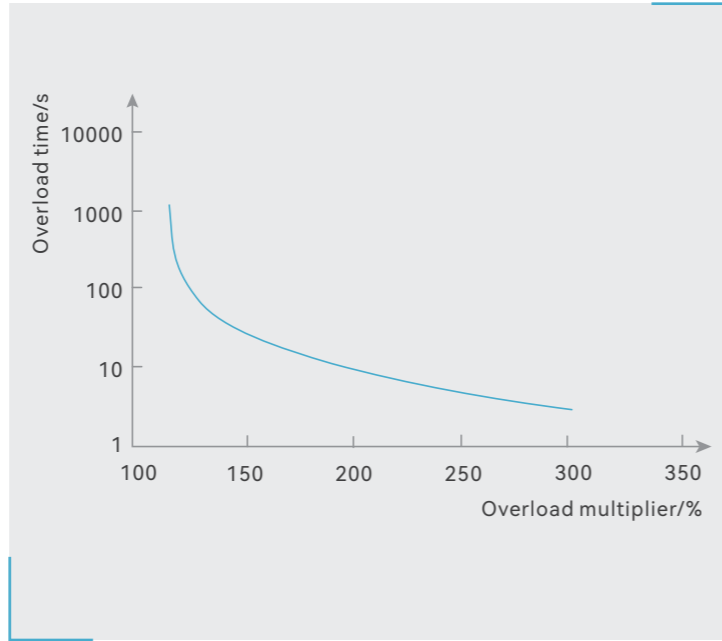
Motor Model	L	LL	LR	S	QK	U	W	T
V7E-M11A-1R230-□1	190	135	55	19	40	3	6	6
V7E-M11A-1R230-□2	221.2	166.2	55	19	40	3	6	6
V7E-M11A-1R530-□1	200	145	55	19	40	3	6	6
V7E-M11A-1R530-□2	231.2	176.2	55	19	40	3	6	6
V7E-M11A-1R830-□1	210	155	55	19	40	3	6	6
V7E-M11A-1R830-□2	241.2	186.2	55	19	40	3	6	6

Unit: mm

Motor Model	L	LL	LR	S	QK	U	W	T
V7E-M13A-R8515-□1	193	138	55	22	36	3.2	8	7
V7E-M13A-R8515-□2	221.2	166.2	55	22	36	3.2	8	7
V7E-M13A-1R020-□1	193	138	55	22	36	3.2	8	7
V7E-M13A-1R020-□2	221.2	166.2	55	22	36	3.2	8	7
V7E-M13A-1R315-□1	208	153	55	22	36	3.2	8	7
V7E-M13A-1R315-□2	236.2	181.2	55	22	36	3.2	8	7
V7E-M13A-1R520-□1	208	153	55	22	36	3.2	8	7
V7E-M13A-1R520-□2	236.2	181.2	55	22	36	3.2	8	7
V7E-M13A-2R020-□1	228	173	55	22	36	3.2	8	7
V7E-M13A-2R020-□2	256.2	201.2	55	22	36	3.2	8	7

