

BLA1HD21 Technical Specification

Update Number

(THIS DATA IS JUST A REFERENCE. IT IS NOT A GUARANTEED DATA.)

181108-02

Item		Specification				Remark		
1	Communication Interface	PWM				Signal Voltage:V	HIGH : min. 2.0V max. Vcc	
							LOW : min. 0.0V max. 0.45V	
						Frame Rate:T	3.0~30ms (Default 14.25ms)	
						Left/Center/Right:Td	2120/1520/920μs (Resolution recommends less than 1μs.)	
		S.BUS				Futaba Serial Protocol (Please ask us for more information.)		
2	Rated Voltage	6.0~7.4V DC				-		
3	Operating Voltage	4.0~8.4V DC				-		
4	Standby Current	≤ 45mA				at 6.0~7.4V		
5	Consumption Current*	LL	Me	UL	unit	at 7.4V , No-Load		
		145	225	305	mA	LL : Low Limit Me : Medium Value UL : Upper Limit		
6	Max. Torque*	LL	Me	UL	unit	at 7.4V		
		5.4	7.6	9.8	kgf-cm			
		0.53	0.75	0.96	N-m			
		75.0	105.5	136.1	ozf-in			
7	Rated Torque*	LL	Me	UL	unit	at 7.4V 20% of Max. Torque		
		1.1	1.5	2.0	kgf-cm			
		0.11	0.15	0.19	N-m			
		15.0	21.1	27.2	ozf-in			
8	No Load Speed*	LL	Me	UL	unit	at 7.4V		
		0.07	0.1	0.13	sec/60°			
		461.5	600.0	857.1	°/sec			
		76.9	100.0	142.9	rpm			
9	Default Travel Angle	CW 60° (920us) CCW 60° (2120us)				-		
10	Max Travel Angle	CW 90° (920us) CCW 90° (2120us)				Programing tool (CIU-2/-3, S-Link) required.		
11	BackLash*	≤ 0.5°				-		
12	Operating Temperature Range	-10~+45°C (14~113°F)				-		
13	Storage Temperature Range	-20~+60°C (-4~140°F)				-		
14	Outer Dimension	1.30 x 0.59 x 1.07 inch (33.0 x 15.0 x 27.1mm)				-		
15	Weight	0.99oz (28g)				-		
16	Case Material	Upper : Resin / Middle : Resin / Bottom : Resin				-		
17	Gear Set Material	1st ,2nd,3rd,4th,5th(Final) : Metal				-		
18	Cable	Non-Shielded Cable				Please refer to Outer Dimension.		
19	Connector	Manufacture	J.A.M Co., LTD.					
		Type	FC25-03HG					
		Mating	FC25-03M etc.					
		Pin Assignment	1	White	S.BUS / PWM			
		2	Red	Vcc				
		3	Black	GND				
20	MTTF	100h (Calculated by Weibull analysis.)				Test Condition • Test voltage : 7.4V • Load : 20% of Max. Torque • Operating Condition : 0.5Hz sweep (±60°) • Input Pluse : PWM 		
21	Vibration Resistance *	Operating time ≥ 50h (at 7.4V)				Test Condition		
						Frequency range	80 to 400Hz	
						Acceleration	30G (294m/s ²)	
						Sweep rate	1.2 min / single-sweep	
						Vibration axis	X , Y , Z	

* Initial Performance Data at 23±5°C

All Specifications are subject to change without prior notice.

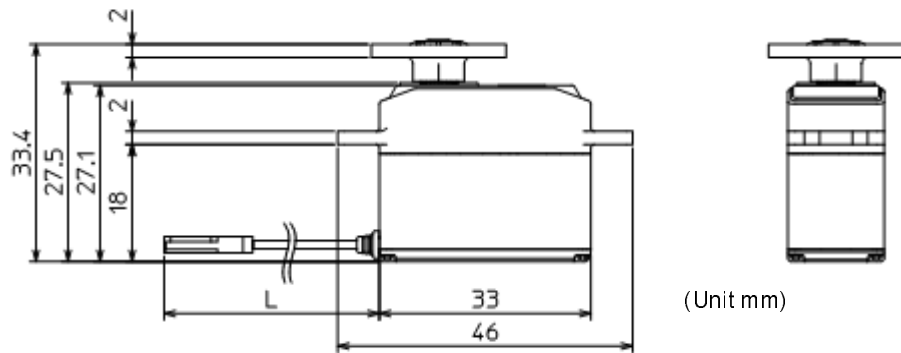
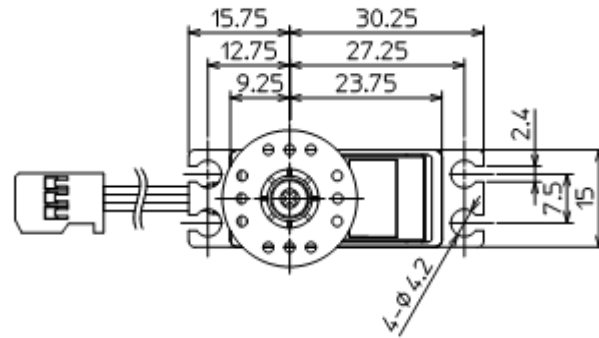
Caution

This product **SHOULD NOT** be used for the devices that is directly related to human life and/or harmful devices for human body such as below applications.

- (1)Medical Devices
- (2)Aerospace/Aviation Related Devices
- (3)Nuclear Related Devices e.t.c.

Outer Dimension

BLA1HD21



(Unit mm)

Cable Length
BLA1HD21 300mm