

Gravity: 360 Degree Rotary Encoder Module

INTRODUCTION

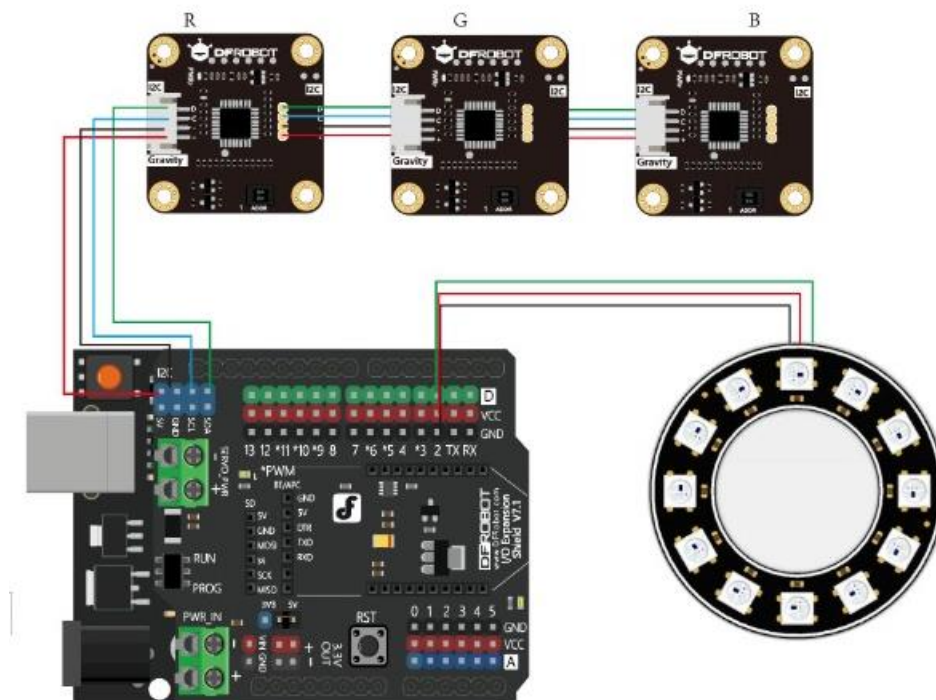
This looks like a potentiometer, but it's an encoder switch.

It is a cascadable 360 ° rotary encoder switch with 20 pulses per revolution, and each pulse corresponds to a detent. There are LED lights set for each detent to allow users visually check the real-time status of the encoder.

For ease of use, the module is designed with I2C data output and configurable accuracy within 1~51 for every detent (set in the program). For instance, when it is set to 1, turn on one LED light by rotating 2.5 revolutions; when set to 51, then one LED light can be switched on by rotating one detent.

In order to apply to more scenarios, the encoder is equipped with cascade function that enables to control multiple output devices by occupying only one I2C interface, such as, simultaneously controlling light brightness, color, volume, speed, etc.

Use Case Diagram (Control RGB LED by three encoders)



FEATURES

Pluggable cascade

I2C Data output, forward to increase, reverse to decrease

Onboard LED detent indicator

Allow setting 4 different I2C addresses by address switch

APPLICATIONS

Application Field

Automotive electronics

Multimedia speaker

Instruments and Apparatuses

Smart home

Application Case

Volume adjustment

Fire regulation

Speed regulation

Light adjustment

SPECIFICATION

Operating Voltage: 3.3V~5V

Total Rotating Angle: 360°

Pulses Per Revolution: 20

Interface: two Gravity connectors; I2C

Cascadable Device Number: 4

Rotation Lifespan: 30000±200 Cycles

Contact Resistance: ≤100mΩ

Insulation Impedance: 100MΩ above

Oscillation: <10ms press

Operating Temperature: -30°C~+80°C

Accuracy: 1~51

Minimum Settable Value: 1(Light up one LED when rotating 2.5 turns)

Maximum Settable Value: 51(Light up one LED when rotating 1 detent)

Storage: 0~1023

Dimension: 37*37mm/1.46*1.46''

SHIPPING LIST

Gravity: Rotary Encoder Module x1

Gravity I2C/UART Sensor Connector x1

