

AC20-05H-A01 Technical Specification

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AC20-05H-A01 Supports PWM signals and S.BUS2.

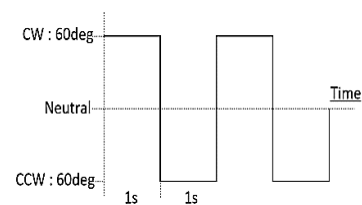
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Basic specifications (AC20-05H-A01)

	Item		Specification				Remark
1	Rated Voltage		4.8 ~ 6.0V				DC power supply.
2	Operating Voltage		4.0 ~ 6.0V				DC power supply.
3	Standby Current		8mA				at 4.8V
			≤ 30mA				at 6.0V
4	Starting Current *		3.5A				at 4.8V
			≤ 6.0A				at 6.0V
5	Consumption Current *		LL	Me	UL	unit	LL : Low Limit Me : Medium Value UL : Upper Limit
			—	80	—	mA	at 4.8V , No-Load
			50	100	150		at 6.0V , No-Load
6	Max. Torque *		—	19.6	—	kgf·cm	at 4.8V
			—	1.92	—	N·m	
			—	272	—	ozf·in	
			19.6	24.5	29.4	kgf·cm	at 6.0V
			1.92	2.40	2.88	N·m	
			272	340	408	ozf·in	
7	Rated Torque *		—	2.0	—	kgf·cm	at 4.8V
			—	0.20	—	N·m	
			—	28	—	ozf·in	
			—	2.5	—	kgf·cm	at 6.0V
			—	0.25	—	N·m	
			—	35	—	ozf·in	
8	No Load Speed *		—	0.21	—	s/60°	at 4.8V
			—	286	—	°/s	
			—	48	—	rpm	
			0.20	0.17	0.14	s/60°	at 6.0V
			300	353	429	°/s	
			50	59	71	rpm	
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 *		≤ 0.5°				—
12	Temperature Range	Operating	-10~+45°C (-40~158°F)				—
		Storage	-20~+60°C (-40~176°F)				—

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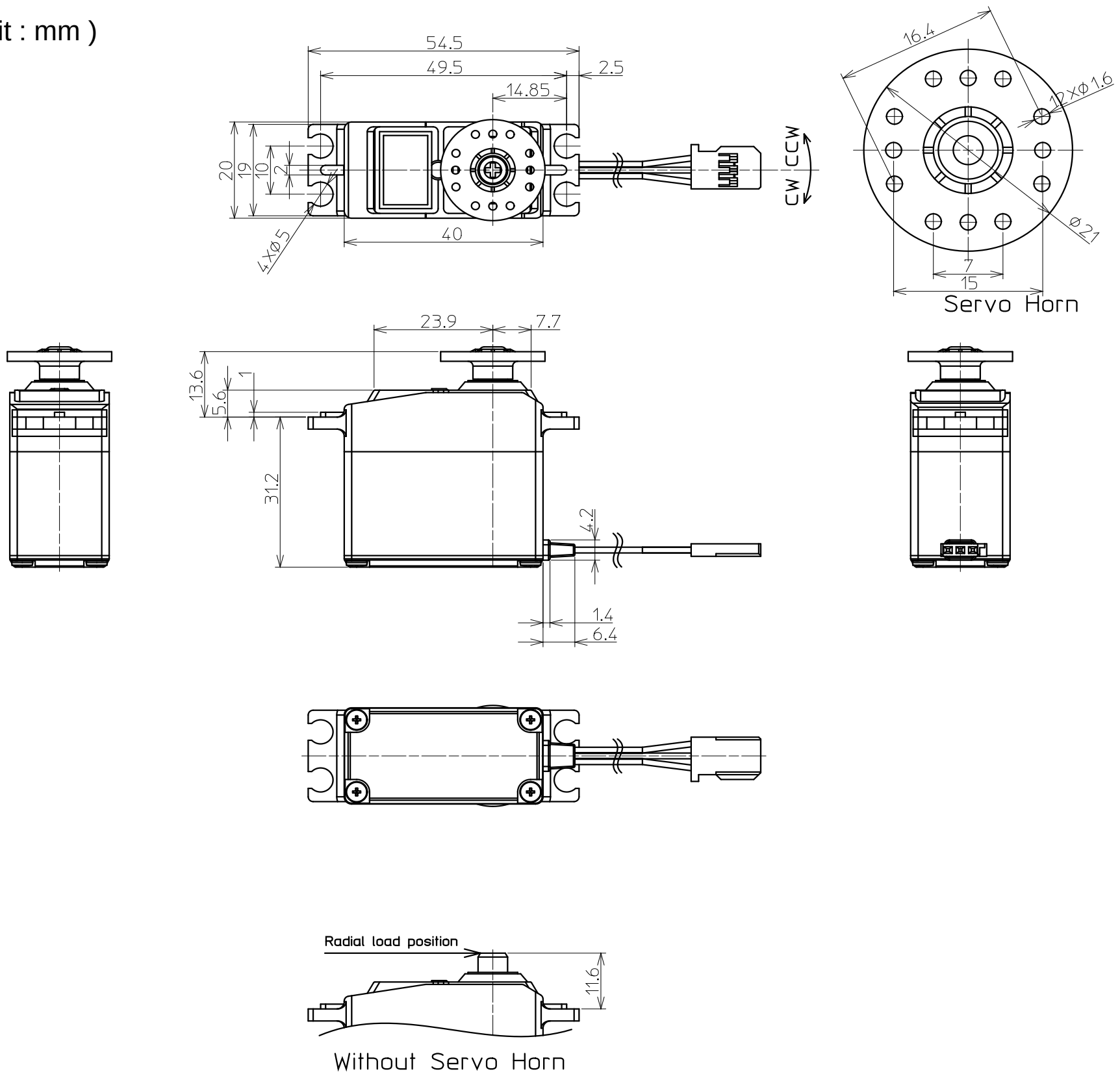
Mechanical specifications (AC20-05H-A01)

