

**NOVOHALL
Rotary Sensor
Non-contacting**

RSK-3200



**Cost-efficient and Robust -
Rotary sensor with Hall Technology
in Mobile Application**

- Non-contacting, magnetic measuring principle (Hall technology)
- Analog interfaces (ratiometric, PWM)
- Fully redundant system
- Meets EN ISO 13849 Standards for Safety Application
- Electrical range up to 360°
- Temperature range -40° up to +125° C
- Simple mounting
- Protection class IP67/IP69K
- Long life
- Very competitive price/performance ratio
- European E1 approved



Applications

For mobile and automotive applications such as

- Throttle
- EGR valves
- Transmission gear
- Accelerator

Working mobile machines and conveyor trucks in their harsh environment place very high stress on sensors.

The very compact rotary sensor RSK-3200 offers reliable function under harsh operating conditions.

The sensor is optimized for mobile applications and is certified according to the highest EMC standards such as ISO 11452 for pulses and interference fields.

The position values are output as a voltage signal ratiometrical to the supply voltage or via PWM.

The fully redundant sensor is suitable for use in safety-related applications.

Magnetic Position Measurement

When a current flows through a Hall element it provides a voltage across the current flow if a magnetic field acts perpendicular to both.

Since this voltage is proportional to the magnetic field strength, a non-contact and absolute angle or displacement measurement can be easily achieved by attaching a position magnet to the moving part of the application. By combining several sensor elements and integrating the complete signal processing in only a few components, complex systems are feasible in the smallest possible space.

The systems are insensitive to aging and independent of field strength fluctuations of the magnets.

Both shafted and touchless 2-part systems enable angle measurement over up to 360°, even over several revolutions or a linear displacement measurement up to 50 mm.

High resolution with great dynamic response, large mechanical tolerances and fast feasibility of customer-specific output options are added benefits of this wear free technology.



Cost-effective Rotary Sensor

The non-contact rotary sensor RSK-3200 offers full 360° angle measurement, smaller measurement ranges are also available. The metal bushings with a hole spacing of 32 mm allow safe and secure mounting. The customer's D-shaft is inserted into the actuator of the sensor and also takes over the function of the bearing for the position magnet. A pre-assembled O-ring on the centering collar seals against the mounting surface.

Hall Sensing Technology - Safe Position Detection

RSK-3200 series is developed for safety-related applications according to EN ISO 13849. The sensor is optimally shielded against electromagnetic interference from their environments and is approved to E1 type approval according to the ECE directive.

Resilient in Harsh Environments

With our large testing facility and our own EMC lab, we are equipped to conduct extensive environmental testing. This enables us to meet our customers' expectations when it comes to challenging outdoor applications. The electronics are completely encapsulated and offer an extremely wide temperature range of -40 to +125°C and can therefore be used in a wide variety of applications.

- Measuring range 60° up to 360°
- Simple mounting
- Actuator integrated
- Favourable price/performance ratio

- European E1 approved
- Suitable for safety-related applications
- Resolution 12 bits
- Fully redundant, crossed outputs
- Supply voltage 5 VDC

- Temperature range -40° up to +125° C
- Protection class IP67/IP69K
- For highest EMC requirements:
ISO 13766-1/2 for Construction machinery, ISO 14982 for Agricultural machinery, ISO 11452 for Road vehicles

Installation example

Recommended Accessories



- Connector Micro Quadlock System as a kit or with lead wires



Ordering Specifications

Preferred types printed in bold

- Delivery time up to 25 pcs. within 10 working days EXW
- Best low-volume pricing

Interface

2_ : $U_b = 5 \text{ VDC}$, 5 ... 95%/10 ... 90% ratiometric to U_b (0.25 ... 4.75 VDC/0.5 ... 4.5 VDC)

7_ : $U_b = 5 \text{ VDC}$, PWM with duty cycle 10 ... 90%, 250 Hz/500 Hz

Other output signals on request

Electrical connection

521: Connector AMP MQS 6-pin, male

R S K - **3 2 0 1** - **8 3 6** - **2 1 4** - **5 2 1**

Series

Mechanical version

3201: Standard design

3202: Standard design, European E1 approved

806: Angle 60°

812: Angle 120°

818: Angle 180°

824: Angle 240°

836: Angle 360°

Other angles on request

For more information and detailed ordering specifications, see <https://www.novotechnik.com/salessupport.php>

Outside North America Representatives

Novotechnik is represented in all of the world's major markets with our own subsidiaries or by approved dealers and representatives. Thanks to this tightly knit network we can ensure that wherever our customers may be located we can provide first-class service and customer care.

Your contacts can be found at <https://www.novotechnik.de/nc/en/service/representatives/>

North American Customers

For further technical assistance please call +1 508 485 2244 <https://www.novotechnik.com/salessupport.php>