

Features

- Line-up IP65 motor: 200 W to 5.0 kW
- Max speed: 5000 r/min (MSMJ, MHMJ)
- Low inertia (MSME) to High inertia (MHME).
- 20-bit incremental encoder (1048576 pulse)
- 17-bit absolute encoder (131072 pulse).

[Please note]

Motors displayed at P.151 to P.181 are Special Order Product. Please contact us for more information.

Motor Lineup

Small capacity	 MSMJ Low inertia Max. speed : 5000 r/min : 4500 r/min (750 W) Rated speed: 3000 r/min Rated output: 200 W to 750 W Enclosure : IP65	 MHMJ High inertia Max. speed : 5000 r/min : 4500 r/min (750 W) Rated speed: 3000 r/min Rated output: 200 W to 750 W Enclosure : IP65
	 MSME Low inertia Max. speed : 5000 r/min : 4500 r/min (from 4.0 kW) Rated speed: 3000 r/min Rated output: 1.0 kW to 5.0 kW Enclosure : IP65	 MDME Middle inertia Max. speed : 3000 r/min Rated speed : 2000 r/min Rated output: IP65 1.0 kW to 5.0 kW Enclosure : IP65
Middle capacity	 MGME (Low speed/ High torque type) High inertia Max. speed : 2000 r/min Rated speed : 1000 r/min Rated output: IP65 0.9 kW to 3.0 kW Enclosure : IP65	 MHME High inertia Max. speed : 3000 r/min Rated speed : 2000 r/min Rated output: IP65 1.0 kW to 5.0 kW Enclosure : IP65

Special Order Product
Motor Contents

MSMJ (200 V)
200 W to 750 W P.155

MSME (200 V)
1.0 kW to 5.0 kW P.158

MDME (200 V)
1.0 kW to 5.0 kW P.164

MGME (200 V)
0.9 kW to 3.0 kW P.170

MHMJ (200 V)
200 W to 750 W P.173

MHME (200 V)
1.0 kW to 5.0 kW P.176

<Cautions> Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

Model Designation

* For combination of elements of model number, refer to Index.

Servo Motor

M S M E 5 0 2 G C C M *

Symbol	Type
MSMJ	Low inertia (200 W to 750 W)
MSME	Low inertia (1.0 kW to 5.0 kW)
MDME	Middle inertia (1.0 kW to 5.0 kW)
MGME	High inertia (0.9 kW to 3.0 kW)
MHMJ	High inertia (200 W to 750 W)
MHME	High inertia (1.0 kW to 5.0 kW)

Motor rated output

Symbol	Rated output
02	200 W
04	400 W
08	750 W
09	0.9 kW
10	1.0 kW
15	1.5 kW
20	2.0 kW
30	3.0 kW
40	4.0 kW
50	5.0 kW

Voltage specifications
2: 200 V

Rotary encoder specifications

Symbol	Format	Pulse counts	Resolution	Wires
G	Incremental	20-bit	1048576	5
S	Absolute	17-bit	131072	7

* S: can be used in incremental.

<Cautions>

Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

Servo Driver

Speed, Position, Torque, Full-closed type

M A D K T 1 5 0 5 * * *

Position control type

M A D K T 1 5 0 5 E * *

Frame symbol *

Symbol	Frame
MAD	Frame A
MBD	Frame B
MCD	Frame C
MDD	Frame D
MED	Frame E
MFD	Frame F

Series

Symbol	Velocity, Position, Torque, Full-Closed type	Position control type
K	A5 II series	A5 II E series

Supply voltage specifications

Symbol	Specifications
3	3-phase, 200 V
5	Single/3-phase, 200 V

Power device Max. current rating

Symbol	Current rating
T1	10 A
T2	15 A
T3	30 A
T5	50 A
T7	75 A
TA	100 A
TB	150 A

Current detector current rating

Symbol	Specifications
07	7.5 A
10	10 A
20	20 A
30	30 A
40	40 A
64	64 A
90	90 A
A2	120 A

Motor series	Motor				Driver			Power capacity (at rated load) (kVA)	Optional parts																				
	Power supply	Output (W)	Part No. (Note) 1	Rating/Spec. (page)	A5II series Part No. (Speed, Position, Torque, Full-Closed type)	A5IE series Part No. (Position control type) (Note) 2	Frame		Encoder Cable		Motor Cable		Brake Cable (Note) 3	External Regenerative Resistor	Reactor (Single phase / 3-phase)	Noise Filter (Single phase / 3-phase)													
									20-bit Incremental (Note) 3	17-bit Absolute (Note) 2,3,6	without Brake (Note) 3	with Brake (Note) 3																	
Low inertia	MSMJ (Leadwire type) 3000 r/min	200	MSMJ022 □ 1 *	155	MADKT1507	MADKT1507E	A-frame	Approx. 0.5	MFECA 0**0EAM	MFECA 0**0EAE (Note) 4	MFMCA 0**0EED	MFMCB 0**0GET	DV0P4283	DV0P227	DV0P4170														
		400	MSMJ042 □ 1 *	156	MBDKT2510	MBDKT2510E	B-frame	Approx. 0.9						DV0P220		DV0P4170													
		750	MSMJ082 □ 1 *	157	MCDKT3520	MCDKT3520E	C-frame	Approx. 1.3						DV0P228			DV0P4170												
	1000	MSME102 □ C * M	158	MDDKT5540	MDDKT5540E	D-frame	Approx. 1.8	DV0P220						DV0P4170															
	MSME 3000 r/min	3-phase 200 V	1500	MSME152 □ C * M	159		MDDKT5540	MDDKT5540E								Approx. 2.3	MFMCB 0**0EED	MFMCB 0**0GET	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P228	DV0P4170						
			2000	MSME202 □ C * M	160	MEDKT7364	MEDKT7364E	E-frame						Approx. 3.3		DV0P220						DV0P4170							
		3-phase 200 V	3000	MSME302 □ C * M	161	MFDKTA390	MFDKTA390E	F-frame						Approx. 4.5		MFMCB 0**0EED								MFMCB 0**0GET	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P228	DV0P4170
			4000	MSME402 □ C * M	162	MFDKTB3A2	MFDKTB3A2E							Approx. 6								DV0P220						DV0P4170	
			5000	MSME502 □ C * M	163	MFDKTB3A2	MFDKTB3A2E							Approx. 7.5								DV0P220							
		Middle inertia	MDME 2000 r/min	Single phase/ 3-phase 200 V	1000	MDME102 □ C * M	164	MDDKT3530						MDDKT3530E		D-frame						Approx. 1.8		MFECA 0**0ESD	MFECA 0**0ESE	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P228
1500					MDME152 □ C * M	165	MDDKT5540	MDDKT5540E	Approx. 2.3	DV0P222	DV0P4170																		
3-phase 200 V	2000			MDME202 □ C * M	166	MEDKT7364	MEDKT7364E	E-frame	Approx. 3.3	MFMCB 0**0EED		MFMCB 0**0GET	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P220	DV0P4170												
	3000			MDME302 □ C * M	167	MFDKTA390	MFDKTA390E	Approx. 4.5	DV0P228		DV0P4170																		
	4000			MDME402 □ C * M	168	MFDKTB3A2	MFDKTB3A2E	F-frame	Approx. 6							DV0P220		DV0P4170											
5000	MDME502 □ C * M		169	MFDKTB3A2	MFDKTB3A2E	Approx. 7.5	DV0P220	DV0P4170																					
MGME (Low speed/ High torque type) 1000 r/min	Single phase/ 3-phase 200 V		900	MGME092 □ C * M	170	MDDKT5540	MDDKT5540E		D-frame	Approx. 1.8	MFECA 0**0ESD	MFECA 0**0ESE	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P228	DV0P4170												
			2000	MGME202 □ C * M	171	MFDKTA390	MFDKTA390E	Approx. 3.8	DV0P221	DV0P4170																			
	3-phase 200 V		3000	MGME302 □ C * M	172	MFDKTB3A2	MFDKTB3A2E	F-frame	Approx. 4.5							MFMCB 0**0EED		MFMCB 0**0GET	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P220	DV0P4170						
			1000	MHME102 □ C * M	176	MDDKT3530	MDDKT3530E	D-frame	Approx. 1.8	MFMCB 0**0EED												MFMCB 0**0GET							MFMCB 0**0GET
		1500	MHME152 □ C * M	177	MDDKT5540	MDDKT5540E	Approx. 2.3	DV0P220	DV0P4170																				
MHME 2000 r/min	3-phase 200 V	2000	MHME202 □ C * M	178	MEDKT7364	MEDKT7364E	E-frame	Approx. 3.3		MFECA 0**0ESD	MFECA 0**0ESE	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P220	DV0P4170													
		3000	MHME302 □ C * M	179	MFDKTA390	MFDKTA390E	Approx. 4.5	DV0P228	DV0P4170																				
	3-phase 200 V	4000	MHME402 □ C * M	180	MFDKTB3A2	MFDKTB3A2E	F-frame	Approx. 6							MFMCB 0**0EED		MFMCB 0**0GET	MFMCB 0**0GET	MFMCB 0**0GET	DV0P4283	DV0P220	DV0P4170							
		5000	MHME502 □ C * M	181	MFDKTB3A2	MFDKTB3A2E	Approx. 7.5	DV0P220	DV0P4170																				

Note) 1 Rotary encoder specifications: □ Motor specification: * (refer to P.152)
 Note) 2 Because A5IE series drivers (dedicated for position control) do not support the 17-bit absolute specification, only 20-bit incremental type can be used in combination.
 Note) 3 Cable length: ** (03: 3 m, 05: 5 m, 10: 10 m, 20: 20 m), (Example. 3 m: MFECA0030EAM)
 Note) 4 When you use a 17-bit absolute encoder as an incremental encoder, please use the encoder cable MFECA0**0EAD.
 Note) 5 Other combinations exist, and refer to P.210 for details.

Note) 6 Please note that a battery is not supplied together with 17-bit absolute encoder cable (with battery box). Please buy the battery part number "DV0P2990" separately.

Options			Title	Part No.	Page
Interface Cable			Interface Cable	DV0P4360	197
				DV0P4120	
				DV0P4121	
			Interface Conversion Cable	DV0P4130	
				DV0P4131	
Connector Kit for Power Supply Input Connection	A-frame to D-frame	Single row type	DV0P4132	200	
		Double row type	DV0P4132		
	E-frame		DV0PM20032		201
			DV0PM20033		
Connector Kit for Motor Connection	A-frame to D-frame		DV0PM20044	201	
	E-frame		DV0PM20034		
Connector Kit for Regenerative Resistor	E-frame		DV0PM20046	201	
			DV0PM20045		
Connector Kit for Motor/Encoder Connection			DV0P4290	202	
			DV0P4310	204	
			DV0P4320	205	
			DV0P4330	205	
			DV0P4340	202	
Connector Kit	RS485, RS232		DV0PM20102	198	
		Safety	DV0PM20103		
	Interface	External Scale	DV0P4350		199
		Encoder	DV0PM20026		
		Analog Monitor Signal	DV0PM20010		
Battery For Absolute Encoder			DV0P2990	207	
Battery Box (Note) 7			DV0P4430	207	
Mounting Bracket	A-frame		DV0PM20027	208	
			DV0PM20028		
			DV0PM20029		
			DV0PM20030		
Encoder Cable	without Battery Box		MFECA0**0EAD	188	
	with Battery Box (Note) 7		MFECA0**0EAM		
			MFECA0**0ESD		
Motor Cable	without Brake		MFECA0**0EAE	191	
			MFECA0**0ESE		
	with Brake		MFMCB0**2ECD		192
			MFMCB0**2ECD		
			MFMCB0**3ECT		
Brake Cable			MFMCB0**2ECD	193	
			MFMCB0**3ECT	194	
External Regenerative Resistor	A-frame		MFMCB0**3ECT	195	
			MFMCB0**3ECT		
	B-frame		MFMCB0**3ECT	196	
			MFMCB0**3ECT		
			MFMCB0**3ECT		
Reactor	DV0P220, DV0P221, DV0P222, DV0P223, DV0P224, DV0P225, DV0P227, DV0P228, DV0PM20047			209	
	Noise Filter		DV0P4170, DV0PM20042, DV0P4220, DV0PM20043	250	
Surge Absorber	Single phase		DV0P4190	253	
	3-phase		DV0P1450		
Ferrite core			DV0P1460	254	

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSMJ082G1□	MSMJ082S1□
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MCDKT3520
	A5IE series	MCDKT3520E	-
Frame symbol		C-frame	
Power supply capacity (kVA)	1.3		
Rated output (W)	750		
Rated torque (N·m)	2.4		
Momentary Max. peak torque (N·m)	7.1		
Rated current (A(rms))	4.0		
Max. current (A(o-p))	17.0		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4283	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	4500		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	0.87	
	With brake	0.97	
Recommended moment of inertia ratio of the load and the rotor Note3	20 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	2.45 or more
Engaging time (ms)	70 or less
Releasing time (ms) Note4	20 or less
Exciting current (DC) (A)	0.42
Releasing voltage (DC) (V)	1 or more
Exciting voltage (DC) (V)	24±1.2

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	686
	Thrust load A-direction (N)	294
	Thrust load B-direction (N)	392
During operation	Radial load P-direction (N)	392
	Thrust load A, B-direction (N)	147

