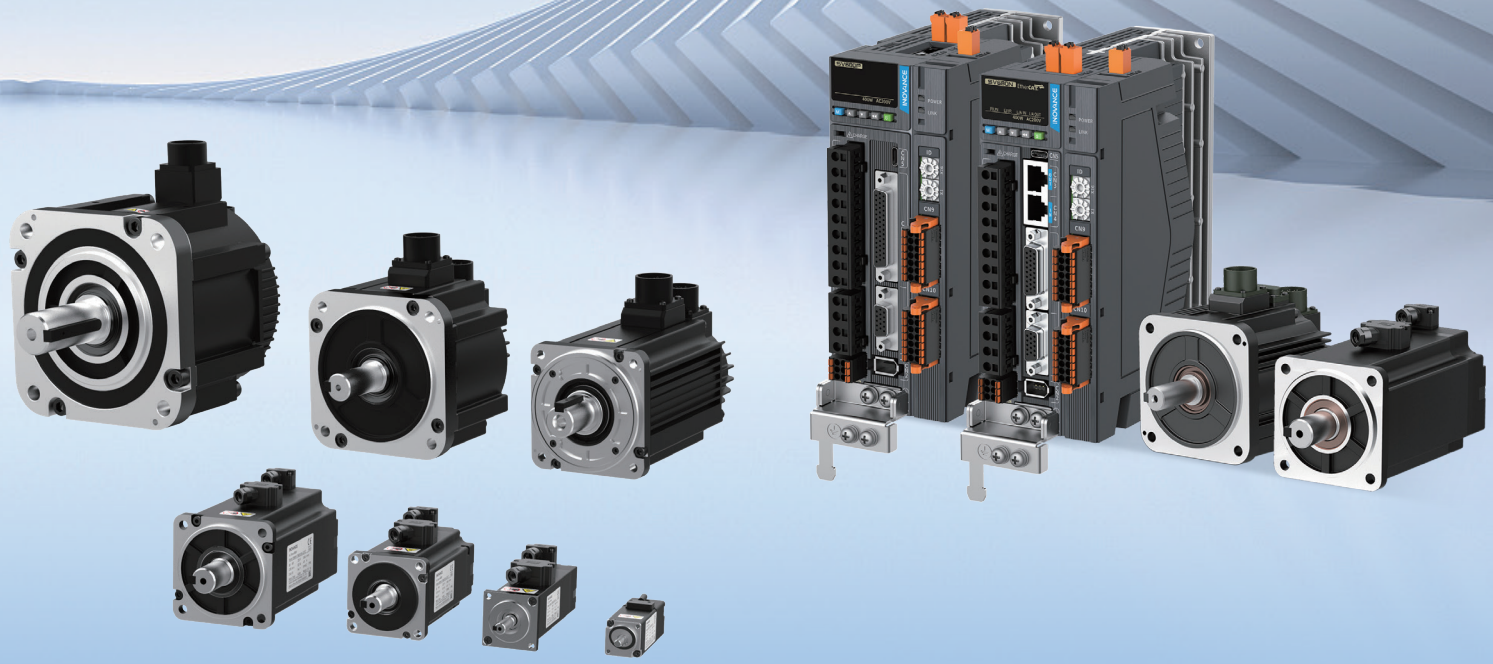
INOVANCE

SERVO DRIVES & MOTORS



NANDEE

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SV660 Series - Servo Drive

High Dynamic Performance with a Compact Footprint

EtherCAT® CANopen CANlink PROFINET®

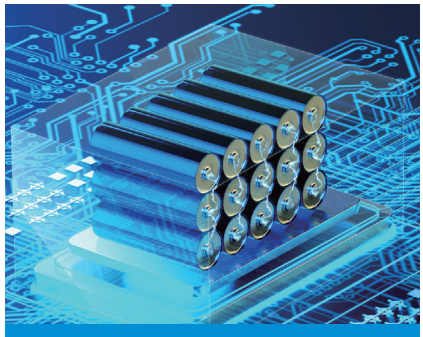
Packing

CNC Machine Tools

Textiles

3C

Photovoltaic



Li-ion

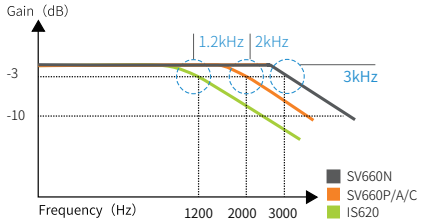
PRODUCT FEATURES

High response 3 kHz bandwidth

Control Performance

Compared with the previous IS620 series, the SV660 series has a much higher response bandwidth and faster command following, and effectively shortens the setting time for accurate positioning. The servo drive performance featuring ultra-high speed and ultra-precision control will give greater play to the mechanical equipment performance and empower the R&D personnel to tackle their research subjects.

	SV660	IS620
Carrier frequency	12kHz	8kHz
Current loop sampling	625kHz	16kHz
Speed loop sampling	16kHz	8kHz
Position loop sampling	8kHz	4kHz



Note: Speed loop bandwidth - The frequency at which the servo drive can respond to the fastest speed command.

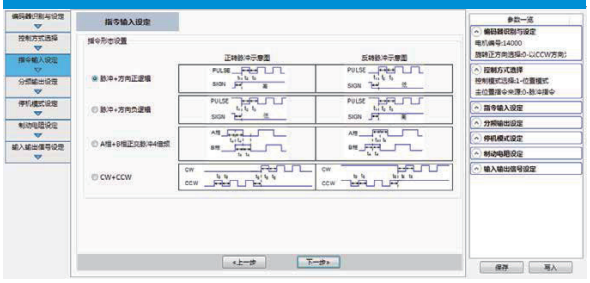
Guided commissioning software

Graphic, Configurable, and Easy to use

The newly designed background software further simplifies the use of the servo drive by providing wizard guides and a graphical interface for parameter configurations. Even green hands can easily set servo drive parameters.

Model Adaption

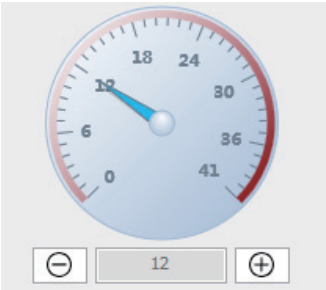
Wizard Mode



Stune for easy commissioning

Auto-tuning with One Parameter

The servo drive can be set by configuring a single parameter. The load inertia ratio is self-adapted and identified, and the resonance suppression parameters are automatically set, which greatly reduces the tuning difficulty and improves the efficiency.



