The KMA36 magnetic encoder's Anisotropic Magnetoresistive (AMR) technology determines accurately and contactless the magnetic angle of an external magnet over 360° with resolution up to 15 bit.

The KMA36 magnetic encoder is an excellent solution for reliable and precise measurement in innovative and rugged applications.

Product Type: Magnetic Angle Sensor
Package: TSSOP20
Signal Output: Analog
Typical Operating Voltage: 3 - 5.5 V
Operating Temperature Range: -25 - 85 °C

Universal contactless magnetic encoder for precise and reliable measurements.
The KMA36 offers a sleep reduced power mode over I²C. In addition, programmable parameters give users access to a wide range of configuration options to provide the maximum of freedom and functionalities. Used both as a linear or a rotary position sensor, the KMA36 magnetic encoder IC has large air gap tolerance. The measurement is reliable over temperature ranges and insensitive to thermal stress. The maintenance-free operation and high bandwidth of this universal magnetic sensor make it a good choice for dynamic applications in harsh environments.

KMA36 Magnetic Encoder IC Video Overview (English)
The KMA36 magnetic encoder IC from TE Connectivity (TE) is an excellent solution for reliable and precise measurement in innovative and rugged applications. Watch this video to learn more.
Benefits
- Small TSSOP Package
- Digital Output
- I²C Interface
- High Resolution up to 0.01°
- Rotational or Linear Measurement Mode
- AMR Technology

Applications
- Industrial and medical robotics and devices
- Potentiometer replacement
- Motion control, like transportation roller etc.
- Valve position in industrial valves
- Gauge readings (e.g. Bourdon tubes etc.)
INTRODUCING THE KMA36

CONTACTLESS MAGNETIC ENCODER IC FOR PRECISE AND RELIABLE POSITION MEASUREMENTS.

Devices and equipment today are being designed smaller and smarter. For applications requiring precise rotary and linear position measurement there is demand for digitization and miniaturization in sensors. TE Connectivity has designed the KMA36 to meet this demand in position sensing applications.

TOP 4 BENEFITS of our KMA36 Magnetic Encoder IC

<table>
<thead>
<tr>
<th>HIGH PERFORMANCE</th>
<th>DESIGN FREEDOM</th>
<th>CONTACTLESS MEASUREMENT</th>
<th>RUGGED TECHNOLOGY</th>
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</thead>
<tbody>
<tr>
<td>Universal Magnetic Encoder IC for highly accurate and reliable rotational or linear measurements with resolution up to 15 bit.</td>
<td>Programmable parameters of this digital sensor provide options for a wide range of configurations allowing for maximum design freedom and functionality.</td>
<td>AMR technology enables precise and contactless 360° measurement over an external magnet. In linear applications, the KMA36 can determine incremental positions on a magnetic pole strip.</td>
<td>Used as both a linear or rotary position sensor, these magnetic encoders are insensitive to magnetic drift whether from mechanical tolerances, changes in temperature or thermal stress.</td>
</tr>
</tbody>
</table>

KMA36 APPLICATIONS ARE ALMOST ENDLESS...

Industrial Robotics • Industrial Automation • Industrial Process Control
Industrial Motors • Robotic Dialysis Equipment • Robotic Surgery • Exo Skeletons
Radio Therapy Equipment • Vending Machines • Agricultural Machines
Buy KMA36 Development Boards Online

Features

Product Type Features

| Product Type | Magnetic Angle Sensor |

Electrical Characteristics

| Sleep Current (mA) | 1.2 |
| Typical Operating Voltage (V) | 3 - 5.5 |
| Typical Average Current (mA) | 10 - 30 |

Usage Conditions

| Operating Temperature Range (°C) | -25 - 85 |
| Operating Temperature Range (°F) | -13 - 185 |

Operation/Application

| I2C Clockrate (Kb/s) | Up to 100 |
| Data Update Rate (Hz) | 24 - 720 |
| Signal Output | Analog |

Packaging Features

| Package | TSSOP20 |

Other
MAGNETIC ENCODER IC

TE Model #: KMA36
TE Internal #: CAT-MR50001

| Resolution (bit) | 13 |

SEE PRODUCTS ON NEXT PAGE
# MAGNETIC ENCODER IC

TE Model #: KMA36  
TE Internal #: CAT-MRS0001

## Products (1 of 1)

<table>
<thead>
<tr>
<th>TE Model / Part #</th>
<th>23370000-01</th>
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<tbody>
<tr>
<td>EU RoHS Directive 2011/65 /EU</td>
<td>Not Yet Reviewed for EU RoHS</td>
</tr>
<tr>
<td>EU ELV Directive 2000/53/EC</td>
<td>Not Yet Reviewed for EU ELV</td>
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<td>Product Families</td>
<td>MEAS</td>
</tr>
<tr>
<td>Series</td>
<td>MEAS KMA</td>
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</tbody>
</table>

*EU RoHS Directive 2011/65/EU*  
These products comply with the substance restrictions of the Restriction on Hazardous Substances Directive 2011/65/EU (RoHS2). The RoHS2 Directive requires that certain electrical and electronic equipment products do not contain mercury, cadmium, hexavalent chromium, PBB, PBDE, lead, DEHP, BBP, DBP and DIBP above defined thresholds. Products indicated as ‘Compliant’ do not contain any of these substances above the prohibition thresholds. Finished electrical and electronic equipment products will be CE marked as required by the Directive. Components may not be CE marked.

**EU ELV Directive 2000/53/EC**  
These products comply with the substance restrictions of the End of Life Vehicles Directive 2000/53/EC (ELV). The ELV Directive requires that materials and components of vehicles do not contain mercury, cadmium, hexavalent chromium, and lead above defined thresholds. Products indicated as ‘Compliant’ do not contain any of these substances above the prohibition thresholds.