




香港天宝实业有限公司
KINGMAX HOBBY Co., Limited

产品规格书

产品编号: ITEM NO.	V700
产品名称: ITEM NAME:	Big-sized UAV servo
产品图片: PRODUCT IMAGE:	

制订 (IMPLEMENTER)	审核 (CHECK)	批准 (APPROVAL)	日期 (DATE)

PROFESSIONAL SERVOS MANUFACTURER

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1. 使用環境條件

Apply Environmental Condition :

No.	項目	規格
1-1	保存溫度 Storage Temperature Range	-40℃ ~ 70℃
1-2	操作溫度 Operating Temperature Range	-30℃ ~ 65℃
1-3	操作電壓 Operating Voltage Range	DC 24~32V

2. 測試環境

Standard Test Environment :

2-1	測試環境 Standard Test Environment	每一个检查必须是正常的温度和湿度进行测量，温度 $25 \pm 5^{\circ}\text{C}$ ，相对湿度 $65 \pm 10\%$ ，在按照本规范的标准测试条件下判断特征。
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3. 外觀檢查

Appearance Inspection :

No.	項目	規格
3-1	外觀尺寸 Outline Drawing	98.7*48*123.5
3-2	外觀 Appearance	无损坏，不允许影响功能
3-3	寿命 Life Time	>100000次/负载(sub/load)

4. 電氣特性

Electrical Specification (Function of the Performance) :

No.	Item	24V	30V
4-1	空載轉速 Operating speed(at no load)	0.40S/60°	0.31S/60°
4-2	空載最大電流 Running current(at no load)	700mA	1000mA
4-3	堵轉扭力 Stall torque(at locked)	520kg.cm	670kg.cm
4-4	最大工作扭矩 Maximum working torque	398kg.cm	536kg.cm
4-5	額定工作扭力 Rated working torque	170kg.cm	210kg.cm
4-6	待機電流 Idle current (at stopped)	50mA	50mA

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5. 機械特性

Mechanical Specification :

No.	項目	規格
5-1	外觀尺寸 Overall Dimensions	98.7*48*123.5mm
5-2	機構極限角度 Limit angle	360°
5-3	重量 Weight	1288 ±1g
5-4	導線規格 Connector wire gauge	J30J-15ZKP
5-5	導線長度 Connector wire length	1500 ±5 mm
5-6	花鍵 Spline	φ 12mm 25T
5-7	舵片種類 Horn type	一字,
5-8	減速比 Reduction ratio	334:1
5-9	馬達類型 Motor	无刷/Brushless
5-10	角度傳感器 Angle sensor	磁编码/Contactless
5-11	軸承 Bearing	6BB
5-12	齒輪材料 Gear	鋼齒/Steel gear
5-13	外殼材料 Case	全金屬/Full metal
5-14	防水 Waterproof	N/A

6. 電氣接口和引腳定義

Electrical Interface & Pin Definition :

Connector	J30J-15ZKP	
Pin 1~4	Power supply +30 VDC	+24~+32 VDC
Pin 5~8	Power supply GND	
Pin 10、 11	Command PWM signal	Logical high: 3.3v~5V
Pin 9、 12~15	Not Connected	

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7. 控制特性

Control Specification :

No.	項目	規格
6-1	控制系統 Control system	Pulse Width Modification
6-2	放大器種類 Amplifier type	Digital
6-3	操作角度 Operating travel	$\pm 100^\circ$
6-4	中立位置 Neutral position	1500 μ sec
6-5	脈波訊號分辨率 Pulse Width Resolution	0.125 μ sec
6-6	旋轉方向 Rotating direction	Anticlockwise(1500-2500usec)
6-7	脈波寬度範圍 Pulse width range	500→2500 μ sec
6-8	反饋訊號脈波寬度範圍 Feedback Pulse width range	$\pm 100^\circ$ (250→1370usec)

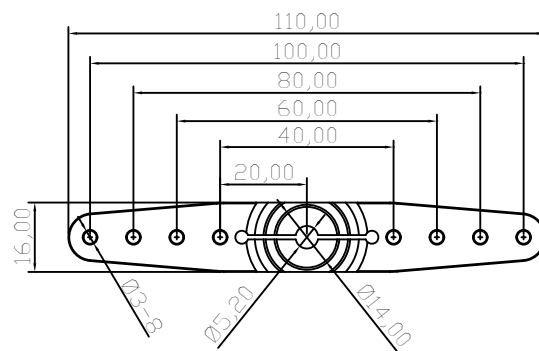
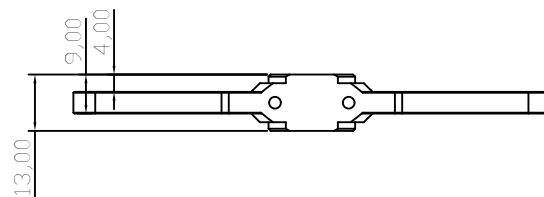
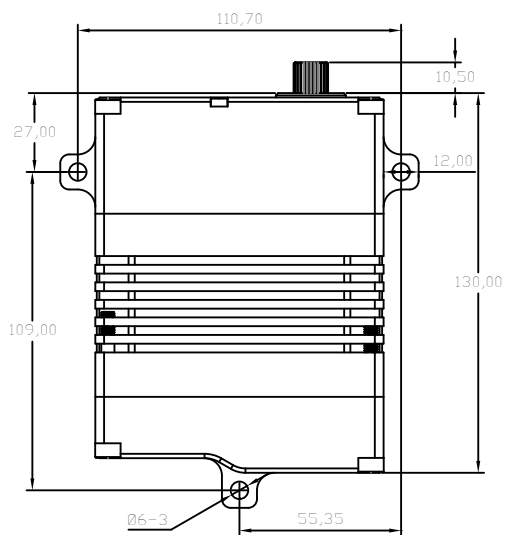
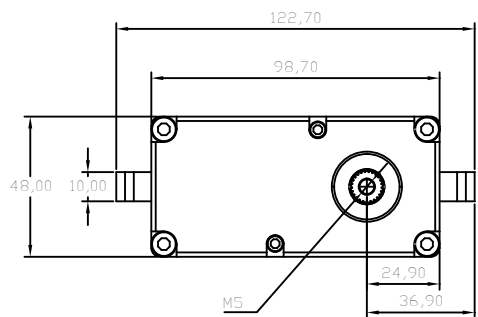
8. 控制信号

Command Signal:

Command Signal

8-1 PWM Command Interface			
Signal Voltage	HIGH:min.3.3V,max.5.0V , Low:min.0.0V,max.1.5V		
Pulse Lengths	500us-2500us		
Pulse Lengths for Position	500us/1500us/2500us -100°/ 0°/+100°		
8-2.1 RS485 / RS422 Command Interface			
Baud-Rate	115200 ±1.5% bits/s		
Protocol (Documentation available)	10 Byte(incl. 1 byte Check Sum)		
8-2.2 RS485 / RS422 Protocol Specifications			
Number of Data Bits	8		
Number of Stop Bits	1		
Parity	None		
Command / Response Frame			
Byte #	Description	Byte #	Description
1	Frame Head(0xFE)	6	Data
2	Version(0xCA)	7	Data
3	Address	8	Data
4	Command code	9	Check Sum
5	Data	10	(0A)Frame End
8-3 CAN Bus Command Interface			
Baud-Rate	500Kbps	Communication	8-1: CAN Open standard frame 8-2: CAN Extended frame
Node number	0 x25 (range 1 ~ 127, 0 is radio)		

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