

AD20-05H-A01 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
		S.BUS				Frame Rate:T	3.0~30ms (Default 14.25ms)
						CW/Center/CCW:Td	920/1520/2120μs (Resolution recommends less than 1μs.)
						Futaba Serial Protocol (Please ask us for more information.)	
2	Rated Voltage	DC 4.8~DC 6.0V				-	
3	Operating Voltage	DC 4.0~DC 6.0V				-	
4	Standby Current	≤ 20mA				at 4.8~6.0V	
5	Starting Current*	0.7A				at 6.0V	
6	Consumption Current*	LL	Me	UL	unit	at 6.0V , No-Load	
		50	100	150	mA	LL : Low Limit Me : Medium Value UL : Upper Limit	
7	Max. Torque*	LL	Me	UL	unit	at 6.0V	
		3.1	4.1	5.1	kgf-cm		
		0.3	0.4	0.5	N-m		
		43.1	56.9	70.8	ozf-in		
8	Rated Torque*	0.8				kgf-cm	at 6.0V
		0.08				N-m	20% of Max. Torque
		11.4				ozf-in	
9	No Load Speed*	LL	Me	UL	unit	at 6.0V	
		0.14	0.19	0.25	s/60°		
		240.0	315.8	428.6	°/s		
		40.0	52.6	71.4	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*	≤ 0.7°				-	
13	Operating Temperature Range	-20~+60°C (-4~140°F)				-	
14	Storage Temperature Range	-20~+60°C (-4~140°F)				-	
15	Outer Dimension	40.4 x 19.8 x 36.0mm (1.59 x 0.78 x 1.42 in)				-	
16	Weight	36g (1.27oz)				with Horn and set screw	
17	Case Material	Upper,Middle,Bottom : PP				-	
18	Gear Set Material	1st,2nd,3rd,4th(Final) : POM				-	
19	Cable	Non-Shielded Cable				Cable Length : 11.81 inch (300mm)	
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	500h (at 6.0V)				Test Condition • Load : 30% of Max. Torque • Operating Condition : 0.5Hz sweep (±60°) • Input Pluse : PWM • Calculated by Weibull analysis	
		650h (at 4.8V)					
22	Vibration Resistance *	Operating time > 100h (at 4.8V)				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.

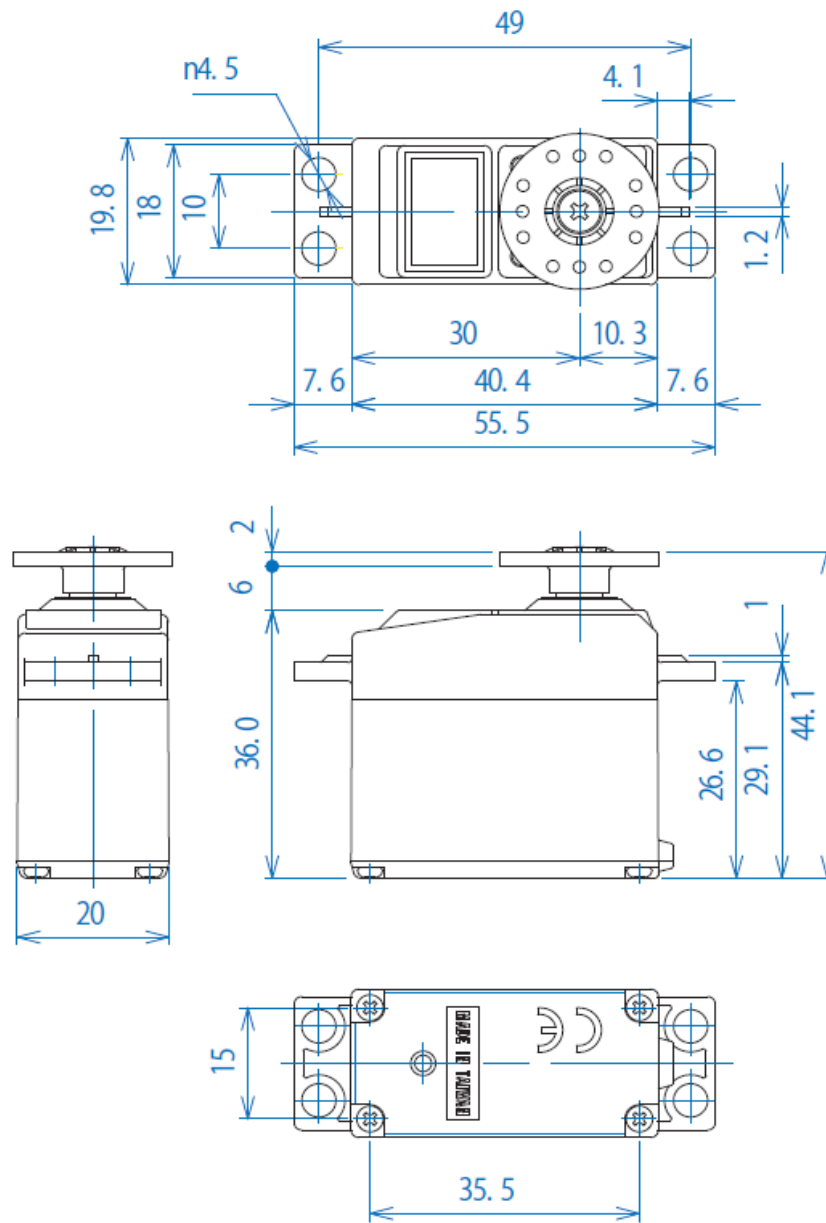
All Specifications are subject to change without prior notice.