Application Mode	Description
H09-00=3 Interpolation mode + automatic inertia identification	The gain is maintained when the set stiffness is maintained regardless of inertia change to ensure the interpolation synchronization effect
H09-00=4 Normal mode + automatic inertia identification	The gain changes when the stiffness is maintained, and the actual gain at the same stiffness level decreases when the inertia is greater than 1
H09-00=6 Quick positioning + automatic inertia identification	The model tracking function is added in normal mode to realize high-speed positioning

CATALOG NUMBER EXPLANATION

SV660 ① P ② S ③ 5R5 ④ I ⑤ - ** ⑥

① Serial number servo drive	③ Voltage class S：220V T：380V	⑤ Installation method I：Substrate installation
② Product category P: Pulse type A: CANlink bus type C: CANopen bus type N: EtherCAT bus type	④ Rated output current 1R6：1.6A ¤¤¤ 021：21A 026：26A	⑥ Customized specifications Vacancy: Standard model -FH: Model with high IP -FS: STO functional safety

Note: -FS is only supported by the SV660N series

SPECIFICATIONS

Single-phase/three-phase 220 V servo drive

Physical Dimensions	SIZE-A		SIZE-B	SIZE-C	SIZE-D
SV660N drive	S1R6	S2R8	S5R5	S7R6	S012
Continuous output current Arms	1.6	2.8	5.5	7.6	11.6
Maximum output current Arms	5.8	10.1	16.9	23.0	32.0
Power supply of main circuit	Single-phase AC200V — 240V,-10 — +10%,50/60Hz			Single-phase/three-phase AC200V — 240V,-10 — +10%,50/60Hz	
Power supply of control circuit	Bus-powered, shared power input and rectifier			Single-phase AC220V — 240V,-10 — +10%,50/60Hz	
Brake release function	External braking resistor		Built-in regenerative resistor		

Three-phase 380 V Servo Drive

Physical Dimensions	SIZE-C		SIZE-C		SIZE-E		
SV660N drive	T3R5	T5R4	T8R4	T012	T017	T021	T026
Continuous output current Arms	3.5	5.4	8.4	12	17	21	26
Max. output current Arms	11	14	20	29.75	41.25	52.12	64.25
Power supply of main circuit	Three-phase AC380V — 440V，-10 — +10%，50/60Hz						
Power supply of control circuit	Single-phase AC380V — 440V，-10 — +10%，50/60Hz						
Brake release function	Built-in regenerative resistor						

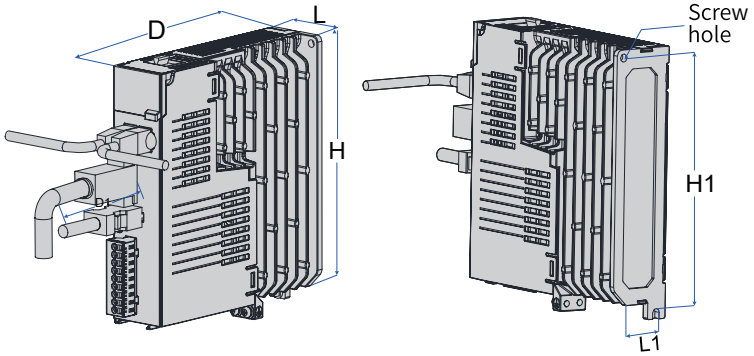
Note: The main power supply of S7R6 and S012 drives can be connected to either single-phase or three-phase power supply, depending on the power supply available on site. When single-phase input is used for models S7R6 and S012, derating is not required.

OVERVIEW

Servo drive (AC200V)	SIZE A		SIZE B	SIZE C	SIZE D
					
	SV660 ☐ S1R6I	SV660 ☐ S2R8I	SV660 ☐ S5R5I	SV660 ☐ S7R6I	SV660 ☐ S012I
	Single-phase 220V		Single-phase 220V	Single-phase/three-phase 220V	Single-phase/three-phase 220V

Servo drive (AC400V)	SIZE C		SIZE D		SIZE E		
							
	SV660 ☐ T3R5I	SV660 ☐ T5R4I	SV660 ☐ T8R4I	SV660 ☐ T012I	SV660 ☐ T017I	SV660 ☐ T021I	SV660 ☐ T026I
	Three-phase 380V	Three-phase 380V	Three-phase 380V				

DEMENSIONS



Structure	L mm(in.)	H mm(in.)	D mm(in.)	L1 mm(in.)	H1 mm(in.)	D1 mm(in.)	Screw Hole (ØLA)	Tightening Torque (N·m)	Weight (kg)
SIZE A	40 (1.57)	170 (6.69)	150 (5.91)	28 (1.10)	161 (6.34)	75 (2.95)	2-M4	0.6~1.2	0.8 (1.76)
SIZE B	50 (1.97)	170 (6.69)	173 (6.81)	37 (1.46)	161 (6.34)	75 (2.95)	2-M4	0.6~1.2	1.0 (2.20)
SIZE C	55±1 (2.17±0.04)	170 (6.69)	173±1 (6.81±0.04)	44 (1.37)	160 (6.30)	75 (2.95)	2-M4	0.6~1.2	1.3 (2.87)
SIZE D	80±1 (3.15±0.04)	170 (6.69)	183 (7.20)	71 (2.80)	160 (6.30)	75 (2.95)	3-M4	0.6~1.2	1.8 (3.97)
SIZE E	90 (3.54)	250 (9.84)	230 (9.06)	78 (3.07)	240.5 (9.47)	75 (2.95)	4-M4	0.6~1.2	3.6 (7.94)