	Item	Specification	Remark
13	Outer Dimension	40.0 x 20.0 x 36.6mm (1.57 x 0.79 x 1.44 in)	See below Outer Dimension
14	Weight	63g (2.22oz)	—
15	International Protection Code	—	Non-waterproof
16	Case Material	Upper : Resin / Middle : Resin / Bottom : Resin / Heat Sink : Alminum	—
17	Gear Set Material	1st : Resin,Steel(Pinion) / 2nd : Metal / 3rd : Steel / 4th(Final) : Alminum	—
18	Gear bearing	2 ball bearing	—
19	Output Shaft	Serration S6	Size: ϕ 6mm, 25 teeth
20	Radial load	TBD	—
21	Position Sensor	Potentiometer	—
22	Motor Type	Brush DC Coreless Motor	—
23	MTTF *	600h (Inquire for the test report)	<u>Operating Condition</u> - at 6.0V $\pm 60^\circ$, 0.5Hz sweep <u>Test Condition</u> - Load : Rated Torque (Powder Brake) <u>Angle Command Value</u> 
24	Vibration Resistance *	Operating time > 200h (Inquire for the test report)	<u>Operating Condition</u> - at 6.0V $\pm 60^\circ$, 0.5Hz sweep - No-Load <u>Test Condition (sine wave)</u> - Frequency : 10 to 500Hz - sweep 1oct/min - amplitude limit 2mm - Acceleration : 300m/s^2 - Vibration axis : X,Y,Z

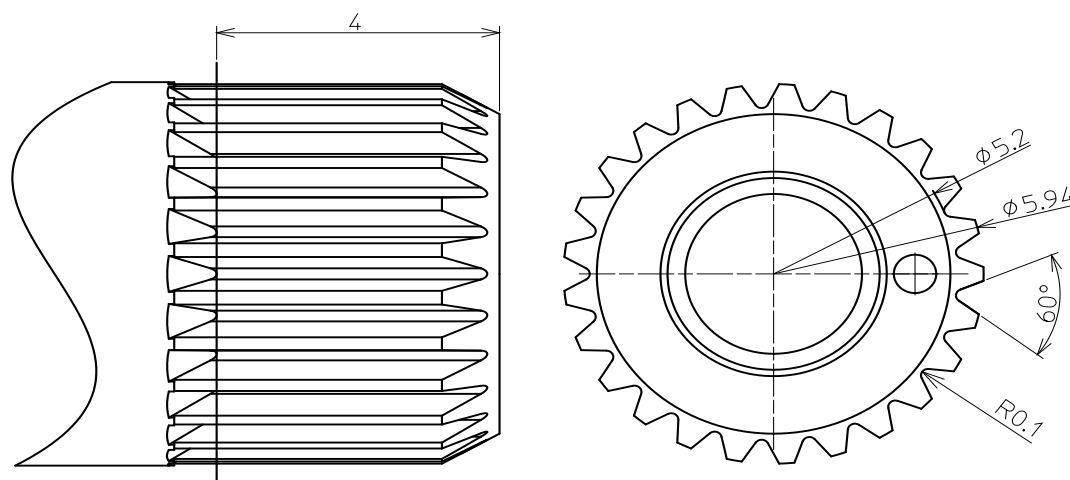
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Outer Dimension (AC20-05H-A01)

