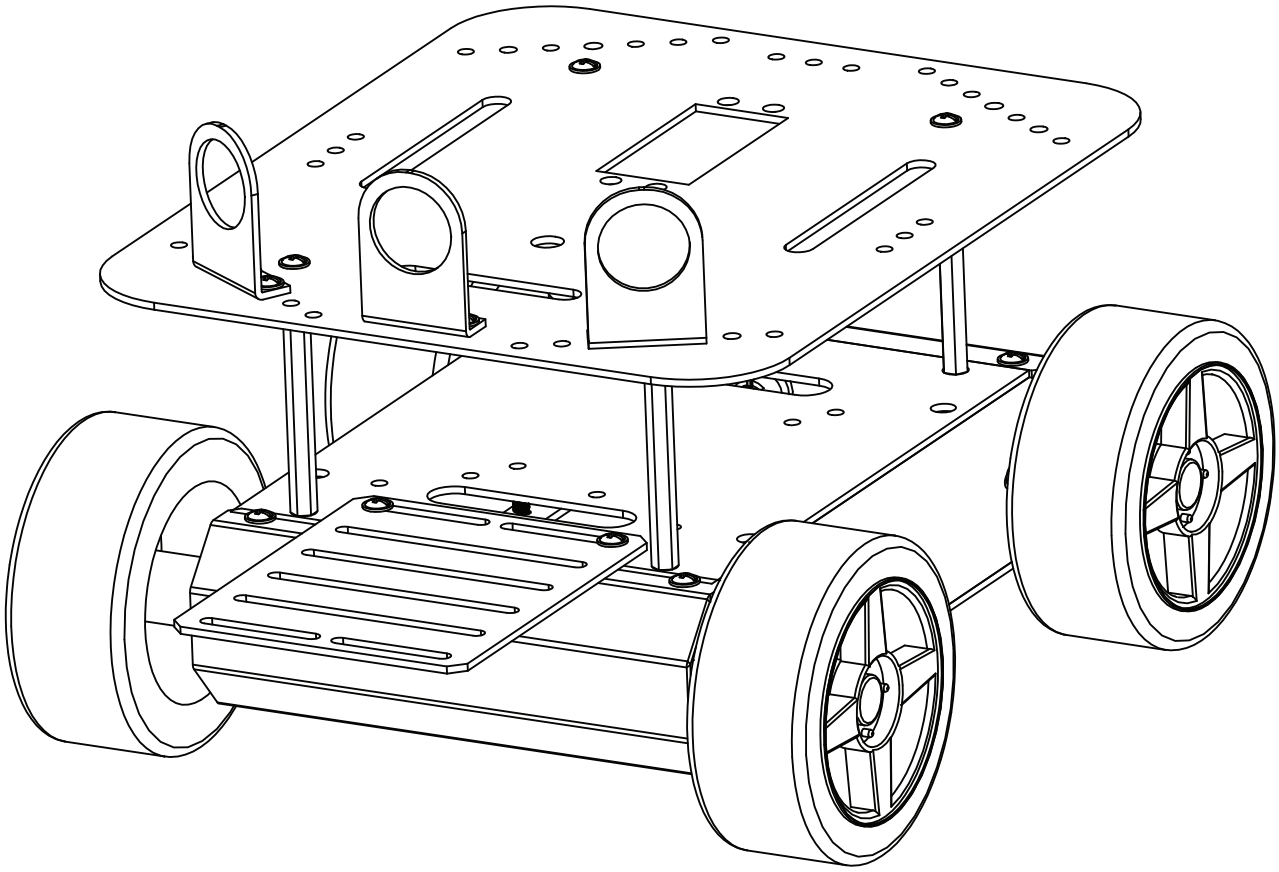
DFROBOT DRIVE THE FUTURE

Instruction Manual

Pirate - 4WD Moblie Platform

安装说明书



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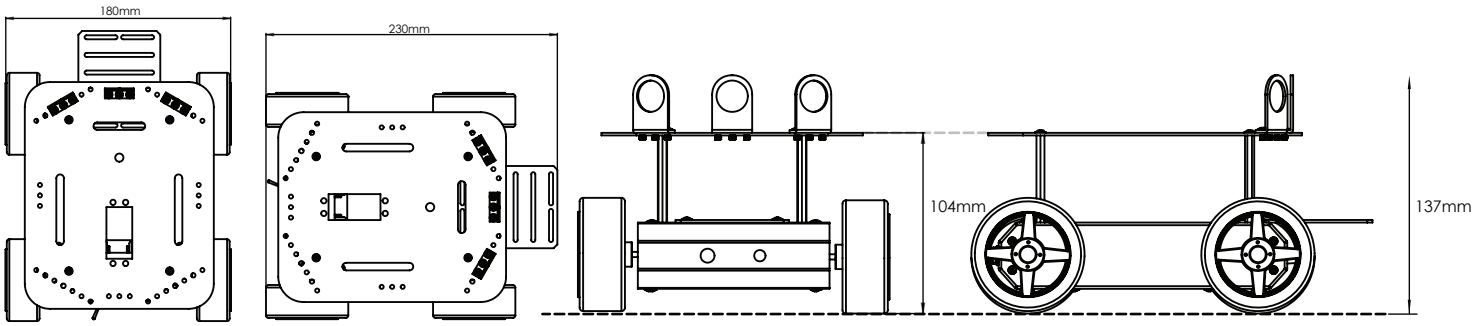
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产品特性 Features

整机尺寸：



简介：

Pirate-4WD Mobile Platform四轮驱动机器人是DFRobot研制的机器人实验平台，该平台不但可以用51控制、STC控制器、AVR控制器控制外，更适合使用世界上广泛推广的Arduino控制器，Arduino开放平台拥有全球众多使用者，有丰富的使用例子程序。机身采用高强度铝合金材料，高速电机加优质橡胶轮运动灵活快速，适合室内的平坦路面行进。 使用Arduino控制器编程简单，控制起来非常有趣。适合机器人比赛，及其相关研究项目。本小车安装孔兼容多种传感器。

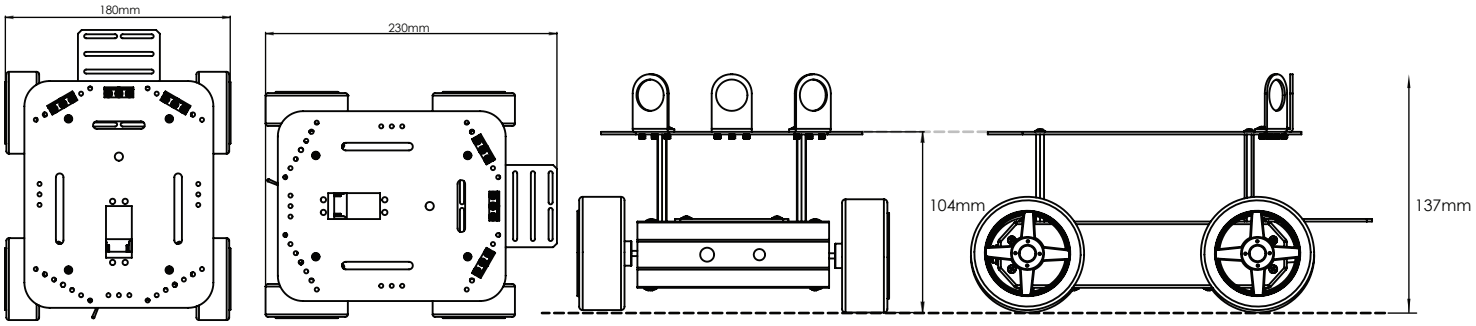
整机重量：710克
车轮直径：65mm
最大行驶速度:61cm/s

电机参数：

- ●电机供电电压：3-6V
- ●减速比：1：120
- ●无负载转速(3V):100RPM
- ●无负载转速(6V):200RPM
- ●无负载运行电流(3V):60mA
- ●无负载运行电流(6V):71mA
- ●堵转电流(3V):260mA
- ●堵转电流(6V):470mA
- ●力矩(3V): 1.2Kgcm
- ●力矩(6V): 1.92Kgcm
- ●重量:45g

产品特性 Features

Dimensions：



Introduction：

The Pirate four-wheel-drive robot is a DFRobot original design and widely used as self-developed control panel for the Arduino platform. The platform can be controlled by a wide variety of microcontrollers including the widely popular Arduino. The Arduino platform has a large user base which provides a vast amount of resources and sample programs on the internet. The four different drives, powered by high-quality high-speed motors and flexible rubber wheels are mounted on a high-strength aluminum alloy body. This robotic platform is suitable for indoor use or flat road surfaces.