SELECTION CHART

Power supply voltage	Motor base speed (RPM)	Motor maxi-mum speed (RPM)	Motor power (W)	Motor rated torque (N·m)	Motor peak torque (N·m)	Motor frame size (mm)	Rotor inertia (0.0001x kg·m2)	MS1 motor type	SV660X type	SV660X rated current (A)	SV660X peak current (A)	Size	Dimensions H x W x D (mm)	Conne-ctor kit
1PH 220 V	3000	6000	50	0.16	0.56	40X40	0.026	MS1H1-05B30CB-A330*	SV660XS1R6I-INT	1.6	5.8	A	170X40X150	S6-C22
	3000	6000	100	0.32	1.12	40X40	0.041	MS1H1-10B30CB-A330*	SV660XS1R6I-INT	1.6	5.8	A	170X40X150	S6-C22
	3000	6000	200	0.64	2.24	60X60	0.207	MS1H1-20B30CB-A331*	SV660XS1R6I-INT	1.6	5.8	A	170X40X150	S6-C22
	3000	6000	400	1.27	4.46	60X60	0.376	MS1H1-40B30CB-A331*	SV660XS2R8I-INT	2.8	10.1	A	170X40X150	S6-C22
	3000	6000	400	1.27	4.46	60X60	0.657	MS1H4-40B30CB-A331*	SV660XS2R8I-INT	2.8	10.1	A	170X40X150	S6-C22
	3000	6000	550	1.75	6.13	80X80	1.06	MS1H1-55B30CB-A331*	SV660XS5R5I-INT	5.5	16.9	B	170X50X173	S6-C22
	3000	6000	750	2.39	8.36	80X80	1.38	MS1H1-75B30CB-A331*	SV660XS5R5I-INT	5.5	16.9	B	170X50X173	S6-C22
	3000	6000	750	2.39	8.36	80X80	2	MS1H4-75B30CB-A331*	SV660XS5R5I-INT	5.5	16.9	B	170X50X173	S6-C22
1/3 PH 220 V	1500	3000	850	5.39	13.5	130X130	13.3	MS1H3-85B15CB-A331*	SV660XS7R6I-INT	7.6	23	C	170X55X173	S6-C29
	3000	6000	1000	3.18	9.12	80X80	1.75	MS1H1-10C30CB-A331*	SV660XS7R6I-INT	7.6	23	C	170X55X173	S6-C22
	3000	6000	1000	3.18	11.1	80X80	1.75	MS1H1-10C30CBA331*	SV660XS012I-INT	11.6	32	D	170X80X183	S6-C22
	3000	6000	1000	3.18	9.54	100X100	1.87	MS1H2-10C30CB-A331*	SV660XS7R6I-INT	7.6	23	C	170X55X173	S6-C29
	1500	3000	1300	8.34	20.85	130X130	17.8	MS1H3-13C15CB-A331*	SV660XS012I-INT	11.6	32	D	170X80X183	S6-C29
	3000	5000	1500	4.9	14.7	100X100	2.46	MS1H2-15C30CB-A331*	SV660XS012I-INT	11.6	32	D	170X80X183	S6-C29
3 PH 400 V	3000	6000	1000	3.18	9.54	100X100	1.87	MS1H2-10C30CD-A331*	SV660XT5R4I-INT	5.4	14	C	170X55X173	S6-C29
	3000	5000	1500	4.9	14.7	100X100	2.46	MS1H2-15C30CD-A331*	SV660XT5R4I-INT	5.4	14	C	170X55X173	S6-C29
	3000	5000	2000	6.36	19.1	100X100	3.06	MS1H2-20C30CD-A331*	SV660XT8R4I-INT	8.4	20	D	170X80X183	S6-C29
	3000	5000	2500	7.96	19.12	100X100	3.65	MS1H2-25C30CD-A331*	SV660XT8R4I-INT	8.4	20	D	170X80X183	S6-C29
	3000	5000	2500	7.96	23.9	100X100	3.65	MS1H2-25C30CD-A331*	SV660XT012I-INT	11.9	29.75	D	170X80X183	S6-C29
	3000	5000	3000	9.8	29.16	130X130	7.72	MS1H2-30C30CD-A331*	SV660XT012I-INT	11.9	29.75	D	170X80X183	S6-C29
	3000	5000	3000	9.8	29.4	130X130	7.72	MS1H2-30C30CD-A331*	SV660XT017I-INT	16.5	41.25	E	250X90X230	S6-C29
	3000	5000	4000	12.6	37.8	130X130	12.1	MS1H2-40C30CD-A331*	SV660XT017I-INT	16.5	41.25	E	250X90X230	S6-C29
	3000	5000	5000	15.8	40.91	130X130	15.4	MS1H2-50C30CD-A331*	SV660XT017I-INT	16.5	41.25	E	250X90X230	S6-C29
	3000	5000	5000	15.8	47.6	130X130	15.4	MS1H2-50C30CD-A331*	SV660XT021I-INT	20.8	52.12	E	250X90X230	S6-C29
	1500	3000	850	5.39	13.5	130X130	13.3	MS1H3-85B15CD-A331*	SV660XT3R5I-INT	3.5	11	C	170X55X173	S6-C29
	1500	3000	1300	8.34	20.85	130X130	17.8	MS1H3-13C15CD-A331*	SV660XT5R4I-INT	5.4	14	C	170X55X173	S6-C29
	1500	3000	1800	11.5	28.75	130X130	25	MS1H3-18C15CD-A331*	SV660XT8R4I-INT	8.4	20	D	170X80X183	S6-C29
	1500	3000	2900	18.6	37.2	180X180	55	MS1H3-29C15CD-A331*	SV660XT012I-INT	11.9	29.75	D	170X80X183	S6-C39
	1500	3000	4400	28.4	71.1	180X180	88.9	MS1H3-44C15CD-A331*	SV660XT017I-INT	16.5	41.25	E	250X90X230	S6-C39
	1500	3000	5500	35	87.6	180X180	107	MS1H3-55C15CD-A331*	SV660XT021I-INT	20.8	52.12	E	250X90X230	S6-C39
	1500	3000	7500	48	117.63	180X180	141	MS1H3-75C15CD-A331*	SV660XT026I-INT	25.7	64.25	E	250X90X230	S6-C39

SV670 Series – Servo Drive

Performance, Enhanced Functionality, and Flexibility

PRODUCT FEATURES

⌘ **Built-in USB-C port (for PC connection) and RS485 port (Modbus RTU communication protocol)**

- 23 bit feedback encoder
- Multi-position control
- IP20 rating
- All 200 V models can be supplied from single phase 200 V

⌘ **High resolution feedback encoder**

23 bit serial single/multi-turn absolute encoder provides 8,388,608 pulses within one mechanical turn. Multi-turn absolute information can be also saved at power down,avoiding the need to perform machine homing at every power-up.

⌘ **Functional safety - STO SIL3 EN/IEC 61800-5-2 compllant**

The STO function guarantees safe machine stop without using additional contactors.

⌘ **Short output winding**

Standard, built-in,short output winding ensures safe braking if the drive is unexpectedly disabled - even in the case of a failure in the motor holding brake.

SV680 Series-Servo Drives

Born for High-End Market

CANopen CANlink Safety over EtherCAT Modbus

PRODUCT FEATURES

- Adopts advanced motion control algorithms to implement 3.5 kHz velocity loop bandwidth response, leading in the industry.
- Implements more precise positioning and is equipped with a 26-bit multi-turn absolute encoder. Seeks for smoother operations and supports a maximum pulse command frequency of 8 Mpps.
- Seeks for faster operations and supports a maximum rotation speed of 7000 RPM.
- Supports standard STO and built-in dynamic braking to build the equipment security system.
- Implements the SS1, SS2, SLS, SBC, SOS, SSM, and SDI functions through the security module, improving the safety level.
- Implements automatic suppression of mechanical resonance and automatic adjustment of loop gain through one-click adjustment of single STune parameter, maximizing mechanical performance and reducing the manual debugging time.
- Uses the Type-C debugging cable for data monitoring, parameter modification, and debugging, ensuring easy connection and use.