Caution

This product SHOULD NOT be used for the devices that is directly related to human life and/or harmful devices for human body such as below applications.

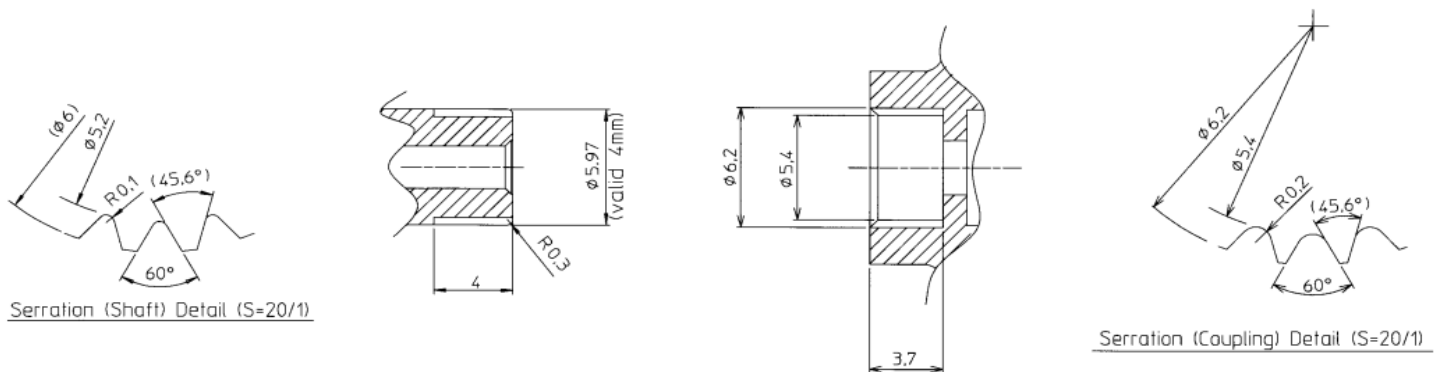
- (1)Medical Devices
- (2)Aerospace/Aviation Related Devices
- (3)Nuclear Related Devices e.t.c

Outer Dimension
AD20-05H-01A



Unit(mm)

Servo Serration



Trigonous Teeth Serration 5.2 x 6.2		
	Shaft	Coupling
Angle of Sarration	60°	60°
Number of Teeth	25	25
Shaft Addendum Circle	φ6	-----
Shaft Dedendum Circle	φ5.2	-----
Coupling Addendum Circle	-----	φ5.4
Coupling Dedendum Circle	-----	φ6.2
Over Pin Diameter	6.488 (Pin Diameter φ0.5)	5.008 (Pin Diameter φ0.4)

Unit(mm)