



Shenzhen Fiter Model Co., Ltd.

SHENZHEN FEETECH RC MODEL CO.,LTD.

Product Specifications

PRODUCT SPECIFICATION

Customer ,

Model (MODEL) ħSCS0009

Product Name: 6V, 2.3KG, Plastic Housing, Metal Gear, 300°, Single-Axis, TTL Serial Servo

Edition ħA/0

Before you place an order for this product, please read this specification and sign and return it in the confirmation box below.

Sign back before you place an order to purchase this product,
please read this specification and in the following admit column.

FEETECH APPROVED

write EDIT	Audit CHECKED	confirm APPROVED
Li Yongchuan	Wu Gengyan	Feng Tanxin

Customer Approved


Review REVIEW	Audit CHECKED	confirm APPROVED


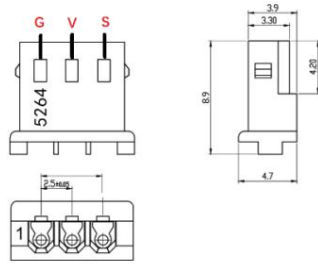
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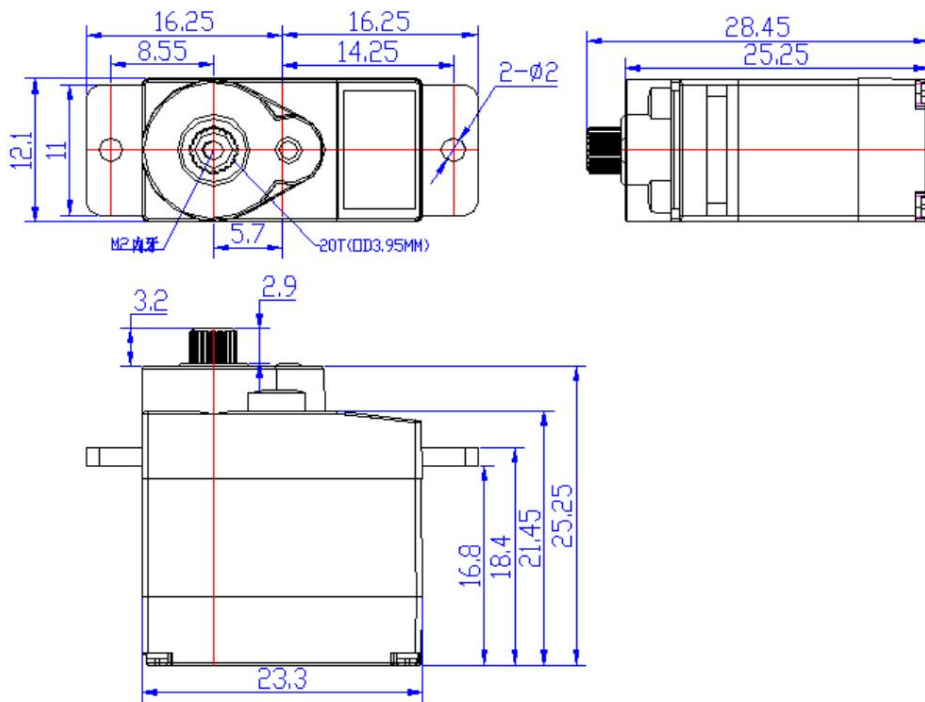
Websiteħwww.feetech.cn


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1. Apply Environmental Condition:					
No.	Item Storage		Specification		
1-1	Temperature Range Operating Temperature		-30℃~80℃		
1-2	Range		-20℃~60℃		
2. Standard Test Environment:					
No.	Item		Specification		
2-1	Temperature Range Humidity		25℃ ±5℃		
2-2	Range		65%±10%		
3. Secure Performance and Certificate					
No.	Item	Certificate	Remarks		
3-1	ASTM F963	No	US toy testing standards and EU		
3-2	EN71	No	toy product regulations regulate electromagnetic		
3-3	FCC	No	interference in electronic and electrical appliances, manage and control radio frequency ranges, and protect the normal operation of telecommunications networks and electrical		
3-4	EMC	Yes	products. They require that any substance not cause unacceptable electromagnetic interference waves and that the machine, device, or system must be able to function properly in the electromagnetic		
3-5	ROHS	Yes	environment. The content of harmful substances in electronic and electrical equipment is also controlled		
3-6	REACH	NO	EU Regulation "Registration, Evaluation, Authorisation and Restriction of Chemicals"		
4. Appearance Inspection:					
No.	Item		Specification		
4-1	Dimensions Outline Drawing		See the appendix for dimensions (item 12)		
4-2	Appearance		No damage, no impact on functionality No damage and mustn't affect functions.		
5. Electrical Specification					
No.	Item	Specification (Specification)	Specification (Specification)	Remark Remark	
5-1	Typical operating voltage	4.8V	6V		
5-2	No Load Speed	0.125sec/60° (80RPM)	0.1sec/60° (100RPM)		
5-3	Running Current (no load)	120mA	150mA		
5-4	Stall Torque (at locked)	1.89kg.cm	2.3kg.cm		
		26.3oz.in	31.99oz.in		
5-5	Stalled rotor current Stall Current (at locked)	0.8A	1.0A		
5-6	Idle Current (at stopped)	5mA	6mA		
5-7	Input Voltage	4V-7.4V			
5-8	Rated Torque	0.65kg.cm	0.75kg.cm		
5-9	Rated Current	300mA	400mA		
5-10	Terminal resistance	0.6Ω			
5-11	Kt constant	2.3kg.cm/A			

