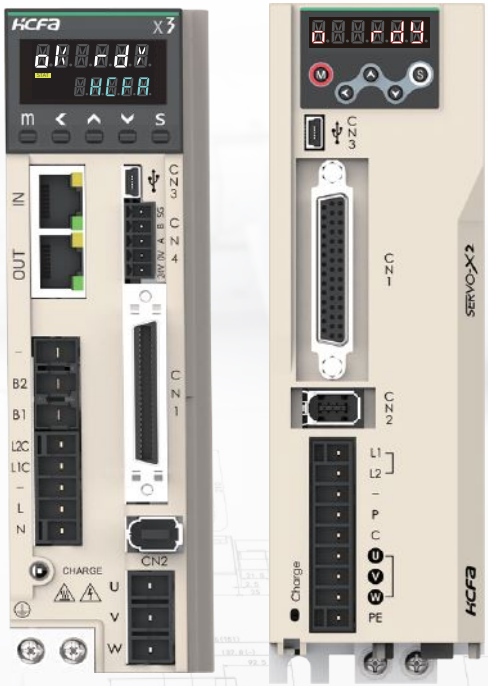
Control Drive Sensor M&E Info.

HCFA

X3E SERIES GENERAL-PURPOSE AC SERVO SYSTEM

X2E SERIES SIMPLE-TYPE AC SERVO SYSTEM



X3E Series General-purpose Servo Drive

Naming Rule

SV-X3E B – 075 – A – A 2 – 00 000

1 2 3 4 5 6 7 8

Product type	
A	Standard type
B	EtherCAT bus- type
N	CANOpen bus-type

Power specifications	
005	50W
010	100W
020	200W
040	400W
075	750W
100	1KW
150	1.5KW
200	2KW
250	2.5KW

Voltage specifications	
A	AC220V

4 Control power	
A	AC power

5 Product iteration serial number	
2	N/A

6 Hardware type	
00	N/A
AO	Analog output
PG	PG extension

7 Software customized mark	
000	N/A

8 Non-standard models (hardware identification + software identification)	
PG000	Full-closed loop
PG005	Gantry synchronization

Single-phase AC 220v — 50 W → 750 W

Three-phase AC 220v — 1 KW → 2.5 KW

LCD display | Compact design

Compact design | Rich bus-type

EtherCAT Technology Group

General Specifications

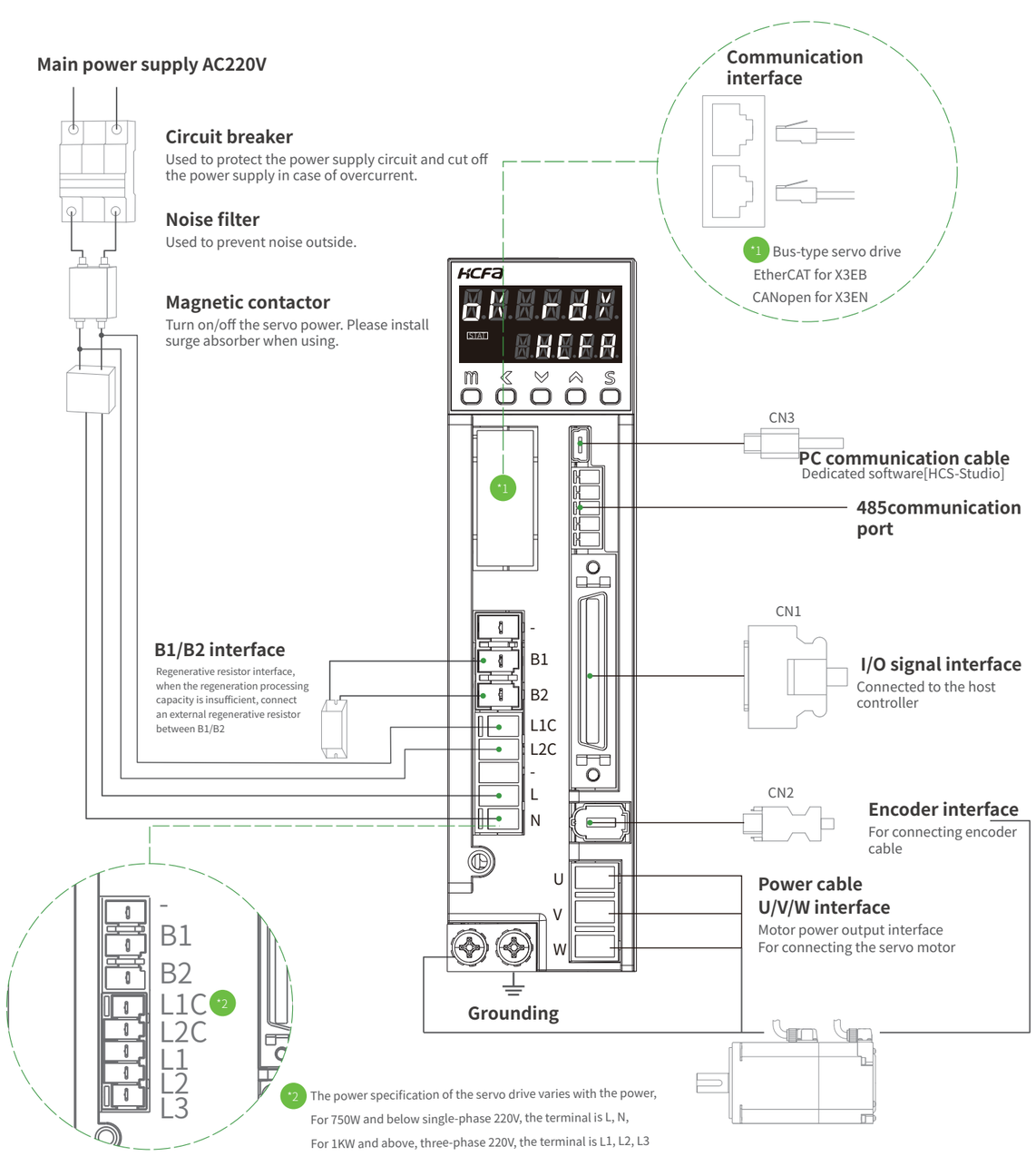
Items	Specifications								
Models	005	010	020	040	075	100	150	200	250
Power (W)	50	100	200	400	750	1000	1500	2000	2500
Rated current (Arms)	0.9	1.2	2	3	4.5	6	10	12.5	15.6
Continuous running current (Arms)	0.9	1.2	2	3	4.5	6	10	12.5	15.6
Max. output current (Arms)	2.7	3.6	6	9	13.5	18	30	37.5	37.5
power specifications	Single-phase220V 50~60Hz					Three-phase220V 50~60Hz			
Control power	Single-phase220V								
Applicable encoder	17bit/23bit								
Control mode	Six control mode: Position control, speed control, torque control, position/speed control, position/torque control, speed/torque control								

Environment Specifications

Items		Specifications
Temperature	Ambient temperature for use	0～55°C
	Ambient temperature for storage	-20～65°C
Humidity	Ambient humidity for use	20～85%RH or less(Without condensation)
	Ambient humidity for storage	20～85%RH or less(Without condensation)
Atmosphere for use& storage		Indoors(Not subject to direct sunlight); free from corrosive gas, flammable gas, oil mist, or dust
Altitude		1000m or less above sea level
Vibration		5.8m/s^2(0.6G) or less, 10～60Hz(No continuous operation allowed at frequency of resonance)
Dielectric strength		1 minute at 1500 VAC across the primary and FG

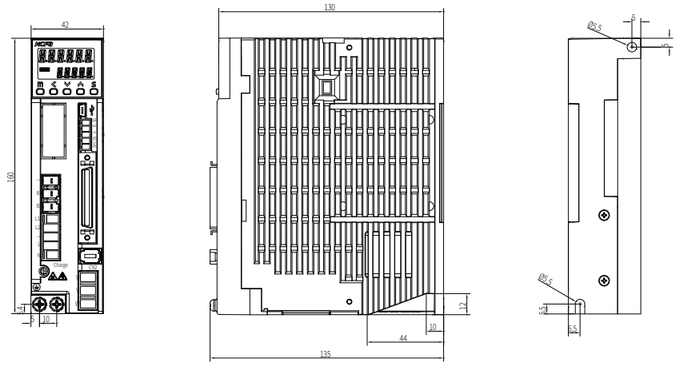
Technical Specifications

Items				Specifications
Position control	Pulse input	Max input pulse frequency		Open-collector pulse input: Up to 200KHz, pulse width larger than 2.5us
				General input: Up to 500KHz, pulse width larger than 1 us
				High-speed input: Up to 4MHz, pulse width larger than 125ns
		Input pulse form		Pulse+ direction, A-Phase + B-Phase, CW+CCW
		Electronic gear setting		Electronic gear : A/B (Encoder resolution/10000000 < A/B <Encoder resolution/2.5)
		Smoothing		Smoothing filter, FIR filter
	Pulse output	Output pulse		Encoder position or pulse synchronization output
		Division ratio		Arbitrary frequency division
		Output pulse form		Differential output: A/B/ Z，Open collector output: Z-phase
	Internal position mode			Segment 1-16 internal position planning
Speed control	Control method			External analog command control/0~16 segments speed selection can be realized by DI terminal combination./Communication setting
	Analog input voltage range			DC±10V(Maximum speed at 10V)
	Torque limit function			Internal parameter setting or analog input
Torque control	Control method			External analog instruction control/internal parameter/DI terminal switch(analog/internal parameter) /communication setting
	Analog input voltage range			DC±10V(Rated torque at 10V)
	Speed limit			Internal parameter setting or analog input
Common functions	Control signal	I/O		9IN/9OUT
	Analog signal	I/O		2IN (±10v)
	Speed monitoring			Provided
	Vibration control			Provided
	Adaptive notch filter			Provided
	Auto-tuning			Provided
	Encoder output division and multiplication			Provided
	Dynamic brake			Can be connected externally
	Regeneration function			A larger power braking resistor can be connected
	Protective functions			Overvoltage, power supply error, overcurrent, overheat, overload, encoder error, over speed, position deviation too large, parameter error
	Communication	USB		For PC communication (「Servostudio」connection)
		Type	RS485	B:EtherCAT / N:CANOPEN



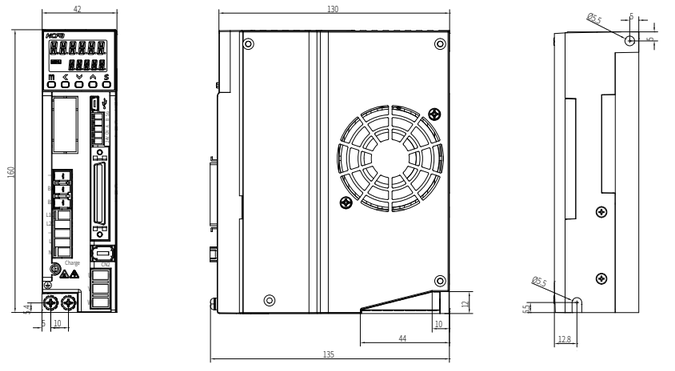
For models of 200W or less　Unit:mm

Weight(KG)
0.82



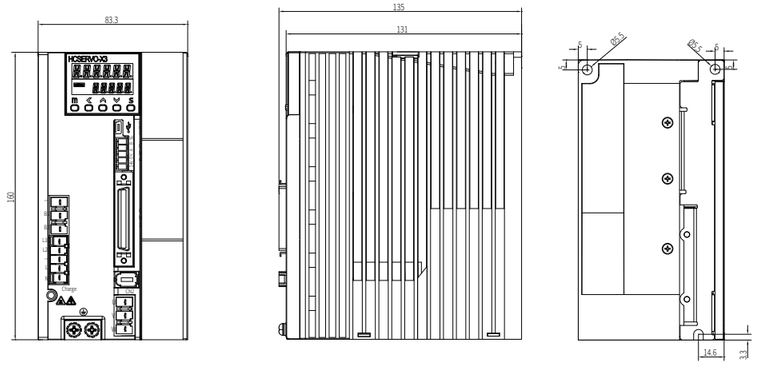
For models of400W/750W　Unit:mm

Weight(KG)
0.86



For models of 1KW/1.5KW/2KW/2.5KW　Unit:mm

Weight(KG)
1.34



X2E Series Simple-type Servo Drive

Naming Rule

SV-X2E A – 075 – A – A 0 – 00 000

1 2 3 4 5 6 7

1	Product type
A	Standard pulse type
N	CANopen bus-type

2	Power specifications
005	50W
010	100W
020	200W
040	400W
075	750W
100	1KW
150	1.5KW
200	2KW
250	2.5KW

3	Voltage specifications
A	AC220V

4	Control power
A	AC power

5	Product iteration serial number
0	N/A

6	Hardware type
00	N/A

7	Software customized mark
000	N/A

Compact size | Space optimized

General Specifications

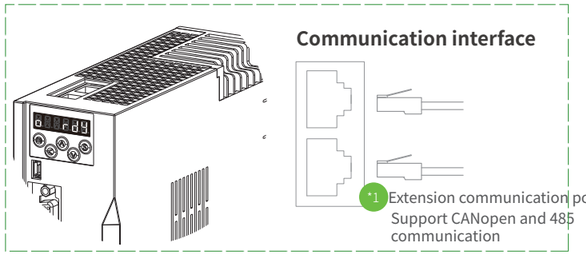
Items	Specifications								
Models	005	010	020	040	075	100	150	200	250
Power (W)	50	100	200	400	750	1000	1500	2000	2500
Rated curren (Arms)	0.9	1.2	2	3	4.5	6	10	12.5	15.6
Continuous running current (Arms)	0.9	1.2	2	3	4.5	6	10	12.5	15.6
Max. output current (Arms)	2.7	3.6	6	9	13.5	18	30	37.5	37.5
power specifications	Single-phase220V 50~60Hz						three-phase220v 50~60Hz		
Control mode	Six control mode: Position control, speed control, torque control, position/speed control, position/torque control, speed/torque control								
Applicable encoder	17bit								

Environment Specifications

Items		Specifications
Temperature	Ambient temperature for use	0～55°C
	Ambient temperature for storage	-20～65°C
Humidity	Ambient humidity for use	20～85%RH or less(Without condensation)
	Ambient humidity for storage	20～85%RH or less(Without condensation)
Atmosphere for use& storage		Indoors(Not subject to direct sunlight); free from corrosive gas, flammable gas, oil mist, or dust
Altitude		1000m or less above sea level
Vibration		5.8m/s^2(0.6G) or less, 10～60Hz(No continuous operation allowed at frequency of resonance)
Dielectric strength		1 minute at 1500 VAC across the primary and FG

Technical Specifications

Items					Specifications
Position control	Pulse input	Max input pulse frequency			Open-collector pulse input: Up to 200KHz, pulse width larger than 2.5us
					General input: Up to 500KHz, pulse width larger than 1 us
					High-speed input: Up to 4MHz, pulse width larger than 125ns
		Input pulse form			Pulse+ direction, A-Phase + B-Phase, CW+CCW
		Electronic gear setting			Electronic gear : A/B (Encoder resolution/10000000 < A/B <Encoder resolution/2.5)
		Smoothing			Smoothing filter, FIR filter
	Pulse output	Output pulse			Encoder position or pulse synchronization output
		Division ratio			Arbitrary frequency division
		Output pulse form			Differential output: A/B/ Z，Open collector output: Z-phase
	Internal position mode				Segment 1-16 internal position planning
Speed control	Control method				Internal parameter P03.03 /0~16 segments speed selection can be realized by DI terminal combination
	Torque limit function				Internal parameter setting
Torque control	Control method				Set the speed instruction value by P03.25
	Speed limit				Set the positive and negative internal speed limit by P03.27, P03.28
Common functions	Control signal	I/O			8IN/5OUT
	Analog signal	I/O			N/A
	Speed monitoring				Provided
	Vibration control				Provided
	Adaptive notch filter				Provided
	Auto-tuning				Provided
	Encoder output division and multiplication				Provided
	Dynamic brake				Provided
	Regeneration function				A larger power braking resistor can be connected
	Protective functions				Overvoltage, power supply error, overcurrent, overheat, overload, encoder error, over speed, position deviation too large, parameter error
	Communication	USB			For PC communication (「Servostudio」connection)
		Models	RS485	N:CANOPEN	

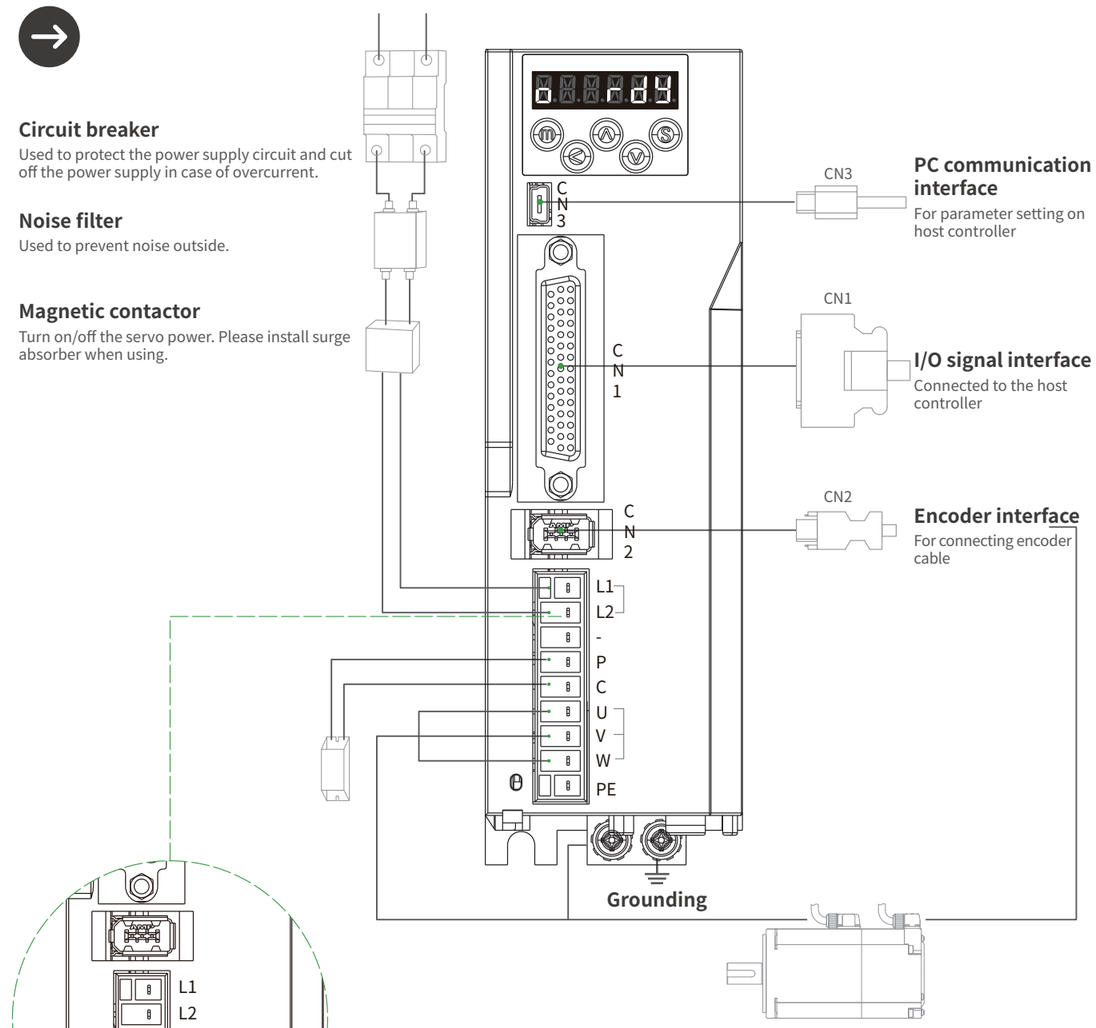


Main power supplyAC220V

Circuit breaker
Used to protect the power supply circuit and cut off the power supply in case of overcurrent.

Noise filter
Used to prevent noise outside.

Magnetic contactor
Turn on/off the servo power. Please install surge absorber when using.

