Motor Specifications and Ratings 200V MDMA 1.0kW to 1.5kW Low inertia, Medium Capacity

				AC200V										
Motor model		MC	ома	102P1 🗌	102S1 🗆	152P1 🗆	152S1 🗆							
			A4 series	MDDD	T3530	MDDDT5540								
	Mo	del No.	A4F	MDDD	T3530F	MDDD [.]	T5540F							
Applicable dri	ver		A4P	MDDD	T3530P	MDDDT5540P								
	F	rame s	/mbol		Fran	ne D								
Power supply	canacity (kVA)		1	8	2.3								
Rated output	(W)			10	00	1500								
Rated torque	(N · m)			4.	.8	7.15								
Momentary M	ax. peak t	orque (N	l · m)	14	.4	21	1.5							
Rated current	(Arms)			5.	.6	9	.4							
Max. current ((Ao-p)			2	4	4	.0							
Regenerative	brake	Withou	t option		No limit	Note)2								
(times/min)	Note)1	DV0P4	284		No limit	Note)2								
Rated rotation	nal speed ((r/min)			20	000								
Max. rotationa	al speed (r	/min)			30	000								
Moment of ine	ertia	Withou	t brake	6.1	17	11.2								
(x10 ⁻⁴ kg · m ²))	With b	rake	6.7	79	12.3								
Recommende of the load an	ed moment d the rotor	t of inert	ia ratio Note)3	10 times or less										
Rotary encoder specifications		2500P/r Incremental	17-bit Absolute/ Incremental	2500P/r Incremental	17-bit Absolute/ Incremental									
Resolution per single turn				10000	131072	10000	131072							
Protective end	closure rat	ing		IP65 (except rotating portion of output shaft and lead wire end)										
	Ambient temperature			0 to 40°C (free from freezing), Storage : -20 to +65°C (Max.temperature guarantee 80°C for 72 hours <nomal temperature="">)</nomal>										
	Ambient	humidit	/	85%RH or lower (free from condensing)										
Environment	Installation location			Indoors (no direct sunlight), free from corrosive gas, inflammable gas, oil mist and dust										
	Altitude			1000m or lower										
	Vibration resistance				49m/s ²	or less								
Mass (kg), () represents holding brake type				6.8	(8.7)	8.5 (10.1)							
Brake specif	ications (This bra	ake will b	e released when it is energ	gized. Do not use this for I	praking the motor in motio	on.)							
Static friction	torque (N	· m)		4.	.9	13.7								
Engaging time	e (ms)			8	0	100								
Releasing tim	e (ms)	Note)4		70 (:	200)	50 (130)								
Exciting curre	nt (DC) (A	.)		0.8	59	0.79								
Releasing vol	tage			DC2V or more										
Exciting voltage	ge				DC 24 \	V ±10%								
Permissible lo	bad													
	Radial loa	d P-dired	ction (N)	980										
During assembly	Thrust loa	d A-dired	ction (N)	588										
	Thrust loa	d B-dired	ction (N)	686										
	Radial loa	d P-dired	ction (N)	490										
During operation	Thrust loa	d A-dired	ction (N)	196										
	Thrust loa	d B-dired	ction (N)	196										

For motor dimensions, refer to page A4-121, and for the diver, refer to pages A4-23, 49 and 74.

MDMA 1.0kW - 1.5kW



MINAS A4E

Torque characteristics

at AC200V of power voltage

(Dotted line represents the torque at 10% less supply voltage.)





MDMA152□1□







- Note) 1. 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 AC230V (at 200V of the main voltage).
 - If the supply voltage fluctuates, foregreen to 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.
 - 2. If the effective torque is within the rated torque, there is no limit in generative brake.
 - 3. Consult us or a dealer if the load moment of inertia exceeds the specified value.
 - 4. Specified releasing time is obtained with the use of surge absorber for brake (Z15D151 by Ishizuka Electronic or equivalent). () represents the actually measured value using a diode (200V, 1A or equivalent)

Motor Specifications and Ratings 200V MDMA 2.0kW to 3.0kW Middle inertia, Medium Capacity