Complete Machine Weight：710g
Wheel Diameter : 65mm
Highest Speed: 61cm/s

Motor Feature：

- ●Gear Ratio : 1:120
- ●No-load speed (3V): 100RPM
- ●No-load speed (6V): 200RPM
- ●No-load current (3V): 60mA
- ●No-load current (6V): 71mA
- ●Stall current (3V): 260mA
- ●Stall current (6V): 470mA
- ●Torgue (3V): 1.2Kgcm
- ●Torque (6V): 1.92Kgcm
- ●Weight : 45g

产品安装说明 Notice for Assembly

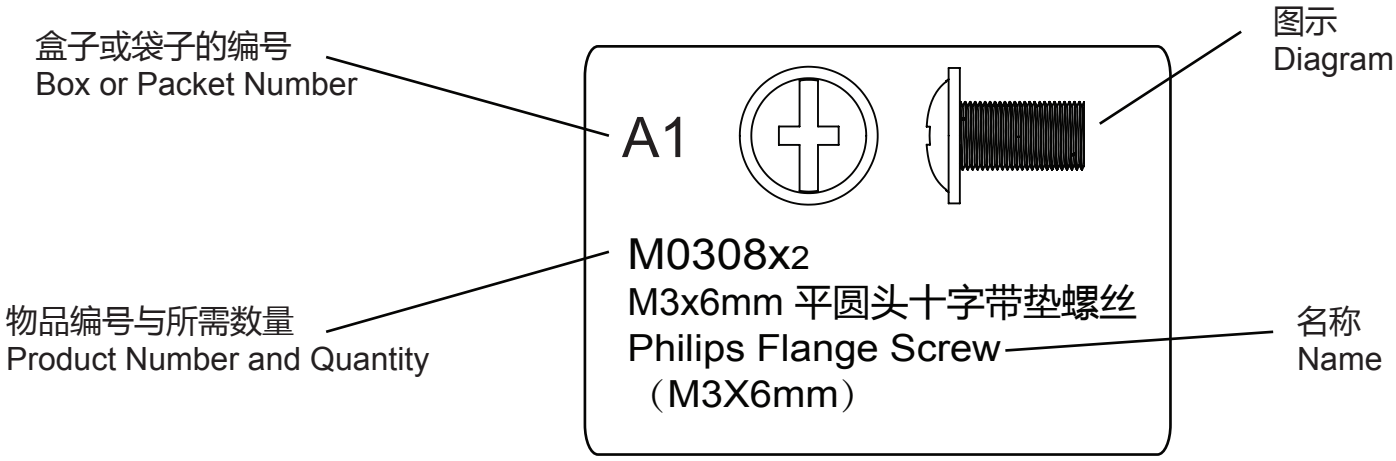
以下设备不包括在ROB0003的部件清单内，用户需自行配备：
1. 5节AA电池。
2. 控制器以及电机驱动器。

您还需要准备以下工具，并参考零部件清单进行ROB0003的安装：
1. 十字螺丝刀（适用于M2.5，M3，M4的螺丝）。
2. 尖嘴钳。

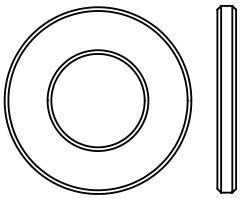
The following parts below are not included in the Parts List, they are self-provided:
1. AA battery (5 pieces).
2. Micro-controller and Motor driver.

When starting assembly, prepare tools below and pick out the parts referring to the Parts List:
1. Phillips screwdriver **(** for screws M2.5 **,** M3 **,** M4 **)** .
2. Needle noses pliers.

