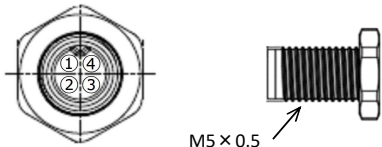
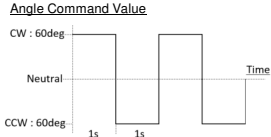


BLA15-12U-A01 Technical Specification

Item		Specification				Remark	
1	Communication Interface	CAN BUS				Protocol	UAVCAN V0
						Baud Rate	1Mbps
						Sample Point	87.5%
						Node ID	1 ~ 127
						(Please ask us for more information)	
2	International Protection Code	IP67				Waterproof and dustproof	
3	Rated Voltage	DC 12V				-	
4	Operating Voltage	DC 9.0~DC 12.6V				-	
5	Standby Current	≤ 55mA				at 12V	
6	Starting Current	Design value	≤ 1.25A			at 12V	
7	Operating mode	Angle control	+36,000,000.0° ~ -36,000,000.0°			See No.13.	
		Speed control	-150rpm ~ +150rpm			Commandable speed. See No.12 for actual speed.	
		Torque control	-100% ~ +100%			Max. torque at supply voltage of 12V is 100%. See No.9. The actual torque that can be output depends on the power supply, load, etc., so use the command value as a guide.	
8	Consumption Current *	LL	Me	UL	unit	at 12V, No-Load LL : Low Limit Me : Medium Value UL : Upper Limit	
		60	120	180	mA		
9	Max. Torque *	LL	Me	UL	unit	at 12V	
		6.7	9.6	12.5	kgf·cm		
		0.66	0.94	1.23	N·m		
		93.0	133.3	173.6	ozf·in		
10	Rated Torque *	1.0			kgf·cm	at 12V 10% of Max. Torque	
		0.09			N·m		
		13.3			ozf·in		
11	No Load Speed * (Angle control mode)	LL	Me	UL	unit	at 12V	
		0.13	0.17	0.21	s/60°		
		286	353	462	°/s		
		48	59	77	rpm		
12	No Load Speed * (Speed control mode)	LL	Me	UL	unit	at 12V	
		48	59	77	rpm		
13	Travel Angle *	Range	Mechanical	+179.9° ~ -180.0°		Absolute	
			Software	+36,000,000.0° ~ -36,000,000.0°		Pseudo absolute *Incremental above mechanical range.	
		Accuracy	±3.0		°	Standard value	at 12V, No-Load, Position: ±60°
		±1.5		°	Measured value		
14	BackLash *	≤ 0.5°				-	
15	Temperature Range	Operating	-30~+70°C (-22~158°F)			*The operating noise of servo may become loud in low temperature.	
		Storage	-40~+80°C (-40~176°F)				
		Protection	+80°C (176°F)				
16	Outer Dimension	39.4 x 15.0 x 29.4mm (1.55 x 0.59 x 1.16 in)				Refer to Outer Dimension	
17	Weight	45g				with Horn and screws without cables	
18	Case Material	Aluminum				Surface : Anodizing Salt Water Resistance	
19	Gear Set Material	Steel				Surface : Hardening treatment	
20	Gear bearing	2 ball bearing				-	
21	Radial load	50N				Load position : Refer to Outer Dimension * Design reference value.	
22	Position Sensor	Magnetic Encoder				-	
23	Motor Type	Brushless DC Motor				-	
24	Cable	Non-Shielded Cable (Detachable)				Cable Length : 15.75 inch (400mm)	
25	Connector	Manufacture	Neltron Industrial Co., Ltd.				
		Type	120505-04P-FA-PB				
		Mating	120505-04S-A-MM etc.				
		Pin Assignment	1	White	Battery(+)		
			2	Red	Battery(-)		
3	Green		CAN-H				
4	Black		CAN-L				
26	MTTF *	Operating time > 700h (TBC)				Operating Condition • at 12V • ±60°, 0.5Hz sweep Test Condition • Load : 1.0 kgf·cm	Angle Command Value 
		Operating time > 700h (TBC)				Operating Condition • at 12V • ±60°, 0.5Hz sweep • No-Load Test Condition (sine wave) • Frequency : 10 to 500Hz (sweep 1oct/min, amplitude limit 2mm) • Acceleration : 300m/s ² • Vibration axis : X,Y,Z	

