

XBA Type



Search Motor-Volume :

XBA Series

XBA series consist of small high power BLDC motor and high level box type driver and line up 20~150W output power.

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1. SPECIFICATIONS

Title	Combi type	XBA-620A-□	XBA-620B-□	XBA-620U-□	XBA-804A-□	XBA-804B-□	XBA-804U-□	XBA-975A-□	XBA-975B-□	XBA-975U-□	XBA-9120A-□	XBA-9120B-□	XBA-9120U-□	XBA-9150A-□	XBA-9150B-□	XBA-9150U-□	
	Gear type	XLM620G			XLM840G			XLM975G			XLM9120G			XLM9150G			
	D-Cut type	XLM620D			XLM840D			XLM975D			XLM9120D			XLM9150D			
Rated Output (continuous)	W	20			40			75			120			150			
Power Input	Voltage	V	Single Phase 100~120	Single Phase 200~230	Three Phase 200~230	Single Phase 100~120	Single Phase 200~230	Three Phase 200~230	Single Phase 100~120	Single Phase 200~230	Three Phase 200~230	Single Phase 100~120	Single Phase 200~230	Three Phase 200~230	Single Phase 100~120	Single Phase 200~230	Three Phase 200~230
	Frequency	Hz	50/60			50/60			50/60			50/60			50/60		
	Rated Input Current	A	0.70	0.40	0.27	1.10	0.66	0.43	1.80	1.00	0.75	2.50	1.50	1.00	3.00	1.80	1.15
	Maximum Input Current	A	1.30	0.90	0.50	2.00	1.30	0.88	2.60	2.00	1.20	3.80	2.70	1.60	4.64	3.23	1.96
정격TORQUE	N·m(kgf·cm)	0,066(0,66) (0,57)			0,133(1,33) (1,5)			0,25(2,5) (2,17)			0,4(4,0) (3,47)			0,6(6,0) (4,34)			
기동TORQUE	N·m(kgf·cm)	0,08(0,8) (0,69)			0,16(1,6) (1,39)			0,32(3,2) (2,78)			0,5(5,0) (4,34)			0,63(6,3) (5,47)			
Permissible Load Inertia Moment	J kg·m ²	1,5×10 ⁻⁴ (6,8)			3,0×10 ⁻⁴ (13,7)			6,0×10 ⁻⁴ (20,5)			6,0×10 ⁻⁴ (32,8)			6,0×10 ⁻⁴ (32,8)			
Rated RPM	r/min	3,000															
Speed Setting Range	r/min	200 to 3,000 (Speed Ratio 1:15)															
Speed Variability Rate	Load	Less than ±1% (0 to rated torque, at rated speed)															
	Voltage	Less than ±1% (supply voltage ±10%, at rated speed with no load)															
	Temperature	Less than ±1% (0 to +40°C (+32 to +104°F), at rated speed with no load)															

※ For permissible load inertia in the geared motor, refer to 31 page.

※ Enter the ratio in the box(□) model number.

※ The values for each item is for the motor only.

2. COMMONALITIES

Category	Specifications
SLOW RUN / SLOW STOP	0,5 to 15 seconds (Applicable for both Slow Run and Slow Stop)
Speed Control	1. Built-in Potentiometer 2. External Potentiometer (20kΩ 1/4W) 3. External DC Voltage(0~5 Volt)
Input Signal	Photocoupler input method, input resistance: 2kΩ, operates at DC 12V±10%, common for EXT., CW, and CCW
Output Signal	Opencollector output, external use conditions: Less than 26,4V 10mA, common for Speed Out and Alarm Out.
Protection Feature	If following protection functions are operated, control unit alarm signal is outputs and motor comes to stop. · Protection for machine overload : When an overload that exceeds the motor's rate touque has been continued for more than 5 seconds · Protection for overvoltage : When the voltage permitted for the control unit has exceed specified voltage · Protectionguard for image formation : When malfunction occurs in the motor feedback signals due to cables disconnection and connector disconnection. · Protection for undervoltage : When the voltage permitted at the control unit has shortage of more than specified voltage · Protection for over speeding : When the speed of the motor exceed 3800r/min
Motor Insulation Level	Class E (120°C)
Time Rating	Continuous

3. GENERAL SPECS

Item	MOTOR	CONTROL UNIT
Dielectric strength	If applying 60HZ 1,500V between the coil and the case for 1 minute after continuous operating under normal temperature and humidity conditions, any fault is not occurred.	Sufficient to withstand 3,0kV at 50Hz applied between power supply terminal (I/O terminal) And I/O terminals for 1 minutes, and 1,5kV at 50Hz applied between protective earth terminal and power supply terminals.
Insulation Resistance	After continuous operating under normal temperature and humidity conditions, if measured the resistance value between the coil and the case using DC500V Mega Tester, should be over 100MΩ.	If the resistance value between protection ground terminal and power input is measured using DC500V Mega Tester, should be over 100MΩ.
Ambient Temperature	0°C to +40°C (+32°F to +104°F) (nofreezing)	0°C to +50°C (+32°F to +122°F) (nofreezing)
Ambient Humidity	Less then 85% (no dew condensation)	
Ambience	Nocorroive gas or dust	
Protection Class	IP65 (excluding the output shaft side)	IP10

※ **Caution** Use it, ensuring that surface temperature of motor does not exceed over 90°C.