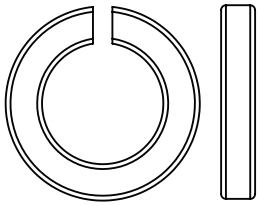
标志含义 Symbol Definition



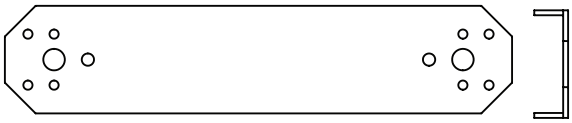
电机安装 Moters Assembly



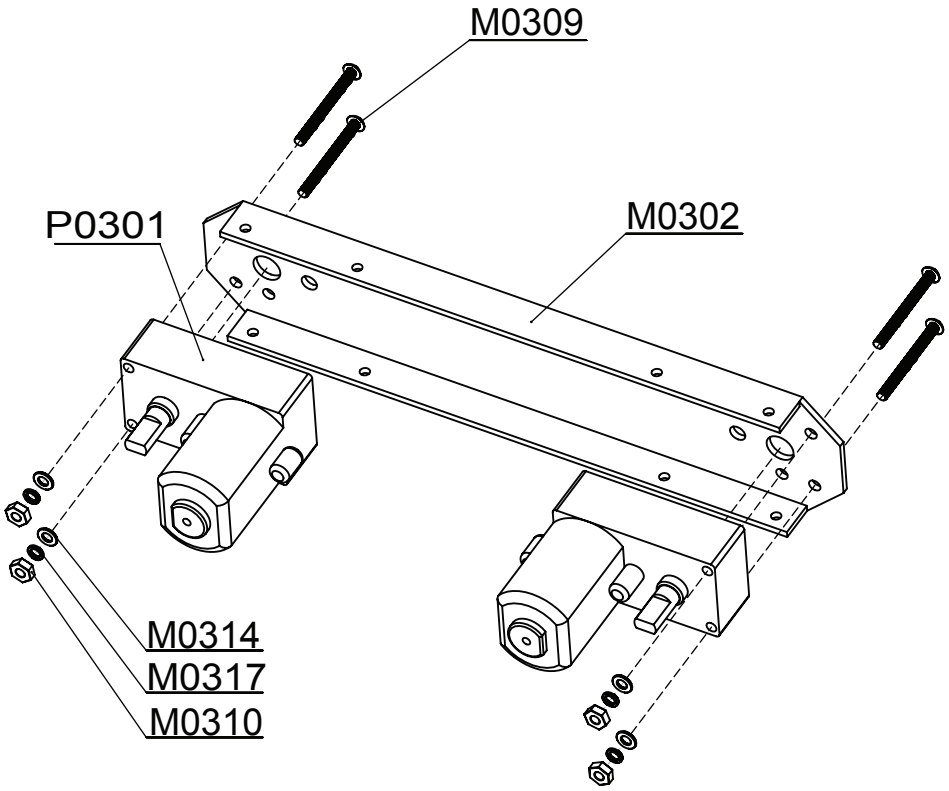
A1
M0314x4
M2.5 垫片
M2.5 Washer

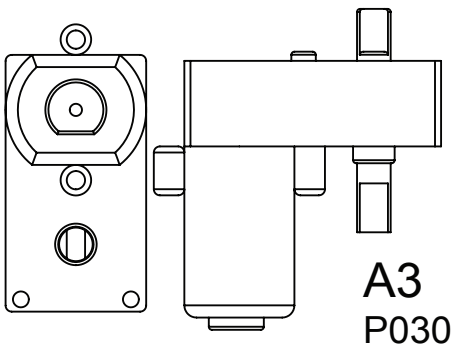


A1
M0317x4
M2.5 弹簧垫圈
M2.5 Spring Washer



A0
M0302x1
侧板
Side Plate

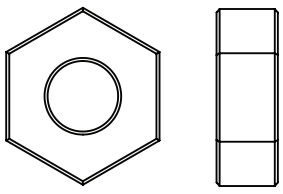




A3
P0301x2
电机
Motor

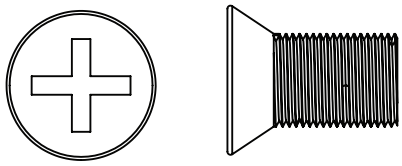


A1
M0309x4
M2.5x25mm 半圆头十字螺丝
Philips Truss Screw(M2.5X25mm)

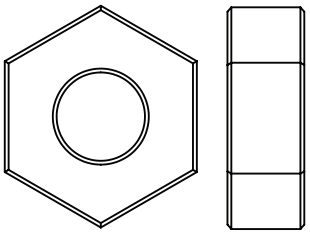


A1
M0310x4
M2.5 螺母
M2.5 Nut

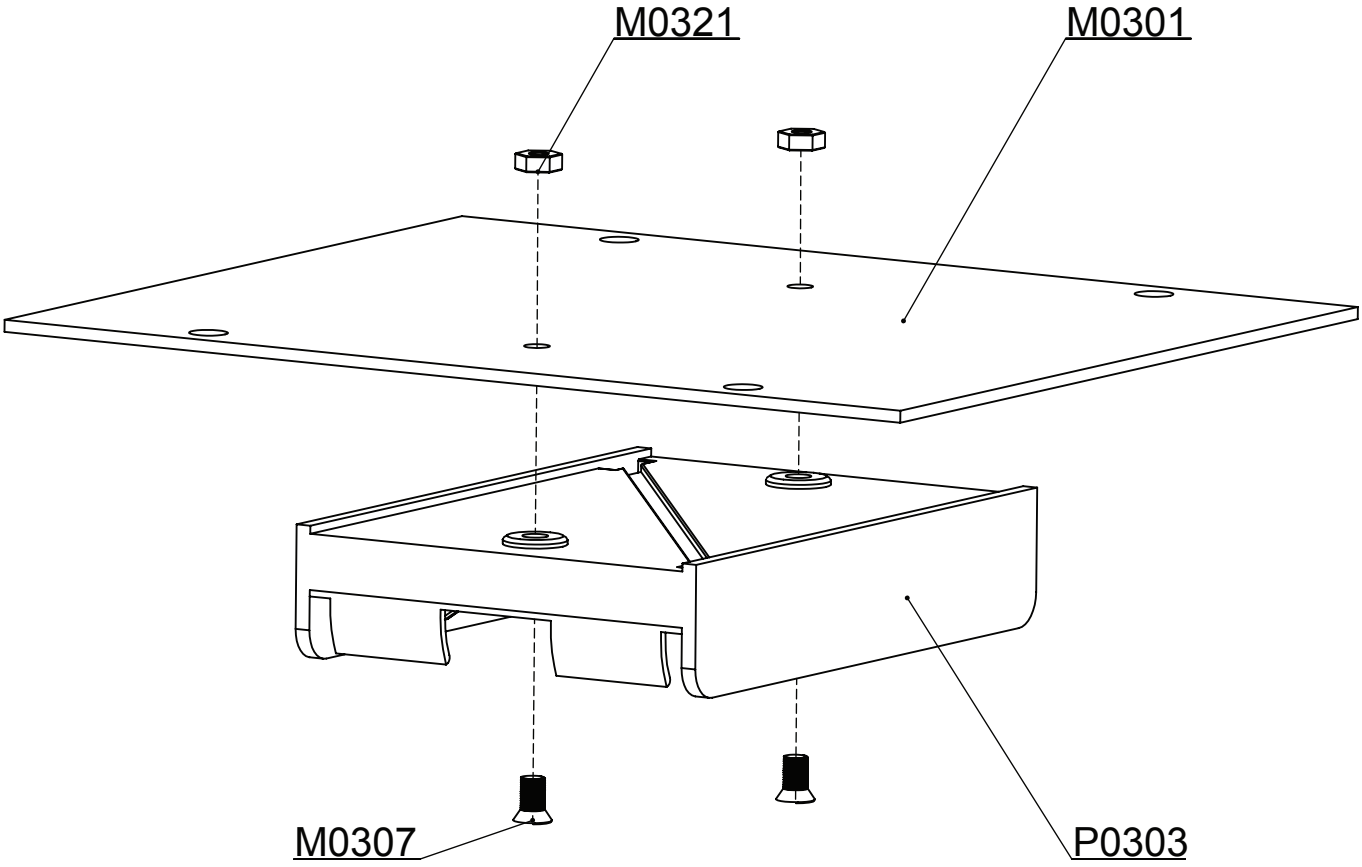
电池盒安装 Battery Holder Assembly

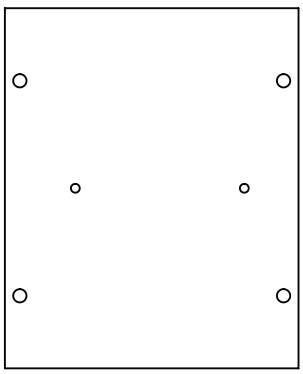


A1
M0307x2
M3x4mm 沉头十字螺丝
Philips Countersunk Screw(M3x4mm)

