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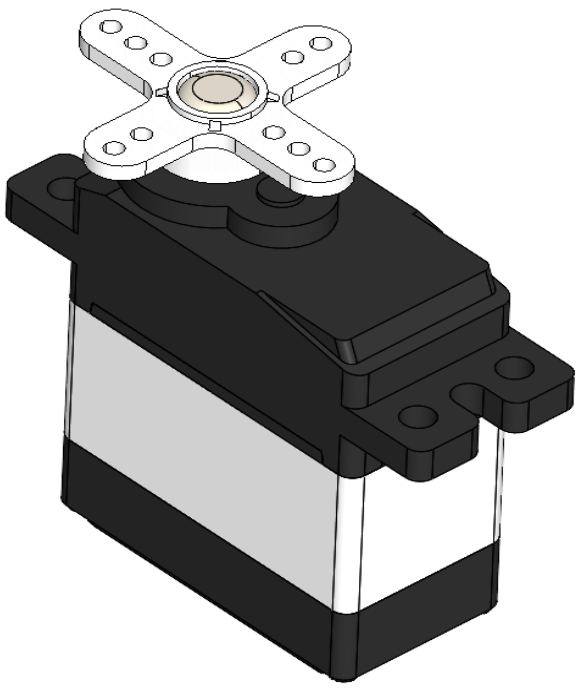
AD12-06H-A02
Technical Specification



AD12-06H-A02	Supports PWM signals and S.BUS2.

AD12-06H-A02 Technical Specification

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Basic specifications (AD12-06H-A02)

	Item		Specification				Remark
1	Rated Voltage		6.0～7.4V				DC power supply.
2	Operating Voltage		4.0～8.4V				DC power supply.
3	Standby Current		≤ 45mA				at 6.0～7.4V
4	Starting Current *		≤ 1.2A				at 6.0～7.4V
5	Consumption Current *		LL	Me	UL	unit	at 7.4V , No-Load LL : Low Limit Me : Medium Value UL : Upper Limit
			-	90	200	mA	
6	Max. Torque *		1.5	3.0	4.5	kgf·cm	at 7.4V
			0.15	0.29	0.44	N·m	
			21	42	62	ozf·in	
7	Rated Torque *		0.6			kgf·cm	at 7.4V
			0.06			N·m	
			8.3			ozf·in	
8	No Load Speed *		LL	Me	UL	unit	at 7.4V
			0.08	0.11	0.14	s/60°	
			429	545	750	°/s	
			71	91	125	min $^{-1}$	
9	Default Travel Angle *		CW 60° (920us) CCW 60° (2120us)				
10	Max Travel Angle		CW 90° (920us) CCW 90° (2120us)				Programing tool (CIU-2 or CIU-3,S-Link) required.
11	BackLash *		≤ 1.5°				
12	Temperature Range	Operating	-10～+45℃ (14～113°F)				
		Storage	-20～+60℃ (-4～140°F)				
13	Soft Start		OFF				Restricts operation in the specified direction the instant the power is turned on. By making this setting, only the fi rst operation when the power is turned on slowly moves the servo to the specifi ed position.

* At 23±5℃ (Initial Performance Data)

AD12-06H-A02 Technical Specification

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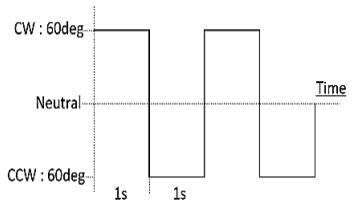
Mechanical specifications (AD12-06H-A02)