(unit : mm)



OUTPUT SHAFT

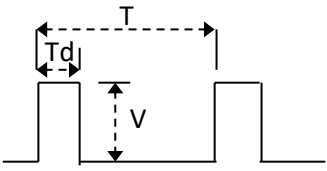


Sarretion Size

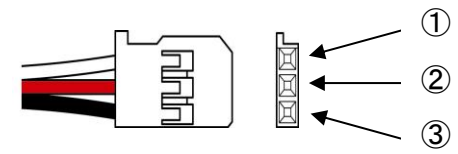
Standard Diameter : Ø6
Angle : 60°
Tooth : 25

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Specifications for PWM signals (AC20-05H-A01)

	Item	Specification	Remark	
25	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 / 2120μs
		S.BUS / S.BUS2	Futaba Serial Protocol (Please ask us for more information.)	

Connector specifications (AC20-05H-A01)

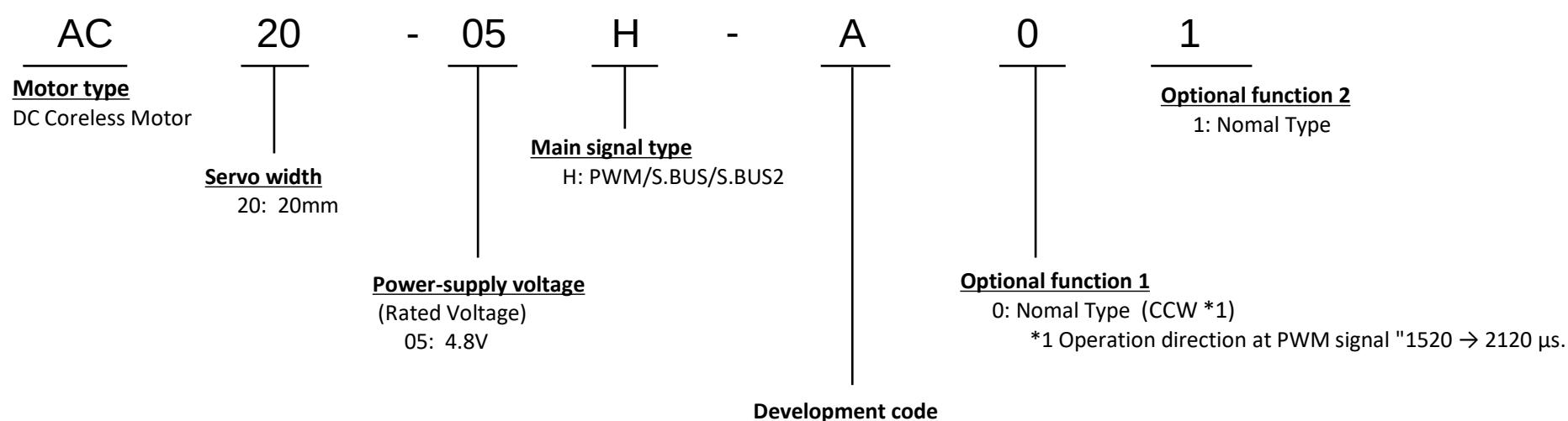
Connector Specifications (FC25 300mm)						
	Item		Specification			Remark
26	Cable		Non-Shielded Cable			Cable Length : 11.81 inch (300mm)
27	Connector	Manufacture	J.A.M. Co., Ltd.			
		Type	FC25-03HG			
		Mating	FC25-03M etc.			
28	Pin Assignment		Pin No.	Assignment	Cable Color	
			①	PWM	White	
			②	Vcc	Red	
			③	GND	Black	

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

All Specifications are subject to change without prior notice.

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Model name system



■ 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.