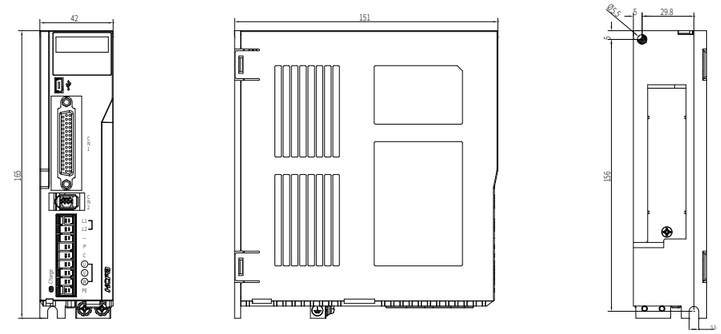


*2: The power specification of the servo drive varies with the power,
For 1KW and below ,single-phase 220V, the terminal is L1,L2
For 1.5KW and above, three-phase 220V, the terminal is L1, L2, L3

For models of 200W or less

Unit:mm

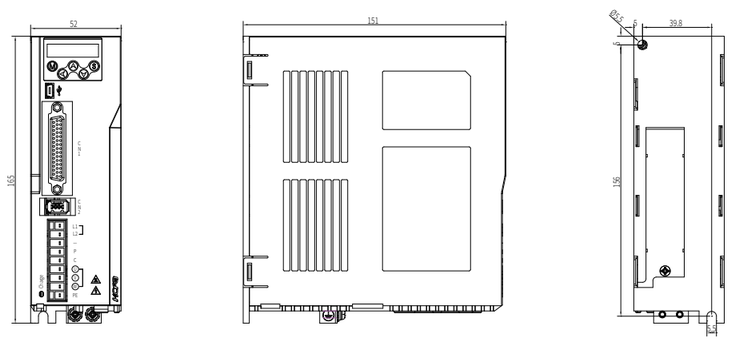
Weight(KG)
0.84



For models of400W/750W/1KW

Unit:mm

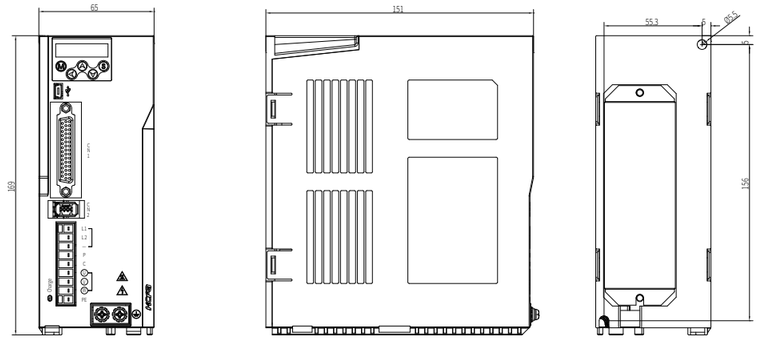
Weight(KG)
0.87



For models of 1.5KW/2KW/2.5KW

Unit:mm

Weight(KG)
1.23



X2 Series

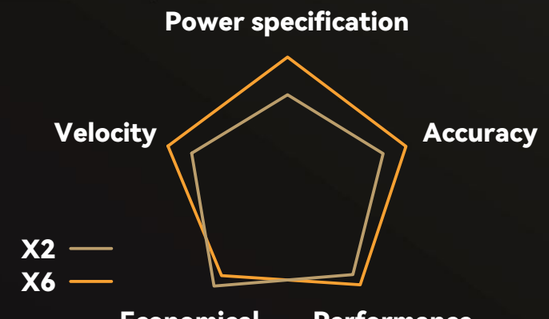
17BIT Absolute

50W-2.3KW
0.16N.m-15N.m

X6 Series

17BIT/23BIT Absolute

50W-7.5KW
0.16N.m-47.8N.m



New manufacturing process

The newly-designed iron-core process makes the servo motor much smaller and lighter, 20% short er than the previous generation

New structure design

The integrated structure of the front flange and housing to be stronger , matching with connector-type motor. IP67 protection level

New rotor design

The new design with 10-pole rotor + magnetic field analysis technology to reduce the width of pulsation and makes it smoother at low speed.

Full range of high, middle and low inertia!

MA

Low-inertia servo motor

Suitable for some occasions with light load and high-speed positioning. Quick response to start, accelerate and stop.

MM/MH

Medium/high inertia servo motor

Suitable for occasions with heavy load and high stability requirements.

MHH

Ultra-high inertia servo motor

Suitable for the same installation flange. With higher motor inertia, suitable for rollers and low-speed and stable occasions.

MQ

Flat and special flange servo motor

Under the same power, with different sizes of flange design. The servo motor becomes shorter, but with larger inertia. Also suitable for rollers and low-speed stable occasions.

MG

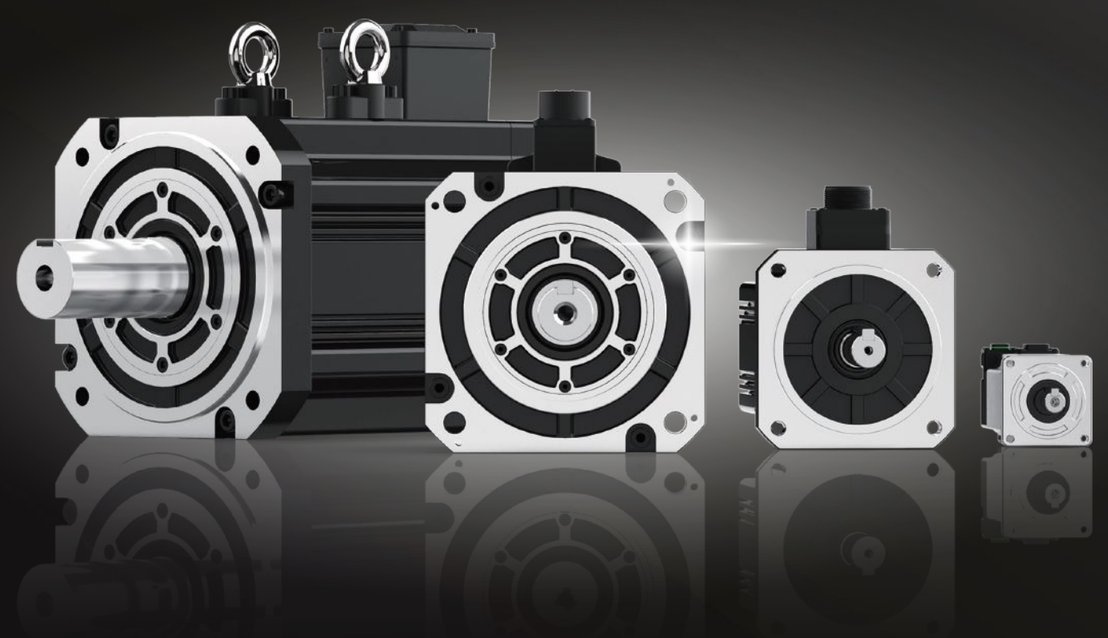
Low-speed and large-torque servo motor

With the characteristics of low rated speed and large output torque, suitable for heavy load occasions.

MGS

Low cogging cutting servo motor

Groove inclination design, which has lower cogging torque and good low-speed characteristics. At the same time, it can reach the maximum speed of 4000RPM with the Y7 series servo drive, which greatly shortens the idle travel time and improves the processing efficiency.



SV-X2 MA 040 A - N 2 C A - ****

1 2 3 4 5 6 7 8 — Special specifications

1	Series name
SV-X2 series	17BIT

2	Inertia specifications
MA	Low inertia
MM	Middle inertia
MH	High inertia
MHH	Ultrahigh inertia
MQ	Special flange/Flat-type/small flange
MG	Low-speed & high-torque
MS	Ultrahigh speed

3	Power specifications
005	50W
010	100W
015	150W
020	200W
040	400W
075	750W
080	800W
085	850W
100	1KW
130	1.3KW
150	1.5KW
180	1.8KW
200	2KW
230	2.3KW

4	Design number
A/B/C/E/F/H/K/S	

5	Brake specifications
N	No brake
B	With brake

6	Voltage specifications
2	AC220V

7	Specifications
K	Keyway shaft/no oil seal
L	Keyway shaft/with oil seal
C	Connector type/ keyway shaft/with oil seal*1
D	Connector type/ keyway shaft/no oil seal*1
J	Compact type(customized)

8	Encoder specifications
N	Single-turn 17bit incremental
A	Multi-turn 17bit absolute

9	Customization
**	N/A

*1: From the 2nd quarter of 2021, our company started releasing connector-type servo motor with 40~80 flanges as the regular model. Lead-wire servo motors will be discontinued from December 2021, if still needed, the customized application process is required. For details, refer to page 67 or consult our sales staff.

E.g.

17bit incremental 220v 400W MA Low inertia Naming rule SV-X2 MA 040A-N2CN

17bit absolute 220v 400W MA Low inertia Naming rule SV-X2 MA 040A-N2CA

X2 Series Servo Motor

Series name	Specifications	200W	400W	750W	1000W	1500W	2000W
X2 Series Low inertia	Models	X2MA020A	X2MA040A	X2MA075A	X2MA100A	X2MA150A	X2MA200A
	Flange	60	60	80	100	100	100
	Rated [Peak Torque]	0.64 [1.91]	1.27 [3.82]	2.39 [7.16]	3.18 [9.55]	4.77 [14.3]	6.37 [19.1]
	Inertia:No brake (with brake)	0.16 [0.17]	0.28 [0.29]	0.96 [1.07]	2.03 [2.35]	2.84 [3.17]	3.68 [4.01]
	Rotation speed: Rated (Max. speed)	3000 [6000*4]	3000 [6000*4]	3000 [6000*4]	3000 [5000]	3000 [5000]	3000 [5000]
	220V servo motor	Tr	Tr	Tr	Tr	Tr	Tr
X2-MM Middle inertia	Models	X2MM020A			X2MM100A	X2MM150A	X2MM200A
	Flange	60			130	130	130
	Rated [Peak Torque]	0.64 [2.23]			4.77 [14.3]	7.16 [21.5]	9.55 [28.6]
	Inertia:No brake (with brake)	0.47 [0.49]			6.18 [7.4]	9.16 [10.4]	12.1 [13.3]
	Rotation speed: Rated (Max. speed)	3000 [6500*4]			2000 [3000]	2000 [3000]	2000 [3000]
	220V servo motor	Tr			Tr	Tr	Tr
X2-MH High inertia	Models	X2MH020A	X2MH040A	X2MH075A	X2MH100A	X2MH150A	
	Flange	60	60	80	130	130	
	Rated [Peak Torque]	0.64 [2.23]	1.27 [4.46]	2.39 [8.36]	4.77 [14.3]	7.16 [21.5]	
	Inertia:No brake (with brake)	0.29 [0.31]	0.56 [0.58]	1.56 [1.66]	30.8 [32]	38.5 [39.7]	
	Rotation speed: Rated (Max. speed)	3000 [6500*4]	3000 [6500*4]	3000 [6000*4]	2000 [3000]	2000 [3000]	
	220V servo motor	Tr	Tr	Tr	Tr	Tr	
X2-MHH Ultrahigh inertia	Models	X2MH020H	X2MH040H	X2MH075H			
	Flange	60	60	80			
	Rated [Peak Torque]	0.64 [2.23]	1.27 [4.46]	2.39 [8.36]			
	Inertia:No brake (with brake)	0.47 [0.49]	0.73 [0.75]	3.15 [3.2]			
	Rotation speed: Rated (Max. speed)	3000 [6500*4]	3000 [6500*4]	3000 [6000*4]			
	220V servo motor	Tr	Tr	Tr			
X2-MQ Special flange Flat-type small flange	Models	X2MQ020A	X2MQ040A		X2MQ100E		
	Flange	80	80		80		
	Rated [Peak Torque]	0.637 [1.91]	1.27 [3.82]		3.185 [11.13]		
	Inertia:No brake (with brake)	0.47 [0.5]	0.87 [0.9]		2 [2.1]		
	Rotation speed: Rated (Max. speed)	3000 [6500]	3000 [6500*4]		3000 [6000*4]		
	220V servo motor	Tr	Tr		Tr		
Series name	Specifications	1.3KW	1.8KW	2.3KW			
X2-MG Low-speed & high-torque	Models	X2MG130A	X2MG180A	X2MG230A			
	Flange	130	130	130			
	Rated [Peak Torque]	8.28 [24.84]	11.5 [34.5]	15 [33]			
	Inertia:No brake (with brake)	20.2 [21.4]	26 [27.2]	12.7 [14.2]			
	Rotation speed: Rated (Max. speed)	1500 [3000]	1500 [3000]	1500 [2000]			
	220V servo motor	Tr	Tr	Tr			
Series name	Specifications	2.0KW					
X2-MS Ultrahigh speed	Models	X2MS200B					
	Flange	130					
	Rated [Peak Torque]	9.55 [28.6]					
	Inertia:No brake (with brake)	16.85 [18.05]					
	Rotation speed: Rated (Max. speed)	2000 [5000]					
	220V servo motor	Tr					

Series name	Specifications	50W	100W	150W	200W	400W	750W
X2-MM Middle inertia	Models	X2MM005A	X2MM010A	X2MM015A	X2MM020A	X2MM040A	X2MM075A
	Flange	40	40	40	60	60	80
	Rated [Peak Torque]	0.16 [0.56]	0.32 [1.11]	0.477 [1.43]	0.64 [2.23]	1.27 [4.46]	2.39 [8.36]
	Inertia:No brake (with brake)	0.038 [0.042]	0.071 [0.074]	0.13 [0.133]	0.29 [0.31]	0.56 [0.58]	1.56 [1.66]
	Rotation speed: Rated (Max. speed)	3000 [6500]	3000 [6500]	3000 [6000]	3000 [6500*4]	3000 [6500*4]	3000 [6000*4]
	220V servo motor	Tr	Tr	Tr	Tr	Tr	Tr
X2-MHH Ultrahigh inertia	Models	X2MH010H			X2MH020H	X2MH040H	X2MH075H
	Flange	40			60	60	80
	Rated [Peak Torque]	0.32 [1.11]			0.64 [2.23]	1.27 [4.46]	2.39 [8.36]
	Inertia:No brake (with brake)	0.092 [0.095]			0.47 [0.49]	0.73 [0.75]	3.15 [3.2]
	Rotation speed: Rated (Max. speed)	3000 [6500]			3000 [6500*4]	3000 [6500*4]	3000 [6000*4]
	220V servo motor	Tr			Tr	Tr	Tr
X2-MQ Special flange Flat-type small flange	Models	X2MQ010A			X2MQ020A	X2MQ040A	
	Flange	60			80	80	
	Rated [Peak Torque]	0.32 [0.96]			0.637 [1.91]	1.27 [3.82]	
	Inertia:No brake (with brake)	0.16 [0.18]			0.47 [0.5]	0.87 [0.9]	
	Rotation speed: Rated (Max. speed)	3000 [6500]			3000 [6500]	3000 [6500*4]	
	220V servo motor	Tr			Tr	Tr	
Series name	Specifications	750W	850W	1KW	1.3KW	1.8KW	2.3KW
X2-MG Low-speed & high-torque	Models	X2MG075A	X2MG085A	X2MG100A	X2MG130A	X2MG180A	X2MG230A
	Flange	80	130	130	130	130	130
	Rated [Peak Torque]	4.77 [14.3]	5.41 [16.2]	9.55 [28.6]	8.28 [24.84]	11.5 [34.5]	15 [33]
	Inertia:No brake (with brake)	2.88 [3]	14 [15.2]	12.1 [13.3]	20.2 [21.4]	26 [27.2]	12.7 [14.2]
	Rotation speed: Rated (Max. speed)	1500 [2000]	1500 [3000]	1000 [1500]	1500 [3000]	1500 [3000]	1500 [2000]
	220V servo motor	Tr	Tr	Tr	Tr	Tr	Tr
Series name	Specifications	800W	1KW	1.5KW	2.0KW		
X2-MS Ultrahigh speed	Models	X2MS080A	X2MS100B	X2MS150B	X2MS200B		
	Flange	60	130	130	130		
	Rated [Peak Torque]	1.27 [3.81]	4.77 [14.3]	7.16 [21.5]	9.55 [28.6]		
	Inertia:No brake (with brake)	1.15 [*3]	9.16 [10.4]	12.1 [13.3]	16.85 [18.05]		
	Rotation speed: Rated (Max. speed)	6000 [10000]	2000 [5000]	2000 [5000]	2000 [5000]		
	220V servo motor	Tr	Tr	Tr	Tr		

NOTE: 23 indicates the encoder bits.

Tr: Under development

*2: Under development

*3: Indicates there is no model with the brake.

*4: The maximum speed of the servo motor varies due to the design difference of the servo drive

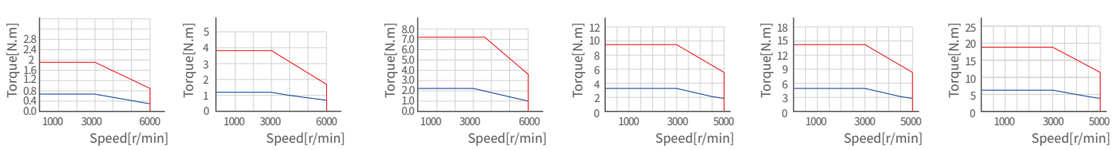
Servo Motor Specifications

200W 400W 750W 1KW 1.5KW 2KW

Items		Unit	X2MA020A	X2MA040A	X2MA075A	X2MA100A	X2MA150A	X2MA200A
Rated power		W	200	400	750	1000	1500	2000
Rated voltage		V	220	220	220	220	220	220
Fitting flange size		mm	60	60	80	100	100	100
Rated torque		N.m	0.64	1.27	2.39	3.18	4.77	6.37
Instantaneous max. torque		N.m	1.91	3.82	7.16	9.55	14.3	19.1
Rated speed		r/min	3000	3000	3000	3000	3000	3000
Max. speed		r/min	6000	6000	6000	5000	5000	5000
		NOTE	*1	*1	*1			
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.						
Rated current		Arms	1.7	2.7	4.2	6.6	8.2	11.3
Instantaneous max. current		Arms	6.5	10.2	17.4	28	35	48
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	0.16	0.28	0.96	2.03	2.84	3.68
	With brake	$x10^{-4}Kg.m^2$	0.17	0.29	1.07	2.35	3.17	4.01
Torque constant		N.m/A	0.427	0.488	0.583	0.52	0.628	0.607
Induced voltage constant per phase		mV[r/min]	14.5	17.9	21.33	18.15	21.92	21.247
Rated power rate	No brake	KW/S	25.6	57.6	59.5	49.82	80.12	110.26
	With brake	KW/S	24.1	55.6	53.4	43.03	71.775	101.19
Mechanical time constant	No brake	ms	0.775	0.561	0.463	0.619	0.507	0.425
	With brake	ms	0.824	0.581	0.516	0.717	0.566	0.463
Electrical time constant		ms	6.3	6.1	12.7	7.22	8.08	9.37
Phase q-axis/d-axis inductance		mH	19/5.6	10.7/7.5	7.6/4.9	—	—	—
Weight: No brake[with brake]		kg	0.9 [1.3]	1.28 [1.67]	2.25 [3.01]	3.5 [4.5]	4.4 [5.4]	5.3 [6.3]
Permissible load	Radial load	N	245	245	392	392	392	392
	Axial load	N	98	98	147	147	147	147
Brake specification	Rated voltage	V	DC24V±10%					
	Rated current	A	0.36	0.36	0.42	0.81±10%	0.81±10%	0.81±10%
	Brake power	w	9	9	10	20	20	20
	Static friction torque	N.m	1.6 or more	1.6 or more	3.8 or more	7.8 or more	7.8 or more	7.8 or more
Note: Holding brake	Suction time	ms	50 or less	50 or less	70 or less	50 or less	50 or less	50 or less
	Release time	ms	20 or less	20 or less	20 or less	15 or less	15 or less	15 or less
	Release voltage	ms	DC1V or more					

Torque characteristics

Instantaneous operation range — Continuous operation range



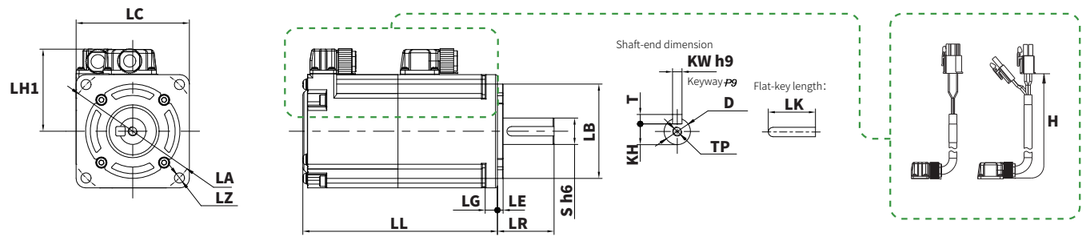
X2MA020A ▲ X2MA040A ▲ X2MA075A ▲ X2MA100A ▲ X2MA150A ▲ X2MA200A ▲

External Dimensions for Servo Motor

Unit(mm)

