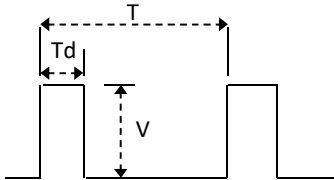
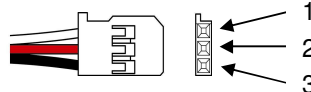
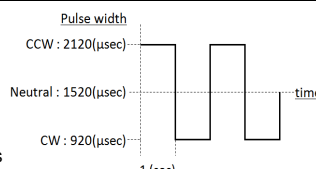


BLA1HC21 Technical Specification

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)
						CW/Center/CCW:Td	920/1520/2120 μ s (Resolution recommends less than 1 μ s.)
							
S.BUS						Futaba Serial Protocol (Please ask us for more information.)	
2	Rated Voltage	DC 6.0~DC 7.4V				—	
3	Operating Voltage	DC 4.0~DC 8.4V				—	
4	Standby Current	≤ 45mA				at 6.0~7.4V	
5	Starting Current*	8.0A				at 7.4V	
6	Consumption Current*	LL	Me	UL	unit	at 7.4V , No-Load	
		355	515	675	mA	LL : Low Limit Me : Medium Value UL : Upper Limit	
7	Max. Torque*	LL	Me	UL	unit	at 7.4V	
		29.5	37.0	44.5	kgf·cm		
		2.9	3.6	4.4	N·m		
		409.7	513.8	618.0	ozf·in		
8	Rated Torque*	LL	Me	UL	unit	at 7.4V 20% of Max. Torque	
		5.9	7.4	8.9	kgf·cm		
		0.58	0.73	0.87	N·m		
		81.9	102.8	123.6	ozf·in		
9	No Load Speed*	LL	Me	UL	unit	at 7.4V	
		0.08	0.11	0.14	s/60°		
		428.6	545.5	750.0	°/s		
		71.4	90.9	125.0	rpm		
10	Default Travel Angle	CW 60° (920us) CCW 60° (2120us)				—	
11	Max Travel Angle	CW 90° (920us) CCW 90° (2120us)				Programing tool (CIU-2 or CIU-3,S-Link) required.	
12	BackLash*	≤ 0.5°				—	
13	Operating Temperature Range	-10~+45°C (14~113°F)				—	
14	Storage Temperature Range	-20~+60°C (-4~140°F)				—	
15	Outer Dimension	40.5 x 21.0 x 38.4mm (1.59 x 0.83 x 1.51 inch)				—	
16	Weight	BLA1HC21: 74g (2.61oz)				BLA1HC21: with Horn and set screw	
17	Case Material	Upper : Resin / Middle : Resin / Bottom : AL / Heat Sink : AL				—	
18	Gear Set Material	1st : Resin / 2nd,3rd,4th(Final) : Metal				—	
19	Cable	Non-Shielded Cable				Cable Length : 100mm (3.94 inch)	
20	Connector	Manufacture		J.A.M. Co., Ltd.			
		Type		FC25-03HG**			
		Mating		FC25-03M** etc.			
		Pin Assignment	1	White	PWM/S.BUS		
			2	Red	Vcc		
3	Black		GND				
21	MTTF	600h (Load : No-Load)				<u>Test Condition</u> • Test Voltage : 7.4V • Operating Condition : 0.5Hz sweep (±60°) • Input Pluse : PWM • Calculated by Weibull analysis	
		70h (Load : 20% of Max. Torque)					
22	Vibration Resistance *	Operating time ≥ 100h (at 7.4V)				Test Condition	
						Frequency range	80 to 400Hz
						Sweep Rate	1.2 min / single-sweep
						Acceleration	30G (294m/s ²)
						Vibration axis	X, Y, Z

* At 23±5°C (Initial Performance Data)

** Custom connector. If necessary, Please use the extension cord sold from Futaba.

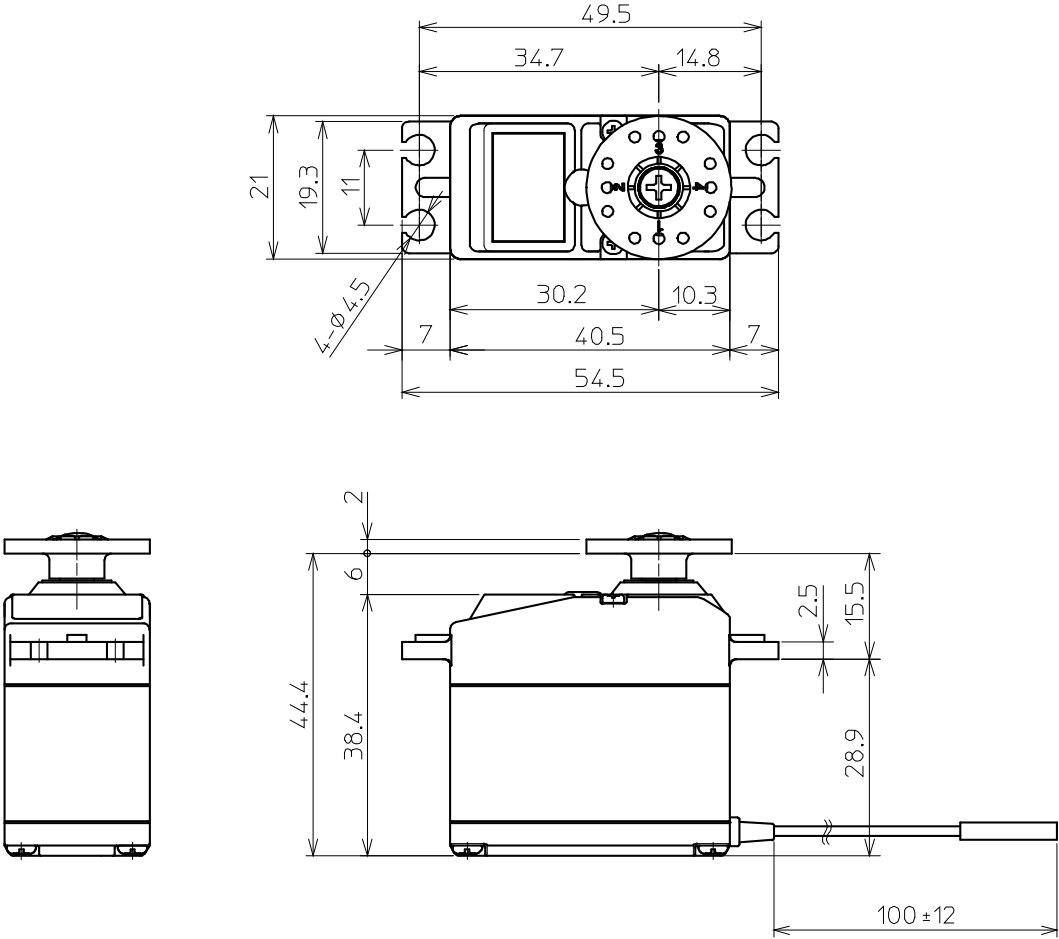
All Specifications are subject to change without prior notice.

Caution

• This product SHOULD NOT been used for the devices that is directly related to human life.

Outer Dimension

BLA1HC21



(Unit mm)