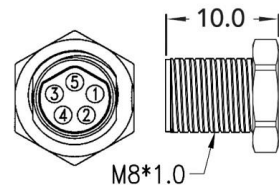
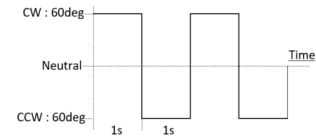
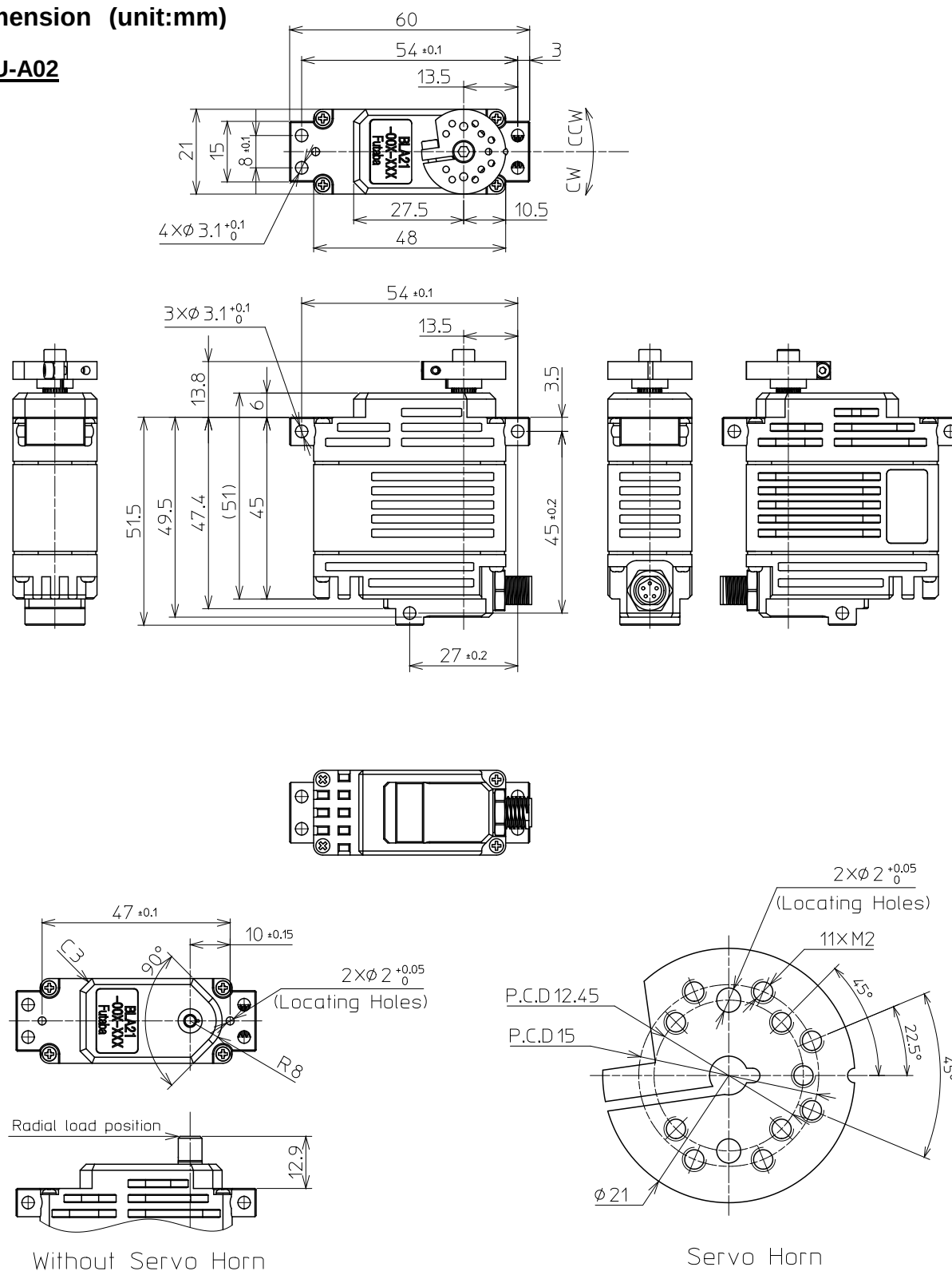
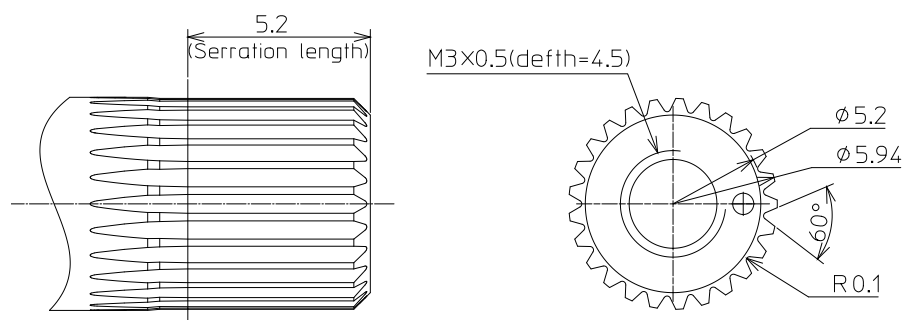


