

## KMA36 SENSOR FOR GROVE SYSTEM

### Digital Magnetic Encoder IC

TE Connectivity provides the necessary hardware to interface the KMA36, a digital magnetic encoder IC for precise rotational measurement. To any system that utilizes Grove compatible expansion ports configurable for I<sup>2</sup>C communication. The KMA36 sensor feature a system-on chip technology that combines a magneto resistive element along with analog to digital converter and signal processing in a standard small package. The sensor model works in 5V voltage external. By using Anisotropic Magneto Resistive(AMR) technology, the KMA36 can determine contactless the magnetic angle of an external magnet over 360°.

### Specifications

- Contactless angle measurement from 0° to 360°
- Programmable resolution up to 15 bits
- I<sup>2</sup>C communication
- Very low hysteresis
- Incremental model
- Programmable zero position
- low power consumption

### Features

- 4-pin Grove compatible connector
- I<sup>2</sup>C interface
- Programmable resolution up to 15 bits
- Very low hysteresis
- High accuracy mode

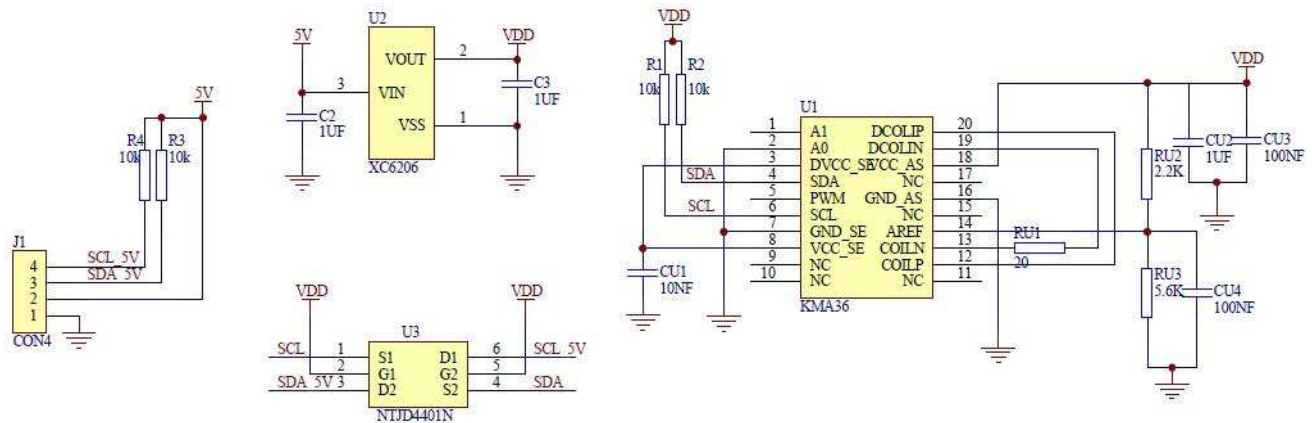
## KMA36 FOR GROVE SYSTEM

Digital Magnetic Encoder IC

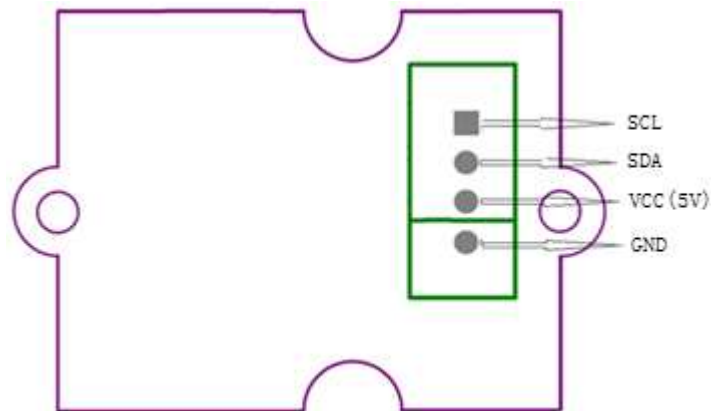
### Performance

- User programmable parameters
- Low power mode
- -40°C to 125°C accuracy: 1°C
- Sleep and automatic wake-up through I<sup>2</sup>C
- Programmable zero position
- Device address hardware configurable
- Operates 5V

### Schematic



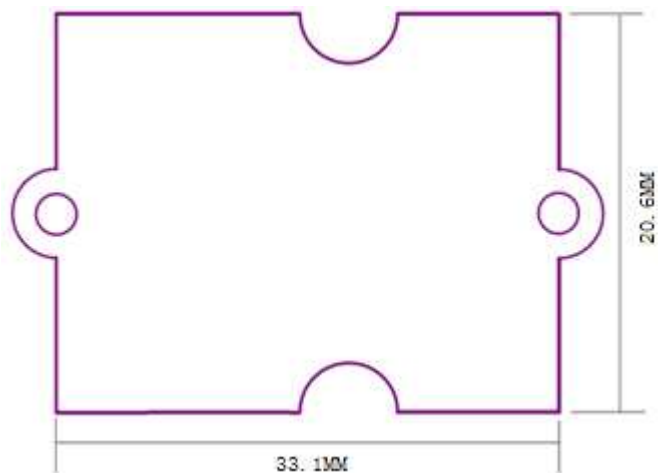
### Connector Pin Assignments (I<sup>2</sup>C Communications)



### Dimensions (mm)

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### Detailed Description

#### I<sup>2</sup>C Interface:

The KMA36 Grove compliant module can interface to the host in I<sup>2</sup>C model with 5V supply, it has a Grove compatible four pins port connector configured for I<sup>2</sup>C.

#### External Control Signals 5V supply:

The IC operates as an I<sup>2</sup>C slave using the standard 2-wire I<sup>2</sup>C connection scheme. As IC is power rated at 3.6V, the board integrates necessary fixture such as a regulator and electrical level shift so that the SCL and SDA signals could be driven directly from an external 5V I<sup>2</sup>C lines and power supply.

### Reference Material

Detailed information regarding operation of the IC:

- [KMA36 magnetic encoder IC datasheet](#)

### Ordering Information

Description	Part Number
KMA36 GROVE BOARD	DPP401G000

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