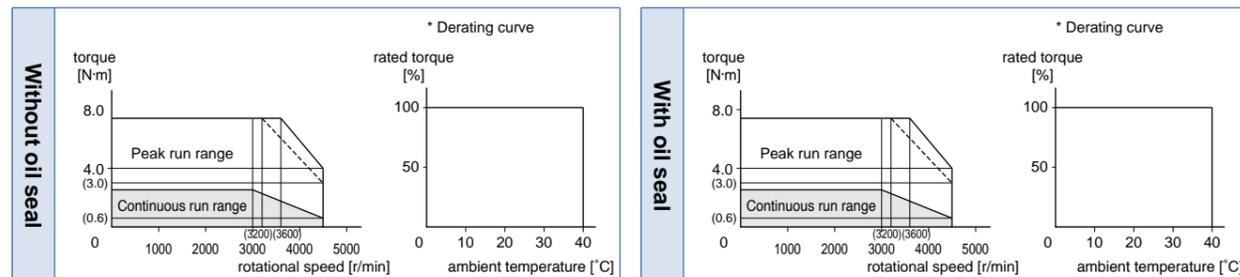
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

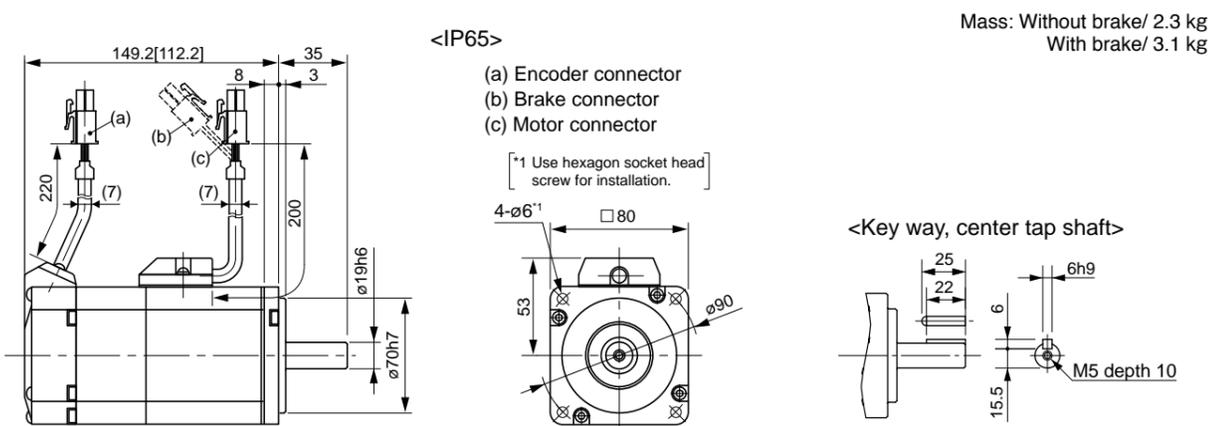
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10% less supply voltage.>)



Dimensions



* Figures in [] represent the dimensions without brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSME102GC□M	MSME102SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MDDKT5540
	A5IE series	MDDKT5540E	-
Frame symbol		D-frame	
Power supply capacity (kVA)	1.8		
Rated output (W)	1000		
Rated torque (N·m)	3.18		
Momentary Max. peak torque (N·m)	9.55		
Rated current (A(rms))	6.6		
Max. current (A(o-p))	28		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4284	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	5000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	2.03	
	With brake	2.35	
Recommended moment of inertia ratio of the load and the rotor Note3	15 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	7.8 or more
Engaging time (ms)	50 or less
Releasing time (ms) Note4	15 or less
Exciting current (DC) (A)	0.81±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

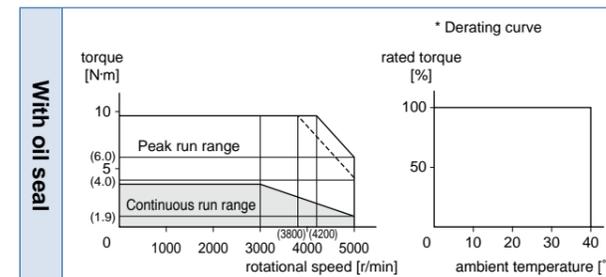
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

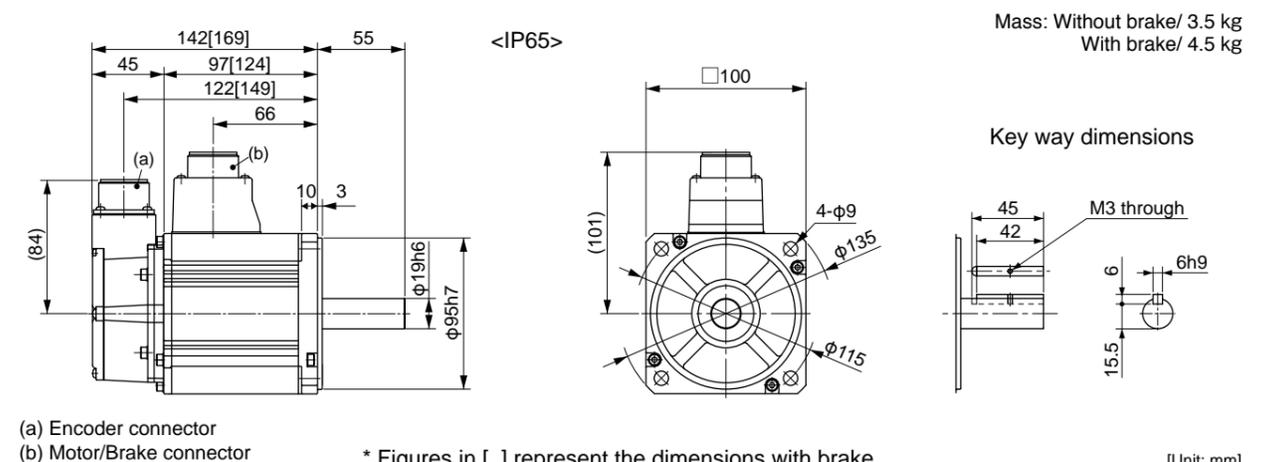
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10% less supply voltage.>)



Dimensions



* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSME152GC□M	MSME152SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5I series	MDDKT5540
	A5IE series	MDDKT5540E	-
Frame symbol		D-frame	
Power supply capacity (kVA)	2.3		
Rated output (W)	1500		
Rated torque (N·m)	4.77		
Momentary Max. peak torque (N·m)	14.3		
Rated current (A(rms))	8.2		
Max. current (A(o-p))	35		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4284	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	5000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	2.84	
	With brake	3.17	
Recommended moment of inertia ratio of the load and the rotor Note3	15 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	7.8 or more
Engaging time (ms)	50 or less
Releasing time (ms) Note4	15 or less
Exciting current (DC) (A)	0.81±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSME202GC□M	MSME202SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5I series	MEDKT7364
	A5IE series	MEDKT7364E	-
Frame symbol		E-frame	
Power supply capacity (kVA)	3.3		
Rated output (W)	2000		
Rated torque (N·m)	6.37		
Momentary Max. peak torque (N·m)	19.1		
Rated current (A(rms))	11.3		
Max. current (A(o-p))	48		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	5000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	3.68	
	With brake	4.01	
Recommended moment of inertia ratio of the load and the rotor Note3	15 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	7.8 or more
Engaging time (ms)	50 or less
Releasing time (ms) Note4	15 or less
Exciting current (DC) (A)	0.81±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

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During operation	Radial load P-direction (N)	490
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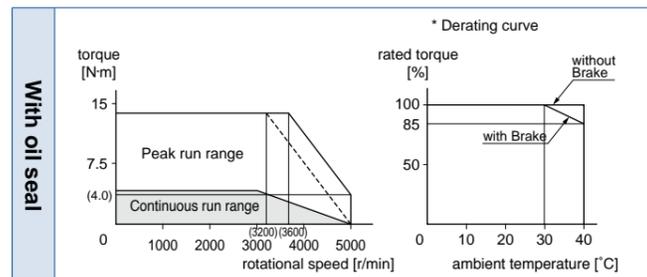
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.44.

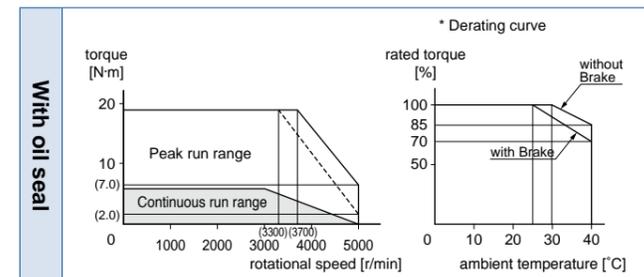
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

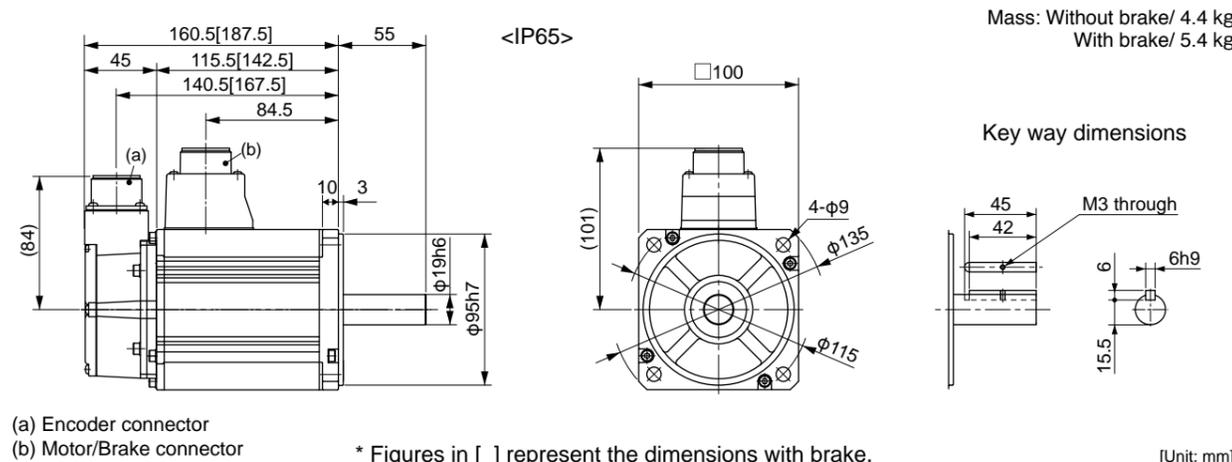
Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)

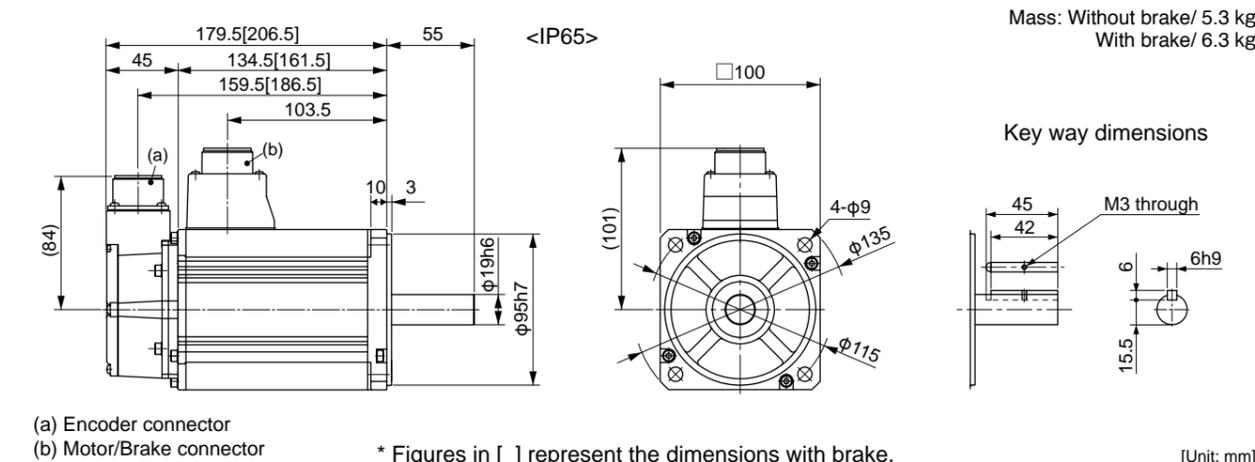


Dimensions



(a) Encoder connector
 (b) Motor/Brake connector
 * Figures in [] represent the dimensions with brake.
 [Unit: mm]
<Cautions> Reduce the moment of inertia ratio if high speed response operation is required.
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Dimensions



(a) Encoder connector
 (b) Motor/Brake connector
 * Figures in [] represent the dimensions with brake.
 [Unit: mm]
<Cautions> Reduce the moment of inertia ratio if high speed response operation is required.
 Dimensions are subject to change without notice. Contact us or a dealer for the latest information.
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* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSME302GC□M	MSME302SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MFDKTA390
	A5IE series	MFDKTA390E	-
	Frame symbol	F-frame	
Power supply capacity (kVA)	4.5		
Rated output (W)	3000		
Rated torque (N·m)	9.55		
Momentary Max. peak torque (N·m)	28.6		
Rated current (A(rms))	18.1		
Max. current (A(o-p))	77		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	5000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	6.50	
	With brake	6.85	
Recommended moment of inertia ratio of the load and the rotor Note3	15 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	11.8 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	15 or less
Exciting current (DC) (A)	0.81±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

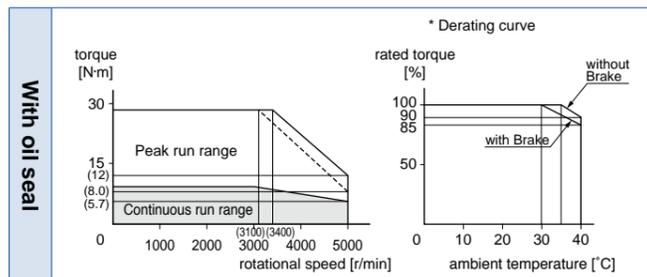
During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

• For details of Note 1 to Note 5, refer to P.182, P.183.
 • Dimensions of Driver, refer to P.45.