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6 Mechanical Specifications:					
No.	Item	Specification		Remarks	
6-1	Size	23.2mmX12.1mmX25.25mm		See drawings	
6-2	Limit Angle of the mechanism	No limit			
6-3	Case material Gear material	PC			
6-4	Bearing type	Copper + Steel			
6-5		NO			
6-6	Angle Sansor	Type	Carbon-Film Potentiometer		
		Angle	330°		
		Life	100000Cycles Min		
6-7	Connectors and cables Connector and Cable	Type	5264-3P		
		Material line	PP		
		length	15CM		
		Pin Definition Pin Definition	1	GND	
			2	Vcc	
6-8	The Weight Output	13.2± 1g			
6-9	Shaft Horn Type	20T/OD3.95mm			
6-10	Gear Ratio	1/416			
6-11	Gear Back Lash Rocker	ÿ0.5°			
6-12	Arm Back Lash The rocker phantom	0°			
6-13	Output shaft screw The rocker screw	M2.0X4			
6-14	Motor	Core Motor			
7-1 Control Specification:					
No.	Item	Specification		Remarks	
7-1	Command Signal	Digital Packet			
7-2	Protocol Type	Half Duplex Asynchronous Serial Communication		8bit, 1stop, No Parity	
7-3	ID range	0-253		Customizable	
7-4	Communication Baud Rate	38400bps ~ 1 Mbps		Customizable (factory default 1Mbps)	
7-5	Control Algorithm	PID		Customizable (supports modification)	
7-6	Neutral Position	90°ÿ511ÿ			
7-7	Rotation angle Running degree	300°(when 0ÿ1024)			
7-8	Electronic resolution Resolution [deg/pulse]	0.293°(300°/1024)			
7-9	Rotating Direction	Clockwise(0ÿ1024ÿ)		Customizable	
7-10	Feedback	Load, Position, Speed, Input			
		Voltage (input voltage), Temperature (operating temperature)			

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7-2. Control Specification:					
No.	Item	Specification		Remarks	
7-11	Electronic Protection	Overload		When the stall is greater than 80% and lasts for 2 seconds, it will enter protection mode. Re-issuing the position command will clear the overload protection flag. The stall percentage and duration can be customized.	
		Over Voltage		The protection mode starts when the voltage is greater than 9V or less than 4V. The protection mode will be automatically released when the voltage returns to the normal range. The voltage range can be customized.	
		Overheat		Turn off torque output when the temperature is above 70°	
7-12	Operating Modes	Mode 0: Angle servo mode		This mode is the default, 0-300 degrees	
		Mode 2: Speed open loop motor mode		In motor mode, the speed will continue to slow down as the load increases.	

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8 Reliability Testing Specifications					
No.	Item	(Specification)	Remarks		
8-1	Load life test Life test	>50,000 times	Forward rotation: 60 degrees for 0.25 seconds, stop for 0.5 seconds, reverse rotation: 60 degrees for 0.25 seconds, stop for 0.5 seconds as one time, continuous cycle, load: 1/5 of the stall torque/speed: 1/2, test voltage: 6V.		
8-2	The motor noises	45±5dB	Ambient noise 40-45 dB, measured 30 cm from the noise meter		
8-3	Steering gear noises	65±5dB	Ambient noise 40-45 dB Test at 30cm from the noise meter / test voltage 6V-1/3 no-load speed		
8-4	Waterproof performance	No			
9. Outside Dimension (Unit: mm)					
					

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10 Accessories		
No Accessories		

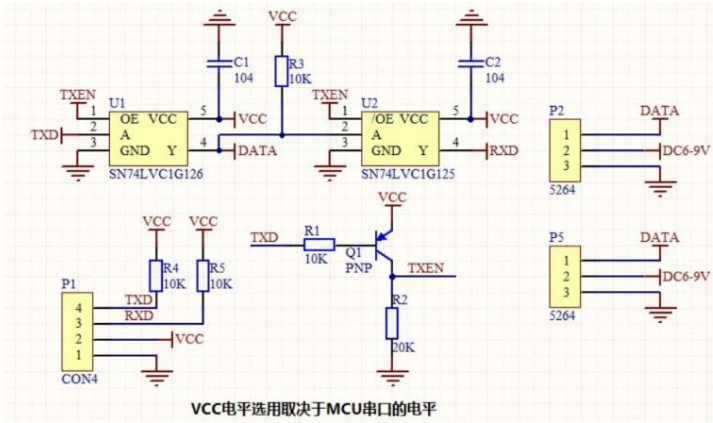
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11 Interface DefinitionControl signal

parameterMax Position Update RateSignal

high voltageSignal low voltageSignal high	1ms	
voltage	2V-5V	
	0.0V-0.45V	



12 Packaging Detail/Product List

