

XWA type



Search Motor-Volume :

XWA Series

XWA Series is consisting with basic functions required to control the speed, is a brushless DC motor of small-high power and the unit of panel type driver and lines up

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1. SPECIFICATIONS

Title	Type	XWA610A-	XWA610B-	XWA825A-	XWA825B-	XWA940A-	XWA940B-	XWA990A-	XWA990B-		
		□	□	□	□	□	□	□	□		
		XWM610G		XWM825G		XWM940G		XWM990G			
Rated Output (continuous)		W		10		25		40		90	
Power Input	Voltage	V	Single Phase 100~120	Single Phase 200~230	Single Phase 100~120	Single Phase 200~230	Single Phase 100~120	Single Phase 200~230	Single Phase 100~120	Single Phase 200~230	
	Frequency	Hz	50/60		50/60		50/60		50/60		
	Rated Input Current	A	0,6	0,35	0,9	0,56	1,0	0,64	2,0	1,2	
	Maximum Input Current	A	0,8	0,5	1,2	0,8	1,3	0,9	2,6	1,6	
Rated Torque	N·m(kgf·cm)	0,05(0,5)(0,43)		0,125(1,25)(1,08)		0,20(2,0)(1,73)		0,45(4,5)(3,9)			
Driving Torque	N·m(kgf·cm)	0,06(0,6)(0,52)		0,15(1,5)(1,3)		0,24(2,4)(2,08)		0,54(5,4)(4,68)			
Permissible Load Inertia	J kg·m ² (oz·in ²)	0,5×10 ⁻⁴ (2,7)		1,8×10 ⁻⁴ (9,8)		3,3×10 ⁻⁴ (18,1)		5,8×10 ⁻⁴ (31,7)			
Rated RPM	r/min	2,000									
Speed Setting ange	r/min	100 to 2,000 (Speed Ratio 1:20)									
Speed Variability Rate	Load	Less than ±1% (0 ~ rated torque, at rated speed)									
	Voltage	Less than ±1% (supply voltage ±10%, at rated speed and zero load)									
	Temperature	Less than ±1% (0 to +40°C (+32 to +104°F), at rated speed and zero load)									

- ※ For permissible load inertia in the geared motor, refer to 9 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 (0~5V)
Input Signal	Photocoupler input method, input resistance: 3kΩ, operates at DC 24V±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 output and motor come to stop. · Overload protection : If load exceeds a rated torque in the motor, is approved over approximately 5 seconds. · Overvoltage protection : If voltage approved in control unit, exceeds top limit in the rated voltage allowable range. · Under voltage protection : If voltage approved in control unit, less than rated voltage allowable range. · Icing protection : If sensor wire of cable is shorted during operating the motor, · Overspeed protection : If motor RPM exceeds 2800 r/min.
Motor Insulation Level	Class E (120°C)
Time Rating	Continuous

[▲TOP](#)

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.	If applying 60Hz, 1,500V between protection ground terminal and power input for 1 minute, any fault is not occurred.
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) (no freezing)	0°C to +40°C (+32°F to +104°F) (no freezing)
Ambient Humidity	Less than 85% (no dew condensation)	
Ambience	No corrosive gas or dust.	
Protection Class	IP65 (excluding the output shaft side)	IP10 (excluding the output shaft side)

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

4. Permissible Load Inertia[J]-Geared Motor

N·m / [kgf·cm(lb·in)]

Title	Gear Ratio	5	10	15	20	30	50	100	200
XWA610()-□K		1,55 (8,5)	6,2 (33,9)	14 (76,5)	24,8 (135,6)	55,8 (305,1)	155 (847,5)	155 (847,5)	155 (847,5)
XWA825()-□K		5,5 (30,1)	22 (120,3)	49,5 (270,6)	88 (481,1)	198 (1083)	550 (3007)	550 (3007)	550 (3007)
XWA940()-□K		10 (54,7)	39 (213,2)	90 (492,1)	130 (710,8)	360 (1968)	1000 (5467)	1000 (5467)	1000 (5467)
XWA990()-□K		25 (136,7)	100 (546,7)	225 (1230)	400 (2187)	900 (4921)	2500 (13669)	2500 (13669)	2500 (13669)

- ※ □ indicates gear ratio.
- ※ () indicates voltage specification.

5. Permissible Torque-Geared Motor

J[kg·m²]/GD²[kgfcm²(oz·in²)]

Item	Speed Control Range[r/min]	20~400	10~200	6,7~133	5~100	3,3~67	2~40	1~20	0,5~10
	Gear Ratio	5	10	15	20	30	50	100	200
XWA610()-□K		0,22 2,2(1,91)	0,45 4,5(3,91)	0,68 6,8(5,90)	0,90 9,0(7,81)	1,3 13(11,28)	2,1 21(18,23)	4,2 42(36,45)	6,0 60,0(52,08)
XWA825()B-□K		0,56 5,6(4,86)	1,12 11,2(9,72)	1,68 16,8(14,58)	2,20 22,0(19,09)	3,2 32(27,77)	5,3 53(46,00)	10,6 106(92,00)	16,0 160(138,87)
XWA940()-□K		0,90 9,0 (7,81)	1,80 18,0(15,62)	2,70 27,0(23,43)	3,60 36,0(31,25)	5,1 51(44,27)	8,5 85(73,78)	17,0 170(147,55)	30,0 300(260,38)
XWA990()-□K		2,10 20,0(17,36)	4,10 40,0(34,72)	6,00 60,0(52,08)	8,00 80,0(69,44)	11,5 115(99,44)	19,3 193(167,51)	30,0 300(260,38)	30,0 300(260,38)

- ※ □ indicates gear ratio.
- ※ Direction indicated in color is the same direction of the motor, The other is reverse direction.
- ※ () indicates voltage specification.

6. Permissible Overhand Load and Permissible Thrust Load

Title	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(lb.)	
		N	kgf(lb.)	N	kgf(lb.)			
GEARED MOTOR	XWA610()-□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)		
	XWA825()B-□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)		
	XWA940()-□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)		
XWA990()-□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	XWM610D		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.	
	XWM825D		117	11,7(25,77)	137	13,7(30,17)		
	XWM940D		156	15,6(34,36)	176	17,6(38,77)		
	XWM990D		156	15,6(34,36)	176	17,6(38,77)		

- ※ □ indicates deceleration ratio.
- ※ () indicates voltage specification.