

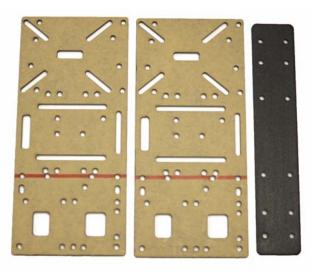


## Two Wheels Balance Car Chassis with JGA25 Motor Kit

**SKU** 110090264

The kit uses JGA25 DC geared motors and optical encoders for higher motor control accuracy and double-layer acrylic plates for easy placement of sensors and development boards.

With this kit, you can DIY assemble the balance car, mini Segway, select the right sensor and development board, and maintain the balance of the body by controlling the rotation of the motor. In this process, you can learn the PID algorithm and learn how to control the motor. Of course, you must first have a balanced car chassis and assemble it.







### The Motor parameters:

### **Encoders Magnetic Series**

### **Magnetic Encoders**

Two Channel Optical Encoder

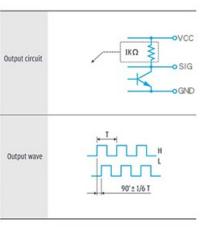


# Two Channel Encoder Connections 1.Black:-Motor 2.Red :+Motor 3.Green:Hall Sensor GND 4.Blue :Hall Sensor VCC 5.Yellow:Hall Sensor A OUT 6.White:Hall Sensor B OUT



#### **Electrical Characteristics**

| Characteristics           | Symbol    | Test conditions                    | Min. | Ref.  | Max. | Units |
|---------------------------|-----------|------------------------------------|------|-------|------|-------|
| Supply voltage            | Vcc       |                                    | 2.7  | -     | 5.5  | ٧     |
| Output saturation voltage | Vce (sat) | Vcc = 14V ; IC = 20mA              | -    | 300   | 700  | mV    |
| Output leakage current    | Icex      | Vcc = 14V ; Vcc = 14V              | -    | < 0.1 | 10   | μА    |
| Supply current            | Ice       | Vcc = 20V Output open              | -    | 5     | 10   | mA    |
| Output rise time          | tr        | Vcc = 14V ; Rι = 820 Ω ; Cι = 20pF | -    | 0.3   | 1.5  | μS    |
| Output fall time          | tr        | Vcc = 14V ; RL = 820 Ω ; CL = 20pF | -    | 0.3   | 1.5  | μS    |



- 20%~85%RH
   Operating relative humidity
- -10'C~+60'C
   Operating temperature range

### Part List

- 1 x Car chassis (metal)
- 2 x Car extension chassis (acrylic)
- 2 x JGA25 motor
- 2 x 17-4MM Coupling
- 2 x Motor bracket (metal)
- 2 x 72MM wheel
- 4 x 12 MM copper column
- 4 x 30 MM copper column

### **ECCN/HTS**

| ECCN     | ERA99      |
|----------|------------|
| HSCODE   | 9023009000 |
| USHSCODE | 90230000   |
| UPC      |            |