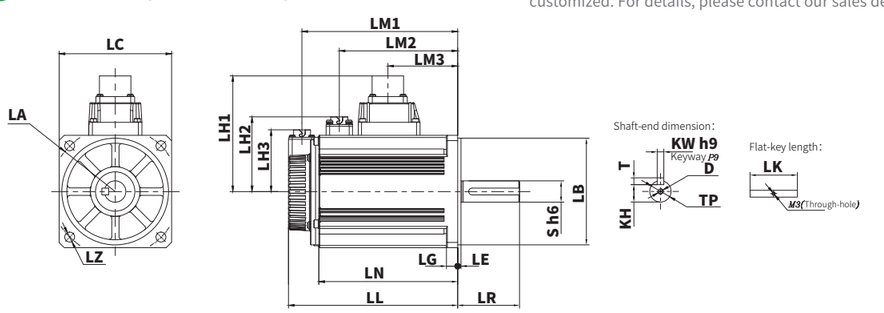
Models	X2MA020A	X2MA040A	X2MA075A	X2MA100A	X2MA150A	X2MA200A
LC	60	60	80	100	100	100
LA	ϕ70	ϕ70	ϕ90	ϕ115	ϕ115	ϕ115
LB	ϕ50	ϕ50	ϕ70	ϕ95	ϕ95	ϕ95
LZ	4-ϕ5.4	4-ϕ5.4	4-ϕ6	4-ϕ9	4-ϕ9	4-ϕ9
LR	30	30	35	55	55	55
S	ϕ14 h6	ϕ14 h6	ϕ19 h6	ϕ19 h6	ϕ19 h6	ϕ19 h6
LL no brake [with brake]	73.5 [103]	93.2 [122.7]	105 [138.5]	123.5 [150.5]	142 [169]	161[188]
LN no brake [with brake]	—	—	—	96.5 [123.5]	115 [142]	134 [161]
LG	6.5	6.5	8	10	10	10
LE	3	3	3	3	3	3
LM1	—	—	—	111.5 [138.5]	130 [157]	149 [176]
LM2	—	—	—	— [105]	— [123.5]	— [142.5]
LM3	—	—	—	62	80.5	99.5
LH1	44.5	44.5	54.5	103	103	103
LH2	—	—	—	66	66.5	66.5
LH3	—	—	—	55	55	55
LK	25	25	25	42	42	42
T	5	5	6	6	6	6
KW	5 h9	5 h9	6 h9	6 h9	6 h9	6 h9
KH	11	11	15.5	15.5	15.5	15.5
TP	M5depth12	M5depth12	M5depth10	M5depth12	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	—	—	—

X2MA020A / X2MA040A / X2MA075A



Connector-type　　Lead-wire type

X2MA100A / X2MA150A / X2MA200A



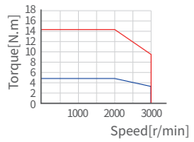
NOTE *2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

Servo Motor Specifications 1KW 1.5KW 2KW

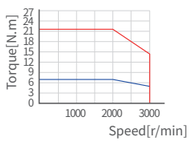
Items		Unit	X2MM100A	X2MM150A	X2MM200A
Rated power		W	1000	1500	2000
Rated voltage		V	220	220	220
Fitting flange size		mm	130	130	130
Rated torque		N.m	4.77	7.16	9.55
Instantaneous max. torque		N.m	14.3	21.5	28.6
Rated speed		r/min	2000	2000	2000
Max. speed		r/min	3000	3000	3000
Rated current		Arms	5.2	8	9.9
Instantaneous max. current		Arms	15.6	24	30
Moment of inertia	No brake	x10^{-4}Kg.m^2	6.18	9.16	12.1
	With brake	x10^{-4}Kg.m^2	7.4	10.4	13.3
Torque constant		N.m/A	0.918	0.895	0.9645
Induced voltage constant per phase		mV[r/min]	33.65	34.84	37.95
Rated power rate	No brake	KW/S	36.8	56	75.4
	With brake	KW/S	30.7	49.3	68.6
Mechanical time constant	No brake	ms	1.51	1.16	1.05
	With brake	ms	1.81	1.3	1.16
Electrical time constant		ms	11.1	14.6	15.38
Phase q-axis/d-axis inductance		mH	8.4/4.3	5.8/2.9	4.9/2.6
Weight: No brake[with brake]		kg	4.67 [6.27]	5.87[7.47]	12.1[13.3]
Permissible load	Radial load	N	490	490	490
	Axial load	N	196	196	196
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%		
	Rated current	A	0.9	0.9	0.9
	Brake power	w	22	22	22
	Static friction torque	N.m	14 or more	14 or more	14 or more
	Suction time	ms	100or less	100or less	100 or less
	Release time	ms	60 or less	60 or less	60 or less
	Release voltage	ms	DC1V or less		

Torque characteristics

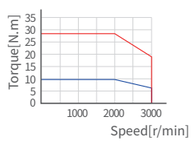
Instantaneous operation range — Continuous operation range



X2MM100A▲



X2MM150A▲



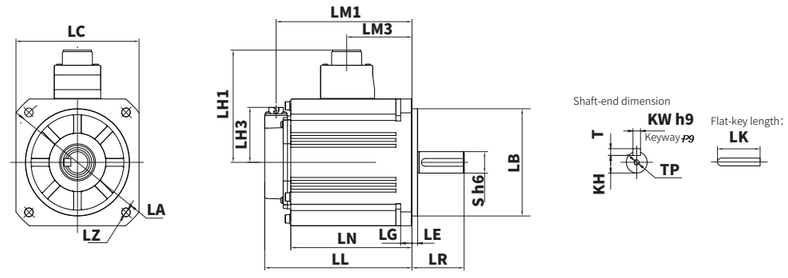
X2MM200A▲

External Dimensions for Servo Motor

Unit(mm)

Models	X2MM100A-□2L□	X2MM150A-□2L□	X2MM200A-□2L□
LC	130	130	130
LA	ϕ145	ϕ145	ϕ145
LB	ϕ110	ϕ110	ϕ110
LZ	4-ϕ9	4-ϕ9	4-ϕ9
LR	55	55	55
S	ϕ22 h6	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	107.5 [127.5]	121.5[141.5]	135.5 [155.5]
LN no brake [with brake]	80[100]	94[114]	108[128]
LG	12	12	12
LE	6	6	6
LH1	115	115	115
LH3	56.5	56.5	56.5
LM1no brake [with brake]	95.5[115.5]	109.5[129.5]	123.5[143.5]
LM3	41	55	69
LK	45	45	45
T	7	7	7
KW	8 h9	8 h9	8 h9
KH	18	18	18
TP	M6depth20	M6depth20	M6deep20

X2MM100A / X2MM150A / X2MM200A[Aviation connector]



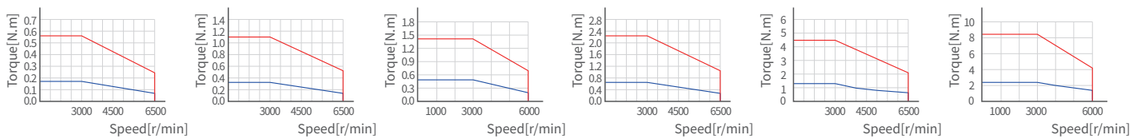
Servo Motor Specifications

50W 100W 150W 200W 400W 750W

Items		Unit	X2MH005A	X2MH010A	X2MH015A	X2MH020A	X2MH040A	X2MH075A
Rated power		W	50	100	150	200	400	750
Rated voltage		V	220	220	220	220	220	220
Fitting flange size		mm	40	40	40	60	60	80
Rated torque		N.m	0.16	0.32	0.477	0.64	1.27	2.39
Instantaneous max. torque		N.m	0.56	1.11	1.43	2.23	4.46	8.36
Rated speed		r/min	3000	3000	3000	3000	3000	3000
Max. speed		r/min	6500	6500	6000	6500	6500	6000
		NOTE				*1	*1	*1
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.						
Rated current		Arms	1.1	1.1	1.5	1.4	2.1	3.8
Instantaneous max. current		Arms	3.89	3.89	4.5	4.87	7.36	13.3
Moment of inertia	No brake	x10^{-4}Kg.m^2	0.038	0.071	0.13	0.29	0.56	1.56
	With brake	x10^{-4}Kg.m^2	0.042	0.074	0.133	0.31	0.58	1.66
Torque constant		N.m/A	0.168	0.327	0.33	0.5	0.67	0.648
Induced voltage constant per phase		mV[r/min]	5	11.1	12.2	14.61	20.85	22.65
Rated power rate	No brake	KW/S	6.7	14.4	17.5	14.1	28.8	36.6
	With brake	KW/S	6.1	13.8	17.1	13.2	27.8	34.4
Mechanical time constant	No brake	ms	2.6	1.67	1.9	1.57	1.24	0.97
	With brake	ms	2.85	1.74	1.94	1.68	1.29	1.03
Electrical time constant		ms	0.89	1.1	1.22	2.58	2.97	6.59
Phase q-axis/d-axis inductance		mH	5.1/3.4	9.4/6.3	7.2/4.8	10.2/5.8	9.2/6.5	6/3.3
Weight: No brake[with brake]		kg	0.33 [0.55]	0.45 [0.66]	0.83 [0.69]	0.87 [1.27]	1.22 [1.61]	2.25 [3.01]
Permissible load	Radial load	N	68	68	68	245	245	392
	Axial load	N	58	58	58	98	98	147
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%					
	Rated current	A	0.25	0.25	0.375	0.36	0.36	0.42
	Brake power	w	6	6	9	9	9	10
	Static friction torque	N.m	0.38 or more	0.38 or more	0.58 or more	1.6 or more	1.6 or more	3.8 or more
	Suction time	ms	35 or less	35 or less	50 or less	50 or less	50 or less	70 or less
	Release time	ms	20 or less	20 or less	20 or less	20 or less	20 or less	20 or less
	Release voltage	ms	DC1Vor more					

Torque characteristics

Instantaneous operation range — Continuous operation range

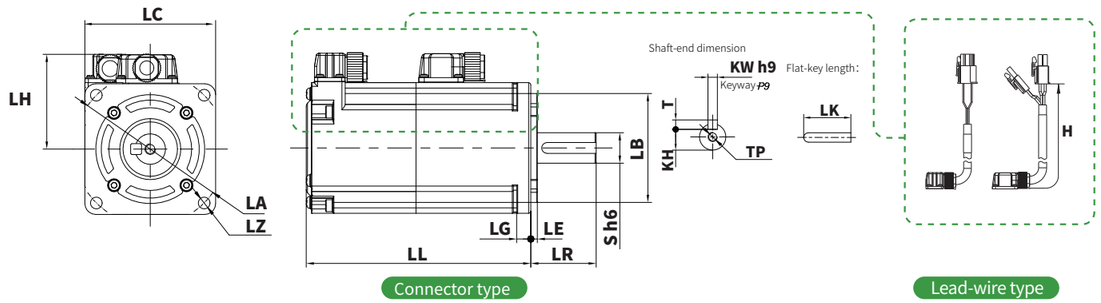


External Dimensions for Servo Motor

Unit(mm)

Models	X2MH005A	X2MH010A	X2MH015A	X2MH020A	X2MH040A	X2MH075A
LC	40	40	40	60	60	80
LA	ϕ46	ϕ46	ϕ46	ϕ70	ϕ70	ϕ90
LB	ϕ30	ϕ30	ϕ30	ϕ50	ϕ50	ϕ70
LZ	2-ϕ4.3	2-ϕ4.3	2-ϕ4.3	4-ϕ5.4	4-ϕ5.4	4-ϕ6.5
LR	25	25	25	30	30	35
S	ϕ8 h6	ϕ8 h6	ϕ8 h6	ϕ14 h6	ϕ14 h6	ϕ19 h6
LL no brake [with brake]	57 [91]	71 [105]	93.8[127.8]	70.5[100]	87.5 [117]	94.5[128.5]
LG	5	5	5	6.5	6.5	8
LE	3	3	3	3	3	3
LH	35	35	35	44.5	44.5	54.5
LK	14	14	14	25	25	25
T	3	3	3	5	5	6
KW	3 h9	3 h9	3 h9	5 h9	5 h9	6 h9
KH	6.2	6.2	6.2	11	11	15.5
TP	M3depth6	M3depth6	M3depth6	M5depth12	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	210	210	210

X2MH005A / X2MH010A / X2MH015A/X2MH20A/X2MH040A/X2MH075A



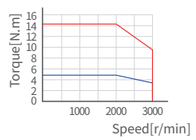
*2: X2 series motor and wire type products are customized products. If there is any demand, please contact our sales department。

Servo Motor Specifications 1KW 1.5KW

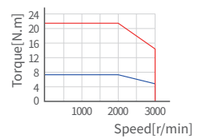
Items		Unit	X2MH100A	X2MH150A
Rated power		W	1000	1500
Rated voltage		V	220	220
Fitting flange size		mm	130	130
Rated torque		N.m	4.77	7.16
Instantaneous max. torque		N.m	14.3	21.5
Rated speed		r/min	2000	2000
Max. speed		r/min	3000	3000
Rated current		Arms	5.2	8
Instantaneous max. current		Arms	15.6	24
Moment of inertia	No brake	x10^{-4}Kg.m^2	30.8	38.5
	With brake	x10^{-4}Kg.m^2	32	39.7
Torque constant		N.m/A	0.918	0.895
Induced voltage constant per phase		mV[r/min]	33.65	34.84
Rated power rate	No brake	KW/S	7.39	13.3
	With brake	KW/S	7.11	12.9
Mechanical time constant	No brake	ms	7.54	4.9
	With brake	ms	7.84	5.05
Electrical time constant		ms	11.1	14.63
Phase q-axis/d-axis inductance		mH	8.4/4.3	5.8/2.9
Weight: No brake[with brake]		kg	6.4 [8]	7.8[9.4]
Permissible load	Radial load	N	490	490
	Axial load	N	196	196
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%	
	Rated current	A	0.9	0.9
	Brake power	w	22	22
	Static friction torque	N.m	14 or more	14 or more
	Suction time	ms	100 or less	100 or less
	Release time	ms	60 or less	60 or less
	Release voltage	ms	DC1Vor more	

Torque characteristics

Instantaneous operation range — Continuous operation range



X2MH100A▲



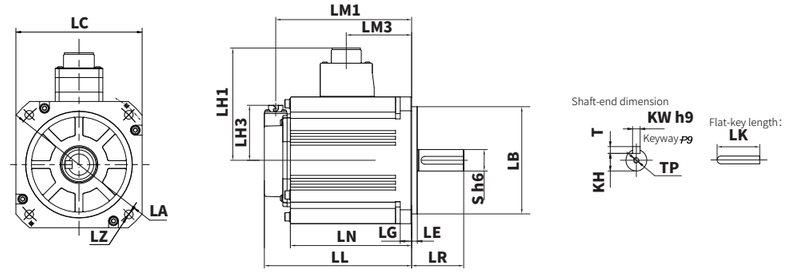
X2MH150A▲

External Dimensions for Servo Motor

Unit(mm)

Models	X2MH100A-□2L□(Aviation connector)	X2MH150A-□2L□(Aviation connector)
LC	130	130
LA	ϕ145	ϕ145
LB	ϕ110	ϕ110
LZ	4-ϕ9	4-ϕ9
LR	55	55
S	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	135.5[155.5]	149.5 [169.5]
LN no brake [with brake]	108[128]	122[142]
LG	12	12
LE	6	6
LH1	115	115
LH3	56.5	56.5
LM1no brake [with brake]	123.5 [143.5]	137.5 [157.5]
LM3	69	83
LK	45	45
T	7	7
KW	8 h9	8 h9
KH	18	18
TP	M6depth20	M6depth20

X2MH100A/X2MH150A[Aviation connector]



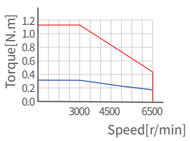
Servo Motor Specifications

100 W 200 W 400 W 750 W

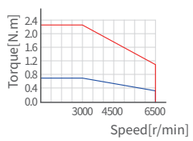
Items		Unit	X2MH010H	X2MH020H	X2MH040H	X2MH075H
Rated power		W	100	200	400	750
Rated voltage		V	220	220	220	220
Fitting flange size		mm	40	60	60	80
Rated torque		N.m	0.32	0.64	1.27	2.39
Instantaneous max. torque		N.m	1.11	2.23	4.46	8.36
Rated speed		r/min	3000	3000	3000	3000
Max. speed		r/min	6500	6500	6500	6000
		NOTE		*1	*1	*1
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.				
Rated current		Arms	0.92	1.4	2.4	3.8
Instantaneous max. current		Arms	3.6	6.9	8.2	18.8
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	0.092	0.47	0.73	3.15
	With brake	$x10^{-4}Kg.m^2$	0.095	0.49	0.75	3.2
Torque constant		N.m/A	0.327	0.5	0.531	0.648
Induced voltage constant per phase		mV[r/min]	13.3	14.61	20.4	22.65
Rated power rate	No brake	KW/S	11.13	8.71	22.09	18.1
	With brake	KW/S	10.78	8.36	21.5	17.85
Mechanical time constant	No brake	ms	2.23	2.54	1.15	1.95
	With brake	ms	2.3	2.65	1.18	1.98
Electrical time constant		ms	0.986	2.58	4.1	6.59
Phase q-axis/d-axis inductance		mH	11.9/8	10.2/5.8	6.9/4.3	6/3.3
Weight: No brake[with brake]		kg	0.44[0.65]	0.95 [1.29]	1.45 [1.85]	2.65 [3.13]
Permissible load	Radial load	N	68	245	245	392
	Axial load	N	58	98	98	147
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%			
	Rated current	A	0.25	0.36	0.36	0.42
	Brake power	w	6	9	9	10
	Static friction torque	N.m	0.38 or more	1.6 or more	1.6 or more	3.8 or more
	Suction time	ms	35 or less	50 or less	50 or less	70 or less
	Release time	ms	20 or less	20 or less	20 or less	20 or less
	Release voltage	ms	DC1Vor more			

Torque characteristics

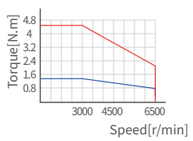
Instantaneous operation range — Continuous operation range



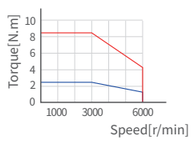
X2MH010H ▲



X2MH020H ▲



X2MH040H ▲



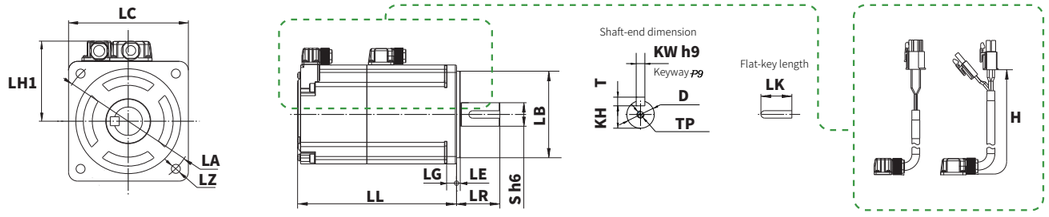
X2MH075H ▲

External Dimensions for Servo Motor

Unit(mm)

Models	X2MH010H	X2MH020H(Lead-wire type)	X2MH040H	X2MH075H(Lead-wire type)
LC	40	60	60	80
LA	ϕ46	ϕ70	ϕ70	ϕ90
LB	ϕ30	ϕ50	ϕ50	ϕ70
LZ	2-ϕ4.3	4-ϕ5.5	4-ϕ5.5	4-ϕ6.6
LR	25	30	30	35
S	ϕ8 h6	ϕ14 h6	ϕ14 h6	ϕ19 h6
LL no brake [with brake]	76.7 [110.7]	82.4 [111.9]	98.5 [128]	122 [167]
LG	5	6.5	6.5	8
LE	3	3	3	3
LH1	34.5	43.5	43.5	53.5
LK	14	25	25	25
T	3	5	5	6
KW	3 h9	5 h9	5 h9	6 h9
KH	6.2	11	11	15.5
TP	M3depth6	M5depth12	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	210

X2MH010H / X2MH020H / X2MH040H / X2MH075H



Connector-type — Lead-wire type

NOTE *2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

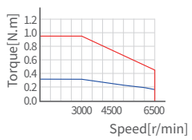
Servo Motor Specifications

100 W 200 W 400 W 1 KW

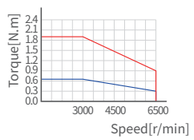
Items		Unit	X2MQ010A	X2MQ020A	X2MQ040A	X2MQ100E
Rated power		W	100	200	400	1000
Rated voltage		V	220	220	220	220
Fitting flange size		mm	60	80	80	80
Rated torque		N.m	0.32	0.637	1.27	3.185
Instantaneous max. torque		N.m	0.96	1.91	3.82	11.13
Rated speed		r/min	3000	3000	3000	3000
Max. speed		r/min	6500	6500	6500	6000
		NOTE			*1	*1
NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.						
Rated current		Arms	0.95	2	2.6	5.7
Instantaneous max. current		Arms	2.8	6.4	8.4	21.2
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	0.16	0.47	0.87	2
	With brake	$x10^{-4}Kg.m^2$	0.18	0.5	0.9	2.1
Torque constant		N.m/A	0.369	0.318	0.488	0.552
Induced voltage constant per phase		mV[r/min]	11.6	12.2	19.6	21.2
Rated power rate	No brake	KW/S	6.4	8.63	18.5	50.7
	With brake	KW/S	5.69	8.12	17.92	48.31
Mechanical time constant	No brake	ms	2.96	2.51	1.51	0.85
	With brake	ms	3.33	2.67	1.57	0.897
Electrical time constant		ms	1.76	3.52	5.41	7.6
Phase q-axis/d-axis inductance		mH	13.9/7.8	7.3/3.9	9/4.9	3.8/2.6
Weight: No brake[with brake]		kg	0.68 [0.92]	1.24 [1.74]	1.6 [2.1]	2.68 [3.45]
Permissible load	Radial load	N	68	245	245	392
	Axial load	N	58	98	98	147
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%			
	Rated current	A	0.9	0.9	0.9	0.42
	Brake power	w	22	22	22	10
	Static friction torque	N.m	0.38-1.1	1.6 or more	1.6 or more	3.8 or more
	Suction time	ms	60 or less	60 or less	60 or less	70 or less
	Release time	ms	40 or less	40 or less	40 or less	20 or less
	Release voltage	ms	DC1.5V or more			DC1V or more