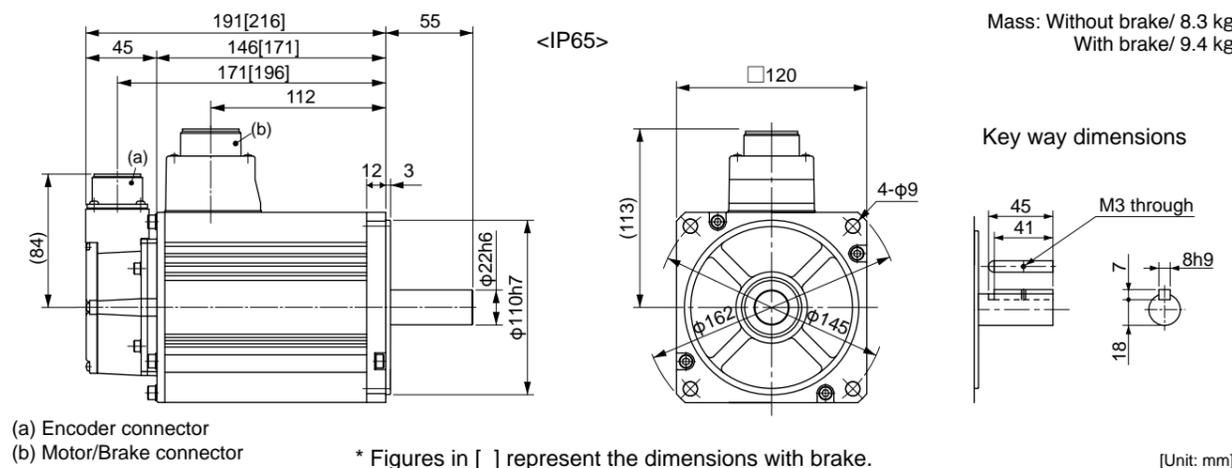
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



<Cautions> Reduce the moment of inertia ratio if high speed response operation is required.
 Dimensions are subject to change without notice. Contact us or a dealer for the latest information.
 Read the Instruction Manual carefully and understand all precautions and remarks before using the products.
 Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSME402GC□M	MSME402SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MFDKTB3A2
	A5IE series	MFDKTB3A2E	-
	Frame symbol	F-frame	
Power supply capacity (kVA)	6.0		
Rated output (W)	4000		
Rated torque (N·m)	12.7		
Momentary Max. peak torque (N·m)	38.2		
Rated current (A(rms))	19.6		
Max. current (A(o-p))	83		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	4500		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	12.9	
	With brake	14.2	
Recommended moment of inertia ratio of the load and the rotor Note3	15 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	16.2 or more
Engaging time (ms)	110 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.90±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

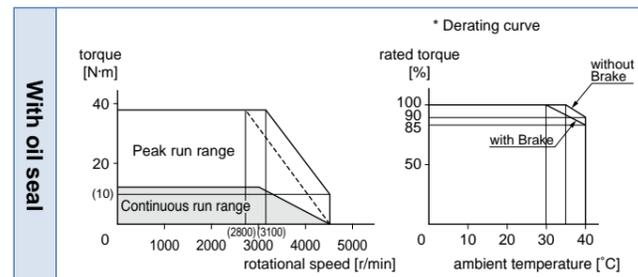
During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

• For details of Note 1 to Note 5, refer to P.182, P.183.
 • Dimensions of Driver, refer to P.45.

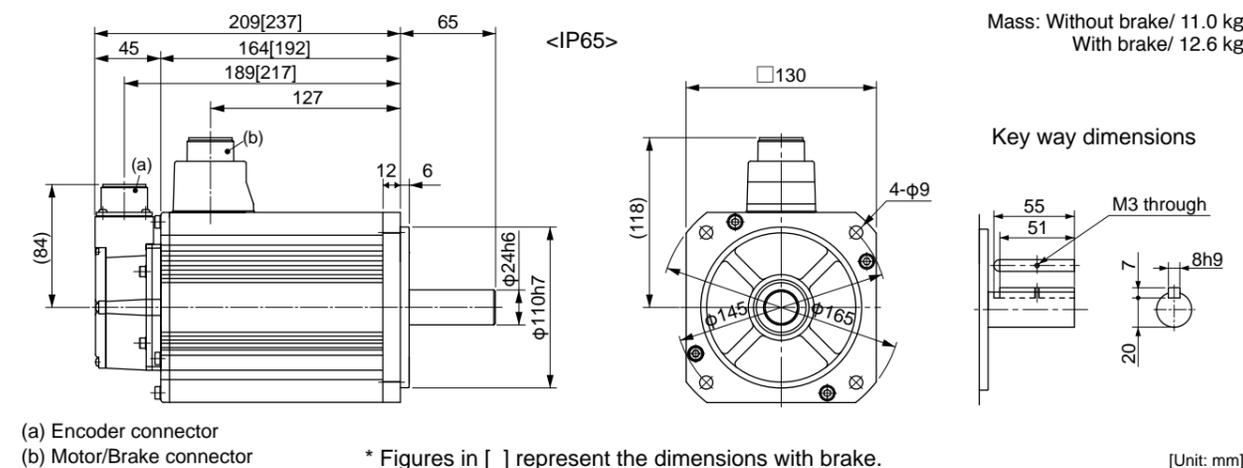
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



<Cautions> Reduce the moment of inertia ratio if high speed response operation is required.
 Dimensions are subject to change without notice. Contact us or a dealer for the latest information.
 Read the Instruction Manual carefully and understand all precautions and remarks before using the products.
 Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MSME502GC□M	MSME502SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5I series	MFDKTB3A2
		A5IE series	MFDKTB3A2E
	Frame symbol	F-frame	
Power supply capacity (kVA)	7.5		
Rated output (W)	5000		
Rated torque (N·m)	15.9		
Momentary Max. peak torque (N·m)	47.7		
Rated current (A(rms))	24.0		
Max. current (A(o-p))	102		
Regenerative brake frequency (times/min) Note1	Without option	357	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	4500		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	17.4	
	With brake	18.6	
Recommended moment of inertia ratio of the load and the rotor Note3	15 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	16.2 or more
Engaging time (ms)	110 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.90±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

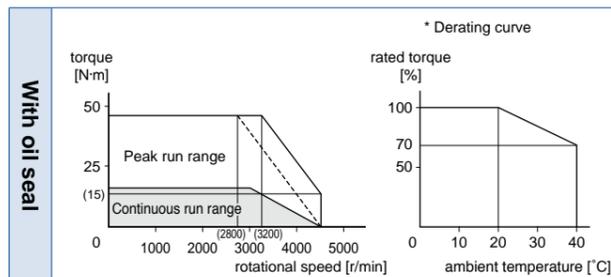
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.45.

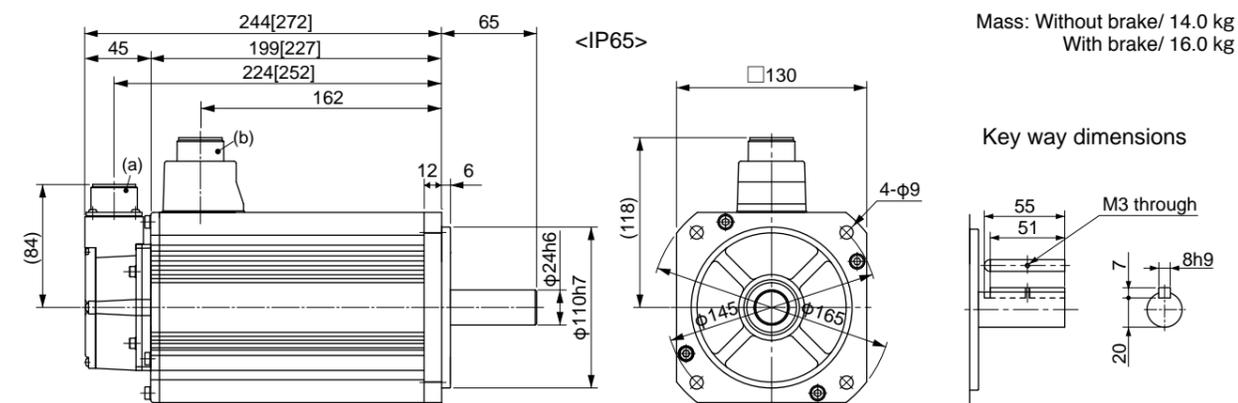
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MDME102GC□M	MDME102SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5I series	MDDKT3530
		A5IE series	MDDKT3530E
	Frame symbol	D-frame	
Power supply capacity (kVA)	1.8		
Rated output (W)	1000		
Rated torque (N·m)	4.77		
Momentary Max. peak torque (N·m)	14.3		
Rated current (A(rms))	5.7		
Max. current (A(o-p))	24		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4284	No limit Note2	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	4.60	
	With brake	5.90	
Recommended moment of inertia ratio of the load and the rotor Note3	10 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	4.9 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	70 or less
Exciting current (DC) (A)	0.59±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

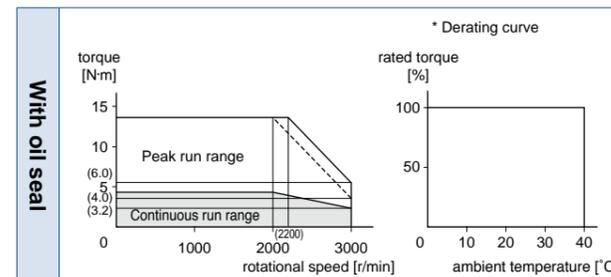
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

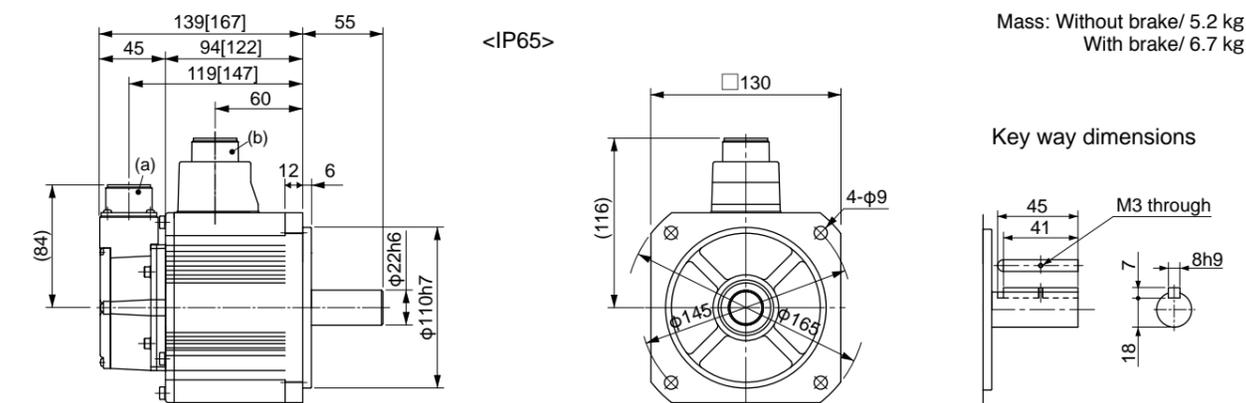
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65		MDME152GC□M
	IP67		MDME152SC□M
Applicable driver *2	Model No.	A5II series	MDDKT5540
		A5IE series	MDDKT5540E
		Frame symbol	D-frame
Power supply capacity	(kVA)	2.3	
Rated output	(W)	1500	
Rated torque	(N·m)	7.16	
Momentary Max. peak torque	(N·m)	21.5	
Rated current	(A(rms))	9.4	
Max. current	(A(o-p))	40	
Regenerative brake frequency (times/min) Note1	Without option	No limit	Note2
	DV0P4284	No limit	Note2
Rated rotational speed	(r/min)	2000	
Max. rotational speed	(r/min)	3000	
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	6.70	
	With brake	7.99	
Recommended moment of inertia ratio of the load and the rotor	Note3	10 times or less	
Rotary encoder specifications	Note5	20-bit Incremental	17-bit Absolute
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	13.7 or more
Engaging time (ms)	100 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.79±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

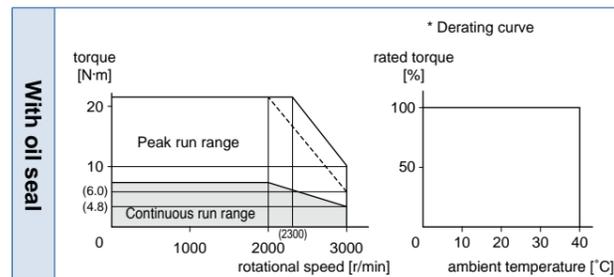
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

