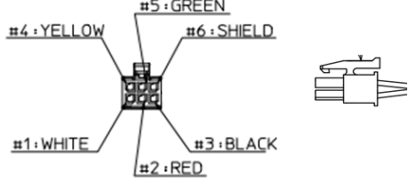


# BLA1HH41 Technical Specification

Update Number

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

180112-01

Item		Specification				Remark	
1	Communication Interface	PWM				Signal Voltage:V	HIGH : min. 2.0V max. Vcc
		S.BUS				Frame Rate:T	LOW : min. 0.0V max. 0.45V
2	Rated Voltage	11.1~14.8V DC				3.0~30ms	
3	Operating Voltage	9.0~16.8V DC				920/1520/2120μs (Resolution recommends less than 1μs.)	
4	Standby Current	≤ 55mA				Futaba Serial Protocol (Please ask us for more information.)	
5	Consumption Current*	LL	Me	UL	unit	at 11.1~14.8V	
		140(110)	275(220)	410(330)	mA	at 14.8V (at 12.0V) , No-Load	
6	Max. Torque*	LL	Me	UL	unit	LL : Low Limit Me : Medium Value UL : Upper Limit	
		31.4(26.5)	44.0(37.0)	56.6(47.5)	kgf-cm	at 14.8V (at 12.0V)	
		3.08(2.60)	4.32(3.63)	5.55(4.66)	N-m		
7	Rated Torque*	LL	Me	UL	unit	at 14.8V	
		6.3	8.8	11.3	kgf-cm	20% of Max. Torque	
		0.62	0.86	1.11	N-m		
8	No Load Speed*	LL	Me	UL	unit	at 14.8V (at 12.0V)	
		0.07(0.09)	0.1(0.12)	0.13(0.15)	sec/60°		
		461.5(400.0)	600.0(500.0)	857.1(666.7)	°/sec		
9	Default Travel Angle	CW 60° (920μs) CCW 60° (2120μs)				-	
10	Max Travel Angle	CW 90° (920μs) CCW 90° (2120μs)				Programing tool (CIU-2 or CIU-3,S-Link) required.	
11	BackLash*	≤ 0.5°				-	
12	Operating Temperature Range	-30~+70°C (-22~158°F)				-	
13	Storage Temperature Range	-40~+80°C (-40~176°F)				-	
14	Outer Dimension	1.59 x 0.83 x 1.51 inch (40.5 x 21.0 x 38.4mm)				-	
15	Weight	3.53oz (100g)				With Horn and screw	
16	Case Material	Upper : AL / Middle : AL / Bottom : AL				-	
17	Gear Set Material	1st,2nd,3rd,4th(Final) : Metal				-	
18	Cable	Shielded Cable				Cable Length : 15.75 inch (400mm)	
19	Connector	Manufacture	Tyco Electronics				
		Type	TE794617-6				
		Mating	TE794616-6 etc.				
		Pin Assignment	1	White	S.BUS / PWM		
			2	Red	Vcc		
			3	Black	GND		
			4	Yellow	Position Feedback+		
			5	Green	Position Feedback-		
			6	Shield	Case Shield Line		
20	MTTF	260h (Calculated by Weibull analysis.)				Test Condition at 14.8V / Load : 20% of Max. Torque / 0.5Hz sweep (±60°)	
21	Vibration Resistance *	Operating time ≥ 100 cycle (at 14.8V)				Test Condition	
						Frequency range	10 to 500Hz
						Acceleration	10G (100m/s <sup>2</sup> )
						Sweep rate	1 oct / min
						Vibration axis	X, Y, Z

\* Initial Performance Data at 23±5°C

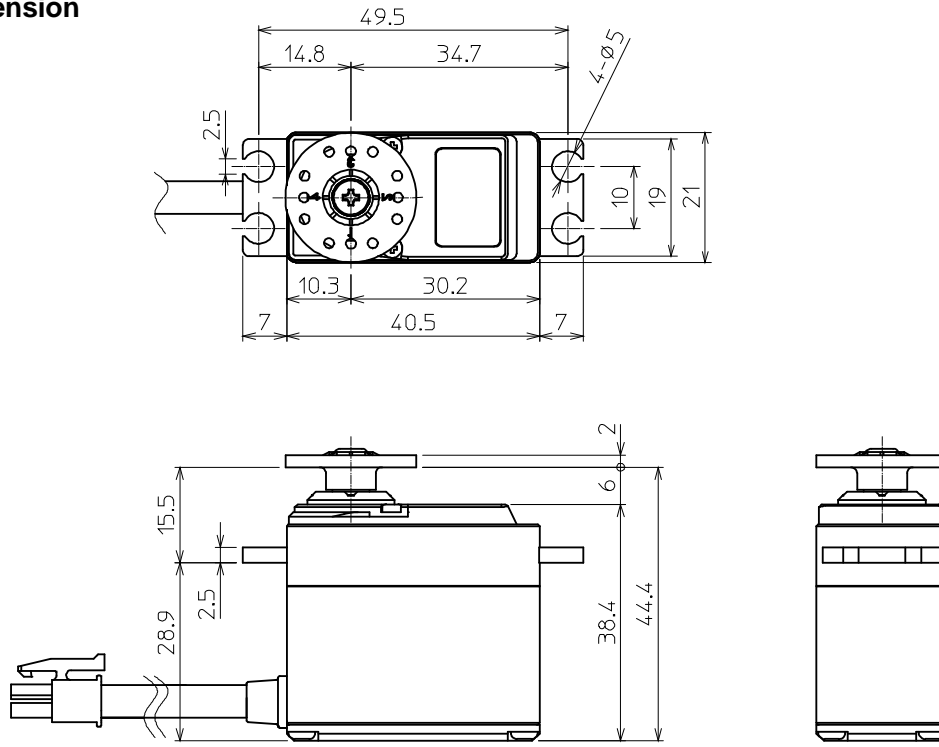
**All Specifications are subject to change without prior notice.**

**■ 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**



(Unit mm)

**Position Feedback**