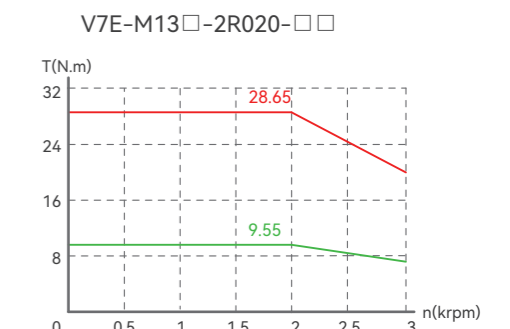
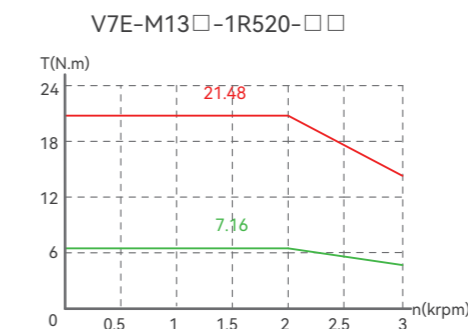
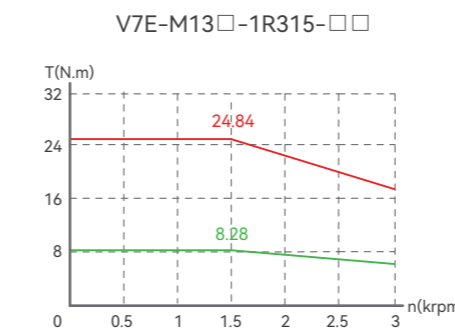
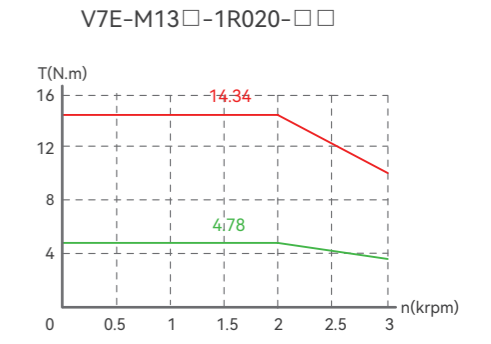
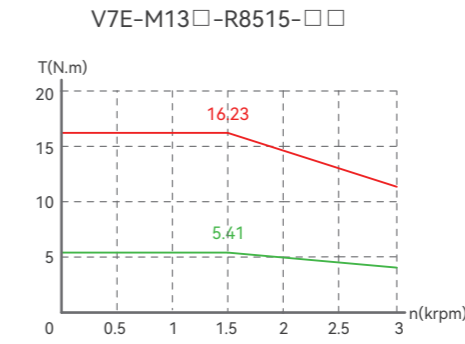
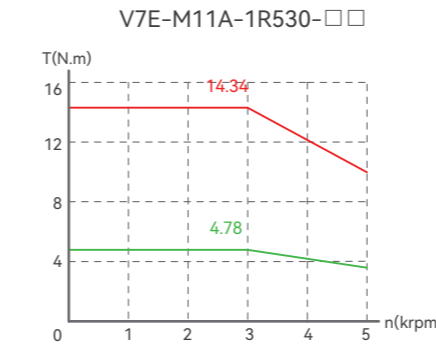
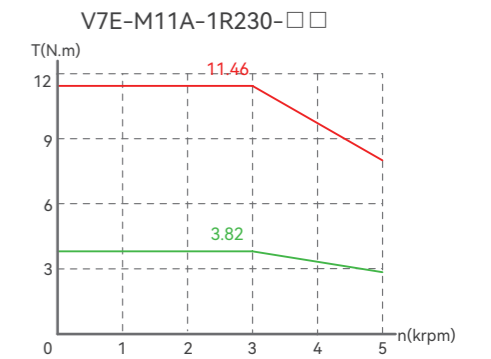
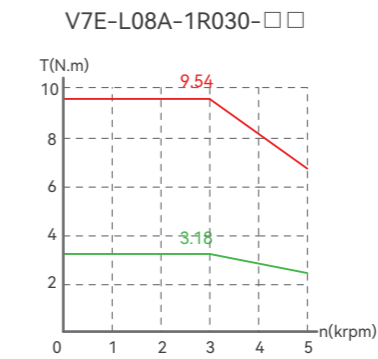