SV660ND Series - Servo Drive

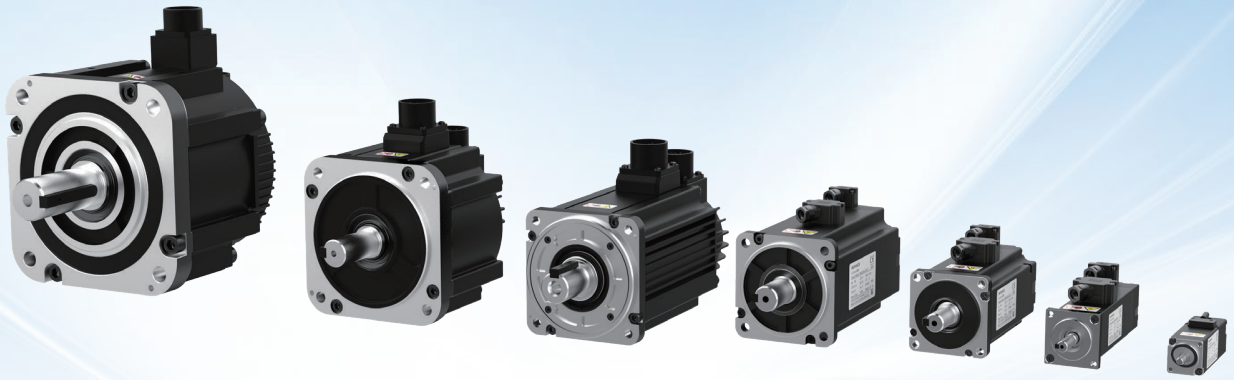
Two-Axis Universal Servo Drive

PRODUCT FEATURES

- Ease of use: Equipped with STO (SIL3), one-key tuning, and adaptive notch functions to simplify the operation process
- Space-saving: Front dimensions reduced by 39%, with compact installation supported by 0.4 kW to 0.75 kW models without the need for derating, saving the installation space by 25%
- All-in-one network: EtherCAT bus communication supported
- Accurate positioning control: Stable and quiet operation with accurate positioning control by working together with MS1 series high-response servo motor (23-bit absolute encoder)

MS1-Z Series Servo Motor

Highly Dynamic Motors with a Wide Range of Brake Options



Power range: 0.03 kW to 7.5 kW, flange size 25 mm to 180 mm
Applied in automation equipment such as semiconductors, SMT machines, handling machineries, machine tools, and conveyer machineries

PRODUCT FEATURES

- Support for 23bit multi-turn optical encoder
- Built-in torque ripple compensation function (torque ripple < 0.5%)
- Enhanced overload capacity
- IP67 protection for the entire machine (except the oil seal) and high shock resistance, ensuring safety and durability under various working conditions

MECHANICAL CHARACTERISTICS

Item	Description
Duty type	Continuous
Vibration level	V15
Insulation resistance	Above 10 MΩ at 500 VDC
Ambient temperature	0°C to 40°C
Storage temperature	-20°C to +60°C (peak temperature assurance: 72 hours at 80°C)
Excitation mode	Permanent magnet
Installation mode	Flange
Insulation class	155(F)
Insulation voltage	1 min at 1500 VAC (220 V level) 1 min at 1800 VAC (380 V level)
IP rating of enclosure	IP67 (shaft extension and cable ends excluded)
Ambient humidity	20% to 80% RH (without condensation)
Direction of rotation	Rotating counterclockwise (CCW) when viewed from the load side with a forward rotation command
Vibration resistance	Below 49 m/s^2
Shock resistance	Below 490 m/s^2
Altitude	Below 1000 m (Derating is required for altitudes above 1000 m)

MS1 H1 - 75B 30C B - A3 3 1 Z - INT
① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

① Series
MS1 series servo motor

② Inertia
H1: low inertia, 40/60/80 mm flange, 3,000 RPM
H2: low inertia, 100/130 mm flange, 3,000 RPM
H3: medium inertia 130/180 mm flange, 1,500 RPM
H4: medium inertia 60/80 mm flange, 3,000 RPM

③ Rated power
A: x 1
B: x 10
C: x 100
D: x 1,000
E: x 10,000
E.g. 75B: 750 W: 15C: 1,500 W

④ Rated speed
A: x 1
B: x 10
C: x 100
D: x 1,000
E: x 10,000
E.g. 30C : 3,000 RPM

⑤ Voltage class
B: 220 V
D: 400 V

⑥ Encoder type
A3: 23-bit single & multi-turn absolute
A6: 26-bit

⑦ Motor shaft
1: plain
2: keyed
3: keyed + tapped hole
5: tapped hole

⑧ Brake and oil seal options
0: no brake, no oil seal
1: oil seal
2: brake
4: brake + oil seal

⑨ Stator pole
Y: 8 pole
Z: 10 pole

⑩ INT: international version

SPECIFICATIONS

MS1H1

Servo motor model	Rated output [kW]	Rated torque [Nm]	Peak torque [Nm]	Rated current [Arms]	Peak current [Arms]	Rated speed [RPM]	Max speed [RPM]	Torque constant [Nm/Arms]	Rotor inertia [10-4 x kg·m²]		Voltage [V]
									Without brake	With brake	
MS1H1 (Nrated = 3,000 RPM, Nmax = 6,000 RPM)											
MS1H1-05B30CB-XXXXZ-INT	0.05	0.16	0.56	1.3	4.7	3,000	6,000	0.15	0.026	0.028	220
MS1H1-10B30CB-XXXXZ-INT	0.1	0.32	1.12	1.3	4.7			0.26	0.041	0.043	
MS1H1-20B30CB-XXXXZ-INT	0.2	0.64	2.24	1.5	5.8			0.46	0.207	0.220	
MS1H1-40B30CB-XXXXZ-INT	0.4	1.27	4.46	2.8	10.1			0.53	0.376	0.390	
MS1H1-55B30CB-XXXXZ-INT	0.55	1.75	6.13	3.8	15.0			0.49	1.06	1.06	
MS1H1-75B30CB-XXXXZ-INT	0.75	2.39	8.36	4.8	16.9			0.58	1.38	1.43	
MS1H1-10C30CB-XXXXZ-INT	1.0	3.18	11.1	7.6	28			0.46	1.75	1.75	