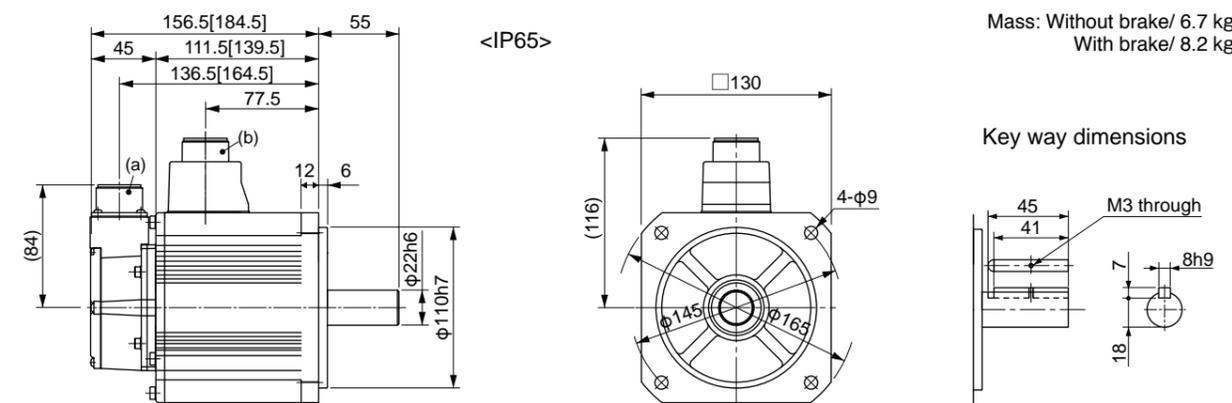
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65		MDME202GC□M
	IP67		MDME202SC□M
Applicable driver *2	Model No.	A5II series	MEDKT7364
		A5IE series	MEDKT7364E
		Frame symbol	E-frame
Power supply capacity	(kVA)	3.3	
Rated output	(W)	2000	
Rated torque	(N·m)	9.55	
Momentary Max. peak torque	(N·m)	28.6	
Rated current	(A(rms))	11.5	
Max. current	(A(o-p))	49	
Regenerative brake frequency (times/min) Note1	Without option	No limit	Note2
	DV0P4285	No limit	Note2
Rated rotational speed	(r/min)	2000	
Max. rotational speed	(r/min)	3000	
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	8.72	
	With brake	10.0	
Recommended moment of inertia ratio of the load and the rotor	Note3	10 times or less	
Rotary encoder specifications	Note5	20-bit Incremental	17-bit Absolute
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	13.7 or more
Engaging time (ms)	100 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.79±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

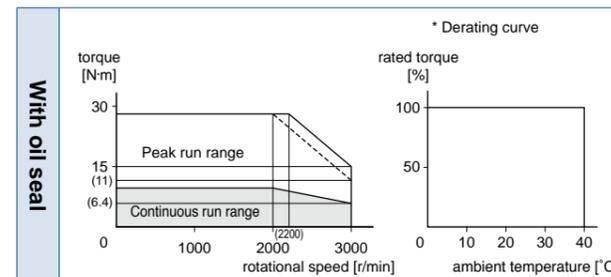
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

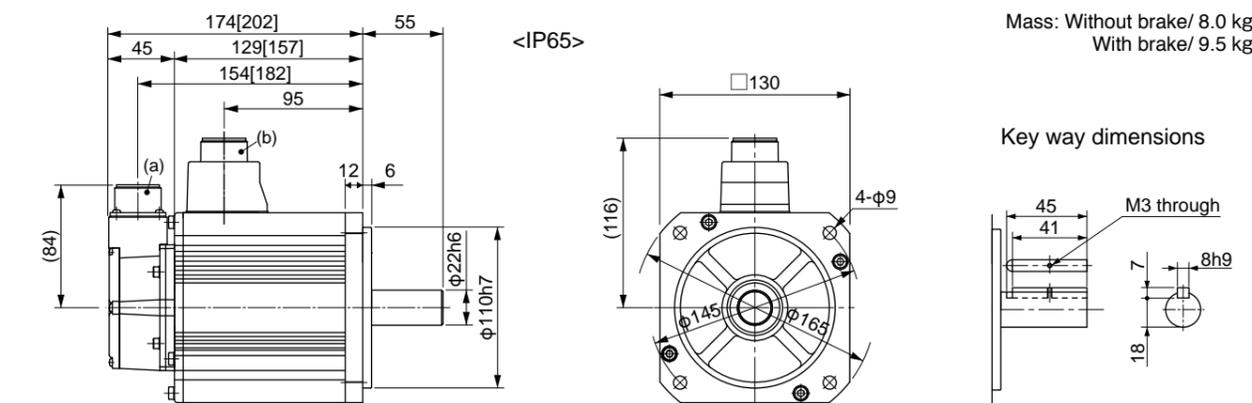
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65		MDME302GC□M
	IP67		MDME302SC□M
Applicable driver *2	Model No.	A5II series	MFDKTA390
		A5IE series	MFDKTA390E
		Frame symbol	F-frame
Power supply capacity (kVA)		4.5	
Rated output (W)		3000	
Rated torque (N·m)		14.3	
Momentary Max. peak torque (N·m)		43.0	
Rated current (A(rms))		17.4	
Max. current (A(o-p))		74	
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)		2000	
Max. rotational speed (r/min)		3000	
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	12.9	
	With brake	14.2	
Recommended moment of inertia ratio of the load and the rotor Note3		10 times or less	
Rotary encoder specifications Note5	20-bit Incremental		17-bit Absolute
	Resolution per single turn		1048576 131072

• **Brake specifications** (For details, refer to P.183)
(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	16.2 or more
Engaging time (ms)	110 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.90±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

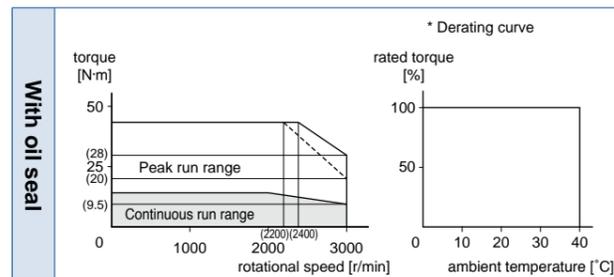
• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

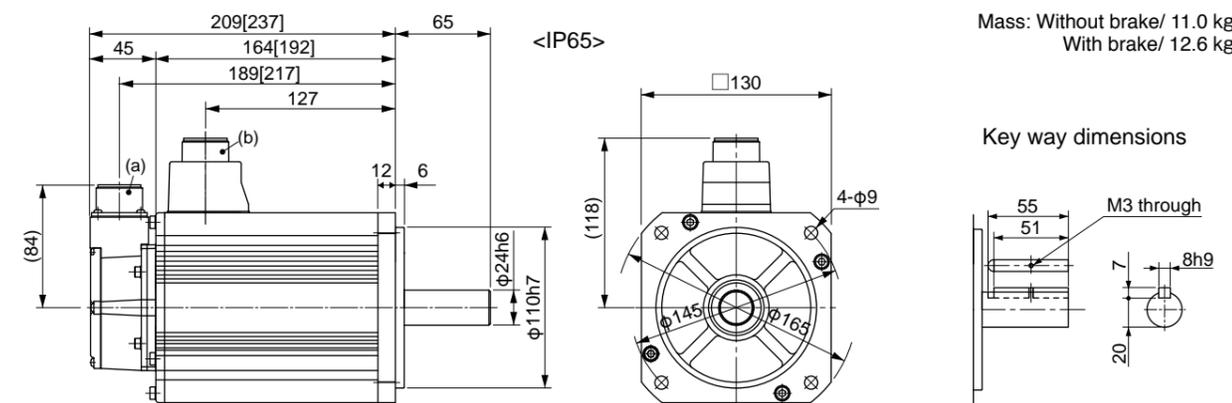
• For details of Note 1 to Note 5, refer to P.182, P.183.
• Dimensions of Driver, refer to P.45.

*1 Motor specifications: □
*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector
* Figures in [] represent the dimensions with brake. [Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65		MDME402GC□M
	IP67		MDME402SC□M
Applicable driver *2	Model No.	A5II series	MFDKTB3A2
		A5IE series	MFDKTB3A2E
		Frame symbol	F-frame
Power supply capacity (kVA)		6.0	
Rated output (W)		4000	
Rated torque (N·m)		19.1	
Momentary Max. peak torque (N·m)		57.3	
Rated current (A(rms))		21.0	
Max. current (A(o-p))		89	
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)		2000	
Max. rotational speed (r/min)		3000	
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	37.6	
	With brake	42.9	
Recommended moment of inertia ratio of the load and the rotor Note3		10 times or less	
Rotary encoder specifications Note5	20-bit Incremental		17-bit Absolute
	Resolution per single turn		1048576 131072

• **Brake specifications** (For details, refer to P.183)
(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

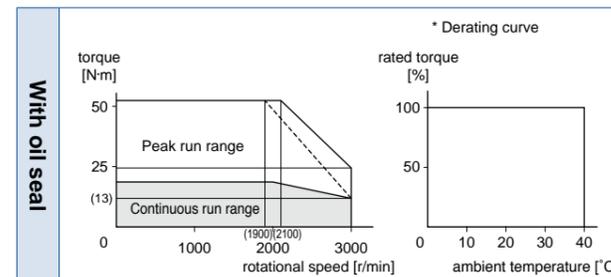
• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

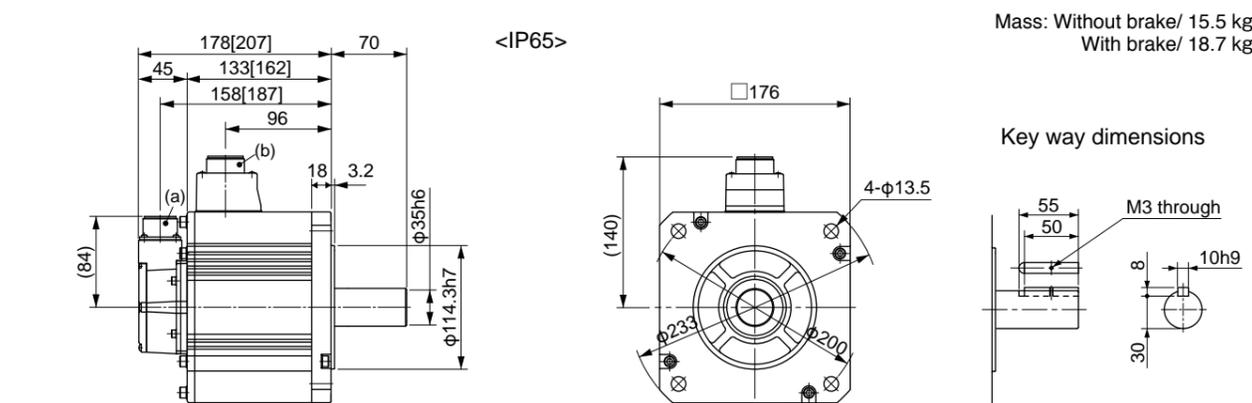
• For details of Note 1 to Note 5, refer to P.182, P.183.
• Dimensions of Driver, refer to P.45.

*1 Motor specifications: □
*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector
* Figures in [] represent the dimensions with brake. [Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MDME502GC□M	MDME502SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MFDKTB3A2
	A5IE series	MFDKTB3A2E	-
Frame symbol		F-frame	
Power supply capacity (kVA)	7.5		
Rated output (W)	5000		
Rated torque (N·m)	23.9		
Momentary Max. peak torque (N·m)	71.6		
Rated current (A(rms))	25.9		
Max. current (A(o-p))	110		
Regenerative brake frequency (times/min) Note1	Without option	120	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	48.0	
	With brake	53.3	
Recommended moment of inertia ratio of the load and the rotor Note3	10 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

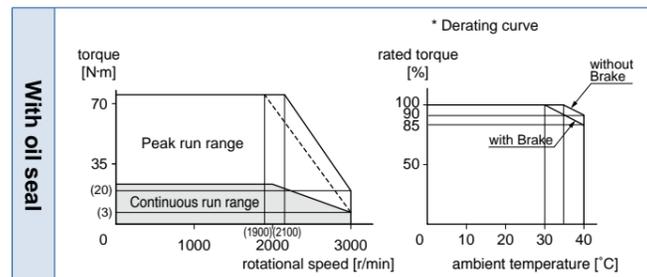
During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

• For details of Note 1 to Note 5, refer to P.182, P.183.
 • Dimensions of Driver, refer to P.45.