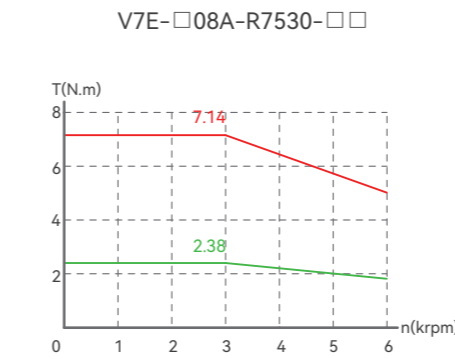
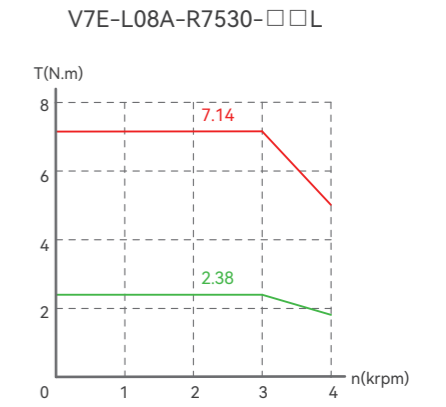
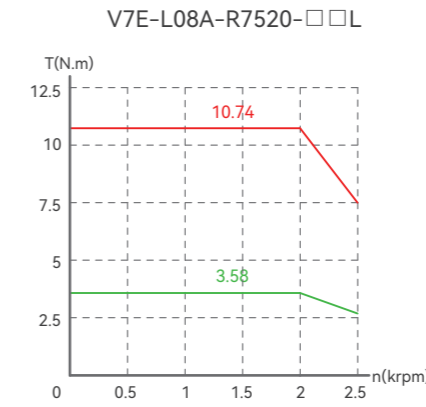
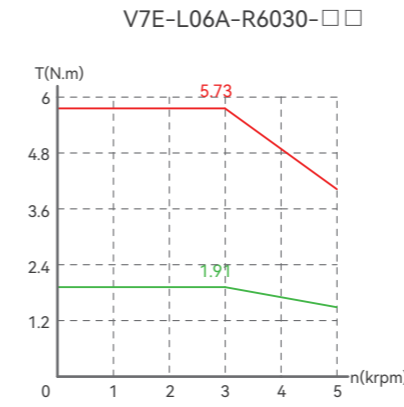
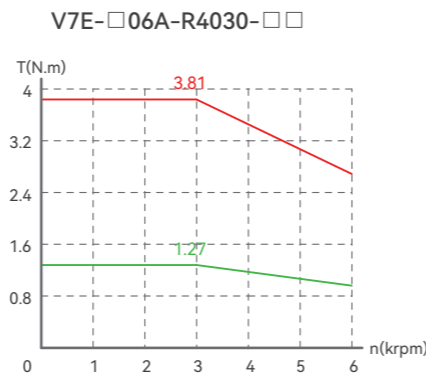
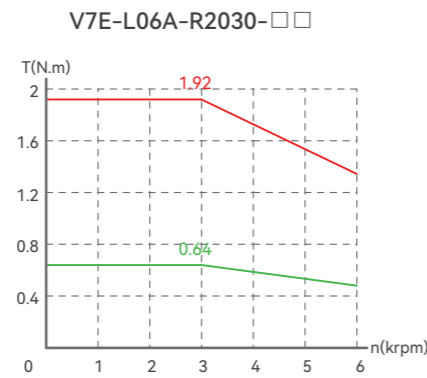
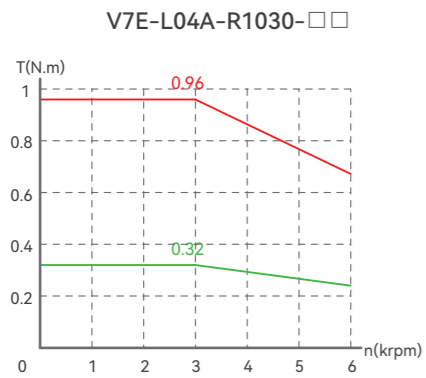
Servo Motor Overload Characteristic Curve