MS1H2

Servo motor model	Rated output [kW]	Rated torque [Nm]	Peak torque [Nm]	Rated current [Arms]	Peak current [Arms]	Rated speed [RPM]	Max speed [RPM]	Torque constant [Nm/Arms]	Rotor inertia [10-4 x kg·m²]		Voltage [V]
									Without brake	With brake	
MS1H2 (Nrated = 3,000 RPM, Nmax = 5,000/6,000 RPM)											
MS1H2-10C30CB-XXXXZ-INT	1.0	3.18	9.54	7.5	23	3,000	6,000	0.43	1.87	3.12	220
MS1H2-15C30CB-XXXXZ-INT	1.5	4.9	14.7	10.8	32		5,000	0.45	2.46	3.71	
MS1H2-10C30CD-XXXXZ-INT	1.0	3.18	9.54	3.65	11		6,000	0.87	1.87	3.12	400
MS1H2-15C30CD-XXXXZ-INT	1.5	4.9	14.7	4.5	14		5,000	1.09	2.46	3.71	
MS1H2-20C30CD-XXXXZ(-S4)-INT	2.0	6.36	19.1	5.89	20			1.08	3.06	4.31	
MS1H2-25C30CD-XXXXZ(-S4)-INT	2.5	7.96	23.9	7.56	25			1.05	3.65	4.9	
MS1H2-30C30CD-XXXXZ(-S4)-INT	3.0	9.8	29.4	10	30			0.98	7.72	7.72	
MS1H2-40C30CD-XXXXZ(-S4)-INT	4.0	12.6	37.8	13.6	40.8			0.93	12.1	14.6	
MS1H2-50C30CD-XXXXZ(-S4)-INT	5.0	15.8	47.6	16	48			1.07	15.4	17.9	

MS1H3

Servo motor model	Rated output [kW]	Rated torque [Nm]	Peak torque [Nm]	Rated current [Arms]	Peak current [Arms]	Rated speed [RPM]	Max speed [RPM]	Torque constant [Nm/Arms]	Rotor inertia [10-4 x kg·m²]		Voltage [V]
									Without brake	With brake	
MS1H3 (Nrated = 1,500 RPM, Nmax = 3,000 RPM)											
MS1H3-85B15CB-XXXXZ-INT	0.85	5.39	13.5	6.6	16.5	1,500	3,000	0.9	13.3	14	220
MS1H3-13C15CB-XXXXZ-INT	1.3	8.34	20.85	10	25			0.9	17.8	18.5	
MS1H3-85B15CD-XXXXZ-INT	0.85	5.39	13.5	3.3	8.25			1.75	13.3	14	400
MS1H3-13C15CD-XXXXZ-INT	1.3	8.34	20.85	5	12.5			1.78	17.8	18.5	
MS1H3-18C15CD-XXXXZ-INT	1.8	11.5	28.75	6.6	16.5			1.8	25	25.7	
MS1H3-29C15CD-XXXXZ-INT	2.9	18.6	37.2	11.9	28			1.7	55	57.2	
MS1H3-44C15CD-XXXXZ-INT	4.4	28.4	71.1	16.5	40.5			1.93	88.9	90.8	
MS1H3-55C15CD-XXXXZ-INT	5.5	35	87.6	20.85	52			1.8	107	109.5	
MS1H3-75C15CD-XXXXZ-INT	7.5	48	119	25.7	65			1.92	141	143.1	

MS1H4

Servo motor model	Rated output [kW]	Rated torque [Nm]	Peak torque [Nm]	Rated current [Arms]	Peak current [Arms]	Rated speed [RPM]	Max speed [RPM]	Torque constant [Nm/Arms]	Rotor inertia [10-4 x kg·m²]		Voltage [V]
									Without brake	With brake	
MS1H4 (Nrated = 3,000 RPM, Nmax = 6,000 RPM)											
MS1H4-40B30CB-XXXXZ-INT	0.4	1.27	4.46	2.8	10.1	3,000	6,000	0.53	0.657	0.667	220
MS1H4-75B30CB-XXXXZ-INT	0.75	2.39	8.36	4.8	16.9			0.58	2	2.012	

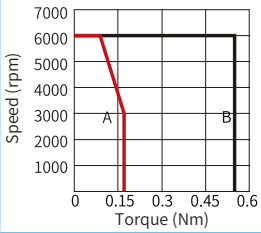
Notes: Type codes with S4 indicate motors with brakes that can be applied on a discontinuous cycle or an RMS load with 70% of the rated torque