Torque characteristics

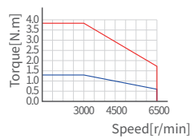
Instantaneous operation range — Continuous operation range



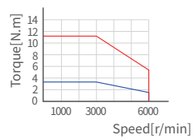
X2MQ010A▲



X2MQ020A▲



X2MQ040A▲



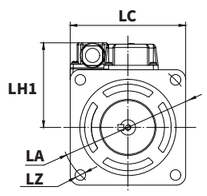
X2MQ100E▲

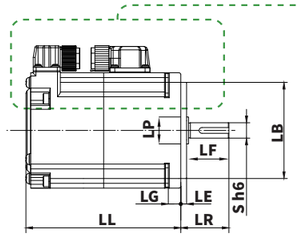
External Dimensions for Servo Motor

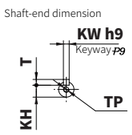
Unit(mm)

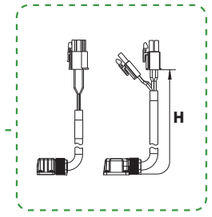
Models	X2MQ010A(Lead-wire type)	X2MQ020A(Lead-wire type)	X2MQ040A(Lead-wire type)	X2MQ100E
LC	60	80	80	80
LA	ϕ70	ϕ90	ϕ90	ϕ90
LB	ϕ50	ϕ70	ϕ70	ϕ70
LZ	4-ϕ5.4	4-ϕ6	4-ϕ6	4-ϕ6.5
LR	25	30	30	35
S	ϕ8 h6	ϕ11 h6	ϕ14 h6	ϕ19 h6
LL no brake [with brake]	61 [80.5]	66 [90]	76.8 [100.8]	108 [141.5]
LG	6.5	8	8	8
LE	3	3	3	3
LF	21	26	26	—
LP	ϕ14	ϕ19.7	ϕ19.7	—
LH1	43.5	53.5	53.5	53.5
LK	14	20	22	25
T	3	4	5	6
KW	3 h9	4 h9	5 h9	6 h9
KH	6.2	8.5	11	15.5
TP	M3depth6	M4depth8	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	210

X2MQ010A / X2MQ020A / X2MQ040A / X2MQ100E









Connector-type — Lead-wire type

NOTE *2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

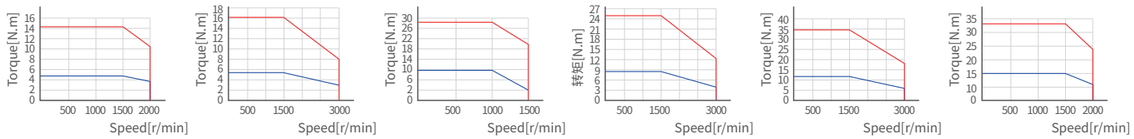
Servo Motor Specifications

750W 850W 1KW 1.3KW 1.8KW 2.3KW

Items		Unit	X2MG075A	X2MG085A	X2MG100A	X2MG130A	X2MG180A	X2MG230A
Rated power		W	750	850	1000	1300	1800	2300
Rated voltage		V	220	220	220	220	220	220
Fitting flange size		mm	80	130	130	130	130	130
Rated torque		N.m	4.77	5.41	9.55	8.28	11.5	15
Instantaneous max. torque		N.m	14.3	16.2	28.6	24.84	34.5	33
Rated speed		r/min	1500	1500	1000	1500	1500	1500
Max. speed		r/min	2000	3000	1500	3000	3000	2000
Rated current		Arms	4.2	5.9	5.2	9.3	11.8	12
Instantaneous max. current		Arms	15	18	16	28	35.5	26.4
Moment of inertia	No brake	x10^{-4}Kg.m^2	2.88	14	12.1	20.2	26	12.7
	With brake	x10^{-4}Kg.m^2	3	15.2	13.3	21.4	27.2	14.2
Torque constant		N.m/A	1.135	0.918	1.83	0.895	0.964	1.27
Induced voltage constant per phase		mV[r/min]	43.3	33.65	67.3	34.84	40.18	83.08
Rated power rate	No brake	KW/S	79	63.29	75.4	33.9	50.87	177
	With brake	KW/S	75.84	58.26	68.6	32	48.6	158
Mechanical time constant	No brake	ms	1.01	3.43	1.12	2.57	2.06	0.583
	With brake	ms	1.05	3.72	1.23	2.72	2.15	0.651
Electrical time constant		ms	5.1	11.1	9.65	14.63	15.99	9.58
Phase q-axis/d-axis inductance		mH	8.4/5.7	8.4/4.3	11/8.7	5.8/2.9	4.9/2.6	-
Weight: No brake[with brake]		kg	3.46 [4.14]	5.53 [7.13]	6.91 [8.51]	6.89 [8.49]	8.14 [9.74]	11.4[13]
Permissible load	Radial load	N	392	490	490	490	490	490
	Axial load	N	147	160	160	160	160	196
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%					
	Rated current	A	0.42	0.9	0.9	0.9	0.9	0.96
	Brake power	w	10	22	22	22	22	23
	Static friction torque	N.m	3.8 or more	14 or more	14 or more	14 or more	14 or more	20 or more
	Suction time	ms	70 or less	100 or less	100 or less	100 or less	100 or less	80 or less
	Release time	ms	20 or less	60 or less	60 or less	60 or less	60 or less	40 or less
	Release voltage	ms	DC1V or more					DC0.5V or more

Torque characteristics

Instantaneous operation range — Continuous operation range



X2MG075A▲ X2MG085A▲ X2MG100A▲ X2MG130A▲ X2MG180A▲ X2MG230A▲

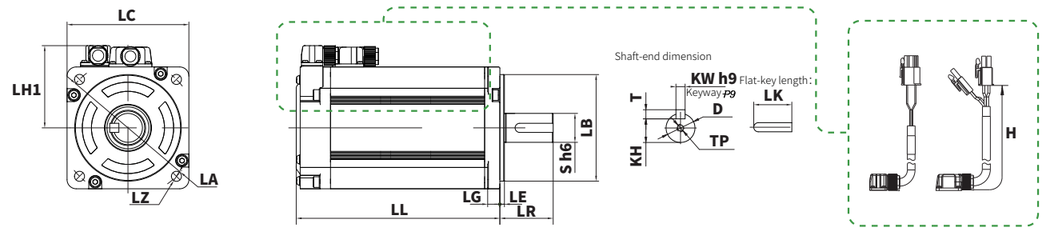
External Dimensions for Servo Motor

Unit(mm)

Models	X2MG075A(Lead-wire type)	X2MG085A	X2MG100A	X2MG130A	X2MG180A	X2MG230A
LC	80	130	130	130	130	130
LA	ϕ90	ϕ145	ϕ145	ϕ145	ϕ145	ϕ145
LB	ϕ70	ϕ110	ϕ110	ϕ110	ϕ110	ϕ110
LZ	4-ϕ6.6	4-ϕ9	4-ϕ9	4-ϕ9	4-ϕ9	4-ϕ9
LR	35	55	55	55	55	55
S	ϕ19 h6	ϕ22 h6	ϕ22 h6	ϕ22 h6	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	134 [177]	135.5 [155.5]	135.5 [155.5]	149.5 [169.5]	163.5 [183.5]	198 [223]
LN no brake [with brake]	—	108 [128]	108 [128]	122 [142]	136 [156]	167 [192]
LG	8	12	12	12	12	12
LE	3	6	6	6	6	6
LM1 no brake [with brake]	—	123.5 [143.5]	123.5 [143.5]	137.5[157.5]	151.5 [171.5]	186 [211]
LM2 no brake [with brake]	—	—	—	—	—	—[173]
LM3	—	69	69	83	97	127.6
LH1	54	115	115	115	115	118
LH2	—	—	—	—	—	81.5
LH3	—	56.5	56.5	56.5	56.5	58.5
LK	25	45	45	45	45	45
T	6	7	7	7	7	7
KW	6 h9	8 h9	8 h9	8 h9	8 h9	8 h9
KH	15.5	18	18	18	18	18
TP	M5depth12	M6depth20	M6depth20	M6depth20	M6depth20	M6depth20
H H-type cable length for lead-wire type	210	—	—	—	—	—

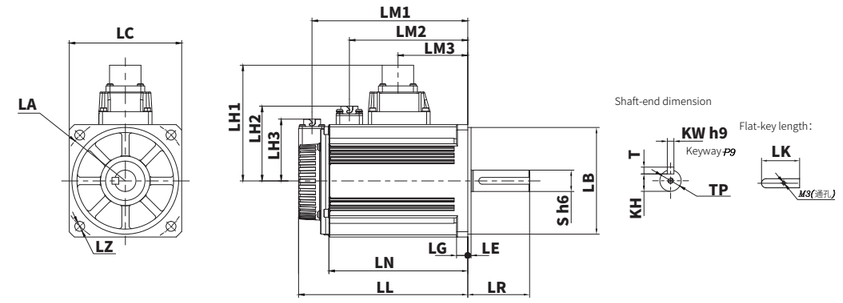
NOTE *2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

X2MG075A



Connector-type Lead-wire type

X2MG085A / X2MG100A / X2MG130A / X2MG180A / X2MG230A



Servo Motor Specifications

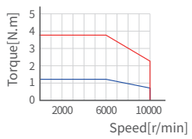
800W 1KW 1.5KW 2KW

Items		Unit	X2MS080A	X2MS100B	X2MS150B	X2MS200B
Rated power		W	800	1000	1500	2000
Rated voltage		V	220	220	220	220
Fitting flange size		mm	60	130	130	130
Rated torque		N.m	1.27	4.77	7.16	9.55
Instantaneous max. torque		N.m	3.81	14.31	21.5	28.6
Rated speed		r/min	6000	2000	2000	2000
Max. speed		r/min	10000	5000	5000	5000
Rated current		Arms	3.8	8.25	9.5	15
Instantaneous max. current		Arms	12	25	29	50
Moment of inertia	No brake	x10^{-4}Kg.m^2	1.15	9.16	12.1	16.85
	With brake	x10^{-4}Kg.m^2	*1	10.4	13.3	18.05
Torque constant		N.m/A	0.33	0.573	0.672	0.627
Induced voltage constant per phase		mV[r/min]	12.4	21.2	25.9	23
Rated power rate	No brake	KW/S	13.9	24.84	42.37	54.13
	With brake	KW/S	*1	21.88	38.55	50.53
Mechanical time constant	No brake	ms	1.09	1.24	1.08	0.93
	With brake	ms	*1	1.41	1.18	1
Electrical time constant		ms	2.88	13.3	16.13	13.75
Phase q-axis/d-axis inductance		mH	1.12/0.79	2.2/1.1	2.5/1.3	1.1/0.6
Weight: No brake[with brake]		kg	2.04	5.87 [7.47]	6.98 [8.58]	6.91 [8.51]
Permissible load	Radial load	N	245	490	490	490
	Axial load	N	98	196	196	196
Brake specification	Rated voltage	V	—	DC24V±10%		
	Rated current	A	—	0.9	0.9	0.9
	Brake power	w	*1	22	22	22
Note: Holding brake	Static friction torque	N.m	—	14 or more	14 or more	14 or more
	Suction time	ms	—	100 or less	100 or less	100 or less
	Release time	ms	—	60 or less	60 or less	60 or less
	Release voltage	ms	—	DC1V or more		

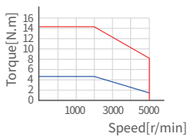
註 *1: Indicates there is no model with the brake.

Torque characteristics

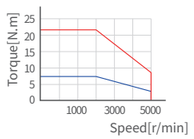
Instantaneous operation range — Continuous operation range



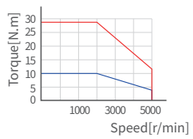
X2MS080A ▲



X2MS100B ▲



X2MS150B ▲



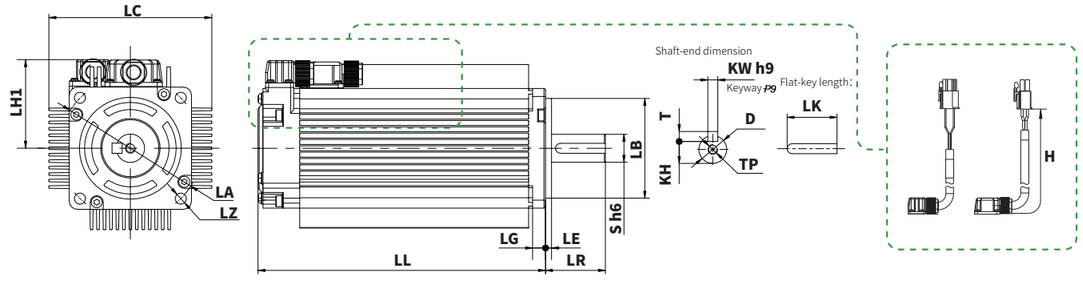
X2MS200B ▲

External Dimensions for Servo Motor

Unit(mm)

Models	X2MS080A(Lead-wire type)	X2MS100B	X2MS150B	X2MS200B
LC	60	130	130	130
LA	ϕ70	ϕ145	ϕ145	ϕ145
LB	ϕ50	ϕ110	ϕ110	ϕ110
LZ	4-ϕ5.4	4-ϕ9	4-ϕ9	4-ϕ9
LR	30	55	55	55
S	ϕ14 h6	ϕ22 h6	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	144.1 [*1]	121.5 [141.5]	135.5 [155.5]	163.5 [183.5]
LN no brake [with brake]	—	94 [114]	108 [128]	136 [156]
LG	6.5	12	12	12
LE	3	6	6	6
LM1 no brake [with brake]	—	109.5 [129.5]	123.5 [143.5]	151.5 [171.5]
LM3	—	55	69	97
LH1	43.5	115	115	115
LH3	—	56.5	56.5	56.5
LK	25	45	45	45
T	5	7	7	7
KW	5 h9	8 h9	8 h9	8 h9
KH	11	18	18	18
TP	M5depth12	M6depth20	M6depth20	M6depth20
H H-type cable length for lead-wire type	210	—	—	—

X2MS080A

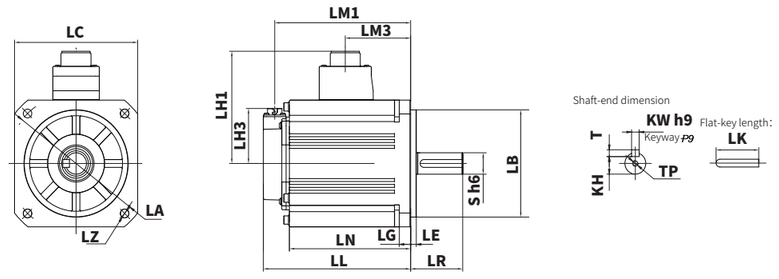


Lead-wire type

NOTE *1:Indicates that there is no brake model for this model

*2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

X2MS100B / X2MS150B / X2MS200B



	Power	Models	17bit absolute	17bit Incremental	Brake	Oil seal	Flange	Shaft diameter	Regular model	Applicable accessories
X2-MA Low-inertia	200W	X2MA020A-N2CA	●			●	60 flange	Φ14	Connector-type	1 5 31
		X2MA020A-B2CA			●					1 6 31
		X2MA020A-N2CN		●						2 5
		X2MA020A-B2CN			●					2 6
	400W	X2MA040A-N2CA	●			●	60 flange	Φ14	Connector-type	1 5 31
		X2MA040A-B2CA			●					1 6 31
		X2MA040A-N2CN		●						2 5
		X2MA040A-B2CN			●					2 6
	750W	X2MA075A-N2CA	●			●	80 flange	Φ19	Connector-type	1 5 31
		X2MA075A-B2CA			●					1 6 31
		X2MA075A-N2CN		●						2 5
		X2MA075A-B2CN			●					2 6
	1KW	X2MA100A-N2LA	●			●	100 flange	Φ19	Aviation connector	11 12 31
		X2MA100A-B2LA			●					11 12 14 31
		X2MA100A-N2LN		●						11 12
		X2MA100A-B2LN			●					11 12 14
	1.5KW	X2MA150A-N2LA	●			●	100 flange	Φ19	Aviation connector	11 12 31
		X2MA150A-B2LA			●					11 12 14 31
		X2MA150A-N2LN		●						11 12
		X2MA150A-B2LN			●					11 12 14
	2KW	X2MA200A-N2LA	●			●	100 flange	Φ19	Aviation connector	11 12 31
		X2MA200A-B2LA			●					11 12 14 31
		X2MA200A-N2LN		●						11 12
		X2MA200A-B2LN			●					11 12 14
X2-MM Low-inertia	1KW	X2MM100A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MM100A-B2LA			●					11 13 31
		X2MM100A-N2LN		●						11 12
		X2MM100A-B2LN			●					11 13
	1.5KW	X2MM150A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MM150A-B2LA			●					11 13 31
		X2MM150A-N2LN		●						11 12
		X2MM150A-B2LN			●					11 13
	2KW	X2MM200A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MM200A-B2LA			●					11 13 31
		X2MM200A-N2LN		●						11 12
		X2MM200A-B2LN			●					11 13

	Power	X3E [ ]_ _ _A-A2 [A]Pulse control	X3E [ ]_ _ _A-A2 [N] CANopen	X3E [ ]_ _ _A-A2 [B] EtherCAT	X3E [ ]_ _ _A-A2 Power specifications	X2E [ ]_ _ _A-A [A]Pulse control	X2E [ ]_ _ _A-A [N] CANopen	X2E [ ]_ _ _A-A Power specifications	Notes
X2-MA Low-inertia	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	X2EA020A-A	X2EN020A-A	Single-phase AC220V	Motor futures
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	X2EA040A-A	X2EN040A-A	Single-phase AC220V	Motor futures
	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	X2EA075A-A	X2EN075A-A	Single-phase AC220V	Motor futures
	1KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	X2EA150A-A	X2EN150A-A	Three-phase AC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	X2EA150A-A	X2EN150A-A	Three-phase AC220V	
	2KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phase AC220V	X2EA200A-A	X2EN200A-A	Three-phase AC220V	
X2-MM Middle inertia	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	X2EA100A-A	X2EN100A-A	Three-phase AC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	X2EA150A-A	X2EN150A-A	Three-phase AC220V	
	2KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phase AC220V	X2EA200A-A	X2EN200A-A	Three-phase AC220V	

Accessories specifications for connector-type servo motors if flange 40 to 80

1	SVCAB-ENC075CA-ABS-***L-05	Absolute encoder cable
2	SVCAB-ENC075CA-***L-05	Incremental encoder cable
3	SVCAB-PWR010CA-***L-05	UVW power cable 50W~100W
4	SVCAB-PWB010CA-***L-05	UVW power cable with brake 50W~100W
5	SVCAB-PWR075CA-***L-05	UVW power cable 200W~1KW
6	SVCAB-PWB075CA-***L-05	UVW power cable with brake 200W~1KW

Aviation connector specifications for servo motor of flange 100&130&180

11	ENC-TE 1KW	Encoder accessories (10-pin aviation connector + 1394 connector)
12	PWR-CON 1KW	4-core power aviation connector, for flange 100&130
13	PWR-CON 1KW-9P	9-pin brake power aviation connector, for flange 100&130
14	PWB-CON- 1KW	2-core brake power connector *1
15	PWR-CON 7.5KW	4-core power aviation connector, for flange 180

*1 For flange 130 models, only X2MA100A/150A/200A/X2MG230A and 180 flange models require PWB-CON- 1KW

Accessories specifications for lead-wire type servo motor of flange 40 to 80

21	ENC-TE 750W	2 packs of encoder accessories (6-hole plastic connector + 1394 connector)
22	PWR-CON 750W	4-hole power plastic connector
23	PWB-CON 750W	6-hole power brake plastic connector