Overload Multiplier	Overload Time/s
1.2	228
1.3	73
1.4	42
1.5	29
1.6	22
1.7	17
1.8	14
1.9	12
2.0	10
2.1	8
2.2	7
2.3	6
2.4	5
2.5	4.5
3.0	3

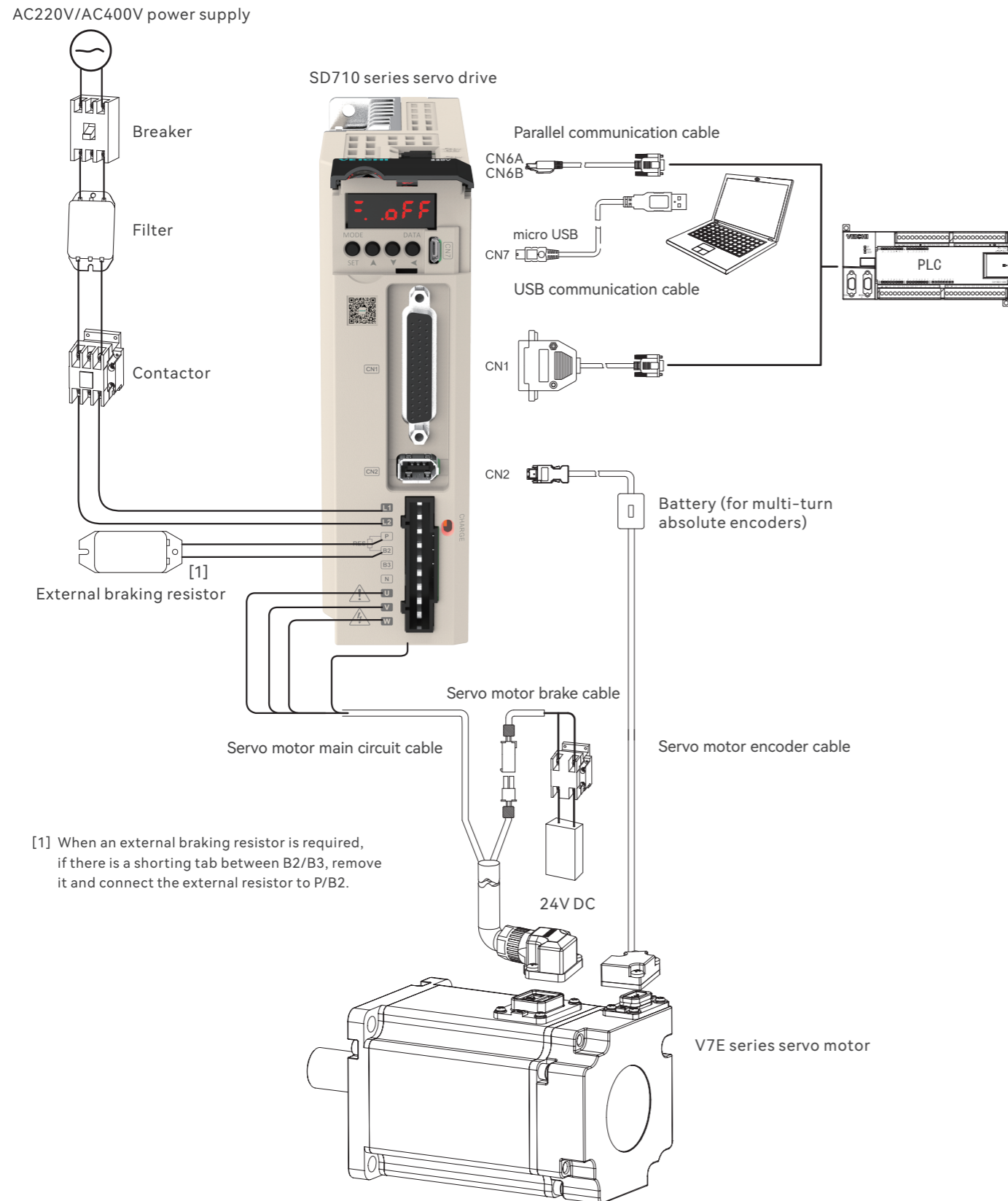