TORQUE-SPEED CHARACTERISTICS OF MS1-Z SERIES MOTORS WITH 23-BIT ENCODER

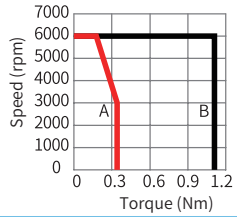
MS1H1 low inertia, small capacity

A — Continuous duty zone
B — Intermittent duty zone

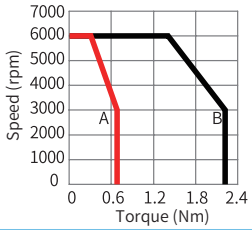
MS1H1-05B30CB-*33*Z



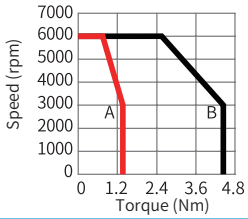
MS1H1-10B30CB-*33*Z



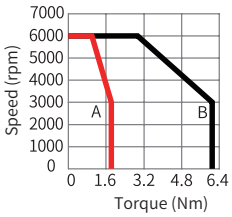
MS1H1-20B30CB-*33*Z



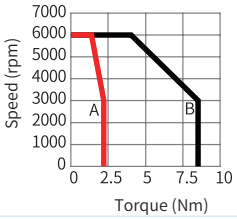
MS1H1-40B30CB-*33*Z



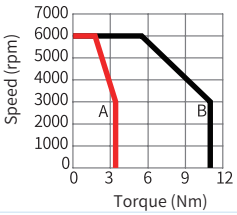
MS1H1-55B30CB-*33*Z



MS1H1-75B30CB-*33*Z



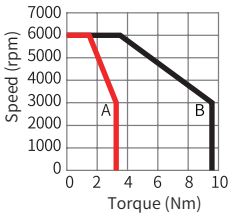
MS1H1-10C30CB-*33*Z



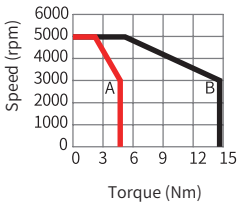
MS1H2 low inertia, medium capacity

A — Continuous duty zone
B — Intermittent duty zone

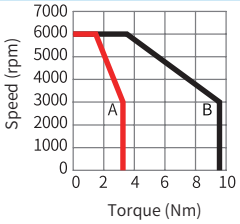
MS1H2-10C30CB-A33*Z



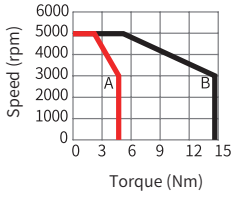
MS1H2-15C30CB-A33*Z



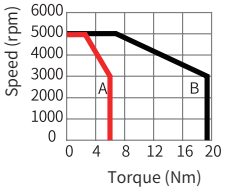
MS1H2-10C30CD-A33*Z



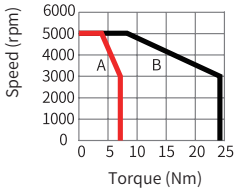
MS1H2-15C30CD-A33*Z



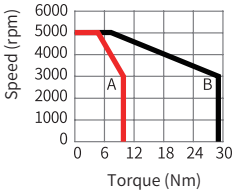
MS1H2-20C30CD-A331Z



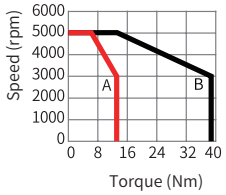
MS1H2-25C30CD-A331Z



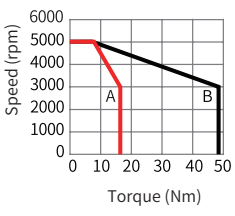
MS1H2-30C30CD-A331Z



MS1H2-40C30CD-A331Z

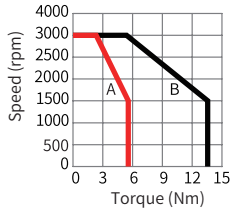
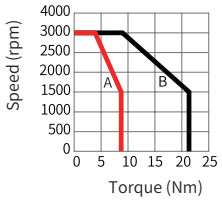
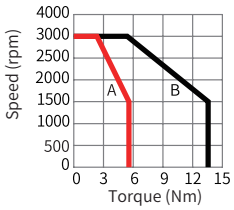
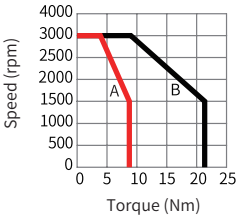


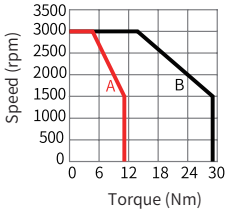
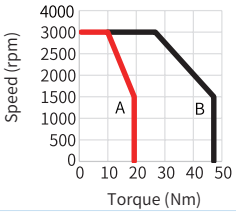
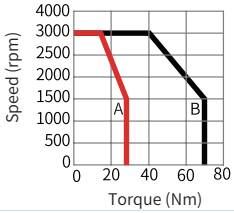
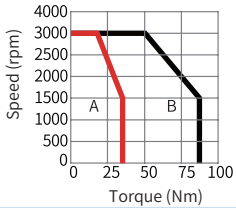
MS1H2-50C30CD-A331Z

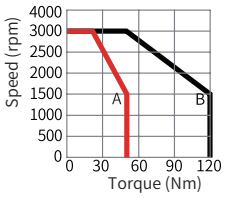


MS1H3 medium inertia, medium capacity

A — Continuous duty zone
B — Intermittent duty zone

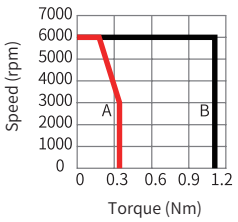
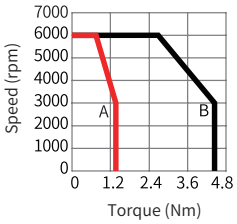
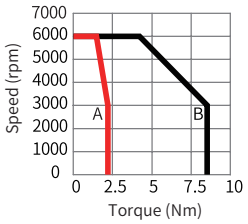
MS1H3-85B15CB-*33*Z	MS1H3-13C15CB-*33*Z	MS1H3-85B15CD-*33*Z	MS1H3-13C15CD-*33*Z
			

MS1H3-18C15CD-*33*Z	MS1H3-29C15CD-A33*Z	MS1H3-44C15CD-A33*Z	MS1H3-55C15CD-A33*Z
			

MS1H3-75C15CD-A33*Z


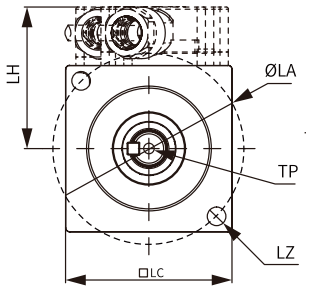
MS1H4 medium inertia, small capacity

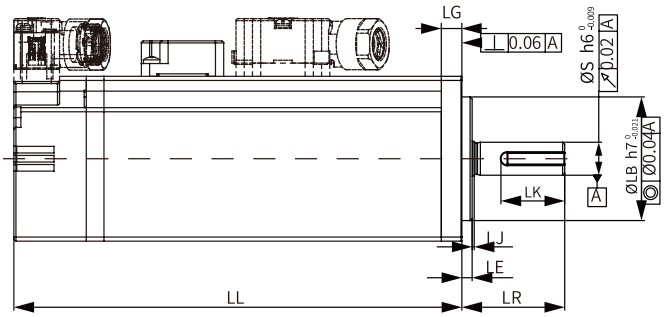
A — Continuous duty zone
B — Intermittent duty zone

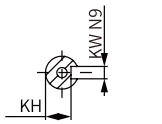
MS1H4-10B30CB-A33*Z	MS1H4-40B30CB-*33*Z	MS1H4-75B30CB-*33*Z
		

DIMENSIONS OF MS1-Z SERIES H1/H4 MOTORS

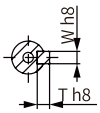
Flange size 40







Dimensions of shaft end



Dimensions of shaft end with key

Flange size 60 and 80

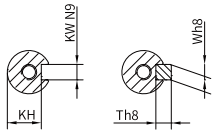
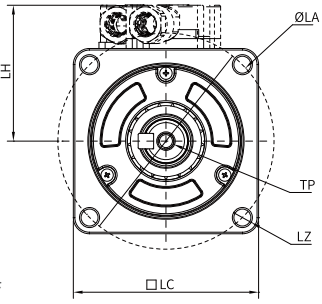
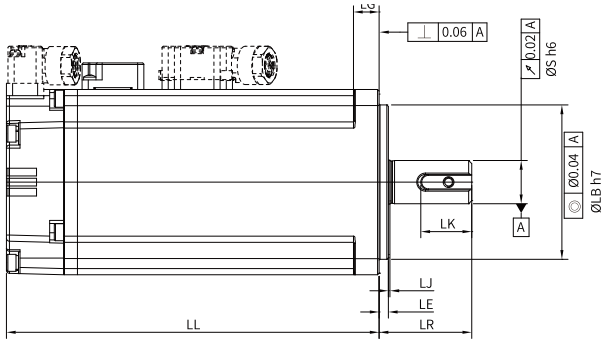


Diagram of shaft end

Diagram of shaft end





Motor Model		LC (mm)	LL (mm)	LR (mm)	LA (mm)	LZ (mm)	LH (mm)	LG (mm)	LE (mm)	LJ (mm)	LB (mm)
Flange size 40	MS1H1-05B30CB-□□3□Z	40	65.4 (96)	25±0.3	46	2 — Ø4.5	34.3	5	2.5±0.5	0.5±0.35	Ø30h7 $^{0}_{-0.021}$
	MS1H1-10B30CB-□□3□Z	40	78.4 (110)	25±0.3	46	2 — Ø4.5	34.3	5	2.5±0.5	0.5±0.35	Ø30h7 $^{0}_{-0.021}$
	MS1H4-10B30CB-□□3□Z	40	91 (121.5)	25±0.3	46	2 — Ø4.5	34.3	5	2.5±0.5	0.5±0.35	Ø30h7 $^{0}_{-0.021}$