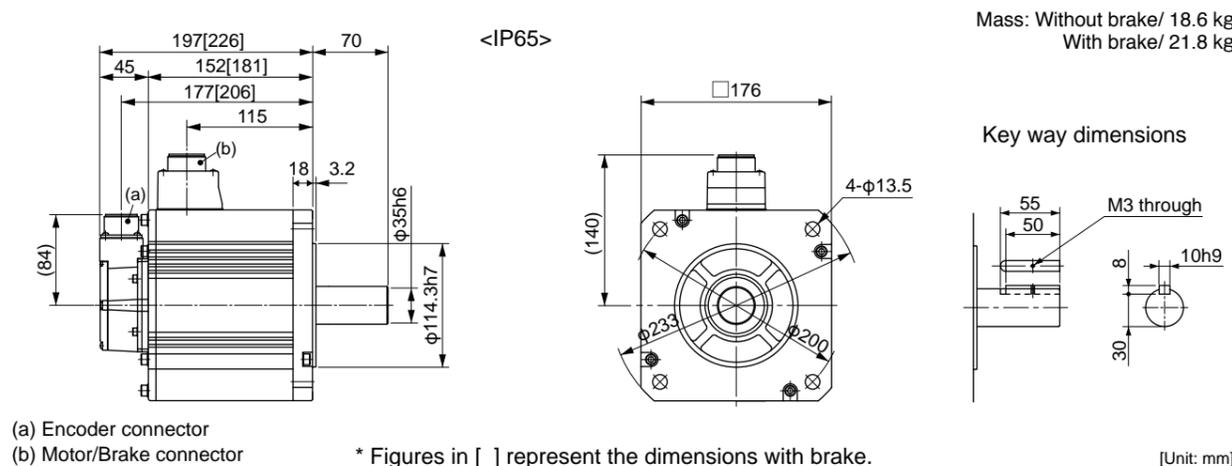
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MGME092GC□M	MGME092SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MDDKT5540
	A5IE series	MDDKT5540E	-
Frame symbol		D-frame	
Power supply capacity (kVA)	1.8		
Rated output (W)	900		
Rated torque (N·m)	8.59		
Momentary Max. peak torque (N·m)	19.3		
Rated current (A(rms))	7.6		
Max. current (A(o-p))	24		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4284	No limit Note2	
Rated rotational speed (r/min)	1000		
Max. rotational speed (r/min)	2000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	6.70	
	With brake	7.99	
Recommended moment of inertia ratio of the load and the rotor Note3	10 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	13.7 or more
Engaging time (ms)	100 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.79±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

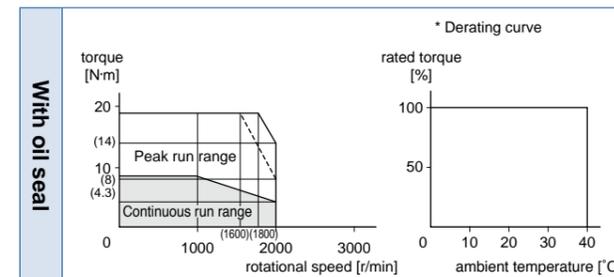
During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	686
	Thrust load A, B-direction (N)	196

• For details of Note 1 to Note 5, refer to P.182, P.183.
 • Dimensions of Driver, refer to P.43.

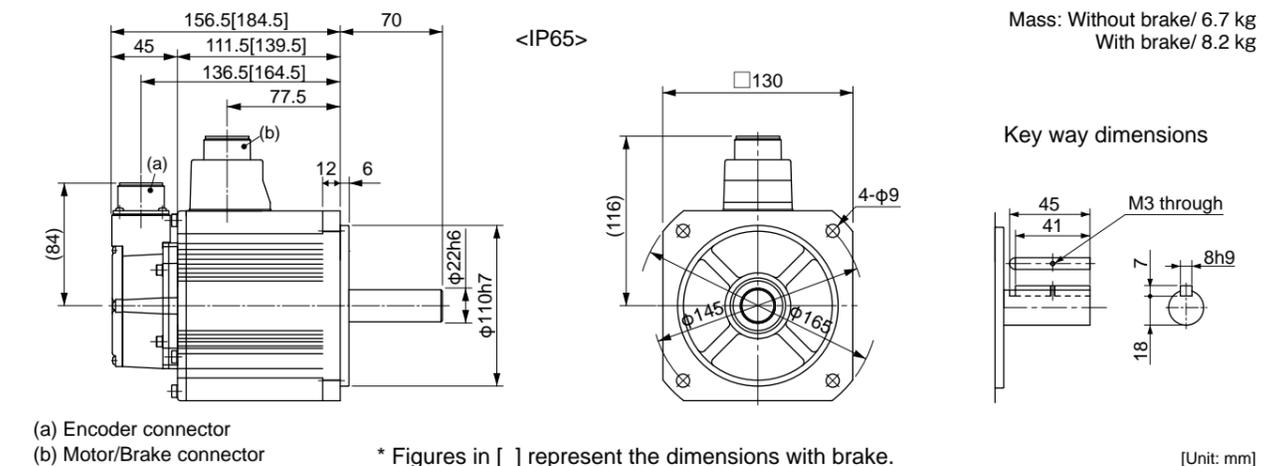
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MGME202GC□M	MGME202SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MFDKTA390
	A5IE series	MFDKTA390E	-
Frame symbol		F-frame	
Power supply capacity (kVA)	3.8		
Rated output (W)	2000		
Rated torque (N·m)	19.1		
Momentary Max. peak torque (N·m)	47.7		
Rated current (A(rms))	17.0		
Max. current (A(o-p))	60		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)	1000		
Max. rotational speed (r/min)	2000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	30.3	
	With brake	35.6	
Recommended moment of inertia ratio of the load and the rotor Note3	10 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	1176
	Thrust load A, B-direction (N)	490

• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.45.

*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MGME302GC□M	MGME302SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MFDKTB3A2
	A5IE series	MFDKTB3A2E	-
Frame symbol		F-frame	
Power supply capacity (kVA)	4.5		
Rated output (W)	3000		
Rated torque (N·m)	28.7		
Momentary Max. peak torque (N·m)	71.7		
Rated current (A(rms))	22.6		
Max. current (A(o-p))	80		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4285×2	No limit Note2	
Rated rotational speed (r/min)	1000		
Max. rotational speed (r/min)	2000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	48.4	
	With brake	53.7	
Recommended moment of inertia ratio of the load and the rotor Note3	10 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	58.8 or more
Engaging time (ms)	150 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	1.4±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	2058
	Thrust load A-direction (N)	980
	Thrust load B-direction (N)	1176
During operation	Radial load P-direction (N)	1470
	Thrust load A, B-direction (N)	490

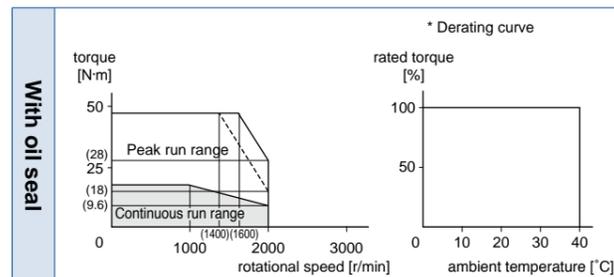
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.45.

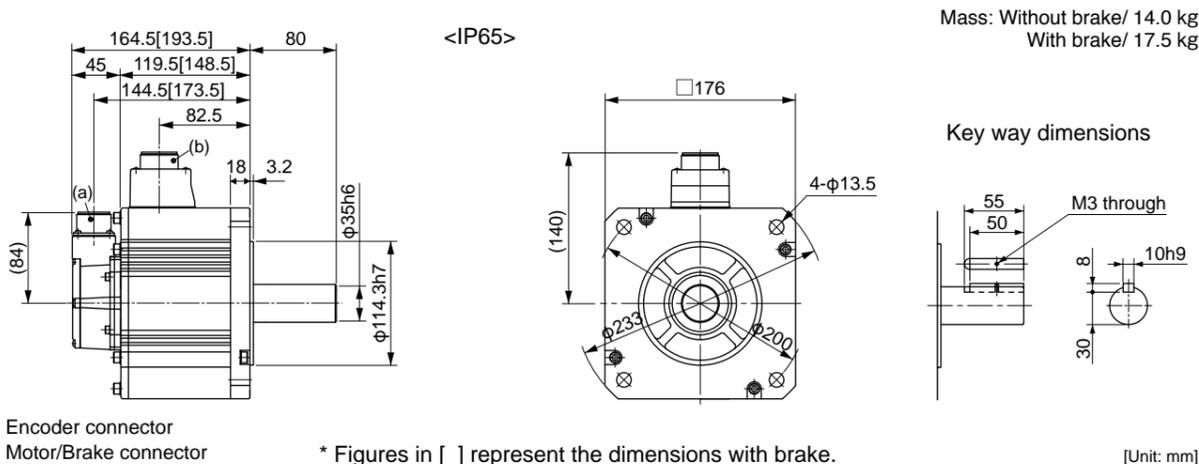
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)

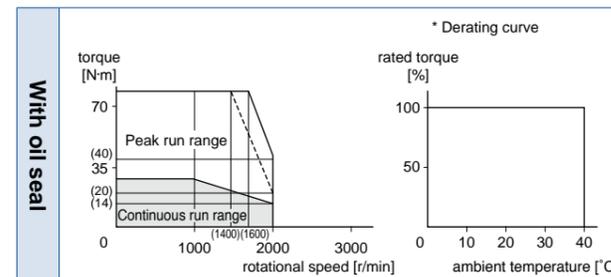


Dimensions

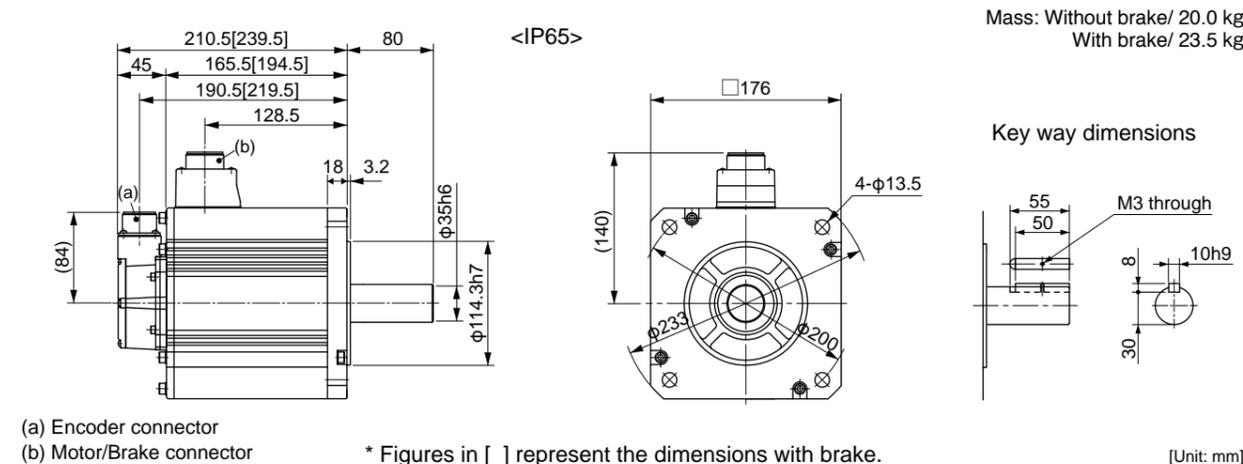


(a) Encoder connector
(b) Motor/Brake connector
* Figures in [] represent the dimensions with brake.
[Unit: mm]
<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector
* Figures in [] represent the dimensions with brake.
[Unit: mm]
<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHMJ022G1□	MHMJ022S1□
	IP67	-	-
Applicable driver *2	Model No.	A5I series MADKT1507	A5IE series MADKT1507E
	Frame symbol	A-frame	
Power supply capacity (kVA)	0.5		
Rated output (W)	200		
Rated torque (N·m)	0.64		
Momentary Max. peak torque (N·m)	1.91		
Rated current (A(rms))	1.6		
Max. current (A(o-p))	6.9		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4283	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	5000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	0.42	
	With brake	0.45	
Recommended moment of inertia ratio of the load and the rotor Note3	30 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	1.27 or more
Engaging time (ms)	50 or less
Releasing time (ms) Note4	15 or less
Exciting current (DC) (A)	0.36
Releasing voltage (DC) (V)	1 or more
Exciting voltage (DC) (V)	24±1.2

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	392
	Thrust load A-direction (N)	147
	Thrust load B-direction (N)	196
During operation	Radial load P-direction (N)	245
	Thrust load A, B-direction (N)	98

• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.42.

*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHMJ042G1□	MHMJ042S1□
	IP67	-	-
Applicable driver *2	Model No.	A5I series MBDKT2510	A5IE series MBDKT2510E
	Frame symbol	B-frame	
Power supply capacity (kVA)	0.9		
Rated output (W)	400		
Rated torque (N·m)	1.3		
Momentary Max. peak torque (N·m)	3.8		
Rated current (A(rms))	2.6		
Max. current (A(o-p))	11.0		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4283	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	5000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	0.67	
	With brake	0.70	
Recommended moment of inertia ratio of the load and the rotor Note3	30 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	1.27 or more
Engaging time (ms)	50 or less
Releasing time (ms) Note4	15 or less
Exciting current (DC) (A)	0.36
Releasing voltage (DC) (V)	1 or more
Exciting voltage (DC) (V)	24±1.2

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	392
	Thrust load A-direction (N)	147
	Thrust load B-direction (N)	196
During operation	Radial load P-direction (N)	245
	Thrust load A, B-direction (N)	98

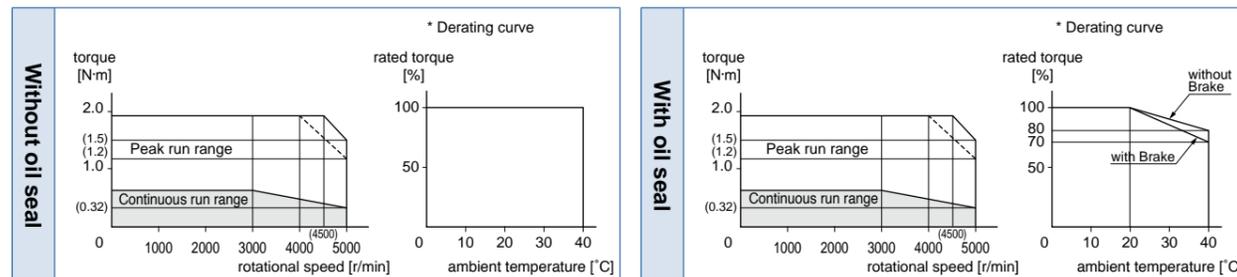
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.42.