5. Permissible Torque-Geared Motor

N·m / [kgf·cm]

Title	Speed Setting Range [RPM]	60~600	30~300	20~200	15~150	10~100	6~60	3~30	1,5~15
	Gear Ratio	5	10	15	20	30	50	100	200
XBA620()-□K		0,29 2,9(2,52)	0,59 5,9(5,12)	0,88 8,8(7,64)	1,2 12(10,42)	1,7 17(14,76)	2,8 28(24,30)	5,6 56(48,61)	6,0 60(52,08)
XBA840()-□K		0,59 5,9(5,12)	1,2 12(10,42)	1,8 18(15,62)	2,3 23(19,96)	3,4 34(29,51)	5,6 56(48,61)	11,2 112(97,21)	1,6 160(138,87)
XBA975()-□K		1,1 11(9,55)	2,3 23(19,96)	3,4 34(29,51)	4,5 45(39,06)	6,5 65(56,42)	10,8 108(93,74)	21,5 215(186,61)	30 300(260,38)
XBA9120()-□K		1,8 18(15,62)	3,6 36(31,25)	5,4 54(46,87)	7,2 72(62,49)	10,3 103(89,40)	17,2 172(142,39)	30 300(260,38)	30 300(260,38)
XBA9150()-□K		2,7 27(23,43)	5,4 54(46,87)	8,1 81(70,30)	10,8 108(93,74)	15,4 154(133,66)	25,8 258(223,93)	30 300(260,38)	30 300(260,38)

※ () of item name represents voltage specification

※ □ of item name represents the reduction ratio.

※ Rotation direction is the same direction of additional motor marked in the , others is reverse direction.

4. Permissible Load Inertia[J]-Geared Motor

J(×10⁻⁴[kg·m²] / GD²[kgfcm²])

Model	Gear Ratio	5	10	15	20	30	50	100	200
XBA620()-□K		1,55 (8,5)	6,2 (33,9)	1,4 (76,5)	24,8 (135,6)	55,8 (305,1)	155 (847,5)	155 (847,5)	155 (847,5)
XBA840()-□K		5,5 (30,1)	22 (120,3)	49,5 (270,6)	88 (481,1)	198 (1083)	550 (3007)	550 (3007)	550 (3007)
XBA975()-□K		20 (109,3)	78 (426,5)	180 (984,1)	260 (1422)	720 (3937)	2000 (10935)	2000 (10935)	2000 (10935)
XBA9120()-□K		25 (136,7)	100 (546,7)	225 (1230)	400 (2187)	900 (4921)	2500 (13669)	2500 (13669)	2500 (13669)
XBA9150()-□K		25 (136,7)	100 (546,7)	225 (1230)	400 (2187)	900 (4921)	2500 (13669)	2500 (13669)	2500 (13669)

※ () of item name represents voltage specification

※ □ of indicates deceleration ratio.

6. Permissible Overhand Load and Permissible Thrust Load

Model	Gear Ratio	Permissible Overhand Load				Permissible Thrust Load		
		10mm(0,3937 in) from end of the output shaft.		20mm(0,7874 in) from end of the output shaft.		N	kgf(lbs.)	
		N	kgf(lbs.)	N	kgf(lbs.)			
GEARED MOTOR	XBA620()-□K	5	100	10(22,03)	150	15(33,04)	40	4(8,81)
		10~20	150	15(33,04)	200	20(44,05)		
		30~200	200	20(44,05)	300	30(66,08)		
	XBA840()-□K	5	200	20(44,05)	250	25(55,07)	100	10(22,03)
		10~20	300	30(66,08)	350	35(77,09)		
		30~200	450	45(99,12)	550	55(121,15)		
	XBA975()-□K	5	300	30(66,08)	400	40(88,11)	150	15(33,04)
		10~20	400	40(88,11)	500	50(110,13)		
		30~200	500	50(110,13)	650	65(143,17)		
XBA9120()-□K	5	300	30(66,08)	400	40(88,11)	150	15(33,04)	
	10~20	400	40(88,11)	500	50(110,13)			
	30~200	500	50(110,13)	650	65(143,17)			
XBA9150()-□K	5	300	30(66,08)	400	40(88,11)	150	15(33,04)	
	10~20	400	40(88,11)	500	50(110,13)			
	30~200	500	50(110,13)	650	65(143,17)			
MOTOR	XEM620D		87,2	8,72(19,21)	107	10,7(23,57)	Do not engage the thrust load, if unavoidable, engage below 50 % of motor weight.	
	XEM840D		117	11,7(25,77)	137	13,7(30,17)		
	XEM975D		156	15,6(34,36)	176	17,6(38,77)		
	XEM9120D		156	15,6(34,36)	176	17,6(38,77)		
	XEM9150D		156	15,6(34,36)	176	17,6(38,77)		

※ () of item name represents voltage specification

※ □ indicates deceleration ratio.