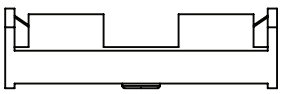


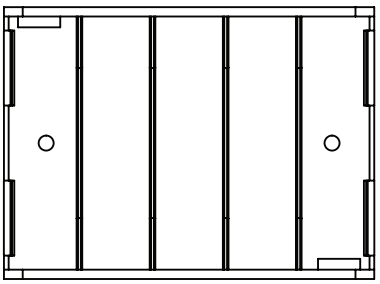
A1
M0321x2
M3 螺母
M3 Nut





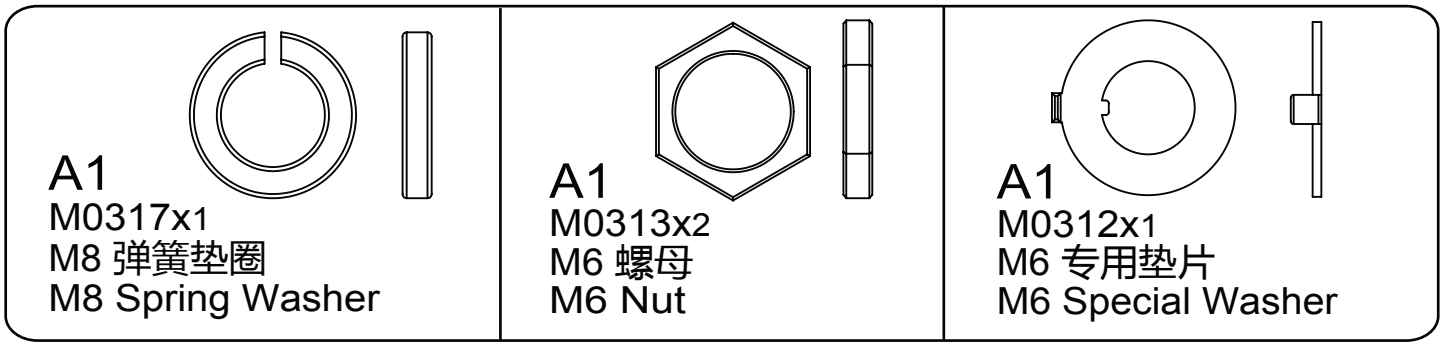
A0
M0301x1
底板
Base Plate





A4
P0303x1
电池盒
Battery Holder

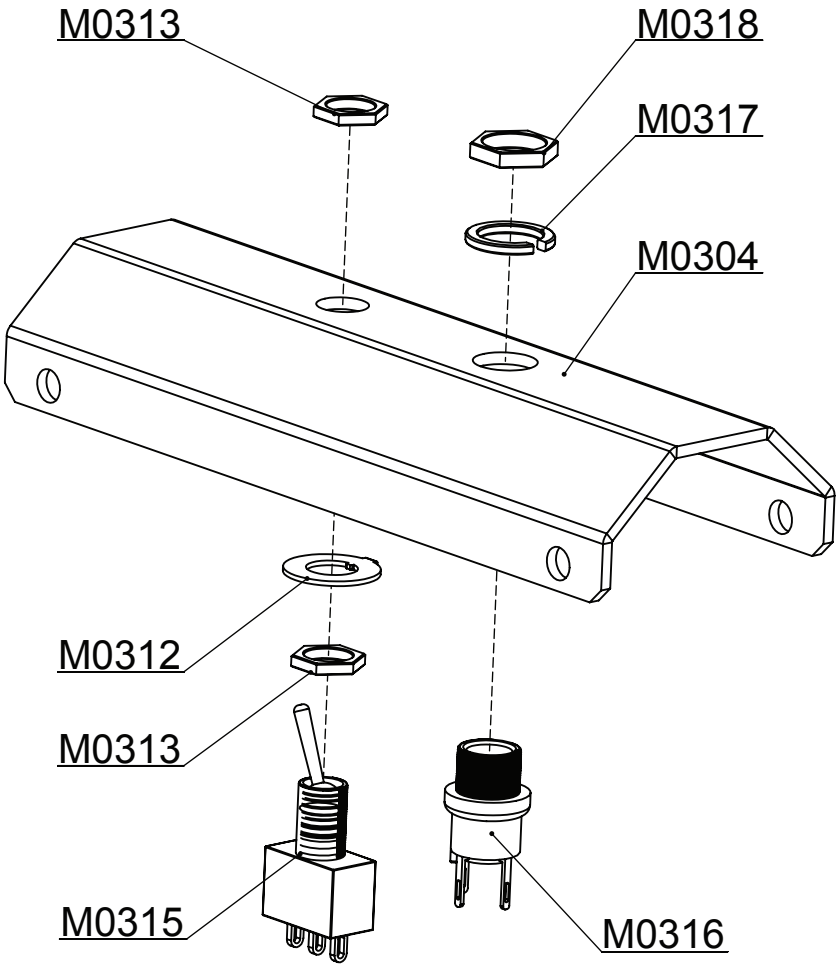
开关及插座安装 Power Jack and Switch Assembly

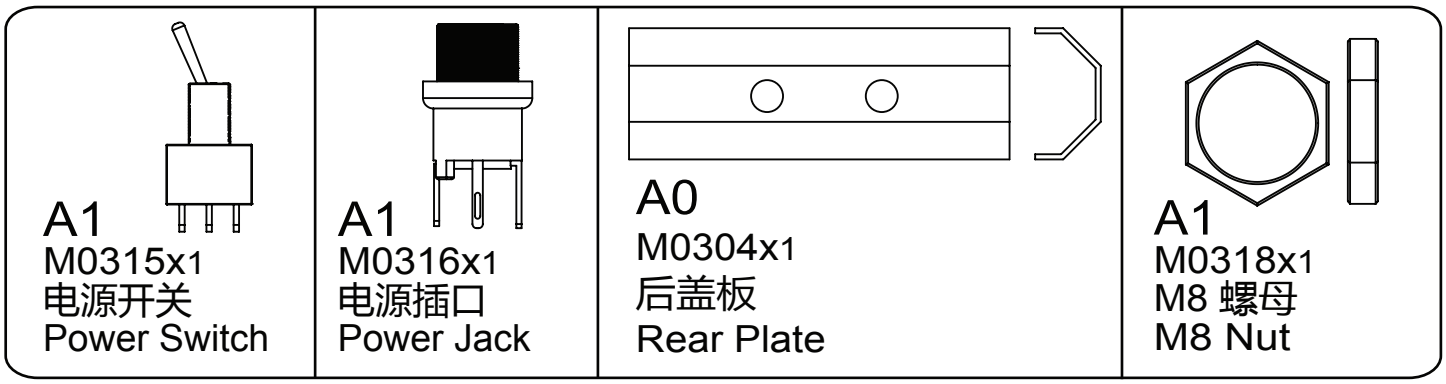


A1
M0317x1
M8 弹簧垫圈
M8 Spring Washer

A1
M0313x2
M6 螺母
M6 Nut

A1
M0312x1
M6 专用垫片
M6 Special Washer