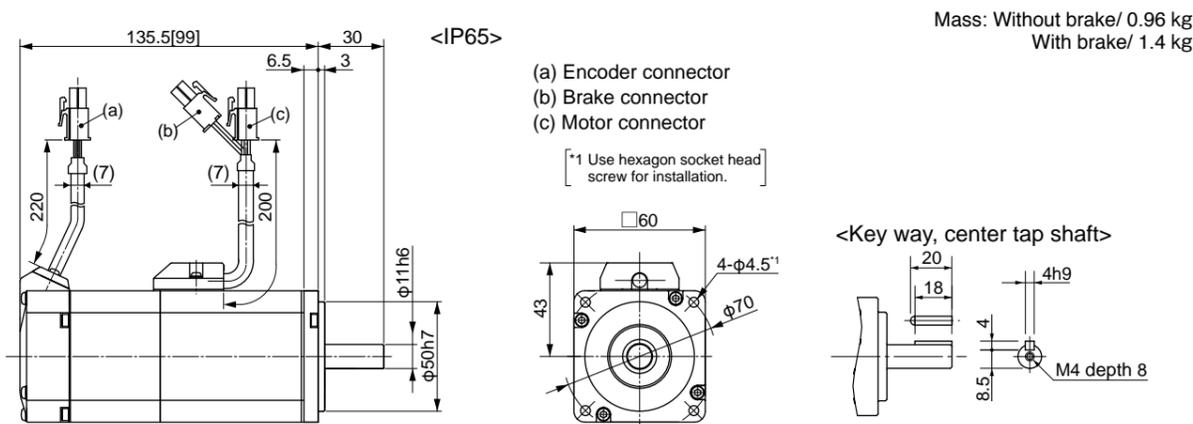
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10% less supply voltage.>)



Dimensions

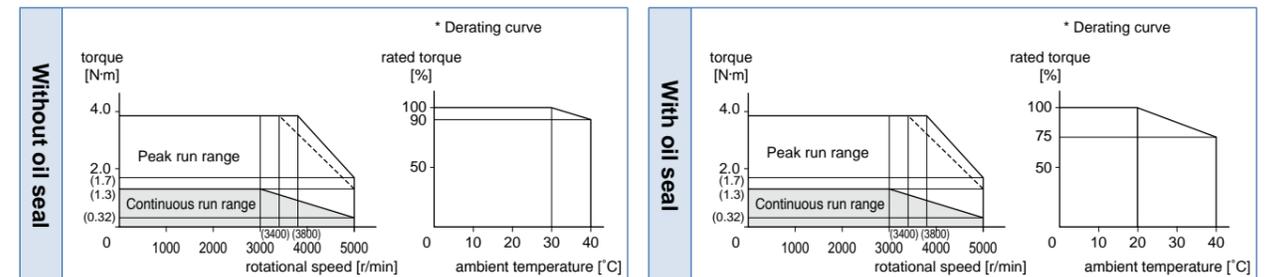


* Figures in [] represent the dimensions without brake.

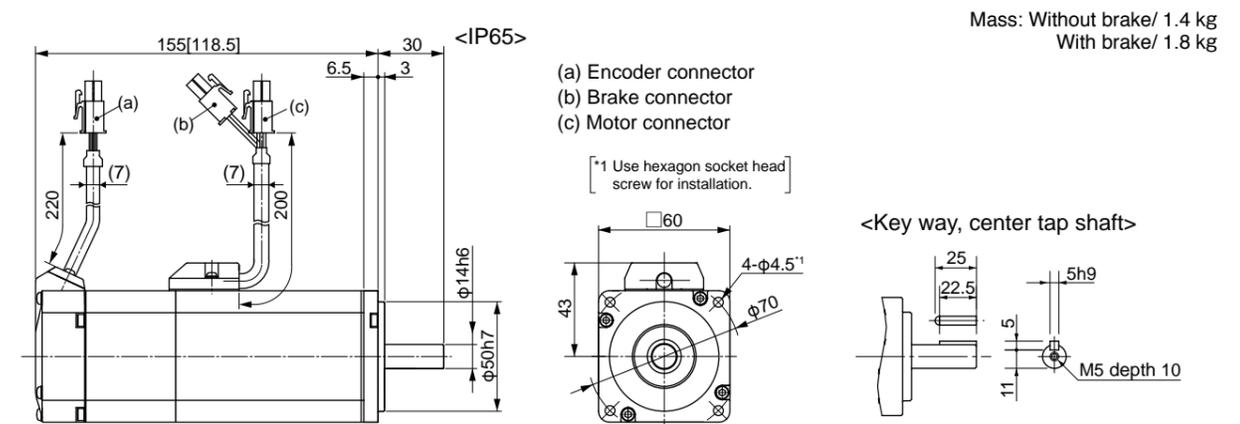
[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10% less supply voltage.>)



Dimensions



* Figures in [] represent the dimensions without brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHMJ082G1□	MHMJ082S1□
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MCDKT3520
	A5IE series	MCDKT3520E	-
Frame symbol		C-frame	
Power supply capacity (kVA)	1.3		
Rated output (W)	750		
Rated torque (N·m)	2.4		
Momentary Max. peak torque (N·m)	7.1		
Rated current (A(rms))	4.0		
Max. current (A(o-p))	17.0		
Regenerative brake frequency (times/min) Note1	Without option	No limit Note2	
	DV0P4283	No limit Note2	
Rated rotational speed (r/min)	3000		
Max. rotational speed (r/min)	4500		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	1.51	
	With brake	1.61	
Recommended moment of inertia ratio of the load and the rotor Note3	20 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	2.45 or more
Engaging time (ms)	70 or less
Releasing time (ms) Note4	20 or less
Exciting current (DC) (A)	0.42
Releasing voltage (DC) (V)	1 or more
Exciting voltage (DC) (V)	24±1.2

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	686
	Thrust load A-direction (N)	294
	Thrust load B-direction (N)	392
During operation	Radial load P-direction (N)	392
	Thrust load A, B-direction (N)	147

• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHME102GC□M	MHME102SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series	MDDKT3530
	A5IE series	MDDKT3530E	-
Frame symbol		D-frame	
Power supply capacity (kVA)	1.8		
Rated output (W)	1000		
Rated torque (N·m)	4.77		
Momentary Max. peak torque (N·m)	14.3		
Rated current (A(rms))	5.7		
Max. current (A(o-p))	24		
Regenerative brake frequency (times/min) Note1	Without option	83	
	DV0P4284	No limit Note2	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	24.7	
	With brake	26.0	
Recommended moment of inertia ratio of the load and the rotor Note3	5 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	4.9 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	70 or less
Exciting current (DC) (A)	0.59±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

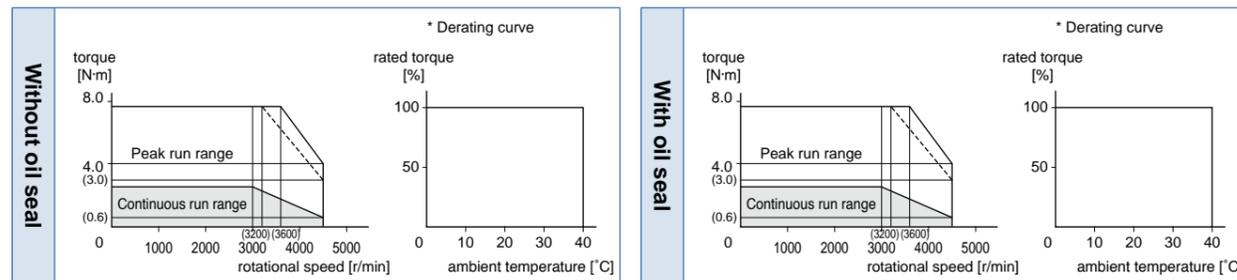
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

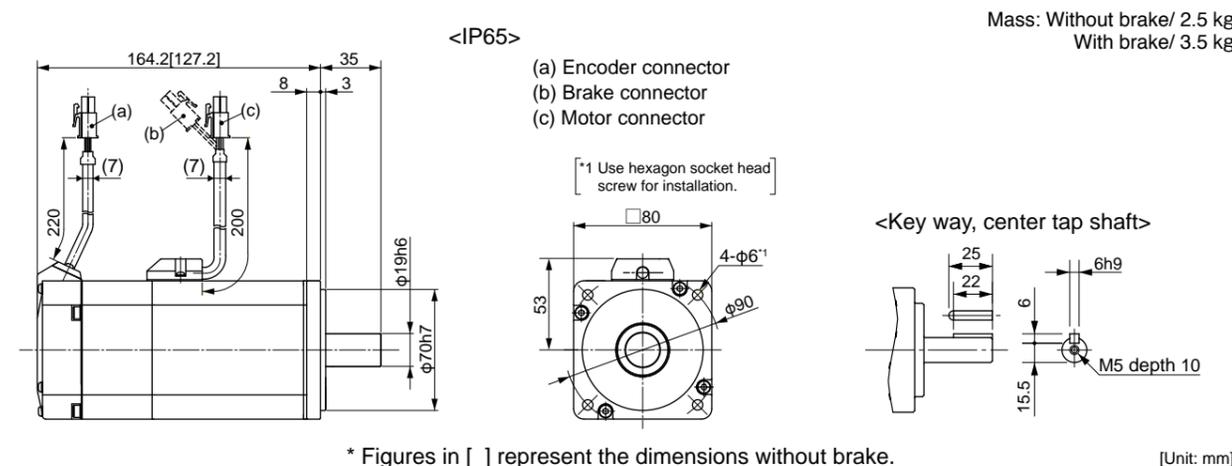
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



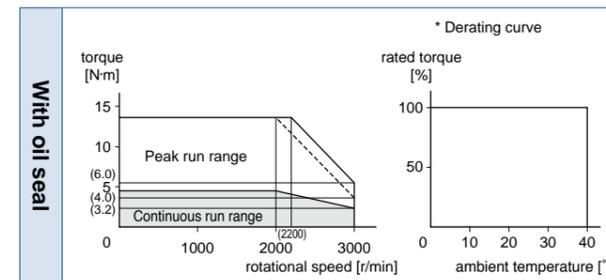
Dimensions



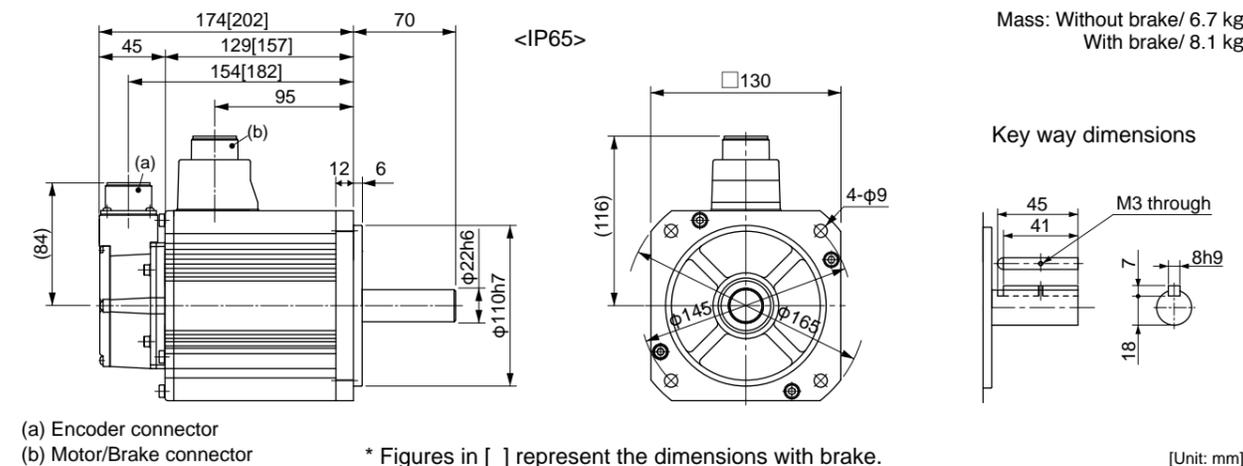
* Figures in [] represent the dimensions without brake. [Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



* Figures in [] represent the dimensions with brake. [Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHME152GC□M	MHME152SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series MDDKT5540	-
	A5IE series	MDDKT5540E	-
Frame symbol		D-frame	
Power supply capacity (kVA)	2.3		
Rated output (W)	1500		
Rated torque (N·m)	7.16		
Momentary Max. peak torque (N·m)	21.5		
Rated current (A(rms))	9.4		
Max. current (A(o-p))	40		
Regenerative brake frequency (times/min) Note1	Without option	22	
	DV0P4284	130	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	37.1	
	With brake	38.4	
Recommended moment of inertia ratio of the load and the rotor Note3	5 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	13.7 or more
Engaging time (ms)	100 or less
Releasing time (ms) Note4	50 or less
Exciting current (DC) (A)	0.79±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	980
	Thrust load A-direction (N)	588
	Thrust load B-direction (N)	686
During operation	Radial load P-direction (N)	490
	Thrust load A, B-direction (N)	196

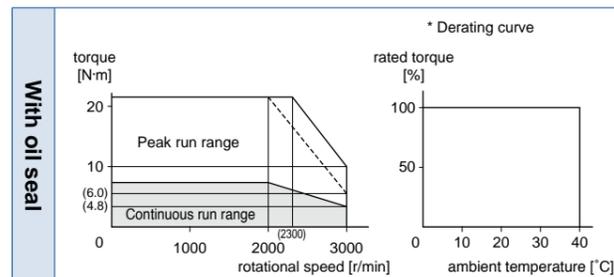
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