Servo Motor Torque Characteristics

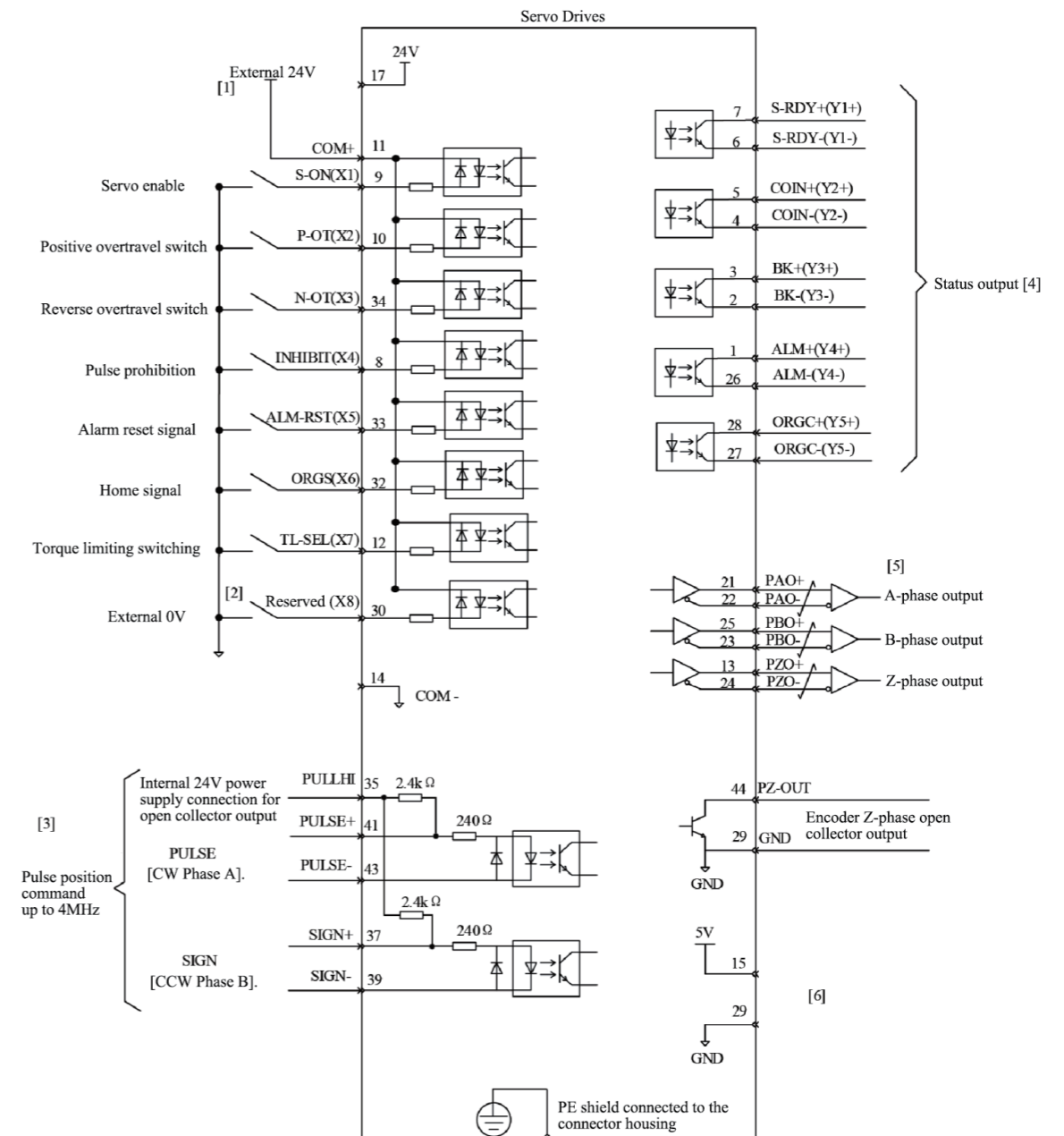
Note: " — " rated torque " — " instantaneous maximum torque