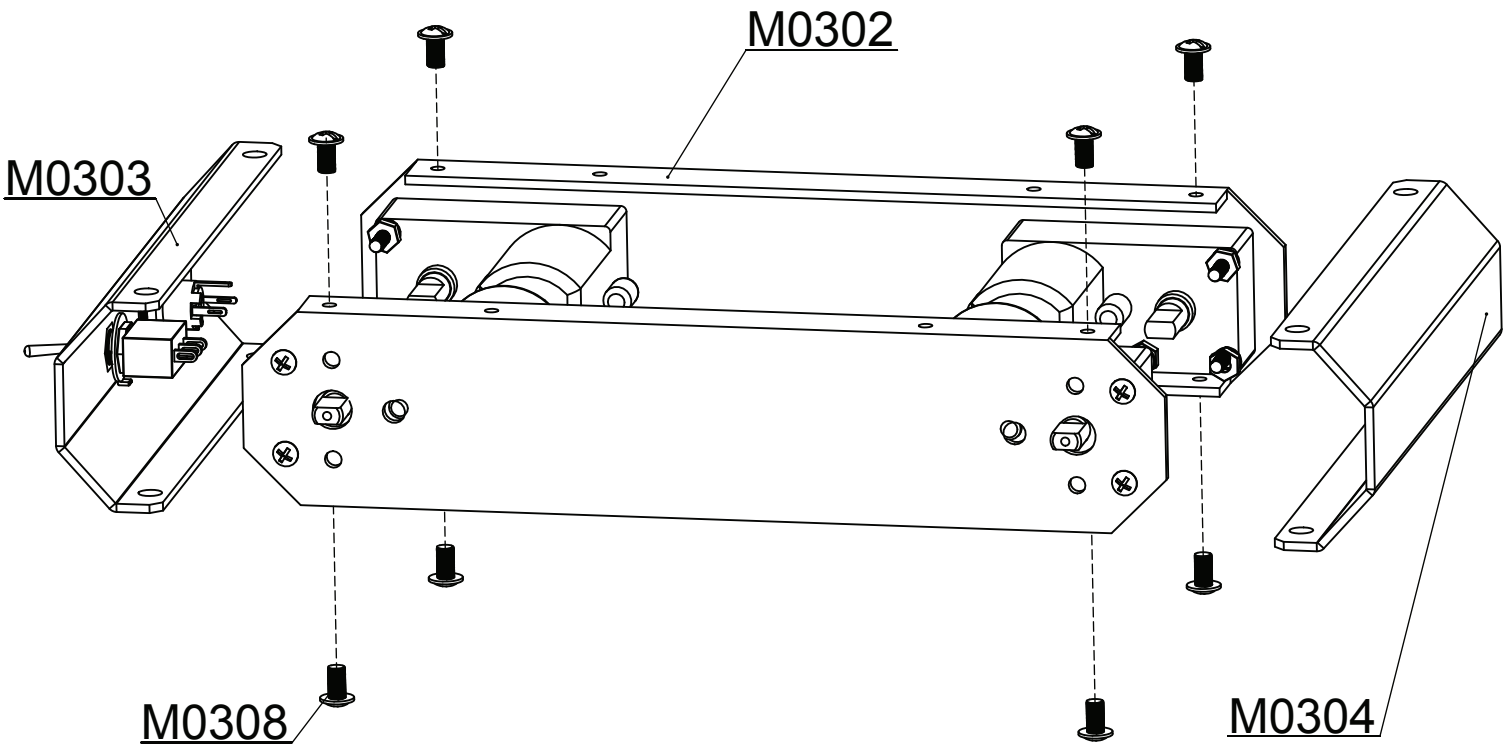
A1
M0315x1
电源开关
Power Switch

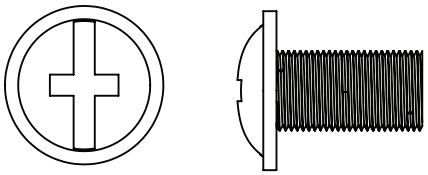
A1
M0316x1
电源插口
Power Jack

A0
M0304x1
后盖板
Rear Plate

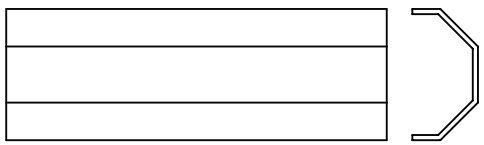
A1
M0318x1
M8 螺母
M8 Nut

前后挡板安装 Front and Rear Plate Assembly



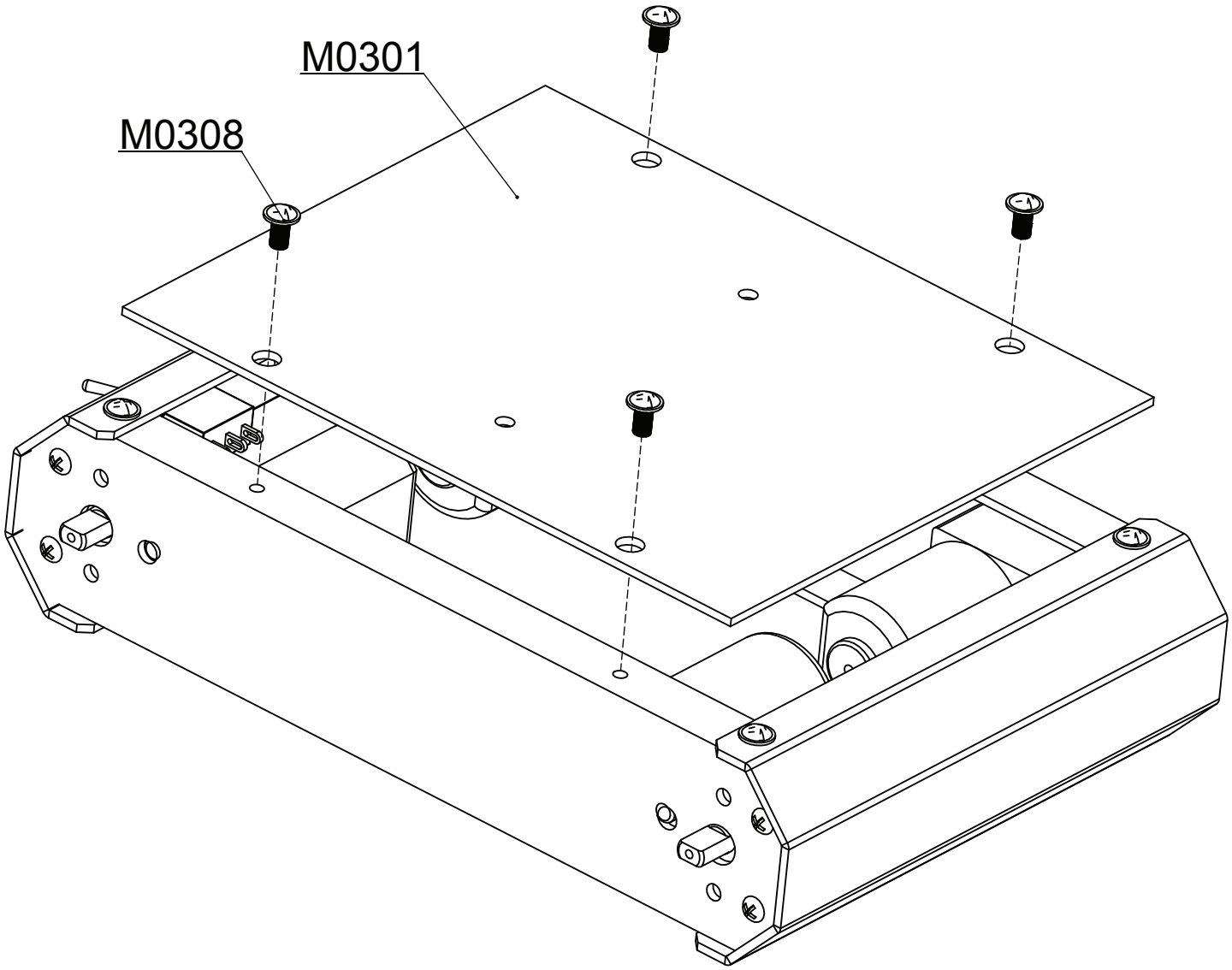


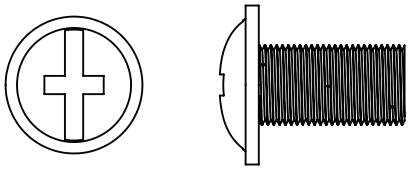
A1
M0308x8
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6)