Motor Model		S (mm)	TP (mm)	LK (mm)	KH (mm)	KW (mm)	W (mm)	T (mm)	Weight (kg)
Flange size 40	MS1H1-05B30CB-□□3□Z	8	M3x6	16	6.2 $^{0}_{-0.1}$	3	3	3	0.39 (0.50)
	MS1H1-10B30CB-□□3□Z	8	M3x6	16	6.2 $^{0}_{-0.1}$	3	3	3	0.45 (0.50)
	MS1H4-10B30CB-□□3□Z	8	M3x6	16	6.2 $^{0}_{-0.1}$	3	3	3	0.45 (0.50)

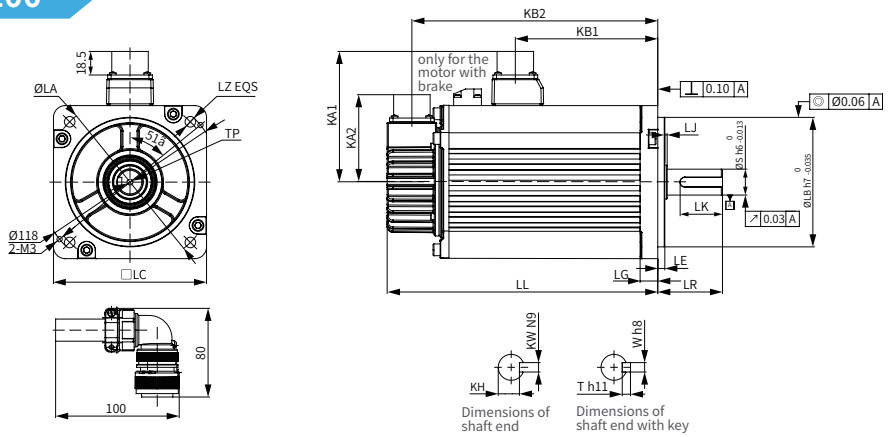
Motor Model		LC (mm)	LL (mm)	LR (mm)	LA (mm)	LZ (mm)	LH (mm)	LG (mm)	LE (mm)	LJ (mm)	LB (mm)
Flange size 60 And 80	MS1H1-20B30CB-□□3□Z	60	75.5 (100)	30±0.5	70	4 — Ø5.5	44	7.5	3±0.5	0.5±0.35	Ø50h7 $^{0}_{-0.025}$
	MS1H1-40B30CB-□□3□Z	60	91 (119)	30±0.5	70	4 — Ø5.5	44	7.5	3±0.5	0.5±0.35	Ø50h7 $^{0}_{-0.025}$
	MS1H1-55B30CB-□□3□Z	80	96.2 (/)	35±0.5	90	4 — Ø7	54	7.7	3±0.5	0.5±0.35	Ø70h7 $^{0}_{-0.03}$
	MS1H1-75B30CB-□□3□Z	80	107 (140)	35±0.5	90	4 — Ø7	54	7.7	3±0.5	0.5±0.35	Ø70h7 $^{0}_{-0.03}$
	MS1H1-10C30CB-□□3□Z	80	118.2 (/)	35±0.5	90	4 — Ø7	54	7.7	3±0.5	0.5±0.35	Ø70h7 $^{0}_{-0.03}$
	MS1H4-40B30CB-□□3□Z	60	105 (128)	30±0.5	70	4 — Ø5.5	44	7.5	3±0.5	0.5±0.35	Ø50h7 $^{0}_{-0.025}$
	MS1H4-75B30CB-□□3□Z	80	117.5 (147.5)	35±0.5	90	4 — Ø7	54	7.7	3±0.5	0.5±0.35	Ø70h7 $^{0}_{-0.03}$

Motor Model		S (mm)	TP (mm)	LK (mm)	KH (mm)	KW (mm)	W (mm)	T (mm)	Weight (kg)
Flange size 60 And 80	MS1H1-20B30CB-□□3□Z	14	M5x8	17.5	11 $^{0}_{-0.1}$	5	5	5	0.78 (1.16)
	MS1H1-40B30CB-□□3□Z	14	M5x8	17.5	11 $^{0}_{-0.1}$	5	5	5	1.11 (1.48)
	MS1H1-55B30CB-□□3□Z	19	M6x20	26	15.5 $^{0}_{-0.1}$	6	6	6	1.85 (/)
	MS1H1-75B30CB-□□3□Z	19	M6x20	26	15.5 $^{0}_{-0.1}$	6	6	6	2.18 (2.82)
	MS1H1-10C30CB-□□3□Z	19	M6x20	26	15.5 $^{0}_{-0.1}$	6	6	6	2.55 (/)
	MS1H4-40B30CB-□□3□Z	14	M5x8	17.5	11 $^{0}_{-0.1}$	5	5	5	1.27 (1.62)
	MS1H4-75B30CB-□□3□Z	19	M6x20	26	15.5 $^{0}_{-0.1}$	6	6	6	2.40 (3.04)

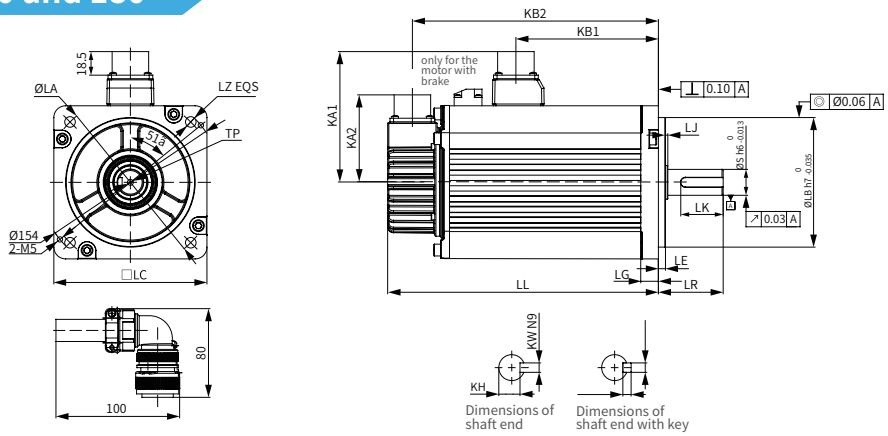
Note: [1] Values in the parentheses are for the motor with brake.