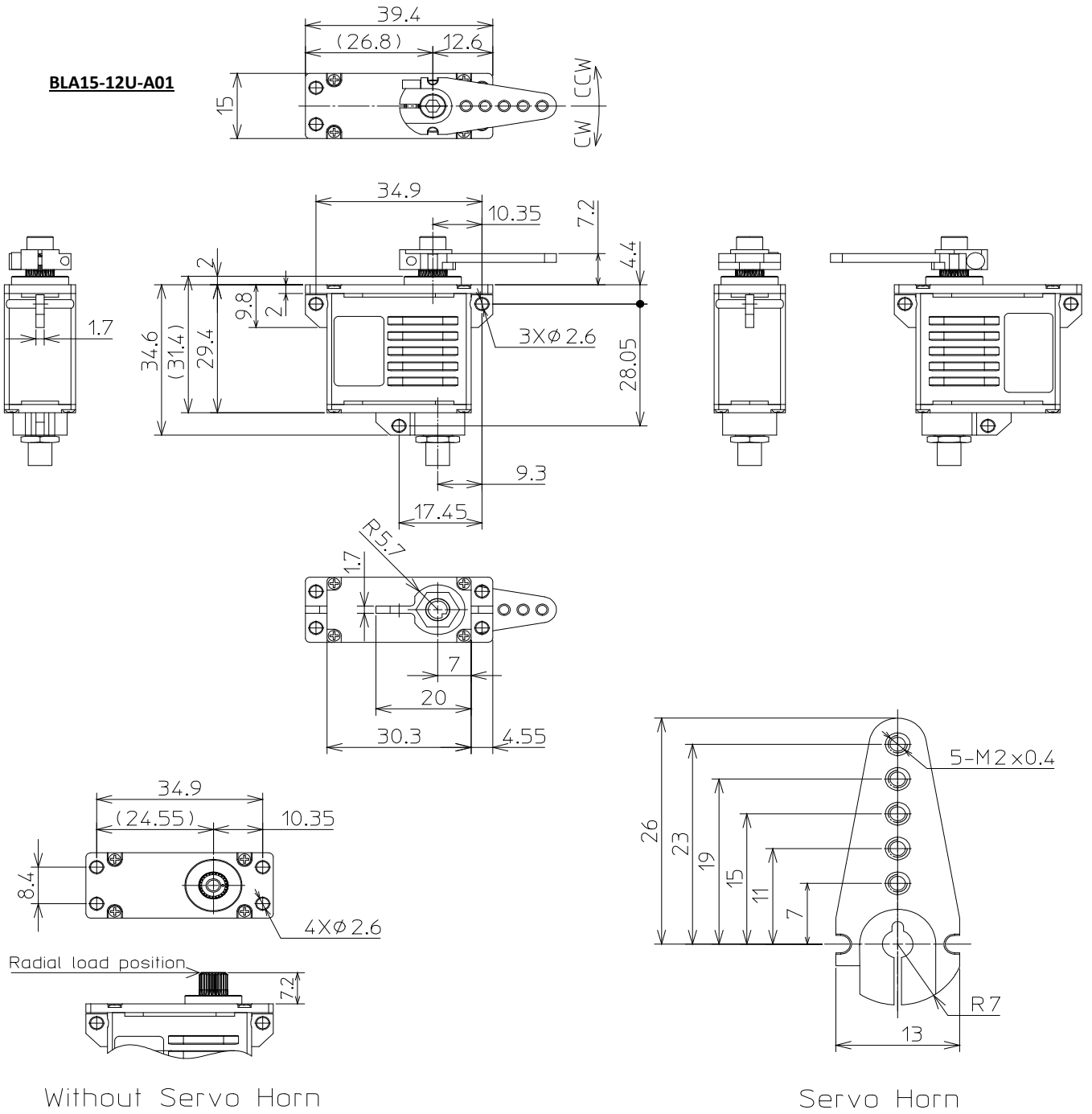
* At 23±5°C (Initial Performance Data)

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.
- Keep the servo away from an object which produces a strong magnetic field.
There is a possibility of malfunction if the servo is affected by a strong magnetic field.
- Please do not twist the cable. Twisting the cable will could result in breakage.

Outer Dimension (unit:mm)

BLA15-12U-A01

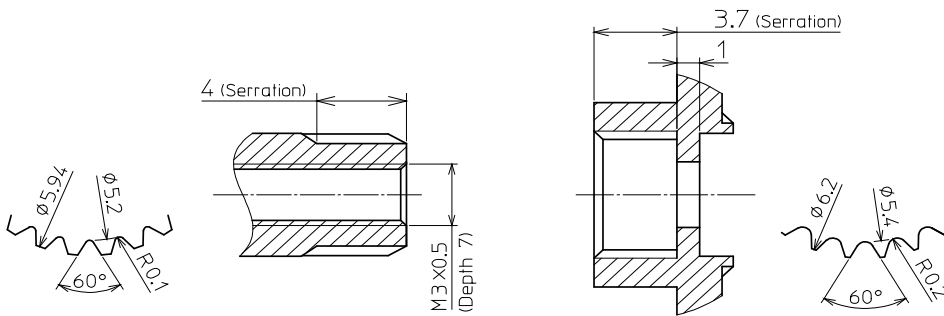


Without Servo Horn

Servo Horn

OUTPUT SHAFT Unit(mm)

SERVO HORN Unit(mm)



Sarretion Size

- Standard Diameter : $\Phi 6$
- Angle : 60°
- Tooth : 25