System Wiring



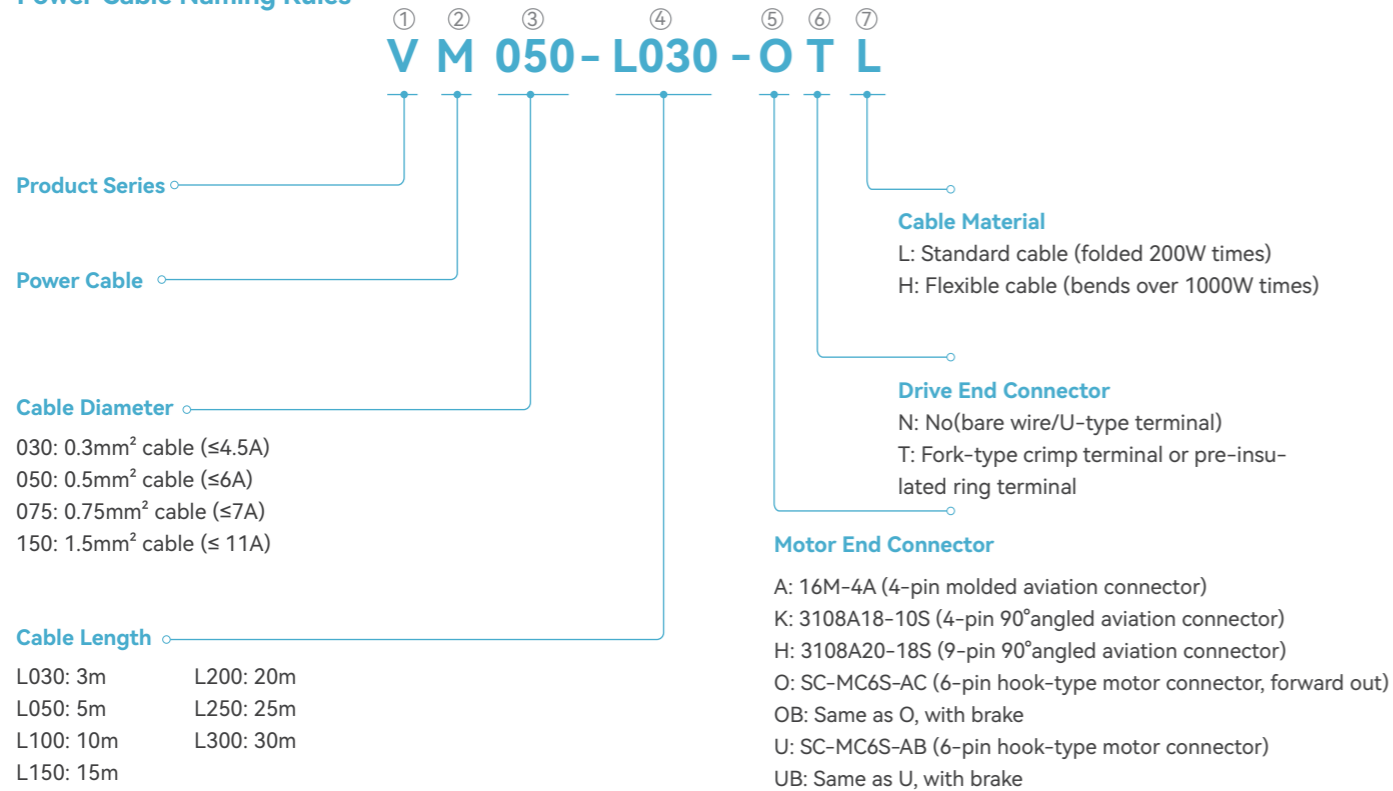
Position Control Wiring



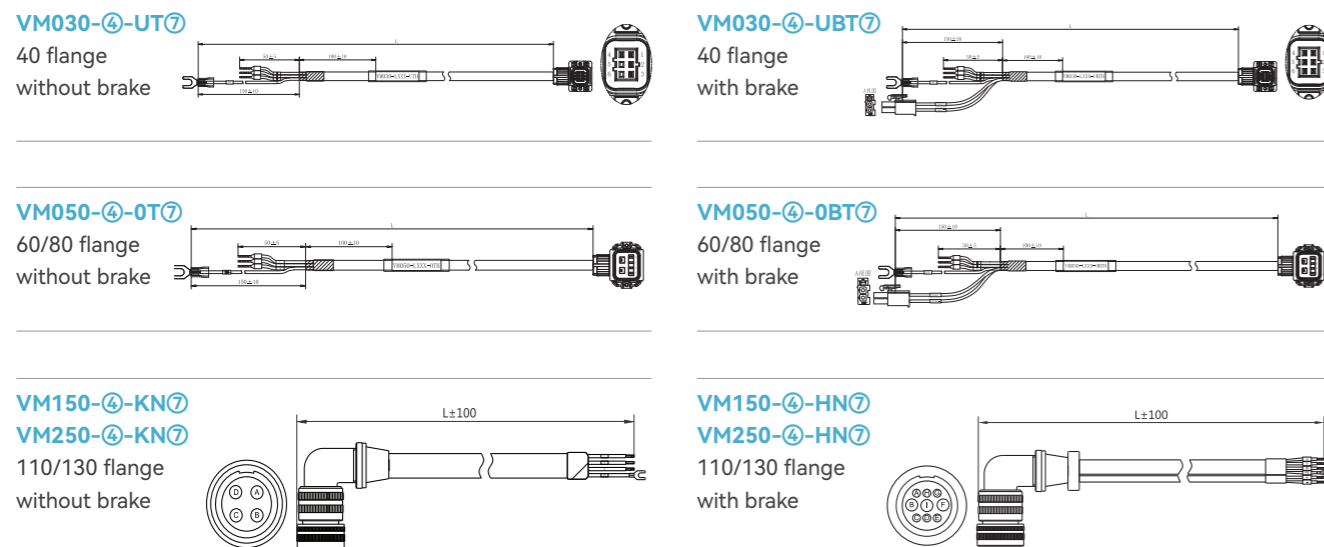
- [1] The example shows external power wiring. If using the internal 24V power supply, connect pin17 (24V+) to pin11, with input terminals connected to corresponding pin and pin14 (COM-).
- [2] X7 and X8 are high-speed DI terminals. Select according to functional requirements.
- [3] For pulse signal wiring, use twisted-pair shielded cables. The shielded layer must be connected to PE at both ends, with GND reliably connected to the host controller's signal ground.
- [4] Y output requires user-provided power supply (5V-24V). Maximum voltage: 30V DC; maximum current: 50mA.
- [5] For encoder frequency division output, use twisted-pair shielded cables. The shielded layer must be connected to PE at both ends, with GND reliably connected to the host controller's signal ground.
- [6] Internal +5V power supply's maximum operating current: 200mA