	Item	Specification	Remark
14	Outer Dimension	23.0 x 11.8 x 28.6mm (0.91 x 0.46 x 1.13 inch)	See below Outer Dimension
15	Weight	16.2g (0.57oz)	
16	International Protection Code	-	
17	Case Material	Upper : Resin / Middle : Resin Bottom : Resin / Heat Sink : AL	
18	Gear Set Material	1st : Resin / 2nd,3rd,4th,5th(Final) : Metal	
19	Gear bearing	1 ball bearing 1 metal bearing	
20	Output Shaft	Serration S5	Size: φ5mm, 21 teeth
21	Radial load	-	Do not apply a strong load to the output shaft.
22	Position Sensor	Potentiometer	
23	Motor Type	Brushed DC Motor	
24	MTTF *	Operating time 55h (Inquire for the test report)	Operating Condition ・at 7.4V ・±60°, 0.5Hz sweep Test Condition ・Load : Rated Torque (Powder Brake) Angle Command Value 
25	Vibration Resistance *	Operating time 53h (Inquire for the test report)	Operating Condition ・at 7.4V ・±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℃ (Initial Performance Data)

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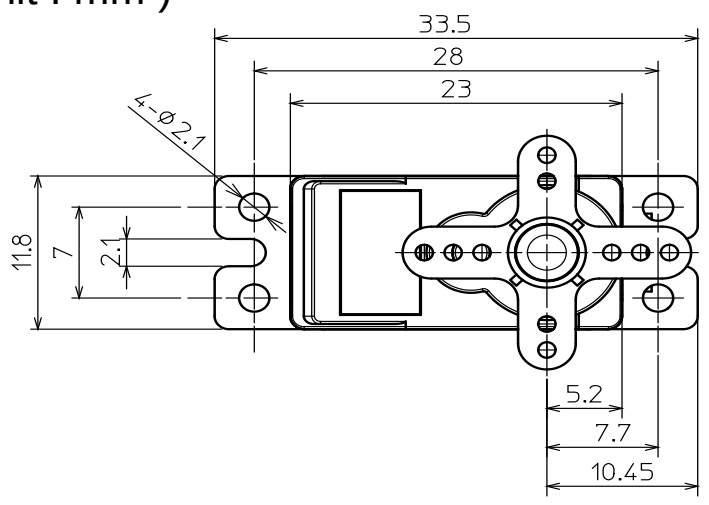
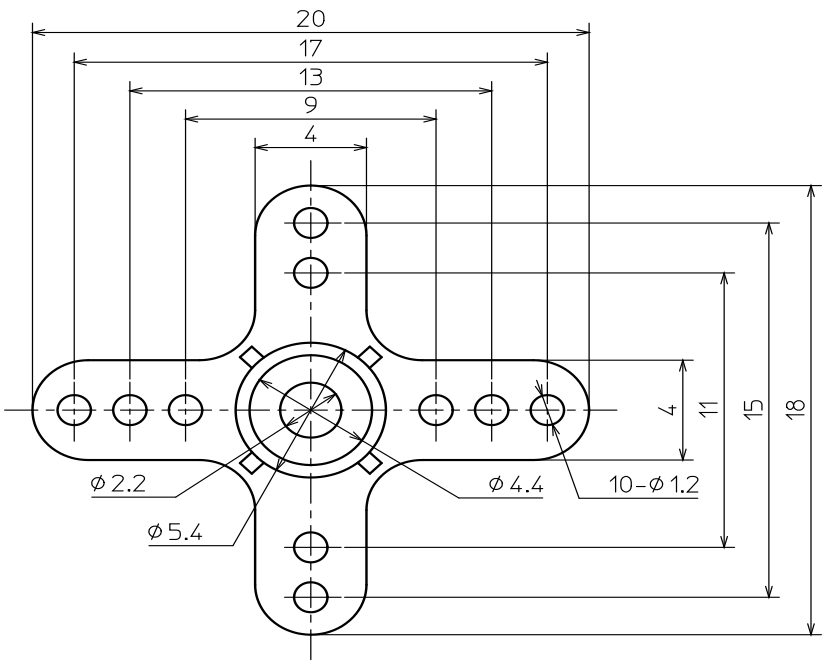
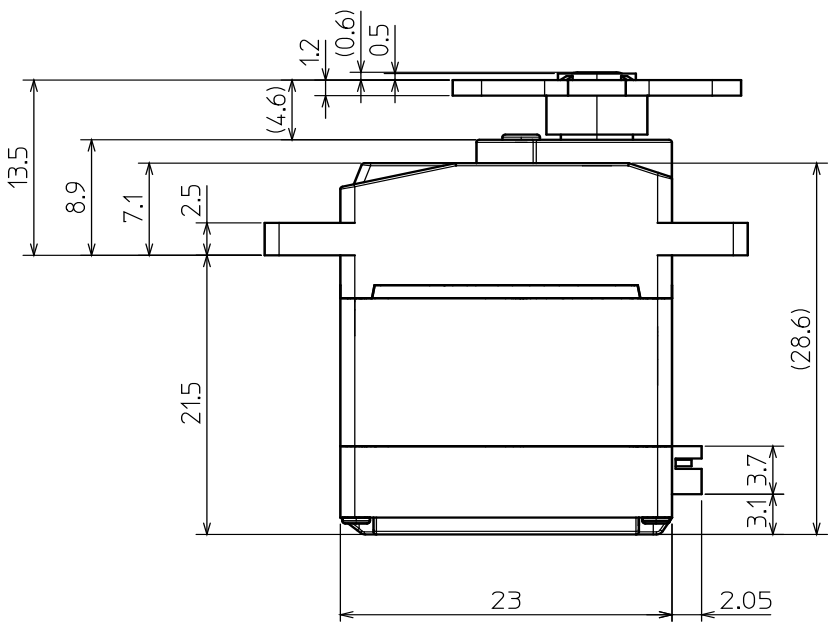
Outer Dimension (AD12-06H-A02)