Other accessories specifications

31 SV-BAT — Absolute battery box with 1394 connector

	Power	Models	17bit absolute	17bit Incremental	Brake	Oil seal	Flange	Shaft diameter	Regular model	Applicable accessories
X2-MH high inertia	50W	X2MH005A-N2CA	●			●	40 flange	Φ8	Connector-type	1 3 31
		X2MH005A-B2CA			●					1 4 31
		X2MH005A-N2CN		●						2 3
		X2MH005A-B2CN			●					2 4
	100W	X2MH010A-N2CA	●			●	40 flange	Φ8	Connector-type	1 3 31
		X2MH010A-B2CA			●					1 4 31
		X2MH010A-N2CN		●						2 3
		X2MH010A-B2CN			●					2 4
	150W	X2MH015A-N2CA	●			●	40 flange	Φ8	Connector-type	1 3 31
		X2MH015A-B2CA			●					1 4 31
		X2MH015A-N2CN		●						2 3
		X2MH015A-B2CN			●					2 4
	200W	X2MH020A-N2CA	●			●	60 flange	Φ14	Connector-type	1 5 31
		X2MH020A-B2CA			●					1 6 31
		X2MH020A-N2CN		●						2 5
		X2MH020A-B2CN			●					2 6
	400W	X2MH040A-N2CA	●			●	60 flange	Φ14	Connector-type	1 5 31
		X2MH040A-B2CA			●					1 6 31
		X2MH040A-N2CN		●						2 5
		X2MH040A-B2CN			●					2 6
	750W	X2MH075A-N2CA	●			●	80 flange	Φ19	Connector-type	1 5 31
		X2MH075A-B2CA			●					1 6 31
		X2MH075A-N2CN		●						2 5
		X2MH075A-B2CN			●					2 6
	1KW	X2MH100A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MH100A-B2LA			●					11 13 31
		X2MH100A-N2LN		●						11 12
		X2MH100A-B2LN			●					11 13
	1.5KW	X2MH150A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MH150A-B2LA			●					11 13 31
		X2MH150A-N2LN		●						11 12
		X2MH150A-B2LN			●					11 13

	Power	X3E [ ]_ _ _A-A2				X2E [ ] _ _ _A-A			Notes
		[A]Pulse control	[N] CANopen	[B] EtherCAT	Power specifications	[A]Pulse control	[N] CANopen	Power specifications	
X2-MH High inertia	50W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	X2EA010A-A	X2EN010A-A	Single-phase AC220V	
	100W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	X2EA010A-A	X2EN010A-A	Single-phase AC220V	
	150W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	X2EA020A-A	X2EN020A-A	Single-phase AC220V	
	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	X2EA020A-A	X2EN020A-A	Single-phase AC220V	
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	X2EA040A-A	X2EN040A-A	Single-phase AC220V	
	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	X2EA075A-A	X2EN075A-A	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	X2EA100A-A	X2EN100A-A	Single-phase AC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	X2EA150A-A	X2EN150A-A	Three-phase AC220V	

Accessories specifications for connector-type servo motors if flange 40 to 80

1	SVCAB-ENC075CA-ABS-***L-05	Absolute encoder cable
2	SVCAB-ENC075CA-***L-05	Incremental encoder cable
3	SVCAB-PWR010CA-***L-05	UVW power cable 50W~100W
4	SVCAB-PWB010CA-***L-05	UVW power cable with brake 50W~100W
5	SVCAB-PWR075CA-***L-05	UVW power cable 200W~1KW
6	SVCAB-PWB075CA-***L-05	UVW power cable with brake 200W~1KW

Aviation connector specifications for servo motor of flange 100&130&180

11	ENC-TE 1KW	Encoder accessories (10-pin aviation connector + 1394 connector)
12	PWR-CON 1KW	4-core power aviation connector, for flange 100&130
13	PWR-CON 1KW-9P	9-pin brake power aviation connector, for flange 100&130
14	PWB-CON- 1KW	2-core brake power connector *1
15	PWR-CON 7.5KW	4-core power aviation connector, for flange 180

注 *1 For flange 130 models, only X2MA100A/150A/200A/X2MG230A and 180 flange models require PWB-CON- 1KW

Accessories specifications for lead-wire type servo motor of flange 40 to 80

21	ENC-TE 750W	2 packs of encoder accessories (6-hole plastic connector + 1394 connector)
22	PWR-CON 750W	4-hole power plastic connector
23	PWB-CON 750W	6-hole power brake plastic connector

Other accessories specifications

31 SV-BAT Absolute battery box with 1394 connector

	Power	Models	17bit absolute	17bit Incremental	Brake	Oil seal	Flange	Shaft diameter	Regular model	Applicable accessories
X2-MHH Ultrahigh inertia	100W	X2MH010H-N2CA	●			●	40 flange	Φ8	Connector -type	1 3 31
		X2MH010H-B2CA			●					1 4 31
		X2MH010H-N2CN		●						2 3
		X2MH010H-B2CN			●					2 4
	200W	X2MH020H-N2LA	●			●	60 flange	Φ14	Lead-wire type	21 22 31
		X2MH020H-B2LA			●					21 23 31
		X2MH020H-N2LN		●						21 22
		X2MH020H-B2LN			●					21 23
	400W	X2MH040H-N2CA	●			●	60 flange	Φ14	Connector -type	1 5 31
		X2MH040H-B2CA			●					1 6 31
		X2MH040H-N2CN		●						2 5
		X2MH040H-B2CN			●					2 6
	750W	X2MH075H-N2LA	●			●	80 flange	Φ19	Lead-wire type	21 22 31
		X2MH075H-B2LA			●					21 23 31
		X2MH075H-N2LN		●						21 22
		X2MH075H-B2LN			●					21 23
X2-MQ Special flange/Flat-type/small flange	100W	X2MQ010A-N2LA	●			●	60 flange	Φ8	Lead-wire type	21 22 31
		X2MQ010A-B2LA			●					21 23 31
	200W	X2MQ020A-N2LA	●			●	80 flange	Φ11	Lead-wire type	21 22 31
		X2MQ020A-B2LA			●					21 23 31
	400W	X2MQ040A-N2LA	●			●	80 flange	Φ14	Lead-wire type	21 22 31
		X2MQ040A-B2LA			●					21 23 31
	1KW	X2MQ100E-N2CA	●			●	80 flange	Φ19	Connector -type	1 5 31
		X2MQ100E-B2CA			●					1 6 31
		X2MQ100E-N2CN		●						2 5
		X2MQ100E-B2CN			●					2 6

	Power	X3E [ ] _ _ _ A-A2 [A]Pulse control	X3E [ ] _ _ _ A-A2 [N] CANopen	X3E [ ] _ _ _ A-A2 [B] EtherCAT	X3E [ ] _ _ _ A-A2 Power specifications	X2E [ ] _ _ _ A-A [A]Pulse control	X2E [ ] _ _ _ A-A [N] CANopen	X2E [ ] _ _ _ A-A Power specifications	Notes
X2-MHH Ultrahigh inertia	100W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	X2EA010A-A	X2EN010A-A	Single-phase AC220V	
	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	X2EA020A-A	X2EN020A-A	Single-phase AC220V	
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	X2EA040A-A	X2EN040A-A	Single-phase AC220V	
	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	X2EA075A-A	X2EN075A-A	Single-phase AC220V	
X2-MQ Special flange/Flat-type/small flange	100W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	X2EA010A-A	X2EN010A-A	Single-phase AC220V	
	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	X2EA020A-A	X2EN020A-A	Single-phase AC220V	
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	X2EA040A-A	X2EN040A-A	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	X2EA100A-A	X2EN100A-A	Three-phase AC220V	

Accessories specifications for connector-type servo motors if flange 40 to 80

1	SVCAB-ENC075CA-ABS-***L-05	Absolute encoder cable
2	SVCAB-ENC075CA-***L-05	Incremental encoder cable
3	SVCAB-PWR010CA-***L-05	UVW power cable 50W~100W
4	SVCAB-PWB010CA-***L-05	UVW power cable with brake 50W~100W
5	SVCAB-PWR075CA-***L-05	UVW power cable 200W~1KW
6	SVCAB-PWB075CA-***L-05	UVW power cable with brake 200W~1KW

Aviation connector specifications for servo motor of flange 100&130&180

11	ENC-TE 1KW	Encoder accessories (10-pin aviation connector + 1394 connector)
12	PWR-CON 1KW	4-core power aviation connector, for flange 100&130
13	PWR-CON 1KW-9P	9-pin brake power aviation connector, for flange 100&130
14	PWB-CON- 1KW	2-core brake power connector *1
15	PWR-CON 7.5KW	4-core power aviation connector, for flange 180

注 *1 For flange 130 models, only X2MA100A/150A/200A/X2MG230A and 180 flange models require PWB-CON- 1KW

Accessories specifications for lead-wire type servo motor of flange 40 to 80

21	ENC-TE 750W	2 packs of encoder accessories (6-hole plastic connector + 1394 connector)
22	PWR-CON 750W	4-hole power plastic connector
23	PWB-CON 750W	6-hole power brake plastic connector

Other accessories specifications

31 SV-BAT — Absolute battery box with 1394 connector

	Power	Models	17bit absolute	17bit Incremental	Brake	Oil seal	Flange	Shaft diameter	Regular model	Applicable accessories
X2-MG Low-speed and Large-torque	750W	X2MG075A-N2LA	●			●	80 flange	Φ19	Lead-wire type	21 22 31
		X2MG075A-B2LA			●					21 23 31
		X2MG075A-N2LN		●						21 22
		X2MG075A-B2LN			●					21 23
	1KW	X2MG100A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MG100A-B2LA			●					11 13 31
		X2MG100A-N2LN		●						11 12
		X2MG100A-B2LN			●					11 13
	850W	X2MG085A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MG085A-B2LA			●					11 13 31
		X2MG085A-N2LN		●						11 12
		X2MG085A-B2LN			●					11 13
	1.3KW	X2MG130A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MG130A-B2LA			●					11 13 31
		X2MG130A-N2LN		●						11 12
		X2MG130A-B2LN			●					11 13
	1.8KW	X2MG180A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MG180A-B2LA			●					11 13 31
		X2MG180A-N2LN		●						11 12
		X2MG180A-B2LN			●					11 13
	2.3KW	X2MG230A-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MG230A-B2LA			●					11 12 14 31
		X2MG230A-N2LN		●						11 12
		X2MG230A-B2LN			●					11 12 14
X2-MS Ultrahigh Inertia	800W	X2MS080A-N2LN		●		●	60 flange	Φ14	Lead-wire type	21 22
	1KW	X2MS100B-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MS100B-B2LA			●					11 13 31
		X2MS100B-N2LN		●						11 12
		X2MS100B-B2LN			●					11 13
	1.5KW	X2MS150B-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MS150B-B2LA			●					11 13 31
		X2MS150B-N2LN		●						11 12
		X2MS150B-B2LN			●					11 13
	2KW	X2MS200B-N2LA	●			●	130 flange	Φ22	Aviation connector	11 12 31
		X2MS200B-B2LA			●					11 13 31
		X2MS200B-N2LN		●						11 12
		X2MS200B-B2LN			●					11 13

	Power	X3E [ ] _ _ _ A-A2				X2E [ ] _ _ _ A-A			Notes
		[A]Pulse control	[N] CANopen	[B] EtherCAT	Power specifications	[A]Pulse control	[N] CANopen	Power specifications	
X2-MG Low-speed and Large-torque	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	X2EA075A-A	X2EN075A-A	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	X2EA100A-A	X2EN100A-A	Single-phase AC220V	
	850W	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Single-phase AC220V	X2EA100A-A	X2EN100A-A	Single-phase AC220V	
	1.3KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	X2EA150A-A	X2EN150A-A	Three-phase AC220V	
	1.8KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phase AC220V	X2EA200A-A	X2EN200A-A	Three-phase AC220V	
	2.3KW	X3EA250A-A2	X3EN250A-A2	X3EB250A-A2	Three-phase AC220V	X2EA250A-A	X2EN250A-A	Three-phase AC220V	
X2-MS Ultrahigh Inertia	800W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	X2EA075A-A	X2EN075A-A	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	X2EA100A-A	X2EN100A-A	Single-phase AC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	X2EA150A-A	X2EN150A-A	Three-phase AC220V	
	2KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phase AC220V	X2EA200A-A	X2EN200A-A	Three-phase AC220V	

Accessories specifications for connector-type servo motors if flange 40 to 80

1	SVCAB-ENC075CA-ABS-***L-05	Absolute encoder cable
2	SVCAB-ENC075CA-***L-05	Incremental encoder cable
3	SVCAB-PWR010CA-***L-05	UVW power cable 50W~100W
4	SVCAB-PWB010CA-***L-05	UVW power cable with brake 50W~100W
5	SVCAB-PWR075CA-***L-05	UVW power cable 200W~1KW
6	SVCAB-PWB075CA-***L-05	UVW power cable with brake 200W~1KW

Aviation connector specifications for servo motor of flange 100&130&180

11	ENC-TE 1KW	Encoder accessories (10-pin aviation connector + 1394 connector)
12	PWR-CON 1KW	4-core power aviation connector, for flange 100&130
13	PWR-CON 1KW-9P	9-pin brake power aviation connector, for flange 100&130
14	PWB-CON- 1KW	2-core brake power connector *1
15	PWR-CON 7.5KW	4-core power aviation connector, for flange 180

注 *1 For flange 130 models, only X2MA100A/150A/200A/X2MG230A and 180 flange models require PWB-CON- 1KW

Accessories specifications for lead-wire type servo motor of flange 40 to 80

21	ENC-TE 750W	2 packs of encoder accessories (6-hole plastic connector + 1394 connector)
22	PWR-CON 750W	4-hole power plastic connector
23	PWB-CON 750W	6-hole power brake plastic connector

Other accessories specifications

31 SV-BAT — Absolute battery box with 1394 connector

Naming Rule for X6 Series Servo Motor

SV-X6 MA 040 A - N 2 C D - ****

1 2 3 4 5 6 7 8 Special specifications

1	Product Series
SV-X6 Series	17BIT/23BIT

2	Inertia Specifications
MA	Low Inertia
MM	Medium Inertia
MH	High Inertia
MHH	Ultra-high Inertia
MQ	Special flange/Flat-type/small flange
MG	Low-speed & high-torque
MGS	Low cogging cutting

3	Power Specification		
005	50W	180	1.8KW
010	100W	200	2KW
015	150W	240	2.4KW
020	200W	290	2.9KW
040	400W	300	3KW
075	750W	400	4KW
085	850W	440	4.4KW
100	1KW	500	5KW
130	1.3KW	550	5.5KW
150	1.5KW	750	7.5KW

4	Design No.
A/B/C/E/F/H/K/S	

5	Brake Specification
N	No brake
B	With brake

6	Power Voltage Specification
2	AC220V

7	Specification
K	Key shaft/no oil seal
L	Key shaft/oil seal
C	Connector type/key shaft/with oil seal*1
D	Connector type/key shaft/no oil seal*1
J	Compact (ccustomized)

8	Encoder Specifications
D	Multi-turn 23bit absolute
A	Multi-turn 17bit absolute

9	Customization
**	N/A

E.g.

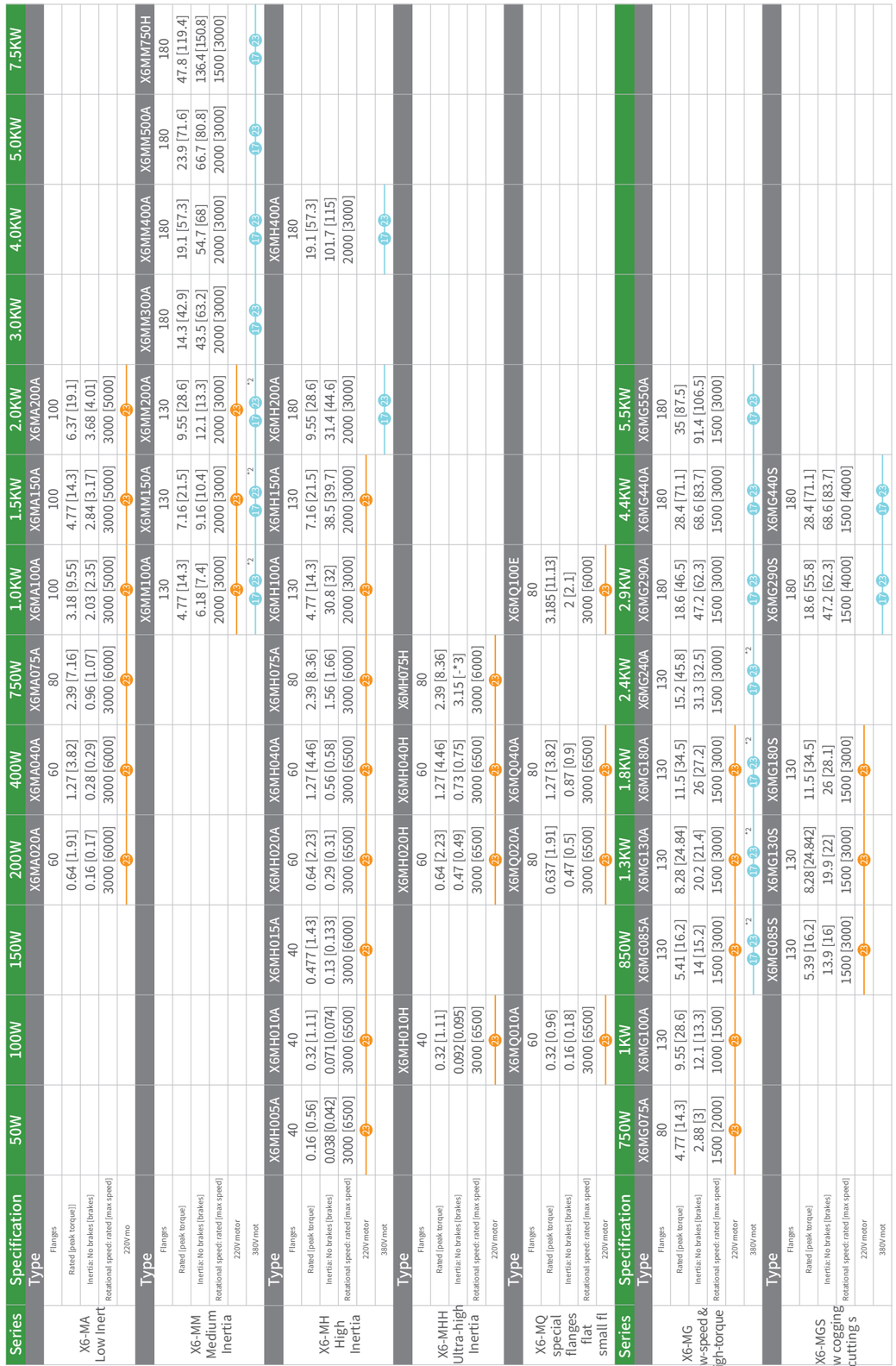
23bitabsolute 220v 850W MG High torque at low speed naming rule SV-X6 MG 085A-N2LD

23bitabsolute 380v 850W MG High torque at low speed naming rule SV-X6 MG 085A-N4LD

17bitabsolute 380v 850W MG High torque at low speed naming rule SV-X6 MG 085A-N4LA

NOTE *1:From the 2nd quarter of 2021, our company started releasing connector-type servo motor with 40~80 flanges as the regular model.
Lead-wire servo motors will be discontinued from December 2021, if still needed, the customized application process is required.
For details, refer to page 67 or consult our sales staff.

