



JGA25-371 Geared Motor with Encoder

SKU 114090047

Please use this motor as an alternative to [JGB37-371](#) and [Encoder Geared Motor JGA25-371](#)

Introduction:

This Motor with **encoder**, Mainly used in robot platform and car provides power, Good quality and long lifetime, high torque and low noise.

If you don't need an encoder, you can choose [JGA25-370](#) Geared Motor

What is a geared motor?

The geared motor uses a gear set to convert the original high speed and low torque of the motor to a low speed and high torque state. So what are the benefits of geared motors? Under the same voltage conditions, you can manually clamp the motor to stop it, but once it is a gear motor, it is more difficult to stop the motor with an external force because the "force" of the motor becomes larger. Therefore, when you use a geared motor, you will find it is slower than a motor that does not slow down, but it can provide a larger load. Geared motors are typically used where high torque is required, such as an elevator, which will carry more than a dozen people upstairs, which will require a lot of torque. Of course, there will be some energy loss during deceleration, but it will still bring a lot of convenience to our lives.

What is an encoder?

An encoder is a device that monitors the speed of a motor through an optoelectronic, Hall or magnetic encoder chip. Using an encoder, we can use some complicated algorithms. For example, we can use the PID algorithm to monitor the speed of the motor. And controls such as speed off can keep the speed of the motor at a certain value. When the external load becomes larger, the speed of the ordinary motor will slow down, but when we know that it is slow, we can adjust it by an algorithm. Controlling the output voltage keeps the motor speed at a certain value. Of course, we need to learn to control the related algorithms.

What can we do with this motor?

With this motor, we can design and manufacture a balance car. Keep the motor steady by using position loops and gyroscopes to keep the car balanced.

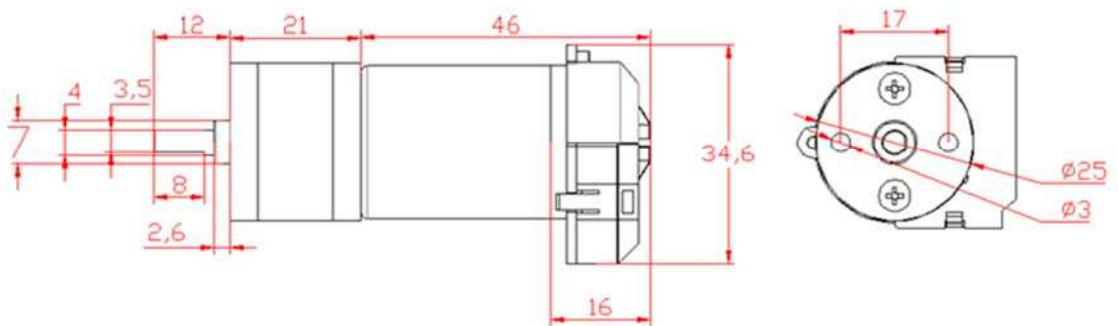
We can design off-road vehicles or mobile robots. The geared motor allows the robot to get more force so that it can pass through some light slopes.



Specification:

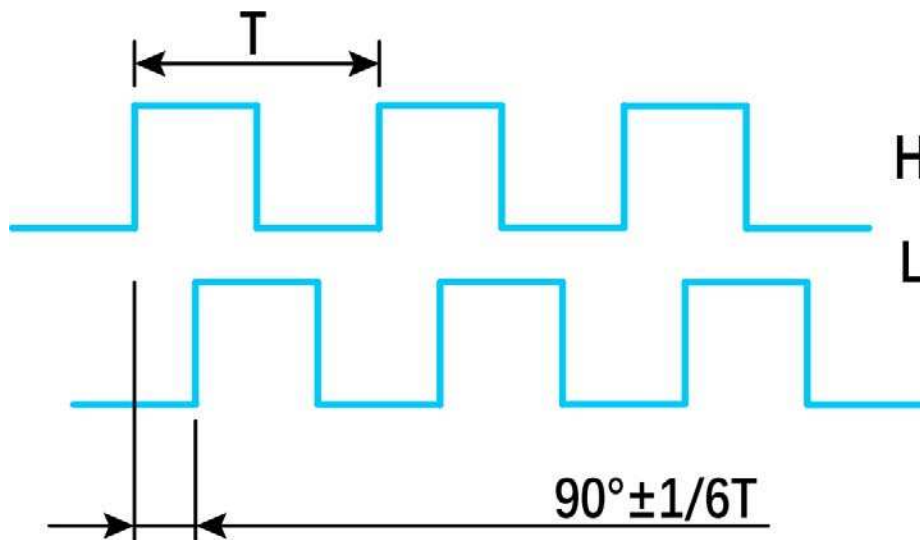
| Voltage V | No-load | | Maximum efficiency pointed | | | | Blockage | |
|--------------|----------------|--------------------------|----------------------------|--------------------------|-----------------|------------|-----------------|--------------------------|
| | speed r/min | electric current A | speed r/min | electric current A | Torque Kg.cm | Power W | Torque Kg.cm | electric current A |
| 6 | 190 | 0.2 | 133 | 0.5 | 0.75 | 1.1 | 4.0 | 2.1 |
| 12 | 350 | 0.1 | 245 | 0.65 | 1.4 | 2.4 | 5.2 | 2.2 |

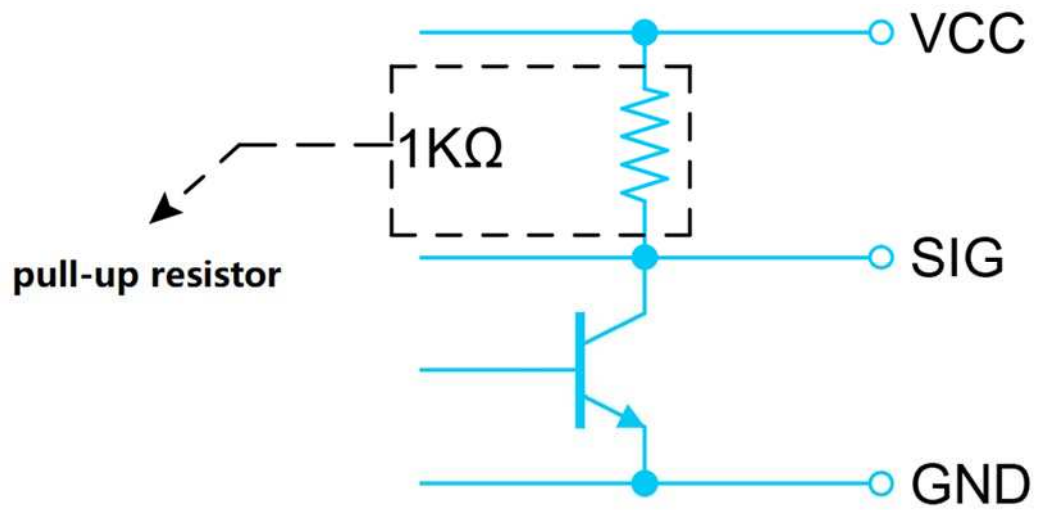
size:



Electrical characteristics:

| Encoder electrical characteristics | specification | Code | Test Conditions | MIN | Benchmark | MAX | unit |
|------------------------------------|---------------------------|---------|---------------------------|-----|-----------|-----|------|
| | Input voltage | vcc | -- | 2.7 | - | 5.5 | V |
| | Output saturation voltage | Vce sat | VCC=14V;IC=20 mA | - | 300 | 700 | mA |
| | Output leakage current | Icex | VCC=14V;VCC=14V | - | <0.1 | 10 | A |
| | Input Current | Ice | VCC=20V output open | - | 5 | 10 | mA |
| | Output rise time | tr | VCC=14V;RH=820Ω ; CH=20pF | - | 0.3 | 1.5 | S |
| | Output fall time | tr | VCC=14V;RL=820Ω ; CL=20pF | - | 0.3 | 1.5 | S |





Part List

1 x JGA25-371 motor

1 x 6pin Wire

ECCN/HTS

| | |
|--------|------------|
| ECCN | ERA99 |
| HSCODE | 8501101000 |
| UPC | |