ARD 2 *Arduino Compatibles*
Controllers, Shields, Modules & Sensors

Rotary Encoder Module   ARD2-2240

- **Converts the angular position or motion of a shaft or axle to an analog or digital code**
- **Perfect for stepper & servo motor control**
- **Applications include industrial controls, robotics, computer input devices, controlled stress rheometers, and rotating radar platforms**

Description

This Rotary Encoder Module is a rotary input device that provides an indication of how much the knob has been rotated and what direction it is rotating in. It is a great device for stepper and servo motor control. You could also use it to control devices like digital potentiometers.

A rotary encoder has a fixed number of positions per revolution. These positions are easily felt as small 'clicks' you turn the encoder. This module has thirty of these positions.

Rotary Encoder Pins

On one side of the switch there are three pins. They are normally referred to as A, B and C. In the case of this module, they are oriented as shown. Inside the encoder there are two switches. One switch connects pin A to pin C and the other switch connects pin B to C.

In each encoder position, both switches are either opened or closed. Each click causes these switches to change states as follows:

- If both switches are closed, turning the encoder either clockwise or counterclockwise one position will cause both switches to open
- If both switches are open, turning the encoder either clockwise or counterclockwise one position will cause both switches to close.

The module is designed so that a low is output when the switches are closed and a high when the switches are open. The low is generated by placing a ground at Pin C and passing it to the CLK and DT pins when switches are closed. The high is generated with a 5V supply input and pullup resistors, such that CLK and DT are both high when switches are open.

The module also features a push button switch that is integral to the encoder. If you push on the shaft, a normally open switch will close. The feature is useful if you want to change switch function. For example, you may wish to have the ability to between coarse and fine adjustments.
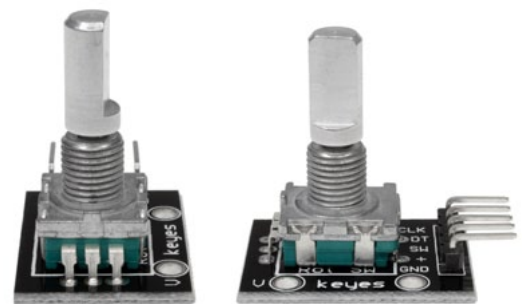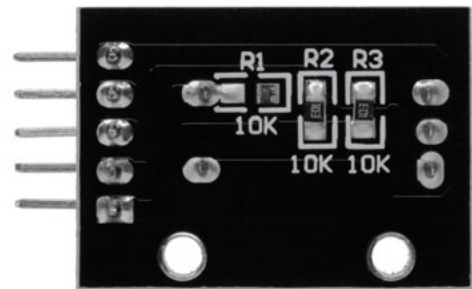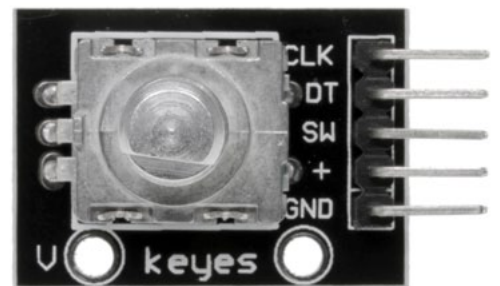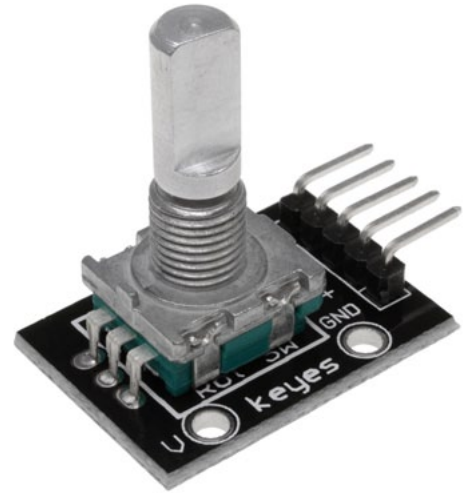
Specifications

Colour (Board)	Black
Material	PCB