X6 Series Servo Motor



注 *2 te 17 23 indicates the encoder bits. *2: Under development *3: Indicates there is no model with the brake.
*4: The maximum speed of the servo motor varies due to the design difference of the servo drive

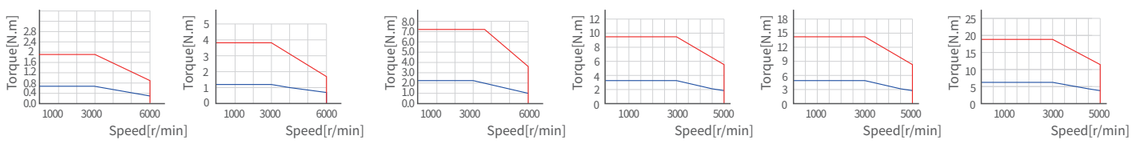
Servo Motor Specifications

200W 400W 750W 1KW 1.5KW 2KW

Items		Unit	X6MA020A	X6MA040A	X6MA075A	X6MA100A	X6MA150A	X6MA200A
Rated power		W	200	400	750	1000	1500	2000
Rated voltage		V	220	220	220	220	220	220
Fitting flange size		mm	60	60	80	100	100	100
Rated torque		N.m	0.64	1.27	2.39	3.18	4.77	6.37
Instantaneous max. torque		N.m	1.91	3.82	7.16	9.55	14.3	19.1
Rated speed		r/min	3000	3000	3000	3000	3000	3000
Max. speed		r/min	6000	6000	6000	5000	5000	5000
		NOTE	*1	*1	*1			
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.						
Rated current		Arms	1.7	2.7	4.2	6.6	8.2	11.3
Instantaneous max. current		Arms	6.5	10.2	17.4	28	35	48
Moment of inertia	No brake	x10^{-4}Kg.m^2	0.16	0.28	0.96	2.03	2.84	3.68
	With brake	x10^{-4}Kg.m^2	0.17	0.29	1.07	2.35	3.17	4.01
Torque constant		N.m/A	0.427	0.488	0.583	0.52	0.628	0.607
Induced voltage constant per phase		mV[r/min]	14.5	17.9	21.33	18.15	21.92	21.247
Rated power rate	No brake	KW/S	25.6	57.6	59.5	49.82	80.12	110.26
	With brake	KW/S	24.1	55.6	53.4	43.03	71.775	101.19
Mechanical time constant	No brake	ms	0.775	0.561	0.463	0.619	0.507	0.425
	With brake	ms	0.824	0.581	0.516	0.717	0.566	0.463
Electrical time constant		ms	6.3	6.1	12.7	7.22	8.08	9.37
Phase q-axis/d-axis inductance		mH	19/5.6	10.7/7.5	7.6/4.9	—	—	—
Weight: No brake[with brake]		kg	0.9 [1.3]	1.28 [1.67]	2.25 [3.01]	3.5 [4.5]	4.4 [5.4]	5.3 [6.3]
Permissible load	Radial load	N	245	245	392	392	392	392
	Axial load	N	98	98	147	147	147	147
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%					
	Rated current	A	0.36	0.36	0.42	0.81±10%	0.81±10%	0.81±10%
	Brake power	w	9	9	10	20	20	20
	Static friction torque	N.m	1.6 or more	1.6 or more	3.8 or more	7.8 or more	7.8 or more	7.8 or more
	Suction time	ms	50 or less	50 or less	70 or less	50 or less	50 or less	50 or less
	Release time	ms	20 or less	20 or less	20 or less	15 or less	15 or less	15 or less
	Release voltage	ms	DC1V or more					

Torque characteristics

Instantaneous operation range — Continuous operation range



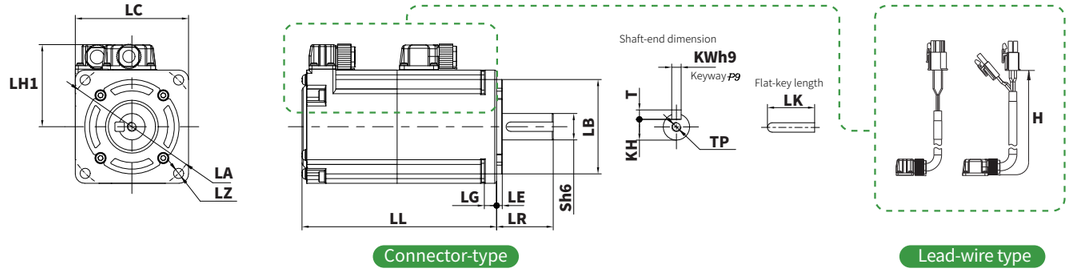
X6MA020A ▲ X6MA040A ▲ X6MA075A ▲ X6MA100A ▲ X6MA150A ▲ X6MA200A ▲

External Dimensions for Servo Motor

Unit(mm)

Models	X6MA020A	X6MA040A	X6MA075A	X6MA100A	X6MA150A	X6MA200A
LC	60	60	80	100	100	100
LA	ϕ70	ϕ70	ϕ90	ϕ115	ϕ115	ϕ115
LB	ϕ50	ϕ50	ϕ70	ϕ95	ϕ95	ϕ95
LZ	4-ϕ5.4	4-ϕ5.4	4-ϕ6	4-ϕ9	4-ϕ9	4-ϕ9
LR	30	30	35	55	55	55
S	ϕ14 h6	ϕ14 h6	ϕ19 h6	ϕ19 h6	ϕ19 h6	ϕ19 h6
LL no brake [with brake]	73.5 [103]	93.2[122.7]	105 [138.5]	123.5 [150.5]	142 [169]	161 [188]
LN no brake [with brake]	—	—	—	96.5 [123.5]	115 [142]	134 [161]
LG	6.5	6.5	8	10	10	10
LE	3	3	3	3	3	3
LM1 no brake [with brake]	—	—	—	111.5 [138.5]	130 [157]	149 [176]
LM2 no brake [with brake]	—	—	—	— [105]	— [123.5]	— [142.5]
LM3	—	—	—	62	80.5	99.5
LH1	44.5	44.5	54.5	103	103	103
LH2	—	—	—	66	66.5	66.5
LH3	—	—	—	55	55	55
LK	25	25	25	42	42	42
T	5	5	6	6	6	6
KW	5 h9	5 h9	6 h9	6 h9	6 h9	6 h9
KH	11	11	15.5	15.5	15.5	15.5
TP	M5depth12	M5depth12	M5depth10	M5depth12	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	—	—	—

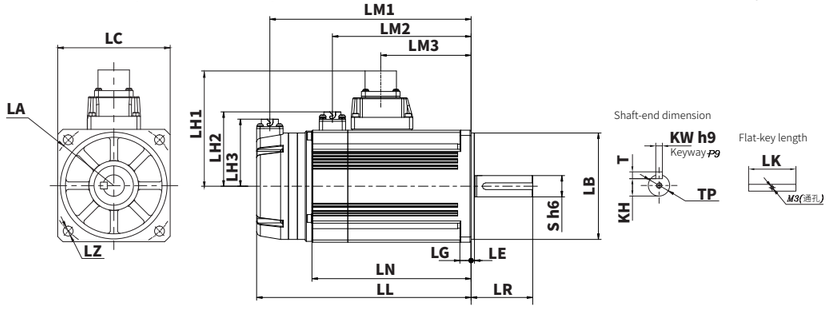
X6MA020A / X6MA040A / X6MA075A



Connector-type — Lead-wire type

NOTE *2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

X6MA100A / X6MA150A / X6MA200A

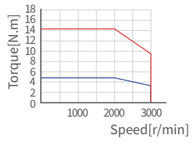


Servo Motor Specifications 1KW 1.5KW 2KW

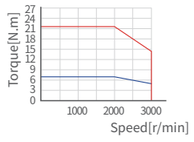
Items		Unit	X6MM100A	X6MM150A	X6MM200A
Rated power		W	1000	1500	2000
Rated voltage		V	220	220	220
Fitting flange size		mm	130	130	130
Rated torque		N.m	4.77	7.16	9.55
Instantaneous max. torque		N.m	14.3	21.5	28.6
Rated speed		r/min	2000	2000	2000
Max. speed		r/min	3000	3000	3000
Rated current		Arms	5.2	8	9.9
Instantaneous max. current		Arms	15.6	24	30
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	6.18	9.16	12.1
	With brake	$x10^{-4}Kg.m^2$	7.4	10.4	13.3
Torque constant		N.m/A	0.918	0.895	0.9645
Induced voltage constant per phase		mV[r/min]	33.65	34.84	37.95
Rated power rate	No brake	KW/S	36.8	56	75.4
	With brake	KW/S	30.7	49.3	68.6
Mechanical time constant	No brake	ms	1.51	1.16	1.05
	With brake	ms	1.81	1.3	1.16
Electrical time constant		ms	11.1	14.6	15.38
Phase q-axis/d-axis inductance		mH	8.4/4.3	5.8/2.9	4.9/2.6
Weight: No brake[with brake]		kg	4.67 [6.27]	5.87 [7.47]	12.1 [13.3]
Permissible load	Radial load	N	490	490	490
	Axial load	N	196	196	196
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%		
	Rated current	A	0.9	0.9	0.9
	Brake power	w	22	22	22
	Static friction torque	N.m	14 or more	14 or more	14 or more
	Suction time	ms	100 or less	100 or less	100 or less
	Release time	ms	60 or less	60 or less	60 or less
	Release voltage	ms	DC1V or more		

Torque characteristics

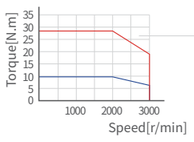
Instantaneous operation range — Continuous operation range



X6MM100A▲



X6MM150A▲



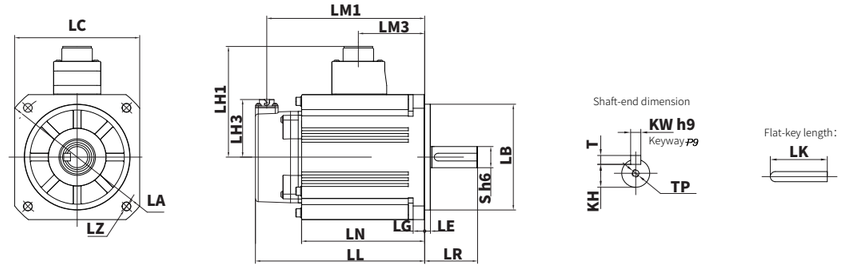
X6MM200A▲

External Dimensions for Servo Motor

Unit(mm)

Models	X6MM100A	X6MM150A	X6MM200A
LC	130	130	130
LA	ϕ145	ϕ145	ϕ145
LB	ϕ110	ϕ110	ϕ110
LZ	4-ϕ9	4-ϕ9	4-ϕ9
LR	55	55	55
S	ϕ22 h6	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	128 [148]	142 [162]	156 [176]
LN no brake [with brake]	80 [100]	94 [114]	108 [128]
LG	12	12	12
LE	6	6	6
LM1 no brake [with brake]	116.2 [136.2]	130.2 [150.2]	144.2 [164.2]
LM3	41	55	69
LH1	115	115	115
LH3	60	60	60
LK	45	45	45
T	7	7	7
KW	8 h9	8 h9	8 h9
KH	18	18	18
TP	M6depth20	M6depth20	M6depth20

X6MM100A / X6MM150A / X6MM200A



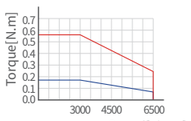
Servo Motor Specifications

50W 100W 150W 200W

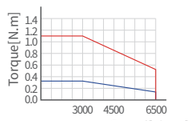
Items		Unit	X6MH005A	X6MH010A	X6MH015A	X6MH020A
Rated power		W	50	100	150	200
Rated voltage		V	220	220	220	220
Fitting flange size		mm	40	40	40	60
Rated torque		N.m	0.16	0.32	0.477	0.64
Instantaneous max. torque		N.m	0.56	1.11	1.43	2.23
Rated speed		r/min	3000	3000	3000	3000
Max. speed		r/min	6500	6500	6000	6500
		NOTE				*1
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.				
Rated current		Arms	1.1	1.1	1.5	1.4
Instantaneous max. current		Arms	3.89	3.89	4.5	4.87
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	0.038	0.071	0.13	0.29
	With brake	$x10^{-4}Kg.m^2$	0.042	0.074	0.133	0.31
Torque constant		N.m/A	0.168	0.327	0.33	0.5
Induced voltage constant per phase		mV[r/min]	5	11.1	12.2	14.61
Rated power rate	No brake	KW/S	6.7	14.4	17.5	14.1
	With brake	KW/S	6.1	13.8	17.1	13.2
Mechanical time constant	No brake	ms	2.6	1.67	1.9	1.57
	With brake	ms	2.85	1.74	1.94	1.68
Electrical time constant		ms	0.89	1.1	1.22	2.58
Phase q-axis/d-axis inductance		mH	5.1/3.4	9.4/6.3	7.2/4.8	10.2/5.8
Weight: No brake[with brake]		kg	0.33 [0.55]	0.45 [0.66]	0.83 [0.69]	0.87 [1.27]
Permissible load	Radial load	N	68	68	68	245
	Axial load	N	58	58	58	98
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%			
	Rated current	A	0.25	0.25	0.375	0.36
	Brake power	w	6	6	9	9
	Static friction torque	N.m	0.38 or more	0.38 or more	0.58 or more	1.6 or more
	Suction time	ms	35 or less	35 or less	50 or less	50 or less
	Release time	ms	20 or less	20 or less	20 or less	20 or less
	Release voltage	ms	DC1V or more			

Torque characteristics

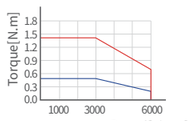
Instantaneous operation range — Continuous operation range



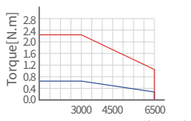
X6MH005A▲



X6MH010A▲



X6MH015A▲



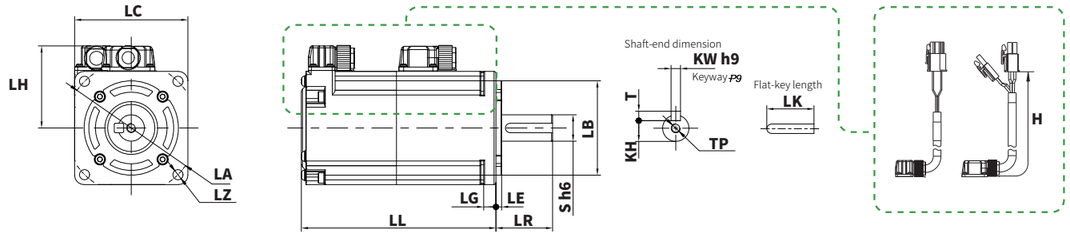
X6MH020A▲

External Dimensions for Servo Motor

Unit(mm)

Models	X6MH005A	X6MH010A	X6MH015A	X6MH020A
LC	40	40	40	60
LA	ϕ46	ϕ46	ϕ46	ϕ70
LB	ϕ30	ϕ30	ϕ30	ϕ50
LZ	2-ϕ4.3	2-ϕ4.3	2-ϕ4.3	4-ϕ5.4
LR	25	25	25	30
S	ϕ8 h6	ϕ8 h6	ϕ8 h6	ϕ14 h6*3
LL no brake [with brake]	57 [91]	71 [105]	93.8 [127.8]	70.5 [100]
LG	5	5	5	6.5
LE	3	3	3	3
LH	35	35	35	44.5
LK	14	14	14	25
T	3	3	3	5
KW	3 h9	3 h9	3 h9	5 h9
KH	6.2	6.2	6.2	11
TP	M3depth6	M3depth6	M3depth6	M5depth12
H H-type cable length for lead-wire type	210	210	210	210

X6MH005A / X6MH010A / X6MH015A / X6MH020A*2



Connector-type　　Lead-wire type

注 *1:Indicates that there is no brake model for this model

*2: For X2 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

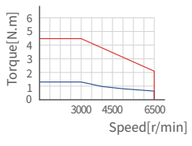
Servo Motor Specifications

400 W | 750 W | 1 KW | 1.5 KW

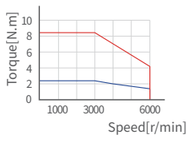
Items		Unit	X6MH040A	X6MH075A	X6MH100A	X6MH150A
Rated power		W	400	750	1000	1500
Rated voltage		V	220	220	220	220
Fitting flange size		mm	60	80	130	130
Rated torque		N.m	1.27	2.39	4.77	7.16
Instantaneous max. torque		N.m	4.46	8.36	14.3	21.5
Rated speed		r/min	3000	3000	2000	2000
Max. speed		r/min	6500	6000	3000	3000
		NOTE	*1	*1		
NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.						
Rated current		Arms	2.1	3.8	5.2	8
Instantaneous max. current		Arms	7.36	13.3	15.6	24
Moment of inertia	No brake	x10^{-4}Kg.m^2	0.56	1.56	30.8	38.5
	With brake	x10^{-4}Kg.m^2	0.58	1.66	32	39.7
Torque constant		N.m/A	0.67	0.648	0.918	0.895
Induced voltage constant per phase		mV[r/min]	20.85	22.65	33.65	34.84
Rated power rate	No brake	KW/S	28.8	36.6	7.39	13.3
	With brake	KW/S	27.8	34.4	7.11	12.9
Mechanical time constant	No brake	ms	1.24	0.97	7.54	4.9
	With brake	ms	1.29	1.03	7.84	5.05
Electrical time constant		ms	2.97	6.59	11.1	14.63
Phase q-axis/d-axis inductance		mH	9.2/6.5	6/3.3	8.4/4.3	5.8/2.9
Weight: No brake[with brake]		kg	1.22 [1.61]	2.25 [3.01]	6.4[8.0]	7.8[9.4]
Permissible load	Radial load	N	245	392	490	490
	Axial load	N	98	147	196	196
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%			
	Rated current	A	0.36	0.42	0.9	0.9
	Brake power	w	9	9	9	9
	Static friction torque	N.m	1.6 or more	3.8 or more	14 or more	14 or more
	Suction time	ms	50 or less	70 or less	100 or less	100 or less
	Release time	ms	20 or less	20 or less	60 or less	60 or less
	Release voltage	ms	DC1V or more			

Torque characteristics

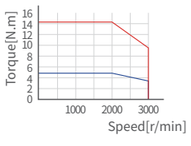
Instantaneous operation range — Continuous operation range



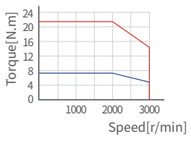
X6MH040A▲



X6MH075A▲



X6MH100A▲



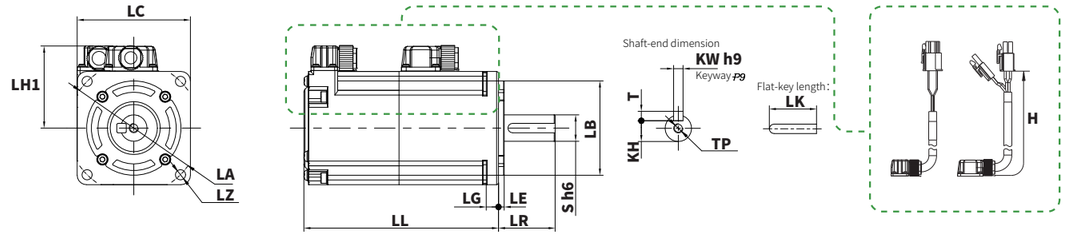
X6MH150A▲

External Dimensions for Servo Motor

Unit(mm)

Models	X6MH040A	X6MH075A	X6MH100A	X6MH150A
LC	60	80	130	130
LA	ϕ70	ϕ90	ϕ145	ϕ145
LB	ϕ50	ϕ70	ϕ110	ϕ110
LZ	4-ϕ5.4	4-ϕ6.5	4-ϕ9	4-ϕ9
LR	30	35	55	55
S	ϕ14 h6	ϕ19 h6	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	87.5 [117]	94.5 [128.5]	156 [176]	170 [190]
LN no brake [with brake]	—	—	108 [128]	122 [142]
LG	6.5	8	12	12
LE	3	3	6	6
LM1 no brake [with brake]	—	—	144.2[164.2]	158.2 [178.2]
LM3	—	—	69	83
LH1	44.5	54.5	115	115
LH3	—	—	60	60
LK	25	25	45	45
T	5	6	7	7
KW	5 h9	6 h9	8 h9	8 h9
KH	11	15.5	18	18
TP	M5depth12	M5depth12	M6depth20	M6depth20
H H-type cable length for lead-wire type	210	210	—	—

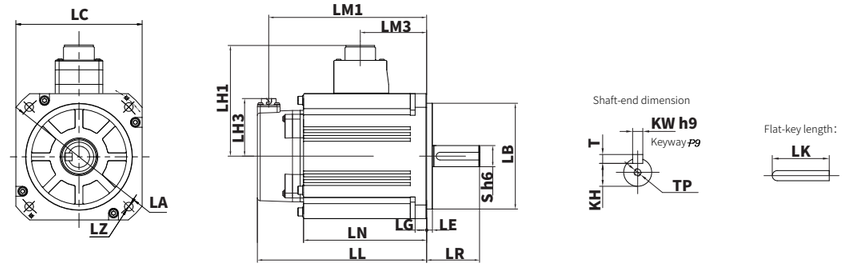
X6MH040A / X6MH075A



Connector-type | Lead-wire type

X6MH100A / X6MH150A

NOTE *2: For X6 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.