A0
M0304x1
前盖板
Front Plate

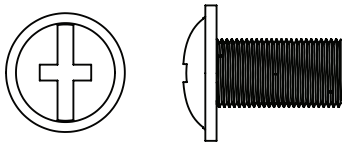
底板安装 Base Plate Assembly



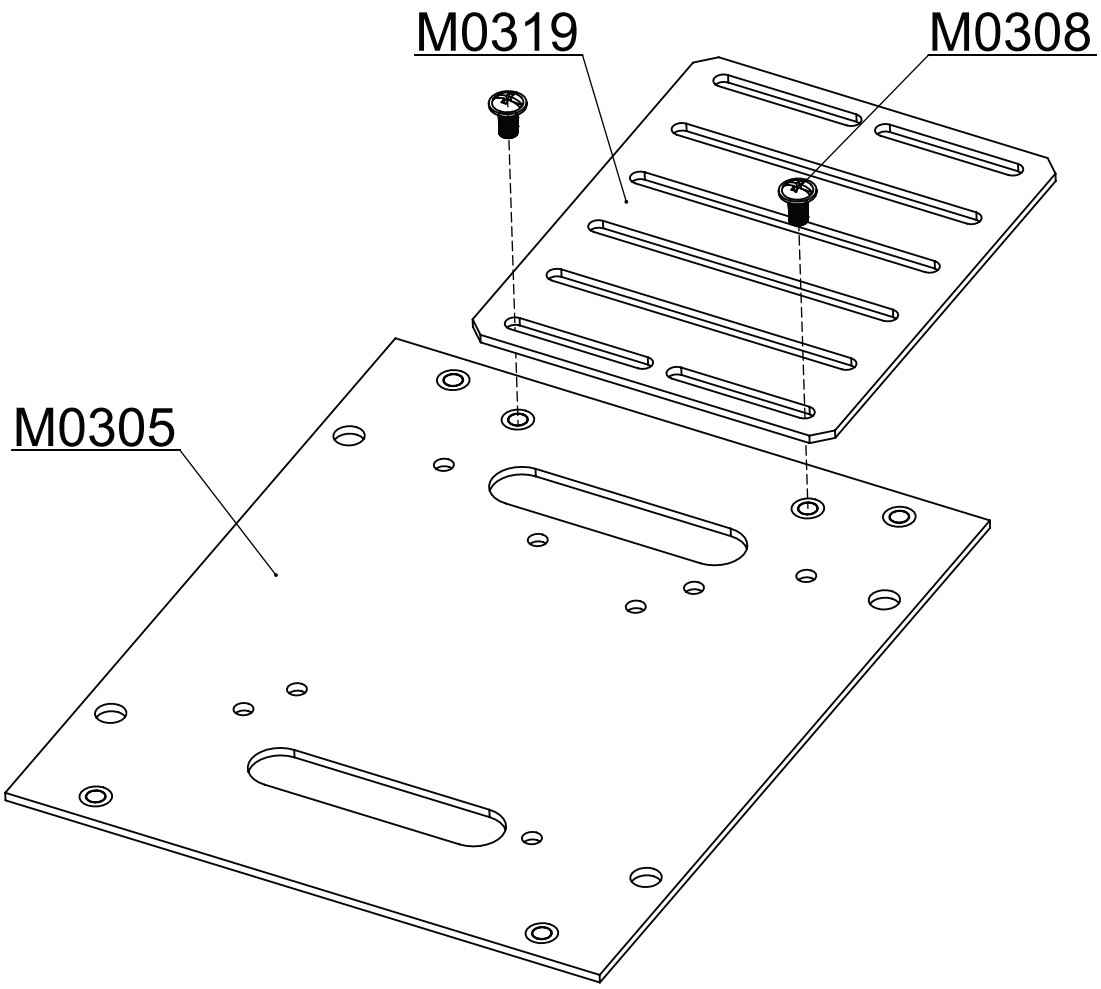


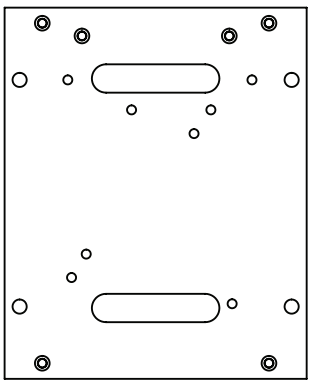
A1
M0308x4
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)

传感器固定板安装 Sensor Plate Assembly

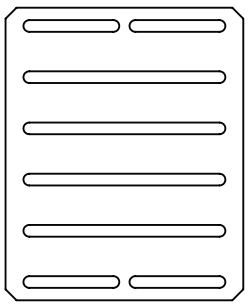


A1
M0308x2
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)