SD710 Series Servo Drive Cables

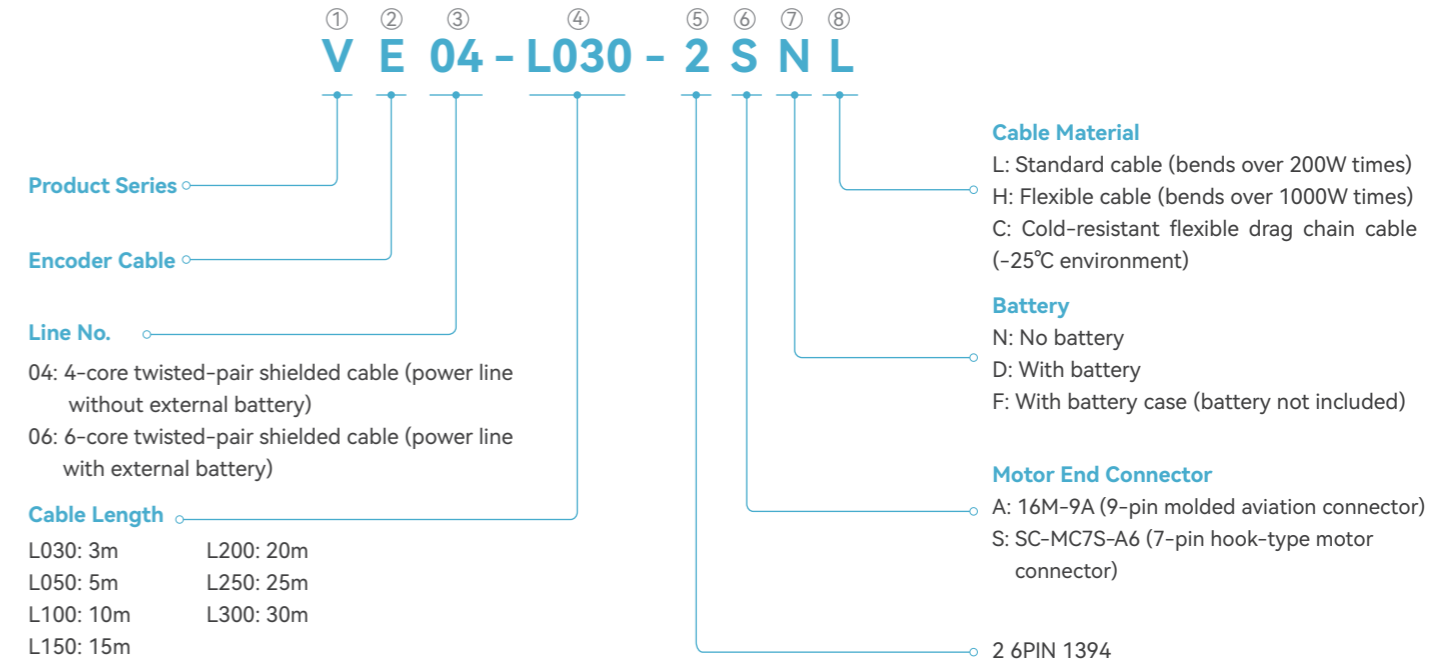
Power Cable Naming Rules



Motor Power Cables

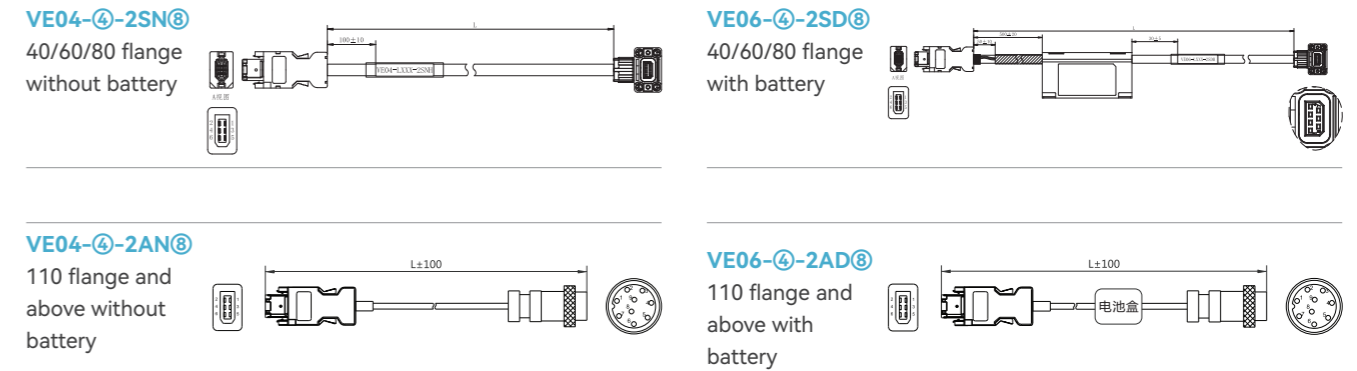


Encoder Cable Naming Rules



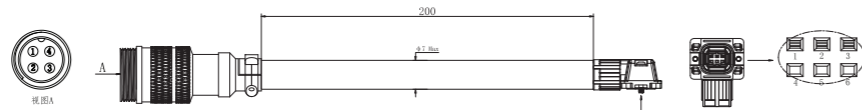
Note: When ⑤⑥ are "2S" and the cable length is longer than 15m, use the "2A" solution plus adapters.