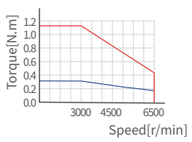
Servo Motor Specifications

100 W 200 W 400 W 750 W

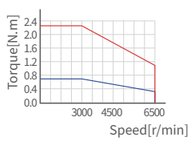
Items		Unit	X6MH010H	X6MH020H	X6MH040H	X6MH075H
Rated power		W	100	200	400	750
Rated voltage		V	220	220	220	220
Fitting flange size		mm	40	60	60	80
Rated torque		N.m	0.32	0.64	1.27	2.39
Instantaneous max. torque		N.m	1.11	2.23	4.46	8.36
Rated speed		r/min	3000	3000	3000	3000
Max. speed		r/min	6500	6500	6500	6000
		NOTE		*1	*1	*1
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.				
Rated current		Arms	0.92	1.4	2.4	3.8
Instantaneous max. current		Arms	3.6	6.9	8.2	18.8
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	0.092	0.47	0.73	3.15
	With brake	$x10^{-4}Kg.m^2$	0.095	0.49	0.75	—*3
Torque constant		N.m/A	0.327	0.5	0.531	0.648
Induced voltage constant per phase		mV[r/min]	13.3	14.61	20.4	22.65
Rated power rate	No brake	KW/S	11.13	8.71	22.09	18.1
	With brake	KW/S	10.78	8.36	21.5	17.85
Mechanical time constant	No brake	ms	2.23	2.54	1.15	1.95
	With brake	ms	2.3	2.65	1.18	1.98
Electrical time constant		ms	0.986	2.58	4.1	6.59
Phase q-axis/d-axis inductance		mH	11.9/8	—	6.9/4.3	6/3.3
Weight: No brake[with brake]		kg	0.44[0.65]	0.95 [1.29]	1.45 [1.85]	2.65 [—*3]
Permissible load	Radial load	N	68	245	245	392
	Axial load	N	58	98	98	147
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%			
	Rated current	A	0.25	0.36	0.36	0.42
	Brake power	w	6	9	9	10
	Static friction torque	N.m	0.38 or more	1.6 or more	1.6 or more	3.8 or more
	Suction time	ms	35 or less	50 or less	50 or less	70 or less
	Release time	ms	20 or less	20 or less	20 or less	20 or less
	Release voltage	ms	DC1V or more			

Torque characteristics

Instantaneous operation range — Continuous operation range



X6MH010H ▲



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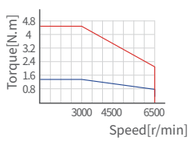

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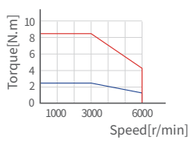


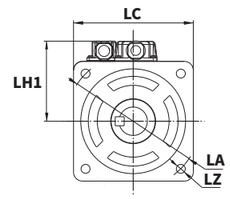
X6MH075H ▲

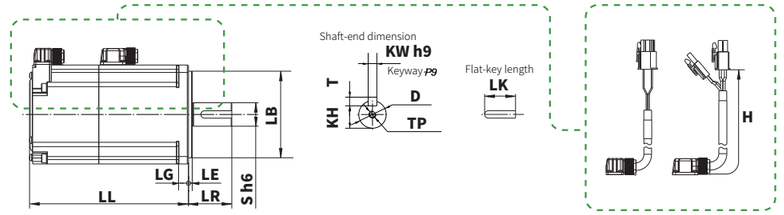
External Dimensions for Servo Motor

Unit(mm)

Models	X6MH010H	X6MH020H(Lead-wire type)	X6MH040H	X6MH075H(Lead-wire type)
LC	40	60	60	80
LA	ϕ46	ϕ70	ϕ70	ϕ90
LB	ϕ30	ϕ50	ϕ50	ϕ70
LZ	2-ϕ4.3	4-ϕ5.5	4-ϕ5.5	4-ϕ6.6
LR	25	30	30	35
S	ϕ8 h6	ϕ14 h6	ϕ14 h6	ϕ19 h6
LL no brake [with brake]	76.7 [110.7]	82.4 [111.9]	98.5 [128]	122 [—*3]
LG	5	6.5	6.5	8
LE	3	3	3	3
LH1	34.5	43.5	43.5	53.5
LK	14	25	25	25
T	3	5	5	6
KW	3 h9	5 h9	5 h9	6 h9
KH	6.2	11	11	15.5
TP	M3depth6	M5depth12	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	210

X6MH010H / X6MH020H / X6MH040H / X6MH075H





Connector-type　　Lead-wire type

*2: For X6 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

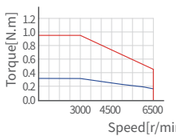
Servo Motor Specifications

100W 200W 400W 1KW

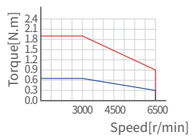
Items		Unit	X6MQ010A	X6MQ020A	X6MQ040A	X6MQ100E
Rated power		W	100	200	400	1000
Rated voltage		V	220	220	220	220
Fitting flange size		mm	60	80	80	80
Rated torque		N.m	0.32	0.637	1.27	3.185
Instantaneous max. torque		N.m	0.96	1.91	3.82	11.13
Rated speed		r/min	3000	3000	3000	3000
Max. speed		r/min	6500	6500	6500	6000
		NOTE			*1	*1
		NOTE *1: The above data is only the theoretical performance of the motor design, so the motor performance may vary according to the different series of servo drives.				
Rated current		Arms	0.95	2	2.6	5.7
Instantaneous max. current		Arms	2.8	6.4	8.4	21.2
Moment of inertia	No brake	x10^{-4}Kg.m^2	0.16	0.47	0.87	2
	With brake	x10^{-4}Kg.m^2	0.18	0.5	0.9	2.1
Torque constant		N.m/A	0.369	0.318	0.488	0.552
Induced voltage constant per phase		mV[r/min]	11.6	12.2	19.6	21.2
Rated power rate	No brake	KW/S	6.4	8.63	18.5	50.7
	With brake	KW/S	5.69	8.12	17.92	48.31
Mechanical time constant	No brake	ms	2.96	2.51	1.51	0.85
	With brake	ms	3.33	2.67	1.57	0.897
Electrical time constant		ms	1.76	3.52	5.41	7.6
Phase q-axis/d-axis inductance		mH	13.9/7.8	7.3/3.9	9/4.9	3.8/2.6
Weight: No brake[with brake]		kg	0.68 [0.92]	1.24 [1.74]	1.6 [2.1]	2.68 [3.45]
Permissible load	Radial load	N	68	245	245	392
	Axial load	N	58	98	98	147
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%			
	Rated current	A	0.9	0.9	0.9	0.42
	Brake power	w	22	22	22	22
	Static friction torque	N.m	0.38-1.1	1.6 or more	1.6 or more	3.8 or more
	Suction time	ms	60 or less	60 or less	60 or less	70 or less
	Release time	ms	40 or less	40 or less	40 or less	20 or less
	Release voltage	ms	DC1.5V or more			DC1V or more

Torque characteristics

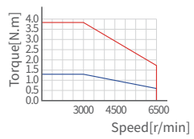
Instantaneous operation range — Continuous operation range



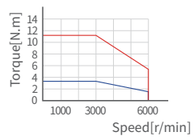
X6MQ010A ▲



X6MQ020A ▲



X6MQ040A ▲



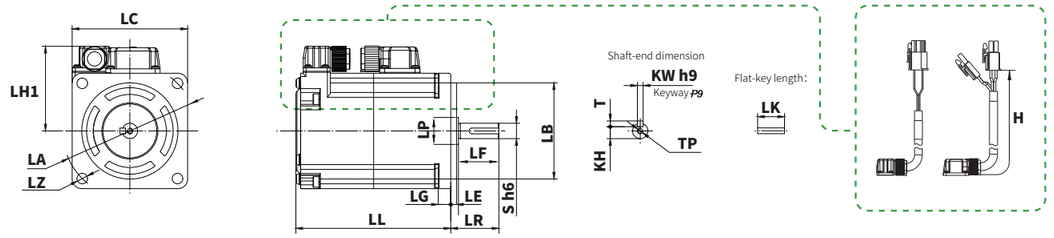
X6MQ100E ▲

External Dimensions for Servo Motor

Unit(mm)

Models	X6MQ010A(Lead-wire type)	X6MQ020A(Lead-wire type)	X6MQ040A(Lead-wire type)	X6MQ100E
LC	60	80	80	80
LA	ϕ70	ϕ90	ϕ90	ϕ90
LB	ϕ50	ϕ70	ϕ70	ϕ70
LZ	4-ϕ5.4	4-ϕ6	4-ϕ6	4-ϕ6.5
LR	25	30	30	35
S	ϕ8 h6	ϕ11 h6	ϕ14 h6	ϕ19 h6
LL no brake [with brake]	61 [80.5]	66 [90]	76.8 [100.8]	108 [141.5]
LG	6.5	8	8	8
LE	3	3	3	3
LF	21	26	26	—
LP	ϕ14	ϕ19.7	ϕ19.7	—
LH1	43.5	53.5	53.5	53.5
LK	14	20	22	25
T	3	4	5	6
KW	3 h9	4 h9	5 h9	6 h9
KH	6.2	8.5	11	15.5
TP	M3depth6	M4depth8	M5depth12	M5depth12
H H-type cable length for lead-wire type	210	210	210	210

X6MQ010A / X6MQ020A / X6MQ040A / X6MQ100E



Connector-type

Lead-wire type

NOTE *2: For X6 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

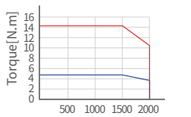
Servo Motor Specifications

750 W | 850 W | 1 KW | 1.3 KW | 1.8 KW

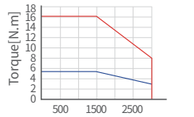
Items		Unit	X6MG075A	X6MG085A	X6MG100A	X6MG130A	X6MG180A
Rated power		W	750	850	1000	1300	1800
Rated voltage		V	220	220	220	220	220
Fitting flange size		mm	80	130	130	130	130
Rated torque		N.m	4.77	5.41	9.55	8.28	11.5
Instantaneous max. torque		N.m	14.3	16.2	28.6	24.84	34.5
Rated speed		r/min	1500	1500	1000	1500	1500
Max. speed		r/min	2000	3000	1500	3000	3000
Rated current		Arms	4.2	5.9	5.2	9.3	11.8
Instantaneous max. current		Arms	15	18	16	28	35.5
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	2.88	14	12.1	20.2	26
	With brake	$x10^{-4}Kg.m^2$	3	15.2	13.3	21.4	27.2
Torque constant		N.m/A	1.135	0.918	1.83	0.895	0.964
Induced voltage constant per phase		mV[r/min]	43.3	33.65	67.3	34.84	40.18
Rated power rate	No brake	KW/S	79	63.29	75.4	33.9	50.87
	With brake	KW/S	75.84	58.26	68.6	32	48.6
Mechanical time constant	No brake	ms	1.01	3.43	1.12	2.57	2.06
	With brake	ms	1.05	3.72	1.23	2.72	2.15
Electrical time constant		ms	5.1	11.1	9.65	14.63	15.99
Phase q-axis/d-axis inductance		mH	8.4/5.7	8.4/4.3	11/8.7	5.8/2.9	4.9/2.6
Weight: No brake[with brake]		kg	3.46 [4.14]	5.53 [7.13]	6.91 [8.51]	6.89 [8.49]	8.14 [9.74]
Permissible load	Radial load	N	392	490	490	490	490
	Axial load	N	147	160	160	160	160
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%				
	Rated current	A	0.42	0.9	0.9	0.9	0.9
	Brake power	w	10	10	10	10	10
	Static friction torque	N.m	3.8 or more	14 or more	14 or more	14 or more	14 or more
	Suction time	ms	70 or less	100 or less	100 or less	100 or less	100 or less
	Release time	ms	20 or less	60 or less	60 or less	60 or less	60 or less
	Release voltage	ms	DC1V or more				

Torque characteristics

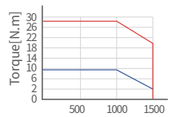
Instantaneous operation range — Continuous operation range



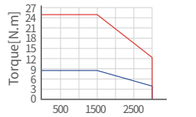
X6MG075A▲



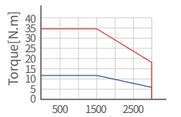
X6MG085A▲



X6MG100A▲



X6MG130A▲



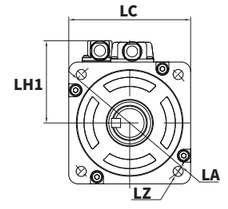
X6MG180A▲

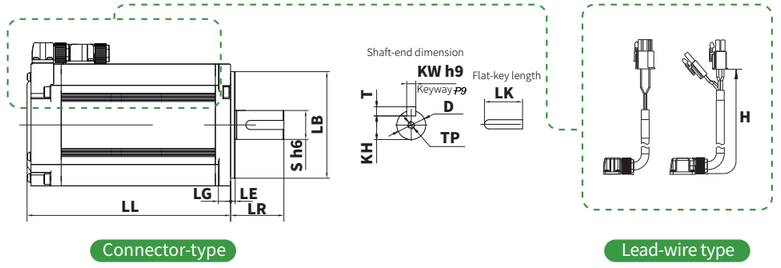
External Dimensions for Servo Motor

Unit(mm)

Models	X6MG075A(Lead-wire type)	X6MG085A	X6MG100A	X6MG130A	X6MG180A
LC	80	130	130	130	130
LA	ϕ90	ϕ145	ϕ145	ϕ145	ϕ145
LB	ϕ70	ϕ110	ϕ110	ϕ110	ϕ110
LZ	4-ϕ6.6	4-ϕ9	4-ϕ9	4-ϕ9	4-ϕ9
LR	35	55	55	55	55
S	ϕ19 h6	ϕ22 h6	ϕ22 h6	ϕ22 h6	ϕ22 h6
LL no brake [with brake]	134 [177]	156 [176]	156 [176]	170 [190]	184 [204]
LN no brake [with brake]	—	108 [128]	108 [128]	122 [142]	136 [156]
LG	8	12	12	12	12
LE	3	6	6	6	6
LM1 no brake [with brake]	—	144.2[164.2]	144.2 [164.2]	158.2 [178.2]	172.2[192.2]
LM3	—	69	69	83	97
LH1	54	115	115	115	115
LH3	—	60	60	60	60
LK	25	45	45	45	45
T	6	7	7	7	7
KW	6 h9	8 h9	8 h9	8 h9	8 h9
KH	15.5	18	18	18	18
TP	M5depth12	M6depth20	M6depth20	M6depth20	M6depth20
H	210	—	—	—	—

X6MG075A

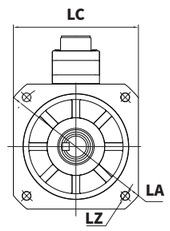


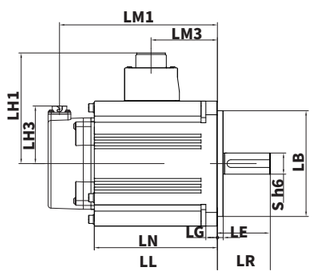


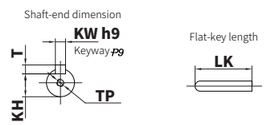
Connector-type | Lead-wire type

NOTE *2: For X6 series servo motors, the lead-wire types are needed to be customized. For details, please contact our sales department.

X6MG085A / X6MG100A / X6MG130A / X6MG180A







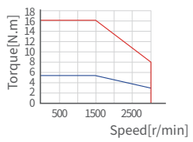
Servo Motor Specifications

850W 1.3KW 1.8KW

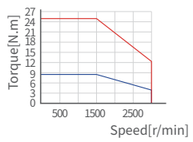
Items		Unit	X6MG085S	X6MG130S	X6MG180S
Rated power		W	850	1300	1800
Rated voltage		V	220	220	220
Fitting flange size		mm	130	130	130
Rated torque		N.m	5.39	8.28	11.5
Instantaneous max. torque		N.m	16.2	24.842	34.5
Rated speed		r/min	1500	1500	1500
Max. speed		r/min	3000	3000	3000
Rated current		Arms	6.7	9.6	15.6
Instantaneous max. current		Arms	20.1	28.8	46.8
Moment of inertia	No brake	$x10^{-4}Kg.m^2$	13.9	19.9	26
	With brake	$x10^{-4}Kg.m^2$	16	22	28.1
Torque constant		N.m/A	0.859	0.891	0.748
Induced voltage constant per phase		mV[r/min]	31.04	32.08	27
Rated power rate	No brake	KW/S	20.9	35	50.9
	With brake	KW/S	18.2	31.6	47.1
Mechanical time constant	No brake	ms	2.74	2.23	1.95
	With brake	ms	3.16	2.46	2.29
Electrical time constant		ms	10.2	10.7	11.14
Phase q-axis/d-axis inductance		mH	—	—	—
Weight: No brake[with brake]		kg	5.7 [7.7]	7.3[9.2]	8.8[11.2]
Permissible load	Radial load	N	490	490	490
	Axial load	N	196	196	196
Brake specification Note: Holding brake	Rated voltage	V	DC24V±10%		
	Rated current	A	0.41	0.41	0.41
	Brake power	w	10	10	10
	Static friction torque	N.m	14 or more	14 or more	14 or more
	Suction time	ms	100 or less	100 or less	100 or less
	Release time	ms	80 or less	80 or less	80 or less
	Release voltage	ms	DC1V or more		

Torque characteristics

Instantaneous operation range — Continuous operation range



X6MG085S▲



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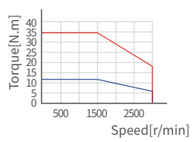


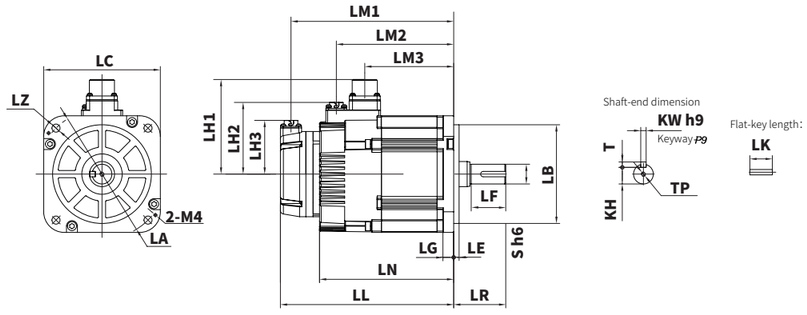
X6MG180S▲

External Dimensions for Servo Motor

Unit(mm)

Models	X6MG085S	X6MG130S	X6MG180S
LC	130	130	130
LA	ϕ145	ϕ145	ϕ145
LB	ϕ110	ϕ110	ϕ110
LZ	4-ϕ9	4-ϕ9	4-ϕ9
LR	58	58	58
S	ϕ19 h6	ϕ22 h6	ϕ24 h6
LL no brake [with brake]	141.1 [177.1]	157.1[193.1]	175.1 [211.1]
LN no brake [with brake]	97.5[133.5]	113.5[149.5]	131.5[167.5]
LG	12	12	12
LE	6	6	6
LF	40	40	40
LM1 no brake [with brake]	129.4[165.4]	145.3[181.3]	163.3 [193.3]
LM2 no brake [with brake]	—[114.5]	—[130.5]	—[148.5]
LM3	83	99	117
LH1	105	105	105
LH2	79.5	79.5	79.5
LH3	60	60	60
LK	25	25	25
T	5	6	7
KW	5 h9	6 h9	8 h9
KH	16	18.5	20
TP	M5depth16	M5depth16	M5depth16

X6MG085S/X6MG130S/X6MG180S



	Motor power	Model names	23bit absolute	17bit absolute	Brake	Oil seal	Flange	Shaft	Regular models	Accessories
X6-MA Low-inertia	200W	X6MA020A-N2CD	●			●	60 flange	ϕ14	Connector-type	① ⑤ ㉛
		X6MA020A-B2CD			●					① ⑥ ㉛
	400W	X6MA040A-N2CD	●			●	60 flange	ϕ14	Connector-type	① ⑤ ㉛
		X6MA040A-B2CD			●					① ⑥ ㉛
	750W	X6MA075A-N2CD	●			●	80 flange	ϕ19	Connector-type	① ⑤ ㉛
		X6MA075A-B2CD			●					① ⑥ ㉛
	1KW	X6MA100A-N2LD	●			●	100 flange	ϕ19	Aviation connector	⑪ ⑫ ㉛
		X6MA100A-B2LD			●					⑪ ⑫ ⑭ ㉛
	1.5KW	X6MA150A-N2LD	●			●	100 flange	ϕ19	Aviation connector	⑪ ⑫ ㉛
		X6MA150A-B2LD			●					⑪ ⑫ ⑭ ㉛
	2KW	X6MA200A-N2LD	●			●	100 flange	ϕ19	Aviation connector	⑪ ⑫ ㉛
		X6MA200A-B2LD			●					⑪ ⑫ ⑭ ㉛
X6-MM Middle inertia	1KW	X6MM100A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MM100A-B2LD			●					⑪ ⑬ ㉛
	1.5KW	X6MM150A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MM150A-B2LD			●					⑪ ⑬ ㉛
	2KW	X6MM200A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MM200A-B2LD			●					⑪ ⑬ ㉛
X6-MH High inertia	50W	X6MH005A-N2CD	●			●	40 flange	ϕ8	Connector-type	① ③ ㉛
		X6MH005A-B2CD			●					① ④ ㉛
	100W	X6MH010A-N2CD	●			●	40 flange	ϕ8	Connector-type	① ③ ㉛
		X6MH010A-B2CD			●					① ④ ㉛
	150W	X6MH015A-N2CD	●			●	40 flange	ϕ8	Connector-type	① ③ ㉛
		X6MH015A-B2LD			●					① ④ ㉛
	200W	X6MH020A-N2CD	●			●	60 flange	ϕ14	Connector-type	① ⑤ ㉛
		X6MH020A-B2CD			●					① ⑥ ㉛
		X6MH020A-N2JD	●					ϕ11		① ⑤ ㉛
	400W	X6MH040A-N2CD	●			●	60 flange	ϕ14	Connector-type	① ⑤ ㉛
		X6MH040A-B2CD			●					① ⑥ ㉛
	750W	X6MH075A-N2CD	●			●	80 flange	ϕ19	Connector-type	① ⑤ ㉛
		X6MH075A-B2CD			●					① ⑥ ㉛
	1KW	X6MH100A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MH100A-B2LD			●					⑪ ⑬ ㉛
	1.5KW	X6MH150A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MH150A-B2LD			●					⑪ ⑬ ㉛

