

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 I²C 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
- I²C communication
- Very low hysteresis
- Incremental model
- Programmable zero position
- low power consumption

Features

- 4-pin Grove compatible connector
- I²C interface
- Programmable resolution up to 15 bits
- Very low hysteresis
- High accuracy mode

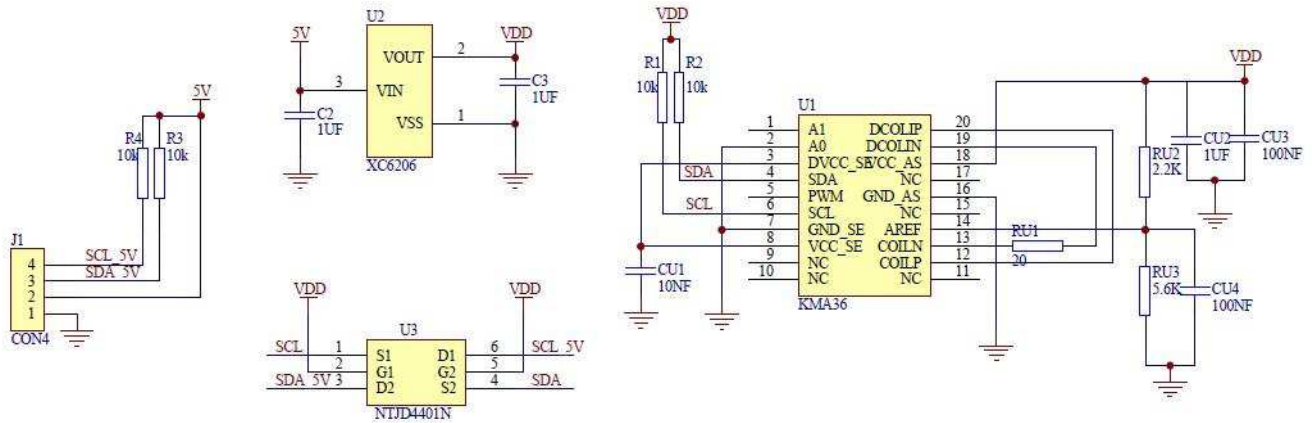
KMA36 FOR GROVE SYSTEM

Digital Magnetic Encoder IC

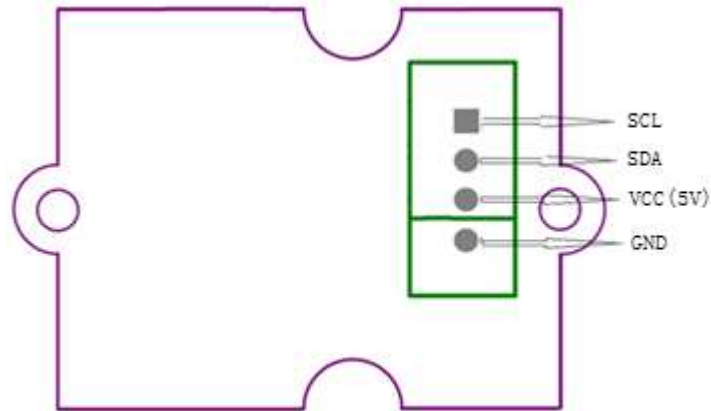
Performance

- User programmable parameters
- Low power mode
- -40°C to 125°C accuracy:1°C
- Sleep and automatic wake-up through I²C
- Programmable zero position
- Device address hardware configurable
- Operates 5V

Schematic



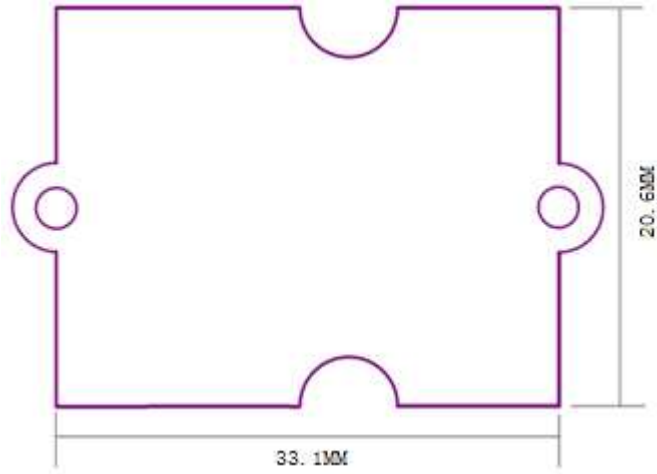
Connector Pin Assignments (I²C Communications)



Dimensions (mm)

KMA36 FOR GROVE SYSTEM

Digital Magnetic Encoder IC



KMA36 FOR GROVE SYSTEM

Digital Magnetic Encoder IC

Detailed Description

I²C Interface:

The KMA36 Grove compliant module can interface to the host in I²C model with 5V supply, it has a Grove compatible four pins port connector configured for I²C.

External Control Signals 5V supply:

The IC operates as an I²C slave using the standard 2-wire I²C 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 I²C 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

NORTH AMERICA

Tel +1-800-522-6752
customercare.hmpt@te.com

EUROPE

Tel +31 73 624 6999
customercare.tlse@te.com

ASIA

Tel +86-400-820-6015
customercare.shzn@te.com

TE.com/sensors

Measurement Specialties, TE Connectivity, TE Connectivity (logo) and EVERY CONNECTION COUNTS are trademarks. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

This data sheet contains data from the preliminary specification. Supplementary data will be published later. TE reserves the right to change the specification without notice, to improve the design and performance of the product. The information given herein, including drawings, illustrations and schematics which are intended for illustration purposes only, is believed to be reliable. However, TE Connectivity makes no warranties as to its accuracy or completeness and disclaims any liability in connection with its use. TE Connectivity's obligations shall only be as set forth in TE Connectivity's Standard Terms and Conditions of Sale for this product and in no case will TE Connectivity be liable for any incidental, indirect or consequential damages arising out of the sale, resale, use or misuse of the product. Users of TE Connectivity products should make their own evaluation to determine the suitability of each such product for the specific application.

© 2019 TE Connectivity Ltd. family of companies All Rights Reserved.