				AC200V										
Motor model		M	ома	202P1	202\$1	302P1	302S1							
			A4 series	MEDD	T7364	MFDD	TA390							
	Mode	el No.	A4F series	MEDD	T7364F	MFDD	TA390F							
Applicable dri	ver		A4P series	MEDD	Г7364Р	MFDDTA390P								
	Fra	ame sy	/mbol	Frar	ne E	Frar	me F							
Power supply	capacity (k	VA)		3	.3	4.5								
Rated output	(W)			20	00	3000								
Rated torque	(N · m)			9.	54	14	4.3							
Momentary M	ax. peak to	rque (l	N · m)	28	3.5	42	2.9							
Rated current	(Arms)			12	2.3	17	7.8							
Max. current ((Ао-р)			5	2	7	76							
Regenerative	brake	Withou	it option		No limit	Note)2								
(times/min)	Note)1	DV0P4	1285 x 2		No limit	Note)2								
Rated rotation	nal speed (r/	/min)			20	000								
Max. rotationa	al speed (r/r	min)			30	000								
Moment of ine of rotor	ertia	Withou	ut brake	15	5.2	22	2.3							
(x10 ⁻⁴ kg · m ²)) ['	With b	rake	16	3.7	24.6								
of the load an	d moment of the rotor	of iner	tia ratio Note)3	10 times or less										
Rotary encoder specifications		2500P/r Incremental	17-bit Absolute/ Incremental	2500P/r Incremental	17-bit Absolute/ Incremental									
Resolution per single turn			gle turn	10000	131072	10000	131072							
Protective enclosure rating				IP65 (except rotating portion of output shaft and lead wire end)										
	Ambient te	empera	ature	0 to 40°C (free from freezing), Storage : -20 to +65°C (Max.temperature guarantee 80°C for 72 hours <nomal temperature="">)</nomal>										
	Ambient h	umidit	у	85%RH or lower (free from condensing)										
Environment	Installation	n locat	ion	Indoors (no direct sunlight), free from corrosive gas, inflammable gas, oil mist and dust										
	Altitude			1000m or lower										
	Vibration resistance			(
Wass (kg), () f	epresents nor	ung bra	ake type	10.0 (12.0) 14.6 (16.5)										
Brake specif	ications (T	his bra	ake will b	e released when it is ener	gized. Do not use this for	braking the motor in motio	on.)							
Static friction	torque (N · ı	m)		13	3.7	16.1								
Engaging time	e (ms)			10	00	110								
Releasing tim	e (ms)	Note)4	1	50 (130)	50 (130)								
Exciting curre	nt (DC) (A)			0.79 0.90										
Releasing vol	tage			DC2V or more										
Exciting voltage	ge			DC 24 V ±10%										
Permissible lo	bad													
	Radial load	P-dire	ction (N)	98	30	980								
During assembly	Thrust load	Thrust load A-direction (N)		58	38	588								
	Thrust load	B-dire	ction (N)	68	36	686								
	Radial load	P-dire	ction (N)	49	90	784								
During operation	Thrust load	A-dire	ction (N)	19	96	343								
	Thrust load B-direction (N)			19	96	343								

For motor dimensions, refer to page A4-122, and for the diver, refer to pages A4-24, 50 and 75.

Model designation MDMA series, 2.0kW to 3.0kW



MINAS A4E

Torque characteristics

at AC200V of power voltage

(Dotted line represents the torque at 10% less supply voltage.)

MDMA202 1



MDMA302 1



*When you lower the torque limit setup (Pr5E and 5F), running range at high speed might be lowered as well. Torque Running range (Torque limit setup : 300%) Running range (Torque limit setup : 200%) Running range (Torque limit setup : 100%) Continuous running range



- Note) 1. 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 AC230V (at 200V 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.
 - 2. If the effective torque is within the rated torque, there is no limit in generative brake.
 - 3. Consult us or a dealer if the load moment of inertia exceeds the specified value.
 - 4. Specified releasing time is obtained with the use of surge absorber for brake (Z15D151 by Ishizuka Electronic or equivalent).
 () represents the actually measured value using a diode (200V, 1A or equivalent)

Motor Specifications and Ratings 200V MDMA 4.0kW to 7.5kW Middle inertia, Medium Capacity