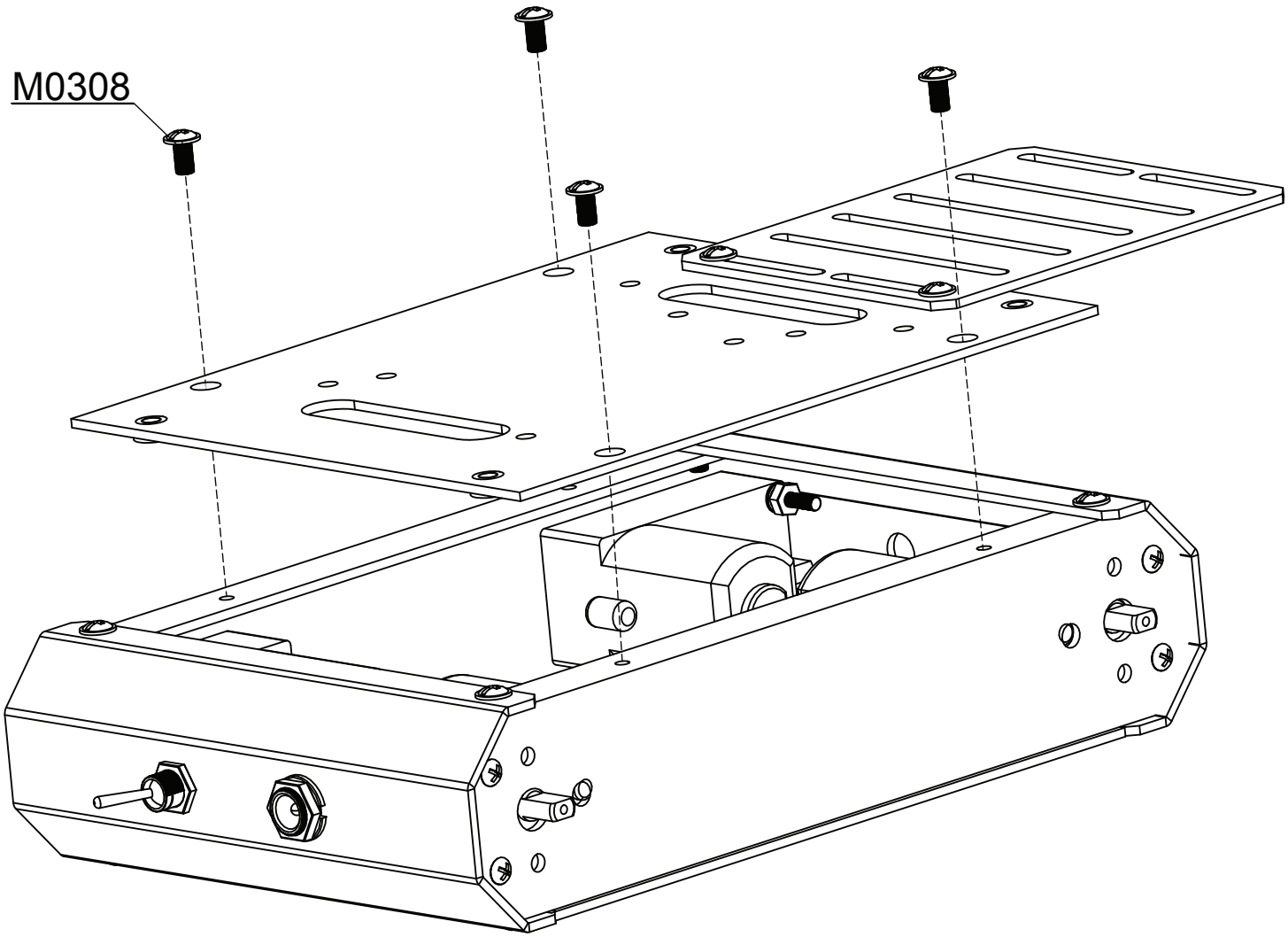


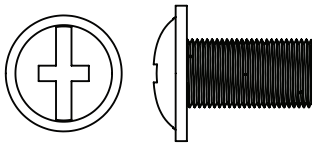
A0
M0305x1
上盖板
Top Plate



A2
M0319x1
传感器固定板
Sensor plate

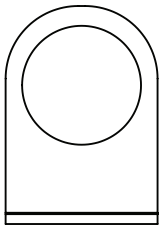
上盖板安装 Top Plate Assembly



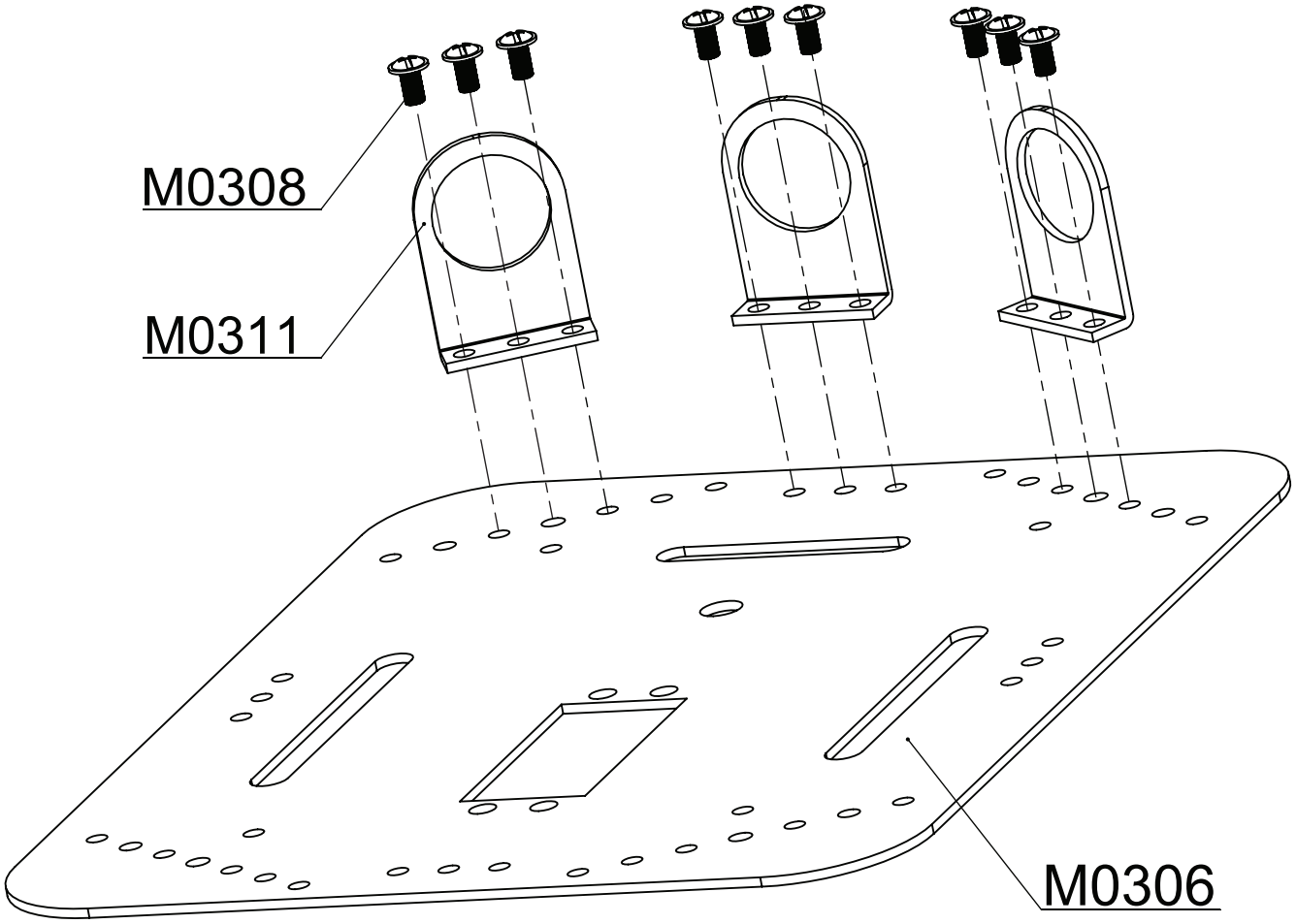


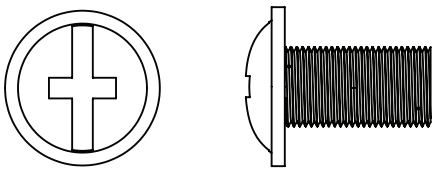
A1
M0308x4
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)

红外传感器支架安装 IR Sensor Bracket Assembly

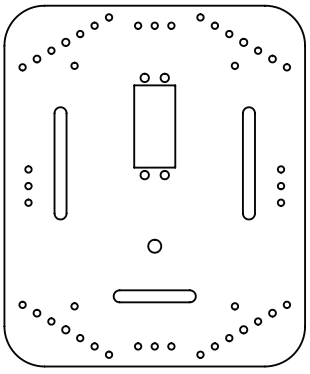


A1
M0311x3
红外传感器支架
IR Sensor Mounting Bracket



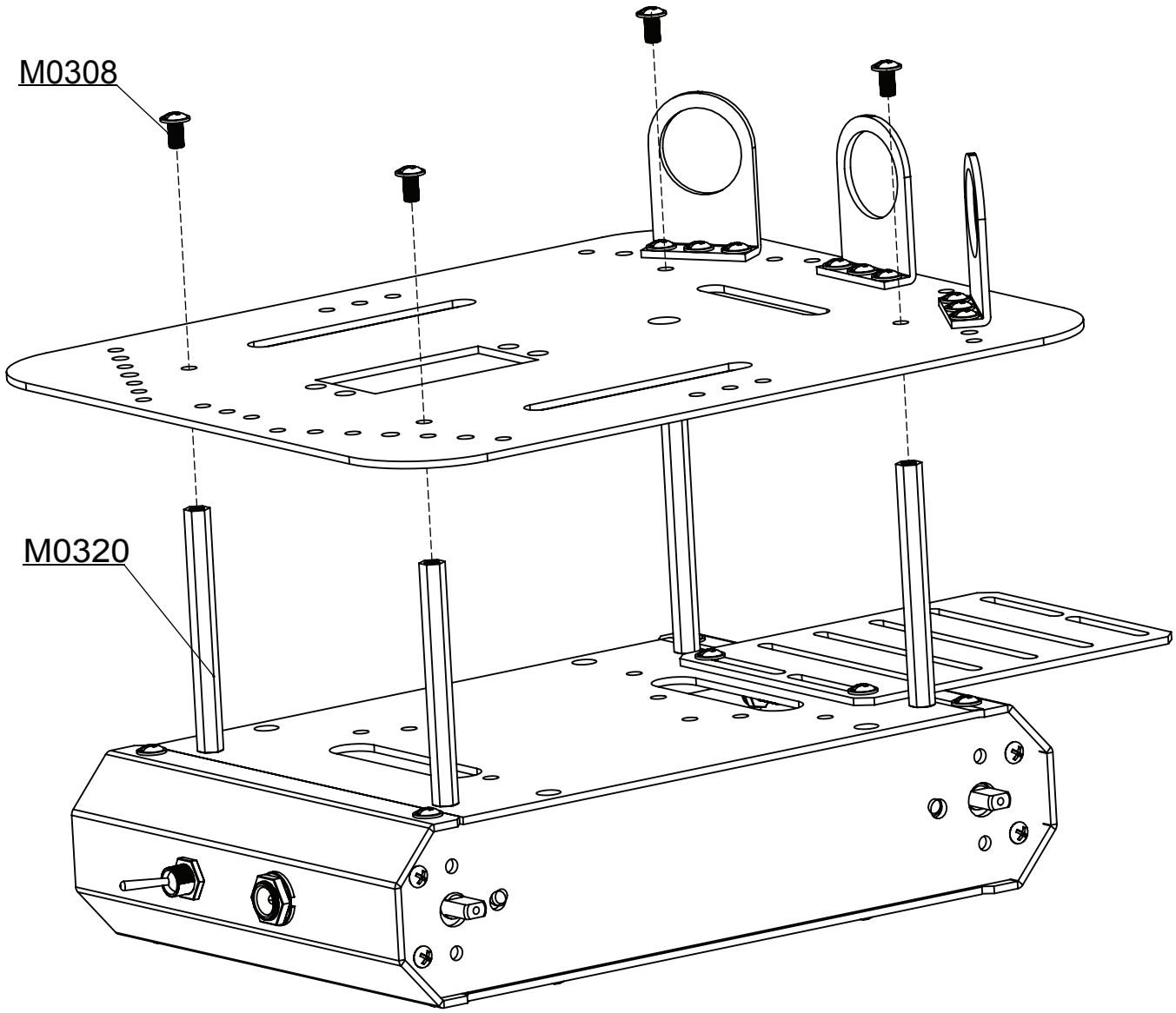


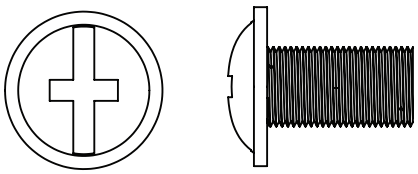
A1
M0308x9
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)