BLA21-06U-A02 Technical Specification

	Item		Specification				Remark		
1	CommunicationInterface		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		6.0 ~ 7.4V				DC power supply.		
4	Operating Voltage		5.0 ~ 8.4V				DC power supply.		
5	Standby Current		≤ 70mA				at 7.4V		
6	Starting Current *	Design value	≤ 20A				at 7.4V		
		Protection	12A				100% of torque control. See No.7.		
7	Operating mode	Angle control	+36,000,000.0° ~ -36,000,000.0°				See No.13.		
		Speed control	-300rpm ~ +300rpm				Commandable speed. See No.12 for actual speed.		
		Torque control	-100% ~ +100%				Max. torque at supply voltage of 7.4V 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 7.4V , No-Load		
			170	270	370	mA	LL : Low Limit Me : Medium Value UL : Upper Limit		
9	Max. Torque *		LL	Me	UL	unit	at 7.4V		
			38.0	48.0	58.0	kgf·cm			
			3.73	4.71	5.69	N·m			
			528	667	805	ozf·in			
			42.0				kgf·cm	at 6.0V Medium Value	
			50.0				kgf·cm	at 8.4V Reference value	
10	Rated Torque *		12.0				kgf·cm		
			1.18				N·m	at 7.4V	
			167				ozf·in		
			9.7				kgf·cm	at 6.0V Medium Value	
			12.0				kgf·cm	at 8.4V Reference value	
11	No Load Speed * (Angle control mode)		LL	Me	UL	unit	at 7.4V		
			0.04	0.07	0.10	s/60°			
			600	857	1500	°/s			
			100	143	250	rpm			
			0.08				s/60°	at 6.0V Medium Value	
			0.06				s/60°	at 8.4V Reference value	
12	No Load Speed * (Speed control mode)		LL	Me	UL	unit	at 7.4V		
			100	143	250	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 7.4V, No-Load, Position: ±60°	
			±1.5			°	Measured value		
14	BackLash *		≤ 0.5°				—		
15	Temperature Range	Operating	-40~+70℃ (-40~158°F)				*The operating noise of servo may become loud in low temperature.		
		Storage	-40~+80℃ (-40~176°F)				—		
		Protection	+80℃ (176°F)				Torque OFF at set temperature or higher.		
16	Outer Dimension		48.0x 21.0 x 51.0mm (1.89 x 0.83 x 2.01 in)				Refer to Outer Dimension		
17	Weight		127g				with Horn and screws without cables		
18	Case Material		Aluminum				Surface : Anodizing Salt Water Resistance, EMI Case Shielding		
19	Gear Set Material		Steel				Surface : Hardening treatment		
20	Gear bearing		8 ball bearing				—		
21	Radial load		100N				Load position : Refer to Outer Dimension * Design reference value.		
22	Position Sensor		Magnetic Encoder				—		
23	Motor Type		Brushless DC Motor				—		
24	Cable		Shielded Cable (Detachable)				Cable Length : 15.75 inch (400mm)		
25	Connector		Manufacture		ODS Electronics Co., Ltd.				
			Type		MMEPM05MCC-SHS7001				
			Mating		MAEAF05FCC-SRC7000 etc.				
			Pin Assignment	1	Brown	Battery(+)			
				2	White	Battery(-)			
				3	Blue	CAN-H			
4	Black	CAN-L							
	5	Drain	Case Shield Line						
26	MTTF *		Operating time > 1,000h (continue testing) (Please contact us for a test report)				Operating Condition	Angle Command Value	
							• at 7.4V • ±60°, 0.5Hz sweep Test Condition • Load : Rated Torque (Powder Brake)		
27	Vibration Resistance *		Operating time ≥ 1,000h (Please contact us for a test report)				Operating Condition	Test Condition (sine wave)	
							• at 7.4V • ±60°, 0.5Hz sweep • No-Load	• 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.

Outer Dimension (unit:mm)
BLA21-06U-A02

OUTPUT SHAFT

Sarretion Size

Standard Diameter : Ø6

Angle : 60°

Tooth : 25

■ 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.