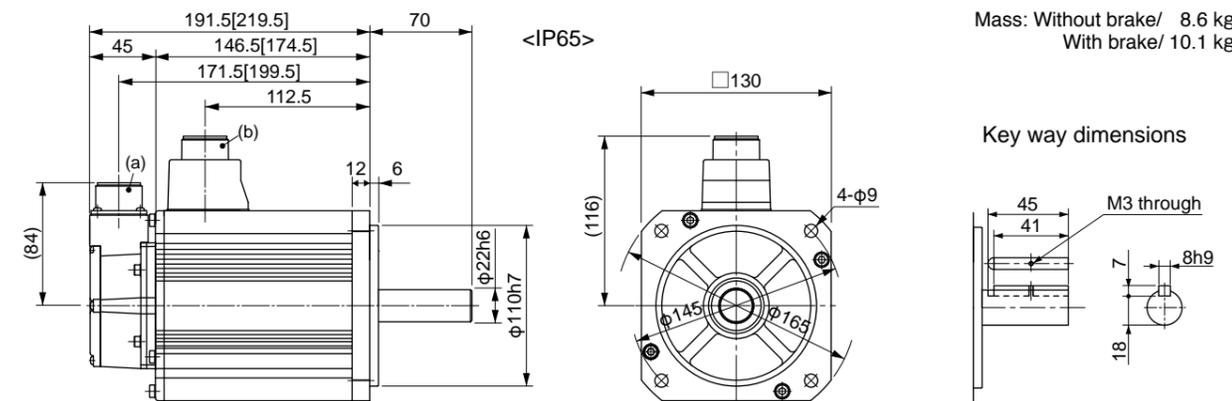
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



Mass: Without brake/ 8.6 kg
With brake/ 10.1 kg

Key way dimensions

(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHME202GC□M	MHME202SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5II series MEDKT7364	-
	A5IE series	MEDKT7364E	-
Frame symbol		E-frame	
Power supply capacity (kVA)	3.3		
Rated output (W)	2000		
Rated torque (N·m)	9.55		
Momentary Max. peak torque (N·m)	28.6		
Rated current (A(rms))	11.1		
Max. current (A(o-p))	47		
Regenerative brake frequency (times/min) Note1	Without option	45	
	DV0P4285	142	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	57.8	
	With brake	59.6	
Recommended moment of inertia ratio of the load and the rotor Note3	5 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

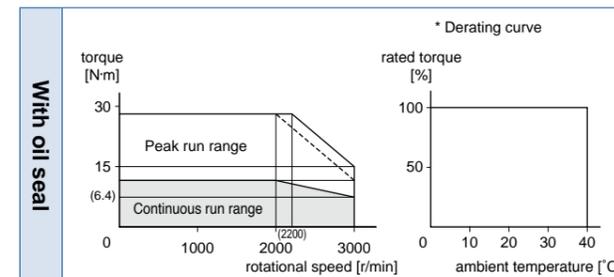
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.43.

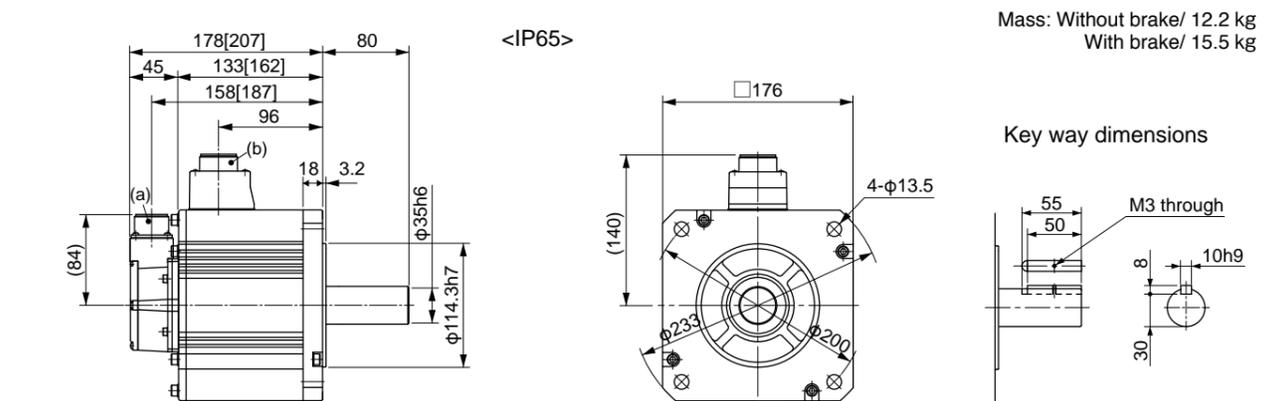
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



Mass: Without brake/ 12.2 kg
With brake/ 15.5 kg

Key way dimensions

(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHME302GC□M	MHME302SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5I series	MFDKTA390
	A5IE series	MFDKTA390E	-
Frame symbol		F-frame	
Power supply capacity (kVA)	4.5		
Rated output (W)	3000		
Rated torque (N·m)	14.3		
Momentary Max. peak torque (N·m)	43.0		
Rated current (A(rms))	16.0		
Max. current (A(o-p))	68		
Regenerative brake frequency (times/min) Note1	Without option	19	
	DV0P4285×2	142	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	90.5	
	With brake	92.1	
Recommended moment of inertia ratio of the load and the rotor Note3	5 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

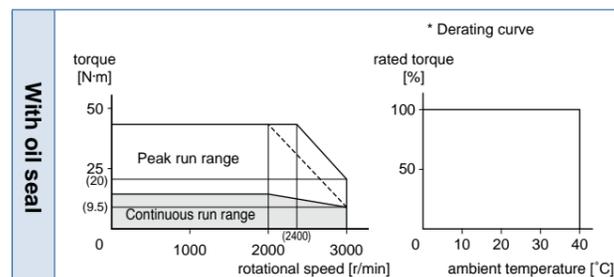
During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

• For details of Note 1 to Note 5, refer to P.182, P.183.
 • Dimensions of Driver, refer to P.45.

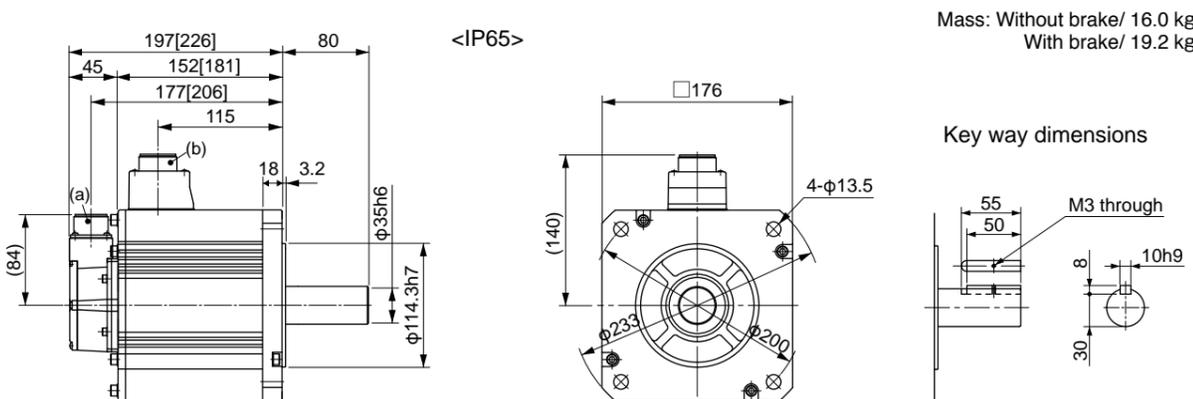
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



Mass: Without brake/ 16.0 kg
 With brake/ 19.2 kg

(a) Encoder connector
 (b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHME402GC□M	MHME402SC□M
	IP67	-	-
Applicable driver *2	Model No.	A5I series	MFDKTB3A2
	A5IE series	MFDKTB3A2E	-
Frame symbol		F-frame	
Power supply capacity (kVA)	6.0		
Rated output (W)	4000		
Rated torque (N·m)	19.1		
Momentary Max. peak torque (N·m)	57.3		
Rated current (A(rms))	21.0		
Max. current (A(o-p))	89		
Regenerative brake frequency (times/min) Note1	Without option	17	
	DV0P4285×2	125	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (×10 ⁻⁴ kg·m ²)	Without brake	112	
	With brake	114	
Recommended moment of inertia ratio of the load and the rotor Note3	5 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• **Brake specifications** (For details, refer to P.183)
 (This brake will be released when it is energized.)
 (Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• **Permissible load** (For details, refer to P.183)

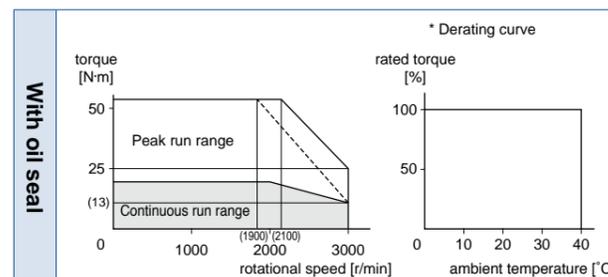
During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

• For details of Note 1 to Note 5, refer to P.182, P.183.
 • Dimensions of Driver, refer to P.45.

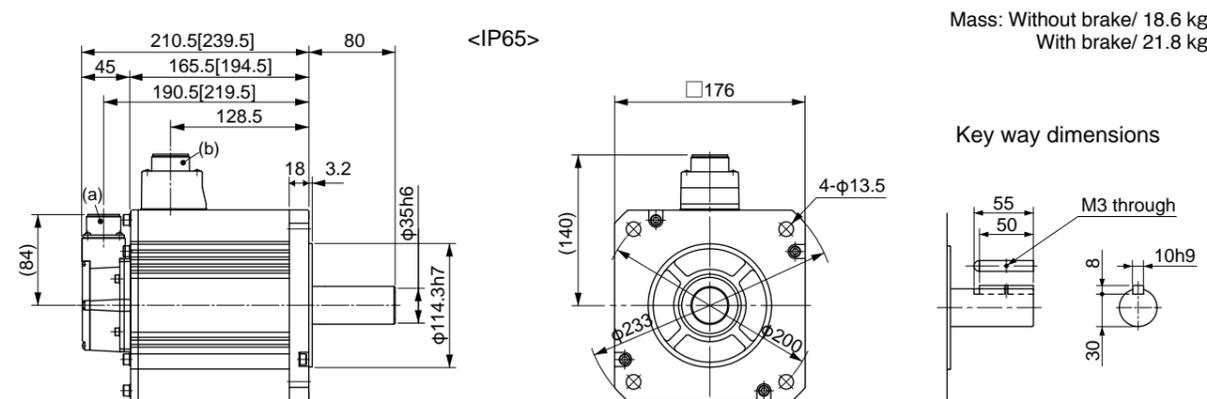
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
 Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



Mass: Without brake/ 18.6 kg
 With brake/ 21.8 kg

(a) Encoder connector
 (b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required. Dimensions are subject to change without notice. Contact us or a dealer for the latest information. Read the Instruction Manual carefully and understand all precautions and remarks before using the products. Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

* Please contact us for more information.

Specifications

		AC200 V	
Motor model *1	IP65	MHME502GC□M	MHME502SC□M
	IP67	-	-
Applicable driver *2	Model No.	MFDKTB3A2	
	A5IE series	MFDKTB3A2E	-
	Frame symbol	F-frame	
Power supply capacity (kVA)	7.5		
Rated output (W)	5000		
Rated torque (N·m)	23.9		
Momentary Max. peak torque (N·m)	71.6		
Rated current (A(rms))	25.9		
Max. current (A(o-p))	110		
Regenerative brake frequency (times/min) Note1	Without option	10	
	DV0P4285x2	76	
Rated rotational speed (r/min)	2000		
Max. rotational speed (r/min)	3000		
Moment of inertia of rotor (x10 ⁻⁴ kg·m ²)	Without brake	162	
	With brake	164	
Recommended moment of inertia ratio of the load and the rotor Note3	5 times or less		
Rotary encoder specifications Note5	20-bit Incremental	17-bit Absolute	
	Resolution per single turn	1048576	131072

• Brake specifications (For details, refer to P.183)

(This brake will be released when it is energized.)
(Do not use this for braking the motor in motion.)

Static friction torque (N·m)	24.5 or more
Engaging time (ms)	80 or less
Releasing time (ms) Note4	25 or less
Exciting current (DC) (A)	1.3±10 %
Releasing voltage (DC) (V)	2 or more
Exciting voltage (DC) (V)	24±2.4

• Permissible load (For details, refer to P.183)

During assembly	Radial load P-direction (N)	1666
	Thrust load A-direction (N)	784
	Thrust load B-direction (N)	980
During operation	Radial load P-direction (N)	784
	Thrust load A, B-direction (N)	343

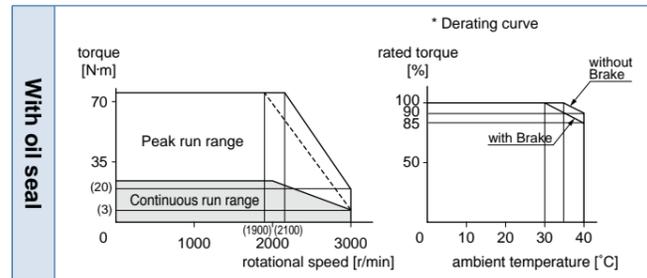
• For details of Note 1 to Note 5, refer to P.182, P.183.