	Motor power	X3E [ ] _ _ _ A-A2 [A] Pulse control	[N] CANopen	[B] EtherCAT	Power specifications	Remark
X6-MA Low-inertia	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	Futures
						Futures
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	Futures
						Futures
	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	Futures
						Futures
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phaseAC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phaseAC220V	
	2KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phaseAC220V	
X6-MM Middle inertia	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phaseAC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phaseAC220V	
	2KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phaseAC220V	
X6-MH High inertia	50W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	
	100W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	
	150W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	
	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	
	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phaseAC220V	
	1.5KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phaseAC220V	

Accessories specifications for connector-type servo motors if flange 40 to 80

①	SVCAB-ENC075CA-ABS-***L-05	Absolute encoder cable
②	SVCAB-ENC075CA-***L-05	Incremental encoder cable
③	SVCAB-PWR010CA-***L-05	UVW power cable 50W~100W
④	SVCAB-PWB010CA-***L-05	UVW power cable with brake 50W~100W
⑤	SVCAB-PWR075CA-***L-05	UVW power cable 200W~1KW
⑥	SVCAB-PWB075CA-***L-05	UVW power cable with brake 200W~1KW

Aviation connector specifications for servo motor of flange 100&130&180

⑪	ENC-TE 1KW	Encoder accessories (10-pin aviation connector + 1394 connector)
⑫	PWR-CON 1KW	4-core power aviation connector, for flange 100&130
⑬	PWR-CON 1KW-9P	9-pin brake power aviation connector, for flange 100&130
⑭	PWB-CON- 1KW	2-core brake power connector *1
⑮	PWR-CON 7.5KW	4-core power aviation connector, for flange 180

注 *1 For flange 130 models, only X2MA100A/150A/200A/X2MG230A and 180 flange models require PWB-CON- 1KW

Accessories specifications for lead-wire type servo motor of flange 40 to 80

㉑	ENC-TE 750W	2 packs of encoder accessories (6-hole plastic connector + 1394 connector)
㉒	PWR-CON 750W	4-hole power plastic connector
㉓	PWB-CON 750W	6-hole power brake plastic connector

Other accessories specifications

㉛ SV-BAT Absolute battery box with 1394 connector

	Power	Models	23bit absolute	17bit absolute	Brake	Oil seal	Flange	Shaft diameter	Regular model	Applicable accessories
X6-MHH Ultrahigh inertia	100W	X6MH010H-N2CD	●			●	40 flange	ϕ8	Connector -type	① ③ ㉛
		X6MH010H-B2CD			●					① ④ ㉛
	200W	X6MH020H-N2LD	●			●	60 flange	ϕ14	Lead-wire type	㉑ ㉒ ㉛
		X6MH020H-B2LD			●					㉑ ㉓ ㉛
	400W	X6MH040H-N2CD	●			●	60 flange	ϕ14	Connector -type	① ⑤ ㉛
		X6MH040H-B2CD			●					① ⑥ ㉛
	750W	X6MH075H-N2LD	●		●	●	80 flange	ϕ19	Lead-wire type	㉑ ㉒ ㉛
										㉑ ㉓ ㉛
X6-MQ Special flange/Flat-type/small flange	100W	X6MQ010A-N2LD	●			●	60 flange	ϕ8	Lead-wire type	㉑ ㉒ ㉛
		X6MQ010A-B2LD			●					㉑ ㉓ ㉛
	200W	X6MQ020A-N2LD	●			●	80 flange	ϕ11	Lead-wire type	㉑ ㉒ ㉛
		X6MQ020A-B2LD			●					㉑ ㉓ ㉛
	400W	X6MQ040A-N2LD	●			●	80 flange	ϕ14	Lead-wire type	㉑ ㉒ ㉛
		X6MQ040A-B2LD			●					㉑ ㉓ ㉛
	1KW	X6MQ100E-N2CD	●			●	80 flange	ϕ19	Connector -type	① ⑤ ㉛
		X6MQ100E-B2CD			●					① ⑥ ㉛
X6-MG Low-speed and Large-torque	750W	X6MG075A-N2LD	●			●	80 flange	ϕ19	Lead-wire type	㉑ ㉒ ㉛
		X6MG075A-B2LD			●					㉑ ㉓ ㉛
	1KW	X6MG100A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MG100A-B2LD			●					⑪ ⑬ ㉛
	850W	X6MG085A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MG085A-B2LD			●					⑪ ⑬ ㉛
	1.3KW	X6MG130A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MG130A-B2LD			●					⑪ ⑬ ㉛
	1.8KW	X6MG180A-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MG180A-B2LD			●					⑪ ⑬ ㉛
X6-MGS Low- cogging Cutting	850W	X6MG085S-N2LD	●			●	130 flange	ϕ19	Aviation connector	⑪ ⑫ ㉛
		X6MG085S-B2LD			●					⑪ ⑬ ㉛
	1.3KW	X6MG130S-N2LD	●			●	130 flange	ϕ22	Aviation connector	⑪ ⑫ ㉛
		X6MG130S-B2LD			●					⑪ ⑬ ㉛
	1.8KW	X6MG180S-N2LD	●			●	130 flange	ϕ24	Aviation connector	⑪ ⑫ ㉛
		X6MG180S-B2LD			●					⑪ ⑬ ㉛

	Power	X3E [ ]_ _ _ A-A2 [A]Pulse control	[N] CANopen	[B] EtherCAT	Power specifications	Notes
X6-MHH Ultrahigh inertia	100W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	
	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	
	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	
X6-MQ Special flange/Flat-type/small flange	100W	X3EA010A-A2	X3EN010A-A2	X3EB010A-A2	Single-phase AC220V	
	200W	X3EA020A-A2	X3EN020A-A2	X3EB020A-A2	Single-phase AC220V	
	400W	X3EA040A-A2	X3EN040A-A2	X3EB040A-A2	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	
X6-MG Low-speed and Large-torque	750W	X3EA075A-A2	X3EN075A-A2	X3EB075A-A2	Single-phase AC220V	
	1KW	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	
	850W	X3EA100A-A2	X3EN100A-A2	X3EB100A-A2	Three-phase AC220V	
	1.3KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	
	1.8KW	X3EA200A-A2	X3EN200A-A2	X3EB200A-A2	Three-phase AC220V	
X6-MGS Low- cogging Cutting	850W	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	
	1.3KW	X3EA150A-A2	X3EN150A-A2	X3EB150A-A2	Three-phase AC220V	
	1.8KW	X3EA250A-A2	X3EN250A-A2	X3EB250A-A2	Three-phase AC220V	

Accessories specifications for connector-type servo motors if flange 40 to 80

①	SVCAB-ENC075CA-ABS-***L-05	Absolute encoder cable
②	SVCAB-ENC075CA-***L-05	Incremental encoder cable
③	SVCAB-PWR010CA-***L-05	UVW power cable 50W~100W
④	SVCAB-PWB010CA-***L-05	UVW power cable with brake 50W~100W
⑤	SVCAB-PWR075CA-***L-05	UVW power cable 200W~1KW
⑥	SVCAB-PWB075CA-***L-05	UVW power cable with brake 200W~1KW

Aviation connector specifications for servo motor of flange 100&130&180

⑪	ENC-TE 1KW	Encoder accessories (10-pin aviation connector + 1394 connector)
⑫	PWR-CON 1KW	4-core power aviation connector, for flange 100&130
⑬	PWR-CON 1KW-9P	9-pin brake power aviation connector, for flange 100&130
⑭	PWB-CON- 1KW	2-core brake power connector *1
⑮	PWR-CON 7.5KW	4-core power aviation connector, for flange 180

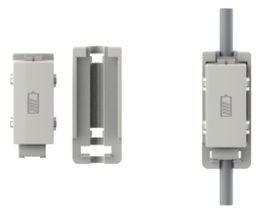
注 *1 For flange 130 models, only X2MA100A/150A/200A/X2MG230A and 180 flange models require PWB-CON- 1KW

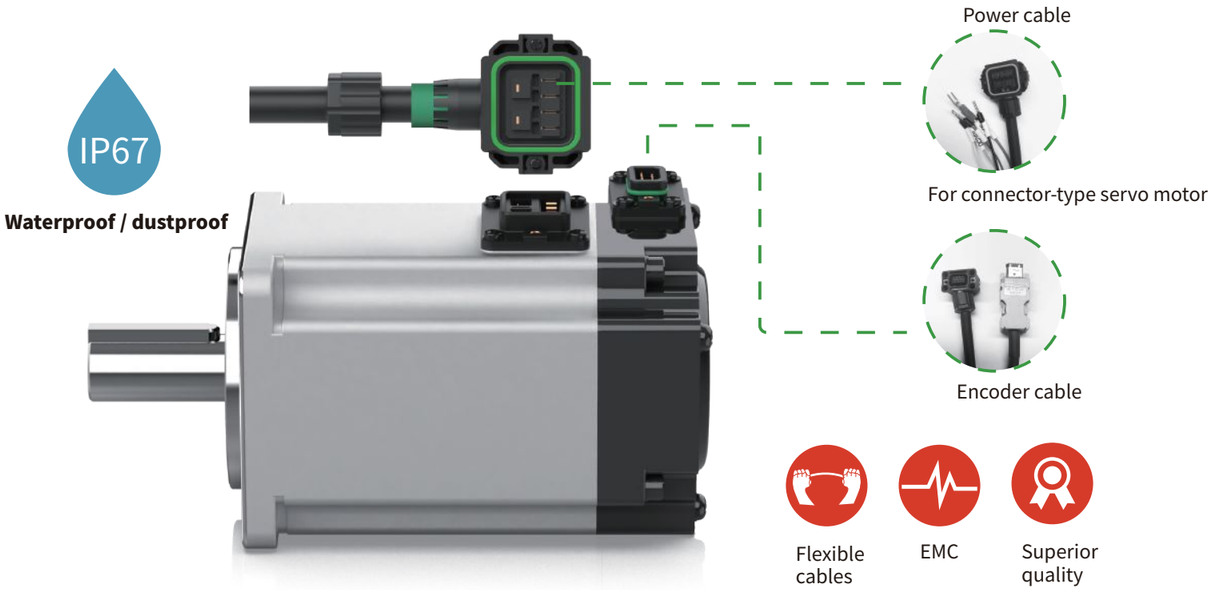
Accessories specifications for lead-wire type servo motor of flange 40 to 80

㉑	ENC-TE 750W	2 packs of encoder accessories (6-hole plastic connector + 1394 connector)
㉒	PWR-CON 750W	4-hole power plastic connector
㉓	PWB-CON 750W	6-hole power brake plastic connector

Other accessories specifications

㉛ SV-BAT Absolute battery box with 1394 connector





Advantages

- The motor cables connected directly to the servo drive, reducing the connection and greatly improving the reliability.
- The protection level of the motor connector upgraded to IP67, vibration-resistance, dustproof and waterproof.
- Encoder cables are treated with metal shielding layer, which has strong anti-interference ability!
- Various specifications of cables can be customized based on the different application occasions. HCFA designated high-quality raw material suppliers for centralized procurement. (See Naming rule 7 for cables)

From the 2nd quarter of 2021, our company started releasing connector-type servo motor with 40~80 flanges as the regular model.
Lead-wire servo motors will be discontinued from December 2021, if still needed, the customized application process is required.
For details, refer to page 67 or consult our sales staff.

SVCAB-ENC 075 C A – ABS-010L-05

1 2 3 4 5 6 7

1	Product type
ENC	Encoder cable
PWR	4-core power cable
PWB	6-core power cable with brake

2	Motor power
010	50W~150W
075	200W~1KW

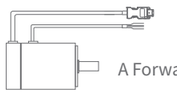
3	Connector-type
C	Flange 40 to 80

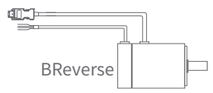
4	Connector-type
A	Forward-The leading direction at the front end
B	Reverse-The leading direction at the back end

5	Encoder type
ABS	Absolute
N/A	Incremental

6	Length specifications (unit 0.1m)
L	Length identification *1

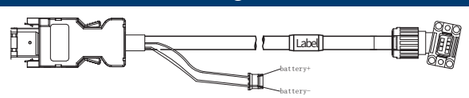
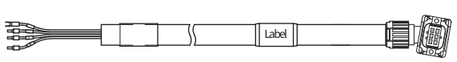
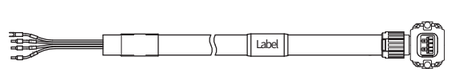
7	Cable flexibility
01	Fixed
05 (regular)	5 million times
10	10 million times
20	20 million times
A0	For swinging


A Forward


BReverse

*1The regular length specifications in our stock is 0.5M/1M/2M/3M/5M/8M/10M.
For other length specifications (minimum unit 0.5 meters), please consult our sales department in advance.

Accessories Specifications for Connector-type Servo Motor

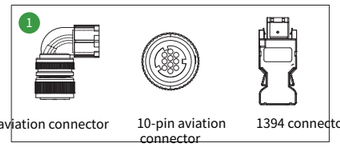
Cables	Model name	Diagram
Absolute encoder cable	SVCAB-ENC075CA-ABS-***L-05	
Incremental encoder cable	SVCAB-ENC075CA-***L-05	
50W~150W UVW power cable	SVCAB-PWR010CA-***L-05	
50W~150W UVWpower cable with brake	SVCAB-PWB010CA-***L-05	
200W~1000W UVWpower cable	SVCAB-PWR075CA-***L-05	
200W~1000W UVW power cable with brake	SVCAB-PWB075CA-***L-05	

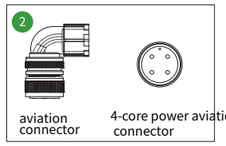
Aviation connectors for servo motor of flange 100&130&180

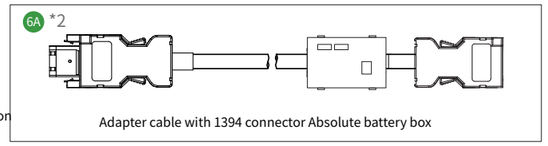
Accessories	Model name	Diagram
Encoder accessories (10-pin aviation connector + 1394 connector)	ENC-TE 1KW	1
4-core power aviation connector, for flange 100&130	PWR-CON 1KW	2
9-pin brake power aviation connector, for flange 100&130	PWR-CON 1KW-9P	3
2-core brake power connector *1	PWB-CON- 1KW	4
4-core power aviation connector,for flange 180	PWR-CON 7.5KW	5

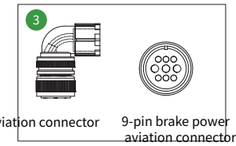
Accessories	Model name	Diagram
Adapter cable with 1394 connector Absolute battery box	SVBOX-ENCABS	6A

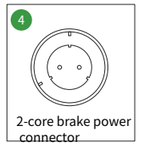
*Flange 130 are only required for X2MA100A/150A/200A/X2MG230A

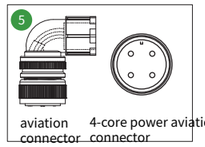


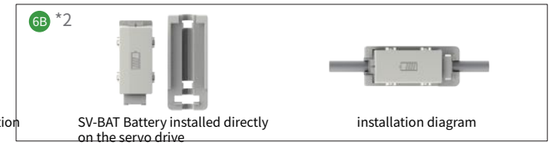












Other accessory specifications

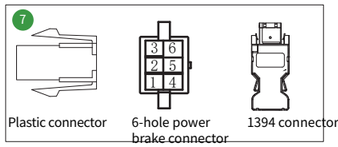
Accessories	Model name	Applicable servo drive	Description
Battery installed directly on the servo drive 6B	SV-BAT	SV-X6 All series SV-X5E All series	Encoder cable external battery, installed on the side of the servo drive
Multifunctional absolute battery panel	SV-ENC-BAT	SV-X6 All series SV-X5E All series	Encoder cable external battery
CAN bus connection cable	SV-CAB-0.3M	SV-X6EN type full power SV-X6FN type full power	CANopen bus-type CN4、CN5 interface
CAN terminal resistance	SV-TR-120	SV-X6EN type full power SV-X6FN type full power	CANopen bus-type CN4、CN5 interface
EtherCAT/profinet bus cable	SV-ECAT-0.35M	SV-X6EB type full power SV-X6ER type full power SV-X6FB type full power SV-X6FR type full power	X6 EtherCAT and profinet bus-type CN4、CN5 interface
		SV-X5EB type full power	X5E EtherCAT bus-type CN4、CN5 interface
RS485cable 0.2m	SV-RS485-0.2M	SV-X6FA full power SV-X6FB full power SV-X6FN full power SV-X6FR full power	All-function models CN1 For 485 communication and analogue AO output port
STO cable 2m	SV-STO-2M	SV-X6FA full power SV-X6FB full power SV-X6FN full power SV-X6FR full power	X6all-function models CN2 interface STO External safety switch
		SV-X5E 1KW or less STO models	X5E models CN2 interface STO External safety switch
Second Encoder cable 2m	SV-MIII-2M	SV-X6FA full power SV-X6FB full power	All-function models CN8 interfaec
Gantry synchronisation signal Cable 0.4m	SV-GS-0.4M	SV-X6FA full power	Gantry synchronisation models CN8 interface
750Wor less brake resistors	SV-BRAKE-75A	SV-X6 All series, models of 750W or less SV-X5E All series, models of 750W or less	X6series brake resistor P、BR interface X5Eseries brake resistor P、BR interface
1KW~1.5KWbrake resistors	SV-BRAKE-100A	SV-X6 All series models of 1KW to 1.5KW SV-X5E All series models of 1KW to 1.5KW	X6series brake resistor P、BR interface X5Eseries brake resistor P、BR interface
2KW~2.5KWbrake resistors	SV-BRAKE-200A	SV-X6 All series220V series, models of 2KW to 2.5KW SV-X5E All series, models of 2KW to 2.5KW	X6series brake resistorP、BR interface X5Eseries brake resistor P、BR interface
Anti-interference magnetic ring	Magnetic ring	All series	Installed on the power cable and encoder cable, with anti-interference

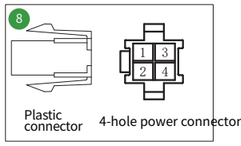
Other accessory specifications

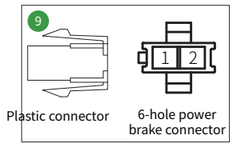
Waterproof connector/compact accessories	Specifications
ENC-TE 750W-F	6-core waterproof encoder connector + 1394 connector encoder accessory pack
PWR-CON 750W-F	4-core waterproof power connector, for flange 40 to 80
PWB-CON 750W-F	6-core waterproof power connector with brake, for flange 40 to 80
PWR-CON 1KW-F	6-core waterproof power connector, for flange 130

For servo motor of flange 40 to 80

Accessories	Model name	Diagram
2 packs of encoder accessories ((6-hole plastic connector + 1394 connector)	ENC-TE 1KW	7
4-hole power connector accessories	PWR-CON 750W	8
6-hole power brake connector accessories	PWB-CON 750W	9







Cable for Lead-wire Type Servo Motor(customized products)

Encoder cable	Specifications
SVCAB-ENC75A-3M	Absolute encoder cable, for lead-wire type servo motor flange 40 to 80, 3 meters
CAB-ENC100A-3M	Incremental encoder cable, for lead-wire type servo motor flange 100&130&180, 3 meters
CAB-ENC100A-ABS-3M	Absolute encoder cable with battery box, for lead-wire type servo motor flange 100&130&180, 3 meters
Power cable	**Specifications**
CAB-PWR75A-3M	4-core power cable, for lead-wire type servo motor flange 40 to 80, 3 meters
CAB-PWR100A-3M	4-core power cable, for lead-wire type servo motor flange 100&130, 3 meters
CAB-PWR400C-3M	4-core power cable, for lead-wire type servo motor of 2KW to 5KW, flange 180, 3 meters
CAB-PWR750C-5M	CAB-PWR750C-5M 4-core power cable, for lead-wire type servo motor of 5.5KW to 7.5KW, flange 180, 5 meters
Power brake cable	**Specifications**
CAB-PWB75A-3M	9-core power cable, for lead-wire type servo motor flange130, 3 meters
CAB-PWB100A-3M	6-core power brake cable, for lead-wire type servo motor flange 40 to 80, 3 meters
CAB-PWD100A-3M	2-core power cable, for lead-wire type servo motor flange100&130, 3 meters
Waterproof-connector cable	**Specifications**
SVCAB-ENC75A-3M-F	6-core waterproof absolute encoder cable, for lead-wire type servo motor flange 40 to 130, 3 meters
CAB-PWR75A-3M-F	4-core waterproof power cable, for lead-wire type servo motor flange 40 to 80, 3 meters
CAB-PWB75A-3M-F	6-core waterproof power brake cable, for lead-wire type servo motor flange 40 to 80, 3 meters
CAB-PWB100A-3M-F	9-core waterproof power brake cable, for lead-wire type servo motor flange 130, 3 meters