DIMENSIONS OF MS1-Z SERIES H2/H3 MOTORS

Flange size 100



Flange size 130 and 180



Motor Model		LC (mm)	LL (mm)	LR (mm)	LA (mm)	LZ (mm)	KA1 (mm)	KB1 (mm)	KA2 (mm)	KB2 (mm)	LG (mm)	LE (mm)
Flange size 100	MS1H2-10C30CB-A33*Z	100	164 (213.5)	45±1	115	4 — Ø7	88	94.5 (101)	74	143.5 (192.5)	10	5±0.3
	MS1H2-10C30CD-A33*Z											
	MS1H2-15C30CB-A33*Z	100	189 (239)	45±1	115	4 — Ø7	88	119.5 (128)	74	168.5 (219.5)	10	5±0.3
	MS1H2-15C30CD-A33*Z											
	MS1H2-20C30CD-A331Z	100	214	45±1	115	4 — Ø7	88	144.5	74	193.5	10	5±0.3
	MS1H2-25C30CD-A331Z	100	240.5	45±1	115	4 — Ø7	88	169.5	74	218.5	10	5±0.3

Motor Model		LJ (mm)	LB (mm)	S (mm)	TP (mm)	LK (mm)	KH (mm)	KW (mm)	W (mm)	T (mm)	Weight (kg)
Flange size 100	MS1H2-10C30CB-A33*Z	2.5±0.75	Ø95h7 $^{0}_{-0.035}$	24	M8x16	36	20 $^{0}_{-0.2}$	8	8	7	5.11 (6.41)
	MS1H2-10C30CD-A33*Z										
	MS1H2-15C30CB-A33*Z	2.5±0.75	Ø95h7 $^{0}_{-0.035}$	24	M8x16	36	20 $^{0}_{-0.2}$	8	8	7	6.22 (7.52)
	MS1H2-15C30CD-A33*Z										
	MS1H2-20C30CD-A331Z	2.5±0.75	Ø95h7 $^{0}_{-0.035}$	24	M8x16	36	20 $^{0}_{-0.2}$	8	8	7	7.39
	MS1H2-25C30CD-A331Z	2.5±0.75	Ø95h7 $^{0}_{-0.035}$	24	M8x16	36	20 $^{0}_{-0.2}$	8	8	7	8.55

Motor Model		LC (mm)	LL (mm)	LR (mm)	LA (mm)	LZ (mm)	KA1 (mm)	KB1 (mm)	KA2 (mm)	KB2 (mm)	LG (mm)	LE (mm)
Flange size 100	MS1H2-30C30CD-A331Z	130	209.5	63±1	145	4 — Ø9	103	136	74	188.5	14	6±0.3
	MS1H2-40C30CD-A331Z	130	252	63±1	145	4 — Ø9	103	178.5	74	231	14	6±0.3
	MS1H2-50C30CD-A331Z	130	294.5	63±1	145	4 — Ø9	103	221	74	273.5	14	6±0.3
	MS1H3-85B15CB-*33*Z	130	146 (182)	55±1	145	4 — Ø9	103	72.5	74	125 (161)	14	4
	MS1H3-85B15CD-*33*Z											
	MS1H3-13C15CB-*33*Z	130	163 (199)	55±1	145	4 — Ø9	103	89.5	74	142 (178)	14	4
	MS1H3-13C15CD-*33*Z											
	MS1H3-18C15CD-*33*Z	130	181 (217)	55±1	145	4 — Ø9	103	107.5	74	160 (196)	14	4

Motor Model		LJ (mm)	LB (mm)	S (mm)	TP (mm)	LK (mm)	KH (mm)	KW (mm)	W (mm)	T (mm)	Weight (kg)
Flange size 100	MS1H2-30C30CD-A331Z	0.5±0.75	Ø110h7 $^{0}_{-0.035}$	28	M8x20	54	24 $^{0}_{-0.2}$	8	8	7	10.73
	MS1H2-40C30CD-A331Z	0.5±0.75	Ø110h7 $^{0}_{-0.035}$	28	M8x20	54	24 $^{0}_{-0.2}$	8	8	7	15.43
	MS1H2-50C30CD-A331Z	0.5±0.75	Ø110h7 $^{0}_{-0.035}$	28	M8x20	54	24 $^{0}_{-0.2}$	8	8	7	16.2
	MS1H3-85B15CB-*33*Z	0.5±0.75	Ø110h7 $^{0}_{-0.035}$	22	M6x20	36	18 $^{0}_{-0.2}$	8	8	7	7 (8)
	MS1H3-85B15CD-*33*Z										
	MS1H3-13C15CB-*33*Z	0.5±0.75	Ø110h7 $^{0}_{-0.035}$	22	M6x20	36	18 $^{0}_{-0.2}$	8	8	7	8 (9.5)
	MS1H3-13C15CD-*33*Z										
	MS1H3-18C15CD-*33*Z	0.5±0.75	Ø110h7 $^{0}_{-0.035}$	22	M6x20	36	18 $^{0}_{-0.2}$	8	8	7	9.5 (11)

Motor Model		LC (mm)	LL (mm)	LR (mm)	LA (mm)	LZ (mm)	KA1 (mm)	KB1 (mm)	KA2 (mm)	KB2 (mm)	LG (mm)	LE (mm)
Flange size 100	MS1H3-29C15CD-A33*Z	180	197 (273)	79±1	200	4 — Ø13.5	138	136 (134)	74	177 (253)	18	3.2±0.3
	MS1H3-44C15CD-A33*Z	180	230 (307)	79±1	200	4 — Ø13.5	138	169 (167)	74	210 (286)	18	3.2±0.3
	MS1H3-55C15CD-A33*Z	180	274 (350)	79±1	200	4 — Ø13.5	138	213 (211)	74	254 (330)	18	3.2±0.3
	MS1H3-75C15CD-A33*Z	180	330 (407)	113±1	200	4 — Ø13.5	138	269 (267)	74	310 (386)	18	3.2±0.3

Motor Model		LJ (mm)	LB (mm)	S (mm)	TP (mm)	LK (mm)	KH (mm)	KW (mm)	W (mm)	T (mm)	Weight (kg)
Flange size 100	MS1H3-29C15CD-A33*Z	0.3±0.75	Ø114.3h7 $^{0}_{-0.035}$	35	M12x25	65	30 $^{0}_{-0.2}$	10	10	8	15 (25)
	MS1H3-44C15CD-A33*Z	0.3±0.75	Ø114.3h7 $^{0}_{-0.035}$	35	M12x25	65	30 $^{0}_{-0.2}$	10	10	8	19.5 (30)
	MS1H3-55C15CD-A33*Z	0.3±0.75	Ø114.3h7 $^{0}_{-0.035}$	42	M12x25	97	37 $^{0}_{-0.2}$	10	10	8	28 (38)
	MS1H3-75C15CD-A33*Z	0.3±0.75	Ø114.3h7 $^{0}_{-0.035}$	42	M16x32	97	37 $^{0}_{-0.2}$	12	12	8	32 (42)

Note: [1] Values in the parentheses are for the motor with brake.

INOVANCE

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