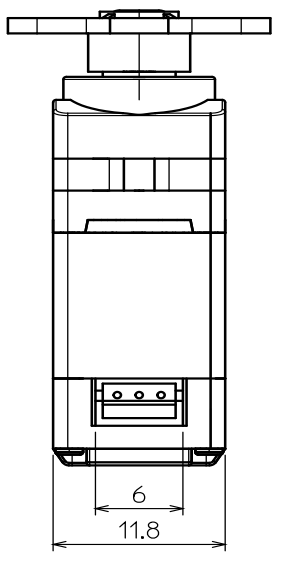
(unit : mm)



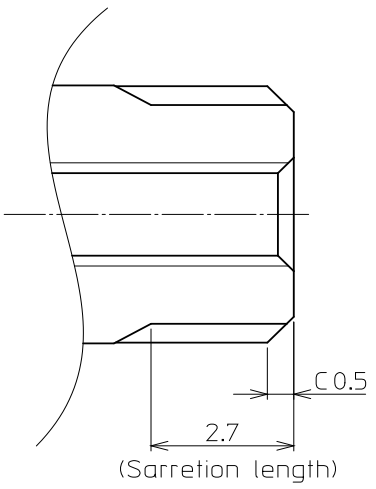


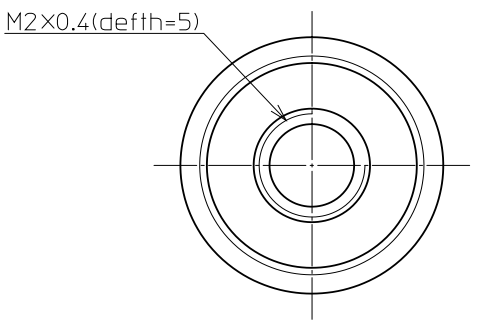


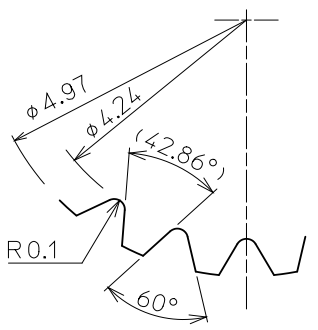
Servo Horn



OUTPUT SHAFT







Sarretion Size

Standard Diameter : Φ5
Angle : 60°
Tooth : 21

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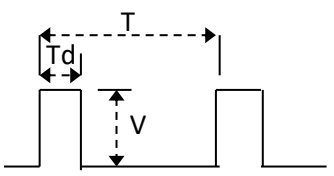
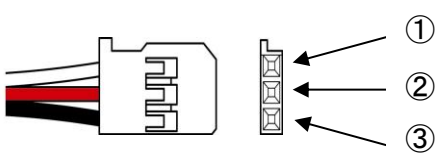
Specifications for PWM signals (AD12-06H-A02)