• Dimensions of Driver, refer to P.45.

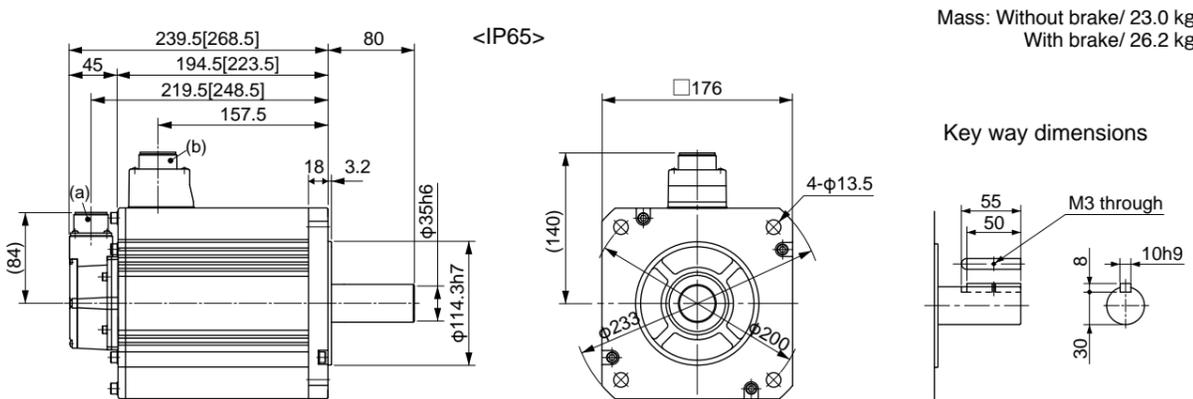
*1 Motor specifications: □

*2 The product that the end of driver model designation has "E" is "Position control type".
Detail of model designation, refer to P.152.

Torque characteristics (at AC200 V of power voltage <Dotted line represents the torque at 10 % less supply voltage.>)



Dimensions



(a) Encoder connector
(b) Motor/Brake connector

* Figures in [] represent the dimensions with brake.

[Unit: mm]

<Cautions> Reduce the moment of inertia ratio if high speed response operation is required.
Dimensions are subject to change without notice. Contact us or a dealer for the latest information.
Read the Instruction Manual carefully and understand all precautions and remarks before using the products.
Please avoid the motor, or equipment containing the motor to be distributed to Japan, or other regions through Japan.

Environmental Conditions

Item	Conditions	
Ambient temperature *1	0 °C to 40 °C (free from freezing)	
Ambient humidity	20 % to 85 % RH (free from condensation)	
Storage temperature *2	-20 °C to 65 °C (Max.temperature guarantee: 80 °C for 72 hours free from condensation ⁵)	
Storage humidity	20 % to 85 % RH (free from condensation ⁵)	
Vibration	Motor only	5.0 kW or less, MGME 3.0 kW or less: Lower than 49 m/s ² (5 G) at running, 24.5 m/s ² (2.5 G) at stall 6.0 kW or more, MGME 4.5 kW or more: Lower than 24.5 m/s ² (2.5 G) at running, 24.5 m/s ² (2.5 G) at stall
Impact	Motor only	Lower than 98 m/s ² (10 G)
Enclosure rating (Motor only)	IP65 *3	MSMD, MHMD, MSMJ, MHMJ (except rotating portion of output shaft and readwire end.) M * ME (IP65 motor: 0.9 kW or more) (except rotating portion of output shaft and connecting pin part of the motor connector and the encoder connector)
	IP67 *3*4	M * ME IP67 motor (except rotating portion of output shaft and connecting pin part of the motor connector and the encoder connector)
Altitude	Lower than 1000 m	

*1 Ambient temperature to be measured at 5 cm away from the motor.

*2 Permissible temperature for short duration such as transportation.

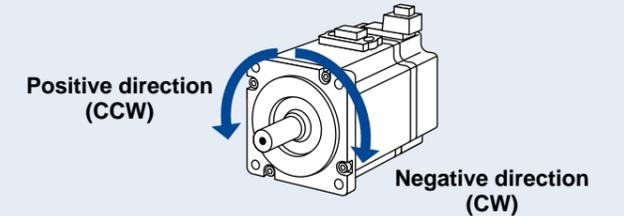
*3 These motors conform to the test conditions specified in EN standards (EN60529, EN60034-5). Do not use these motors in application where water proof performance is required such as continuous wash-down operation.

*4 This condition is applied when the connector mounting screw are tightened to the recommended tightening torque.

*5 Air containing water vapor will become saturated with water vapor as the temperature falls, causing dew.

<Note>

Initial setup of rotational direction:
positive = CCW and negative = CW.
Pay an extra attention.



Notes on [Motor specification] page

Note) 1. [At AC100 V of power voltage]

Regenerative brake frequency represents the frequency of the motor's stops from the rated speed with deceleration without load.

- If the load is connected, frequency will be defines as 1/(m+1), where m=load moment of inertia/ rotor moment of inertia.
- When the motor speed exceeds the rated speed, regenerative brake frequency is in inverse proportion to the square of (running speed/rated speed).
- Power supply voltage is AC115 V (at 100 V of the main voltage).
If the supply voltage fluctuates, frequency is in inverse proportion to the square of (Running supply voltage/115) relative to the value in the table.
- When regeneration occurs continuously such cases as running speed frequently changes or vertical feeding, consult us or a dealer.

[At AC200 V of power voltage]

Regenerative brake frequency represents the frequency of the motor's stops from the rated speed with deceleration without load.

- If the load is connected, frequency will be defines as 1/(m+1), where m=load moment of inertia/ rotor moment of inertia.
- When the motor speed exceeds the rated speed, regenerative brake frequency is in inverse proportion to the square of (running speed/rated speed).
- Power supply voltage is AC230 V (at 200 V of the main voltage).
If the supply voltage fluctuates, frequency is in inverse proportion to the square of (Running supply voltage/230) relative to the value in the table.
- When regeneration occurs continuously such cases as running speed frequently changes or vertical feeding, consult us or a dealer.

[At AC400 V of power voltage]

Regenerative brake frequency represents the frequency of the motor's stops from the rated speed with deceleration without load.

- If the load is connected, frequency will be defined as $1/(m+1)$, where m =load moment of inertia/rotor moment of inertia.
- When the motor speed exceeds the rated speed, regenerative brake frequency is in inverse proportion to the square of (running speed/rated speed).
- Power supply voltage is AC460 V (at 400 V of the main voltage).
If the supply voltage fluctuates, frequency is in inverse proportion to the square of (Running supply voltage/460) relative to the value in the table.
- When regeneration occurs continuously such cases as running speed frequently changes or vertical feeding, consult us or a dealer.

Note) 2. If the effective torque is within the rated torque, there is no limit in generative brake.

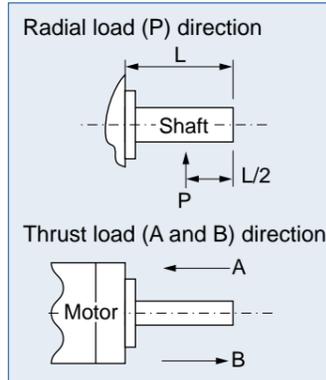
Note) 3. Consult us or a dealer if the load moment of inertia exceeds the specified value.

Note) 4. Releasing time values represent the ones with DC-cutoff using a varistor.

Note) 5. The 17-bit absolute encoder can also be used as a 17-bit incremental encoder.

Permissible Load at Output Shaft

The radial load is defined as a load applied to the output shaft in the right-angle direction. This load is generated when the gear head is coupled to the machine using a chain, belt, etc., but not when the gear head is directly connected to the coupling. As shown in the right figure, the permissible value is determined based on the load applied to the L/2 position of the output shaft. The thrust load is defined as a load applied to the output shaft in the axial direction.



Because the radial load and thrust load significantly affect the life of the bearing, take care not to allow the load during operation to exceed the permissible radial load and thrust load shown in the table below.

Built-in Holding Brake

In the applications where the motor drives the vertical axis, this brake would be used to hold and prevent the work (moving load) from falling by gravity while the power to the servo is shut off.

Use this built-in brake for "Holding" purpose only, that is to hold the stalling status. Never use this for "Brake" purpose to stop the load in motion.

• Output Timing of BRK-OFF Signal

- For the brake release timing at power-on, or braking timing at Servo-OFF/Servo-Alarm while the motor is in motion, refer to the Operating Instructions (Overall).
- With the parameter, Pr4.38 (Setup of mechanical brake action while the motor is in motion), you can set up a time between when the motor enters to a free-run from energized status and when BRK-OFF signal turns off (brake will be engaged), when the Servo-OFF or alarm occurs while the motor is in motion. For details, download a copy of the instruction manual from our website.

<Note>

1. The lining sound of the brake (chattering and etc.) might be generated while running the motor with built-in brake, however this does not affect any functionality.
2. Magnetic flux might be generated through the motor shaft while the brake coil is energized (brake is open). Pay an extra attention when magnetic sensors are used nearby the motor.

• Specifications of Built-in Holding Brake

Motor series	Motor output	Static friction torque N·m	Rotor inertia $\times 10^{-4}$ kg·m ²	Engaging time ms	Releasing time ms	Exciting current DC A (at cool-off)	Releasing voltage DC V / Exciting voltage DC V	Permissible work (J) per one braking	Permissible total work $\times 10^3$ J	Permissible angular acceleration rad/s ²	
MSMD	50 W, 100 W	0.29 or more	0.002	35 or less	20 or less	0.3	1 V or more	39.2	4.9	30000	
	200 W, 400 W	1.27 or more	0.018	50 or less	15 or less	0.36	24 ±1.2	137	44.1		
	750 W	2.45 or more	0.075	70 or less	20 or less	0.42		196	147		
MSME	50 W, 100 W	0.29 or more	0.002	35 or less	20 or less	0.3	1 V or more	39.2	4.9	30000	
	200 W, 400 W	1.27 or more	0.018	50 or less	15 or less	0.36	24 ±1.2	137	44.1		
	750 W(200 V)	2.45 or more	0.075	70 or less	20 or less	0.42		196	147		
	750 W(400 V)	2.5 or more	0.33	50 or less	15 or less (100)	0.7	2 V or more	392	490	10000	
	1.0 kW, 1.5 kW, 2.0 kW	7.8 or more		80 or less		0.81					
	3.0 kW	11.8 or more	1.35	110 or less	50 or less (130)	0.9	24 ±2.4	1470	2200		
4.0 kW, 5.0 kW	16.2 or more	110 or less		50 or less (130)	0.9	1470	2200				
MDME	400 W(400 V), 600 W(400 V)	2.5 or more	1.35	50 or less	15 or less	0.7	2 V or more	392	490		10000
	1.0 kW	4.9 or more		80 or less	70 or less (200)	0.59		588	780		
	1.5 kW, 2.0 kW	13.7 or more		100 or less	50 or less (130)	0.79		1176	1500		
	3.0 kW	16.2 or more	110 or less	0.9	24 ±2.4	1470		2200			
	4.0 kW, 5.0 kW	24.5 or more	4.7	80 or less	25 or less (200)	1.3		1372	2900	5440	
	7.5 kW	58.8 or more		150 or less	50 or less	1.4				5000	
11.0 kW, 15.0 kW	100 or more	7.1	300 or less	140 or less	1.08	2000	4000	3000			
MFME	1.5 kW	7.8 or more	4.7	80 or less	35 or less	0.83	2 V or more	1372	2900	10000	
	2.5 kW	21.6 or more	8.75	150 or less	100 or less	0.75	24 ±2.4	1470	1500		
	4.5 kW	31.4 or more						2200			
MGME	0.9 kW	13.7 or more	1.35	100 or less	50 or less (130)	0.79	2 V or more	1176	1500	10000	
	2.0 kW	24.5 or more	4.7	80 or less	25 or less (200)	1.3		24 ±2.4	1372	2900	5440
	3.0 kW	58.8 or more		150 or less	50 or less (130)	1.4					5000
	4.5 kW, 6.0 kW			50 or less	1.4	5000					
MHMD	200 W, 400 W	1.27 or more	0.018	50 or less	15 or less	0.36	1 V or more	137	44.1	30000	
MSMJ	750 W	2.45 or more	0.075	70 or less	20 or less	0.42	24 ±1.2	196	147		
MHMJ											
MHME	1.0 kW	4.9 or more	1.35	80 or less	70 or less (200)	0.59	2 V or more	588	780	10000	
	1.5 kW	13.7 or more		100 or less	50 or less (130)	0.79		1176	1500		
	2.0 kW~5.0 kW	24.5 or more	4.7	80 or less	25 or less (200)	1.3		24 ±2.4	1372	2900	5440
	7.5 kW	58.8 or more		150 or less	50 or less	1.4					5000

- Releasing time values represent the ones with DC-cutoff using a varistor. Values in () represent those measured by using a diode (V03C by Hitachi, Ltd.)
- Above values (except static friction torque, releasing voltage and excitation current) represent typical values.
- Backlash of the built-in holding brake is kept $\pm 1^\circ$ or smaller at ex-factory point.
- Service life of the number of acceleration/deceleration with the above permissible angular acceleration is more than 10 million times. (Life end is defined as when the brake backlash drastically changes.)