



PRODUCT NAME : Micro Unipolar Stepper Motor India for Arduino/Raspberry-Pi/Robotics

PRICE : Rs 130.00

SKU : RM0781



DESCRIPTION

A stepper motor (or step motor) is a brushless DC electric motor that divides a full rotation into a number of equal steps. The motor's position can then be commanded to move and hold at one of these steps without any feedback sensor (an open-loop controller), as long as the motor is carefully sized to the application.

Fundamentals of operation:-

DC brush motors rotate continuously when voltage is applied to their terminals. Stepper motors, on the other hand, effectively have multiple "toothed" electromagnets arranged around a central gear-shaped piece of iron. The electromagnets are energized by an external control circuit, such as a microcontroller. To make the motor shaft turn, first, one electromagnet is given power, which magnetically attracts the gear's teeth. When the gear's teeth are aligned to the first electromagnet, they are slightly offset from the next electromagnet. So when the next electromagnet is turned on and the first is turned off, the gear rotates slightly to align with the next one, and from there the process is repeated. Each of those rotations is called a "step", with an integer number of steps making a full rotation. In that way, the motor can be turned by a precise angle.

Applications:-

Computer-controlled stepper motors are a type of motion-control positioning system. They are typically digitally controlled as part of an open loop system for use in holding or positioning applications.

In the field of lasers and optics they are frequently used in precision positioning equipment such as linear actuators, linear stages, rotation stages, goniometers, and mirror mounts. Other uses are in packaging machinery, and positioning of valve pilot stages for fluid control systems.

Commercially, stepper motors are used in floppy disk drives, flatbed scanners, computer printers, plotters, slot machines, image scanners, compact disc drives, intelligent lighting.