Motor model		MC	OMA	402P1 🗆	402S1	502S1	752P1	752S1						
			A4 series		MFDD	TB3A2		MGDD	TC3B4					
	Mode	el No.	A4F		MFDD1	MGDDTC3B4F								
Applicable dri	Image:	A4P			MEDDI									
	Er	ame sv	mbol		Fran	ne F		Frame G						
Power supply	canacity (k)	ν <u>Δ</u>)		6	0	11								
Bated output	(W)	•7()		40	.0	50	.0	7500						
Rated torque	(N · m)			18	38	25	3.8	48						
Momentary M	lax. peak tor	raue (N	lvm)	56	6.4	71	1.4	119						
Rated current	(Arms)	-1 X	,	23	3.4	28	3.0	46.6						
Max. current	(Ao-p)			10	0.0	12	0.0	165.0						
Demonstration	\ \	Without	option	2!	50	9	94	No limit Note)2						
frequency	brake	DV0P4	285 x 2		No limit									
(times/min)	Note)1	DV0P4	285 x 4			No limit Note)2								
Rated rotatior	nal speed (r/	/min)			20	000		1500						
Max. rotationa	al speed (r/n	nin)			30	000		3000						
Moment of ine	ertia 🛛	Withou	it brake	42	2.5).7	99.0							
$(x10^{-4} \text{ kg} \cdot \text{m}^2)$) \	With b	rake	46	6.8	66	6.7	105.0						
Recommended moment of inertia ratio of the load and the rotor Note)3														
Rotary encoder specifications			2500P/r Incremental	17-bit Absolute/ Incremental	2500P/r 17-bit Incremental Incremental		2500P/r Incremental	17-bit Absolute/ Incremental						
	Resolution	per sin	gle turn	10000 131072 10000 131072				10000 131072						
Protective en	closure ratin	ıg		IP65 (except rotating portion of output shaft and lead wire end)										
	Ambient te	empera	ature	0 to 40°C (free from freezing), Storage : -20 to +65°C (Max.temperature guarantee 80°C for 72 hours <nomal td="" te<=""></nomal>										
	Ambient humidity			85%RH or lower (free from condensing)										
Environment	Installatior	n locat	ion	Indoors (no direct sunlight), free from corrosive gas, inflammable gas, oil mist and du										
	Altitude													
	Vibration r	resista	nce		49m/s ²	or less		24m/s ² or less						
Mass (kg), () r	epresents hole	ding bra	ake type	18.8	(21.3)	41.0 (45.0)								
Brake specif	ications (TI	his bra	ake will k	be released when	it is energized. De	o not use this for	braking the moto	r in motion.)						
Static friction	torque (N · r	m)		21	.5	24	4.5	58	3.8					
Engaging time	e (ms)			9	0	8	0	150						
Releasing tim	e (ms)	Note)4	ļ	35 (150)	25 (200)	50 (130)						
Exciting curre	nt (DC) (A)			1.	10	1.	30	1.40						
Releasing vol	tage			DC2V or more										
Exciting volta	ge			DC 24 V ±10%										
Permissible lo	bad													
	Radial load	P-dired	ction (N)		16	2058								
During assembly	Thrust load	A-dired	ction (N)		7	980								
	Thrust load	B-dired	ction (N)		9	1176								
	Radial load	P-dired	ction (N)		7	1176								
During operation	Thrust load	A-dired	ction (N)		3	490								
	Thrust load B-direction (N)				3	490								

For motor dimensions, refer to page A4-123, and for the diver, refer to pages A4-24, 25, 50, 51 and 75.

MINAS A4F

Model designation MDMA series, 4.0kW to 7.5kW

g.)	Μ	D	Ν	Λ	A	<u>4</u>	. ()	2	5	<u>5</u> <u>1</u>	G							
	Symb	Symbol Type				Volta	Voltage specifications			Design o	Motor structure								
	MDN	MDMA (4.0kW-7.5kW)					Symbol Specifications			T: Stand	Symbol	Sh Round	aft Key-way	Holding	g brake with	Oil s without	eal with		
l											C D	•		•	•		•		
I	Motor r	ated outp	ut		Rotary	encoder s	ncoder specifications					G							
[Symbol	mbol Bated output			Symbol	Format		Pulse co	ounts	Resolution	Wires	Н							
	40	4.0kW	V		Р	Incremental		2500P/r		10000	5	Products	are standar	d stock item	s or build to	order items	. See index	(page F31).	
	50	5.0kW	v		S	Absolute/	Absolute/Incremental		17-bit		131072	7							
	75	75 7.5kW																	

Torque characteristics

at AC200V of power voltage

(Dotted line represents the torque at 10% less supply voltage.)

MDMA402 1



MDMA752 1





rotational speed

Radial load (P) direction

- Note) 1. 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 AC230V (at 200V 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.
 - 2. If the effective torque is within the rated torque, there is no limit in generative brake.
 - 3. Consult us or a dealer if the load moment of inertia exceeds the specified value.
 - 4. Specified releasing time is obtained with the use of surge absorber for brake (Z15D151 by Ishizuka Electronic or equivalent). () represents the actually measured value using a diode (200V, 1A or equivalent)

MDMA502□1□