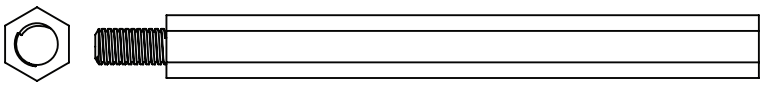
A0
M0306x1
车身上板
Upper Deck

车身上板安装 Upper Deck Assembly



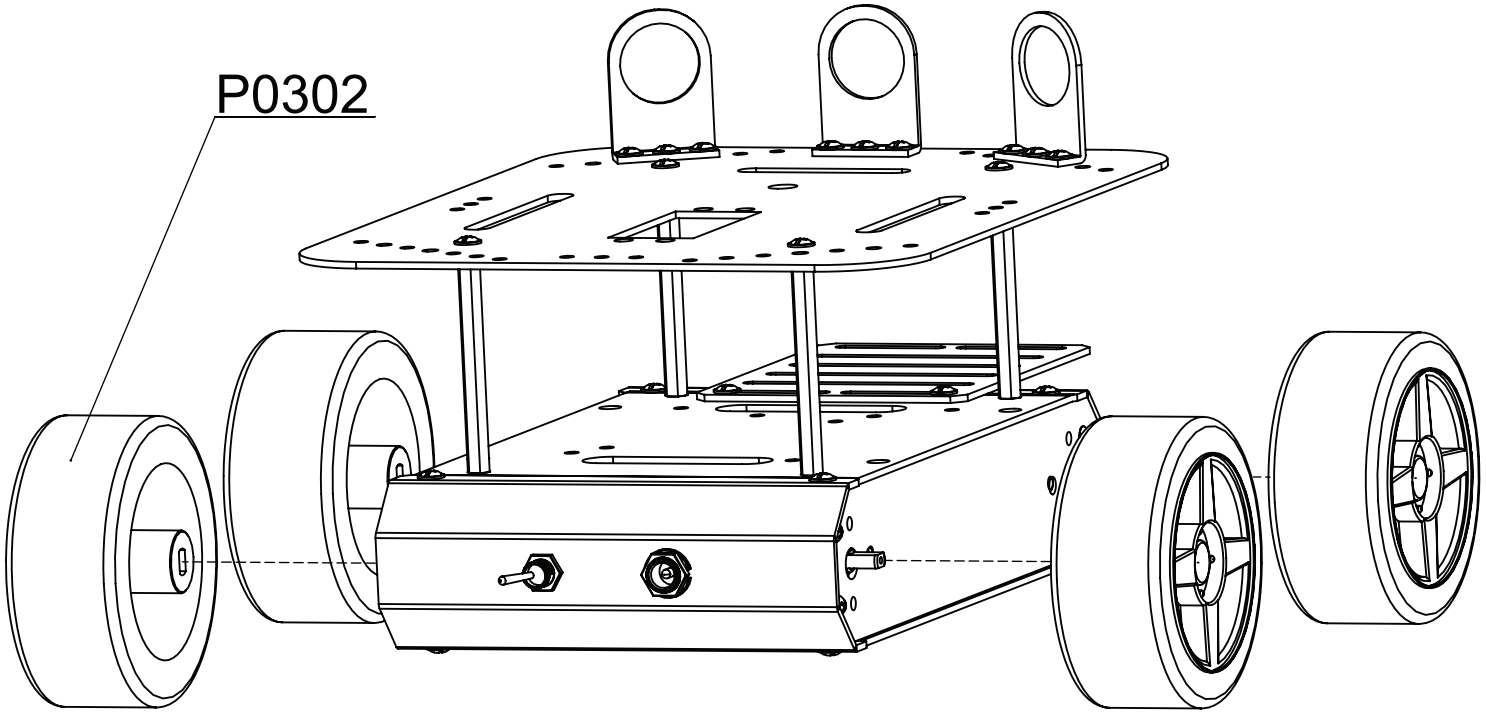


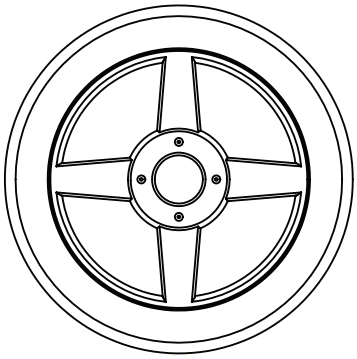
A1
M0308x4
M3x6mm 平圆头十字带垫螺丝
Philips Flange Screw (M3x6mm)



A1
M0320x4
M3x50mm 六角铜柱
Copper Standoff (M3x50mm)

车轮安装 Wheels Assembly





A0
P0302x4
轮子
Wheel

零部件清单(A) Parts List(A)

编号 Product NO.	盒编号 BOX	袋编号 Packet	名称 Name	数量 Amount	备注 Remark
M0301		A0	底板 Base Plate	1	
M0302		A0	侧板 Side Plate	2	
M0303		A0	后盖板 Rear Plate	1	
M0304		A0	前盖板 Front Plate	1	
M0305		A0	上盖板 Top Plate	1	
M0306		A0	车身上板 Upper Deck	1	
M0307		A1	M3X4mm 沉头十字螺丝 Philips Contersunk Screw(M3X4mm)	2	
M0308		A1	M3x6mm 平圆头十字带垫螺丝 Philips Flange Screw (M3x6mm)	31	
M0309		A1	M2.5X25mm 半圆头十字螺丝 Philips Truss Screw(M2.5X25mm)	8	
M0310		A1	M2.5 螺母 M2.5 Nut	8	
M0311		A1	红外传感器支架 IR Sensor Mounting Bracket	3	
M0312		A1	M6 专用垫片 M6 Special Washer	1	

零部件清单(B) Parts List(B)

编号 Product NO.	盒编号 BOX	袋编号 Packet	名称 Name	数量 Amount	备注 Remark
M0313		A1	M6 螺母 M6 Nut	2	
M0314		A1	M2.5 垫圈 M2.5 Washer	8	
M0315		A1	电源开关 Power Switch	1	
M0316		A1	电源插口 Power Jack	1	
M0317		A1	M2.5 弹簧垫圈 M2.5 Spring Washer	9	
M0318		A1	M8 螺母 M8 Nut	1	
M0319		A2	传感器固定板 Sensor Plate	1	
M0320		A1	M3x50mm 六角铜柱 Copper Standoff (M3x50mm)	4	
M0321		A1	M3 螺母 M3 Nut	2	
P0301		A3	电机 Motor	4	
P0302		A0	轮子 Wheel	4	
P0303		A4	电池盒 Battery Holder	1	

设计与监制
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