Encoder Cables

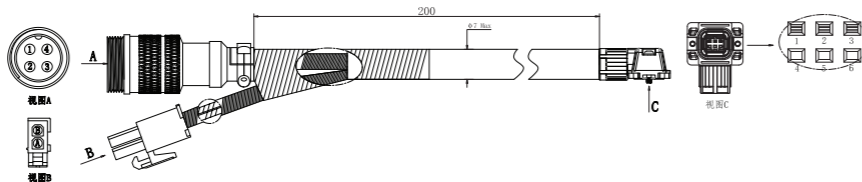


Power Cable with Adapter

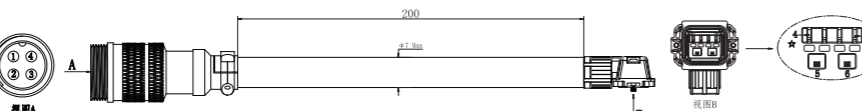
D-VM050-L020-A1-L
VM7-V7E
for 40mm flange (0.2m)



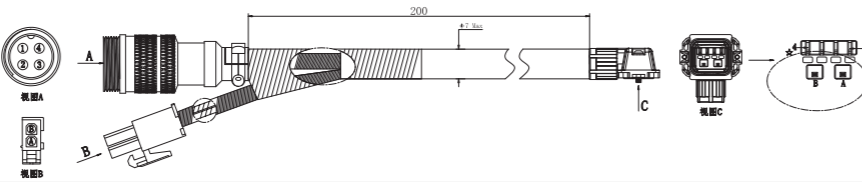
D-VM050-L020-AB2-L
VM7-V7E
For 40mm flange (0.2m)



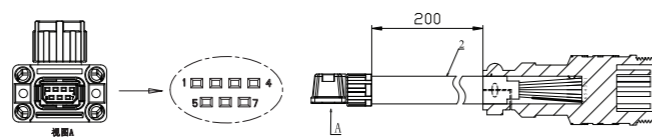
D-VM050-L020-AC1-L
VM7-V7E
For 60mm/80mm flange (0.2m)



D-VM050-L020-AC2-L
VM7-V7E
For 60mm/80mm flange (0.2m)



VEF07-L020-ANL
VM7-V7E
For 40mm/60mm/80mm flange (0.2m)



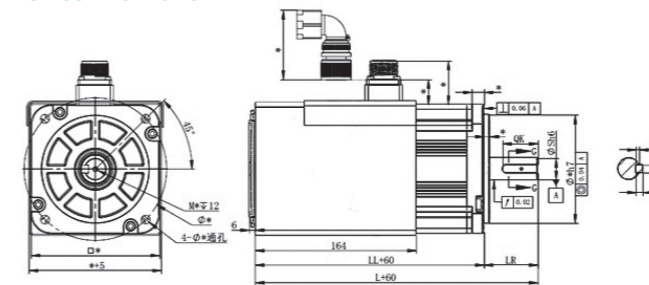
Braking Resistor

Model	Braking Voltage	Built-in Resistor	Min. External Resistor	Max. External Resistor
SD710-1R8A	380V	-	40Ω	200Ω
SD710-3R3A	380V	-	40Ω	100Ω
SD710-5R5A	380V	40Ω 70W	25Ω	70Ω
SD710-7R6A	380V	40Ω 70W	15Ω	50Ω
SD710-9R5A	380V	40Ω 70W	15Ω	40Ω
SD710-3R8D	700V	80Ω 70W	55Ω	180Ω

Fan Selection

All 110mm/130mm flanged motors are optional with fans, and there is an addition of the character "F" to the original model code.

Sizes with fans



Fan specifications

	F12038N27A230
Rated Voltage(V)	230±15AC
Rated Current (A)	0.135A
Rated airflow(CFM)	89
Rated Speed (rpm)	2650

60mm longer after the motor is equipped with an optional fan, and the rest of the dimensions remain unchanged.

Brake Selection

	Model	Static Torque N·m	Rated Voltage (V)	Rated Current (A)
40	Z092-S040B(24V)0.38G8.5-001	0.38	24±10%	0.25
60	Z029-S060B(24V)1.5G12	1.5	24±10%	0.32
80	Z122-S080B(24V)3.8G16-002	3.8	24±10%	0.35
110	Z029-S110B(24V)10G21	10	24±10%	0.81
130	Z092-S130B(24V)16C25-002	16	24±10%	1

Application

Printing & Packaging

3C Electronics

Engraving Machines

Woodworking Machines

Mechanical Arms