

## AD1AC Technical Specification

Update Number

**(THIS DATA IS JUST A REFERENCE. IT IS NOT A GUARANTEED DATA.)**

161027-01

Item		Specification				Remark	
1	Communication Interface	PWM				Signal Voltage:V	Max : Vcc
							Min : 3.0V
						Frame Rate:T	14.25~20ms
						Left/Center/Right:Td	2120/1520/920us
						Resolution	≤ 1us
2	Rated Voltage	4.8V DC				-	
3	Operating Voltage	4.0~6.0V DC				-	
4	Standby Current	≤ 12mA				-	
5	Starting Current*	0.8A				at 4.8V	
6	Consumption Current*	LL	Me	UL	unit	LL : Low Limit Me : Medium Value UL : Upper Limit	
		40	80	145	mA	at 4.8V , No-Load	
7	Max. Torque*	3.1	3.7	4.3	kgf-cm	at 4.8V	
		0.30	0.36	0.42	N-m	at 4.8V	
		43.1	51.4	59.7	ozf-in	at 4.8V	
		-	4.6	-	kgf-cm	at 6.0V (Calculated value)	
		-	0.45	-	N-m	at 6.0V (Calculated value)	
		-	63.9	-	ozf-in	at 6.0V (Calculated value)	
8	No Load Speed*	0.20	0.23	0.26	sec/60°	at 4.8V	
		230.8	260.9	300.0	°/sec	at 4.8V	
		38.5	43.5	50.0	rpm	at 4.8V	
		-	0.18	-	sec/60°	at 6.0V (Calculated value)	
		-	326.1	-	°/sec	at 6.0V (Calculated value)	
		-	54.3	-	rpm	at 6.0V (Calculated value)	
9	Default Travel Angle	CW 50° (920us) CCW 50° (2120us)				-	
10	BackLash*	≤ 0.6°				-	
11	Operating Temperature Range	-10~+45°C (14~113°F)				-	
12	Storage Temperature Range	-20~+60°C (-4~140°F)				-	
13	Outer Dimension	1.10 x 0.51 x 1.17 inch (28.0 x 13.0 x 29.8mm)				-	
14	Weight	0.74oz (20g)				-	
15	Case Material	Upper : Resin / Middle : Resin / Bottom : Resin				-	
16	Gear Set Material	1st : Resin / 2nd...Final : Metal				-	
17	Cable	Non-Shielded Cable				Cable Length : 5.91 inch (150mm)	
18	Connector	Manufacture	J.A.M Co., LTD.				
		Type	FC25-03HG				
		Mating	FC25-03M etc.				
		Pin Assignment	1	White	PWM		
	2	Red	Vcc				
	3	Black	GND				
19	MTTF	400h (Calculated by Weibull analysis)				Test Condition Load : No-Load / 0.5Hz sweep (±50°) / at 4.8V	
		150h (Calculated by Weibull analysis)				Test Condition Load : 20% of Max. Torque / 0.5Hz sweep (±50°) / at 4.8V	
20	Vibration Resistance *	Operating time(at 4.8V) ≥ 10h Non Operating time ≥ 100h				Test Condition	
						Frequency range	80 to 400Hz
						Acceleration	30G (294m/s <sup>2</sup> )
						Sweep rate	1.2min
						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 and/or harmful devices for human body such as below applications.

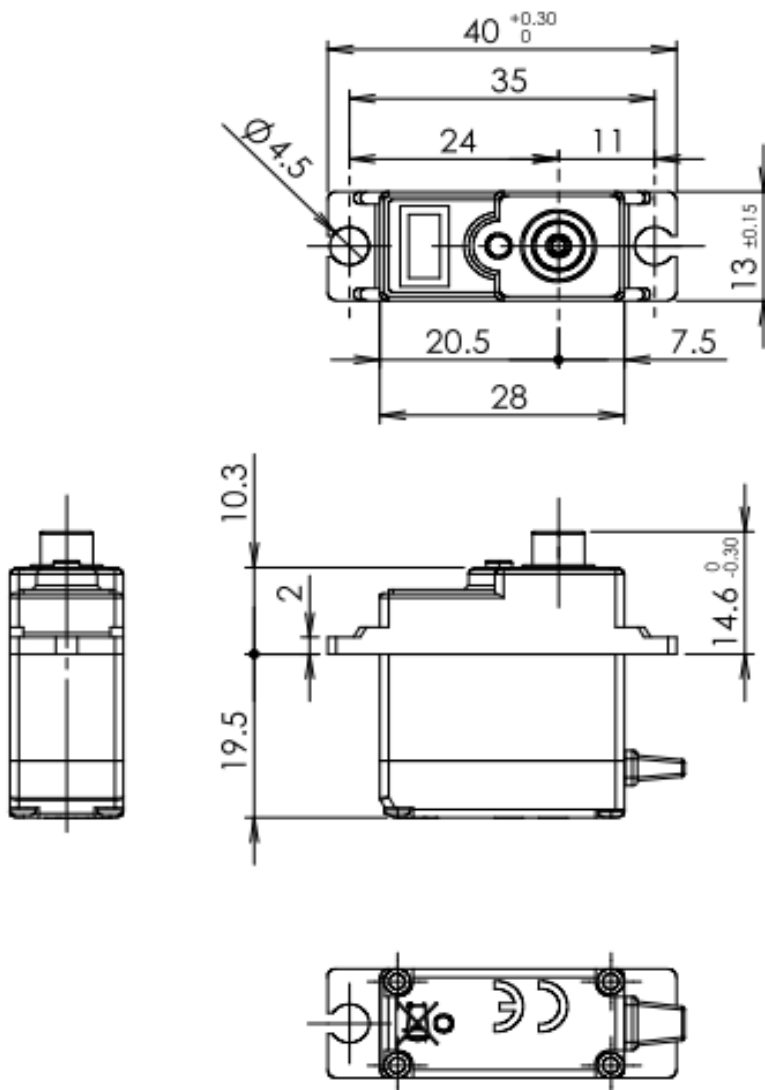
(1) Medical Devices

(2) Aerospace/Aviation Related Devices

(3) Nuclear Related Devices

e.t.c.

Outer Dimension



※Not specified tolerance dimensions ( ± ) 0.2 (Unit mm)