	Item	Specification	Remark	
26	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	Default 920 / 1520 / 1520 us

Connector specifications

	Item		Specification			Remark
27	Cable		Non-Shielded Cable			Cable Length : 7.87 inch (200mm)
28	Connector	Manufacture	J.A.M. Co., Ltd.			
		Type	FC25-03HG			
		Matching	FC25-03M etc.			
29	Pin Assignment		Pin No.	Assignment	Cable Color	
			①	PWM	White	
			②	Vcc	Red	
			③	GND	Black	

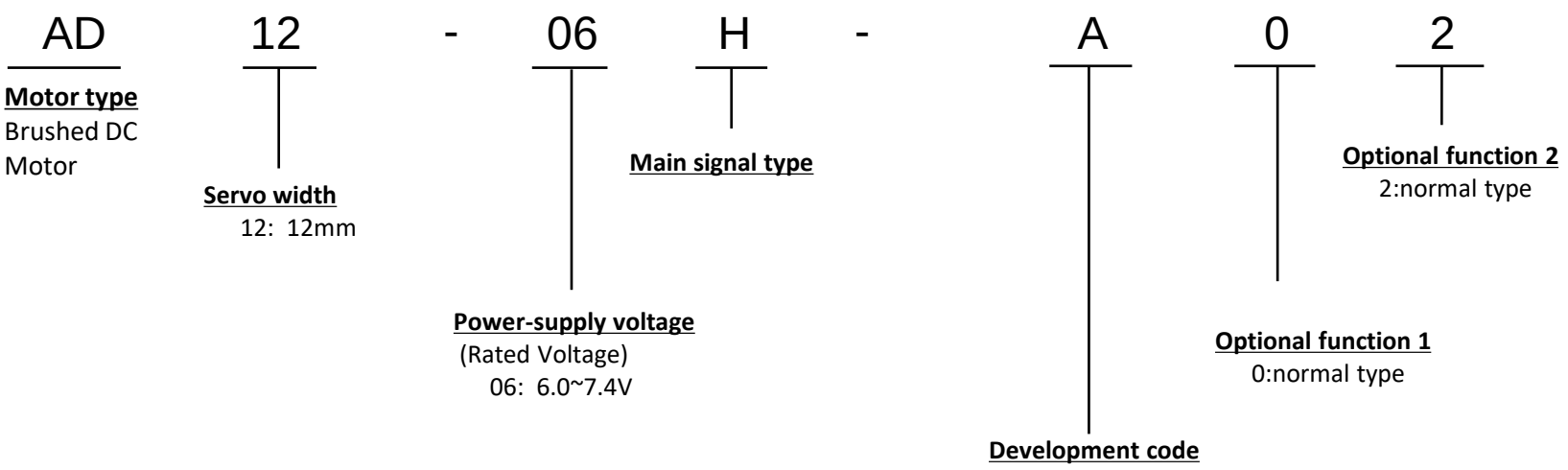
Connector specifications (Servo side)

	Item		Specification	Remark
30	Connector	Manufacture	J.S.T.MFG.CO.,LTD.	
		Housing	ZHR-3	
		Contact Pin	SZH-002T-P0.5	
		Matching	S3B-ZR	

All Specifications are subject to change without prior notice.

AD12-06H-A02 Technical Specification

Model name system



■Caution

- This product SHOULD NOT been 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.