



Bestell-Nr.: 2388648

Reely 15kg Digital Servo

Technical data sheet

1. Apply Environmental Condition

No.	Item	Specification
1-1	Storage Temperature Range	-20°C~60°C
1-2	Operating Temperature Range	-10°C~50°C
1-3	Operating Voltage Range	DC4.8V~DC6V

2. Standard Test Environment

2-1	Standard Test Environment	Every test under normal temperature and humidity (temperature: 21±25°C, relative humidity: 65±10%), and characteristics are determined under the condition of standard test.
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3. Environment Performance

No.	Item	Complied?	Standard	Remarks
3-1	The motor	Yes	≤50dB	
3-2	Steering gear	Yes	≤50dB	
3-3	EMC	Yes		
3-4	RoHS	Yes		Hazardous substances in electrical and electronic equipment

4. Secure Performance

No.	Item	With Certification?	Remarks
4-1	ASTM F963	Yes	
4-2	EN71	Yes	

5. Appearance Inspection

No.	Item	Specification
5-1	Outline Drawing	See section 12
5-2	Appearance	With reference to the sample

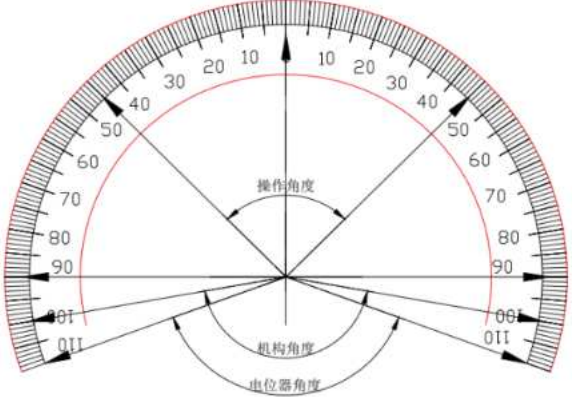
6. Motor Performance

No.	Item	Specification	Remarks
6-1	The motor model	HRF-130CH-20120-28.3	
6-2	The use of voltage	DC5.0V	
6-3	Driving frequency	20 KHZ	
6-4	Motor idling current	≤ 140 MA	
6-5	Motor starting voltage	≤ 0.8 V	
6-6	Locked-rotor current	≤ 3600 MA	
6-7	No-load speed	13000r/min $\pm 10\%$	
6-8	Stall torque	≥ 45 g.cm	
6-9	Shaft to	CW	

7. Steering Gear Specification (Function of the Performance)

No.	Item	Specification	Remarks
7-1	Service voltage	6V	
7-2	Operating speed (at no load)	0.21 $\pm$ 0.02sec/60°	
7-3	Running current (at no load)	230 $\pm$ 40MA	
7-4	Stall torque (at locked)	15 $\pm$ 2kg.cm	
7-5	Stall current (at locked)	2700 $\pm$ 200mA	
7-6	Idle current (at stopped)	≤ 14 mA	
7-7	Load life	>8000	
7-8	Temperature drift (at 25°C)	$\leq 1^\circ$	

8. Mechanical Specification

No.	Item	Specification	
8-1	Appearance of size	See drawings	
8-2	The potentiometer limit	$220^\circ \pm 10^\circ$	
8-3	Institutions limit angle	$200^\circ \pm 10^\circ$	
8-4	Weight	58 ± 1 g	
8-5	Wire specifications	#22PVC	
8-6	Wire length	L=300MM, orange (signal), red (+), brown (-), OD=1.5, 60 core PVC (plug not included 120 ± 5 mm)	
8-7	Vane flake specification	25T/ $\Psi 5.9$	
8-8	Vane flake type	Nil	
8-9	Reduction ratio	1/325	
8-10	Gear phantom	$\leq 1^\circ$	
8-11	The rocker phantom	1°	
8-12	The rocker screw	PM $\varnothing 3.0 \times 5$ MM ≤ 50 dB	

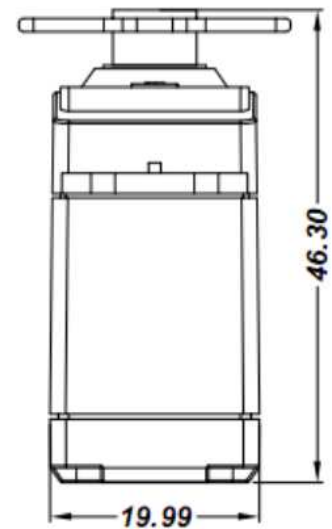
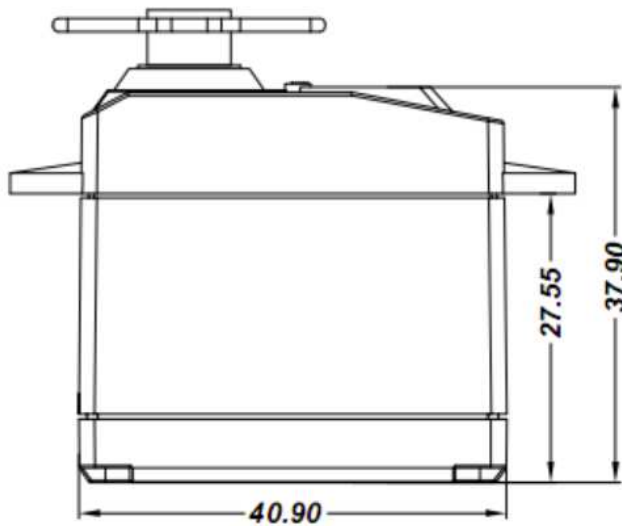
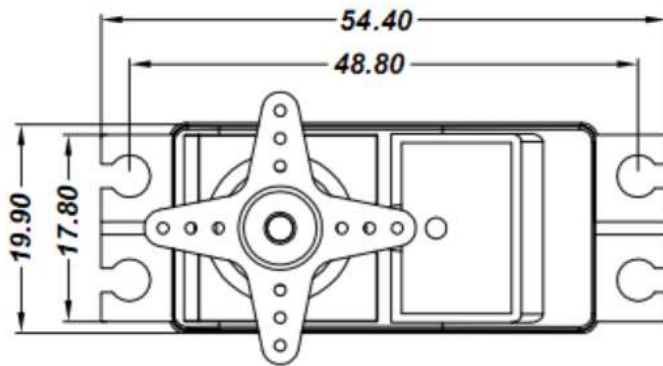
9. Control Specification

No.	Item	Specification	Remarks
9-1	Control system	Change the pulse width	
9-2	Amplifier type	Digital controller	
9-3	Control IC	KC9102	
9-4	Operating travel	$90^\circ \pm 10^\circ$ (1000 $\rightarrow$ 2000 μ sec)	
9-5	Left & Right Travelling Angle Deviation	≤ 3	Diff. between 1000 μ sec and 2000 μ sec
9-6	Centering Deviation	$\leq 1^\circ$	
9-7	Neutral Position	1500 μ sec	
9-8	Dead Hand Width	≤ 9 μ sec	
9-9	Rotating Direction	Counterclockwise	
9-10	Pulse Width Range	800 $\rightarrow$ 2200 μ sec	Signal width range
9-11	Maximum Travel	About 140°	Max rotation angle within 800 $\rightarrow$ 2200 μ sec
9-12	Pulse Width Range	50KHZ	

10. Reliability Testing

No.	Item	Specification	Remarks
10-1	Life test	≥20 hours	3kg added weight, CW90° 0.75 sec, CCW90° 0.75 sec, pause 0.5 sec, repeat
10-2	Waterproof test	≥8000 times	
10-3	Drop test		
10-4	Impact test		

11. Overall Dimensions



12. Plug Definition

