NOVOHALL
Rotary Sensor
Non-contacting

RSA-3200

Resilient in Harsh Environments -
Rotary sensor with robust Hall technology
for mobile machinery

- Touchless hall technology
- Electrical range up to 360°
- High protection class IP67 / IP6K9K (housing side)
- Resolution up to 14 bits
- Temperature range -40°C to +125°C
- Single and dual-channel versions
- Optimized for use in mobile applications
- For highest EMC requirements such as ISO pulses and interference fields according to ISO 11452 and ECE directive
- Suitable for safety-critical applications according to DIN EN ISO 13849
- Interfaces: voltage, current, CANopen, CAN SAE J1939
- Optional linkage lever mounting
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 machine 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.

Applications

- Mobile working machines (industrial trucks, construction machinery, agricultural and forestry machinery)
- Marine applications
Compact Rotary Sensor with Shaft
The non-contact angle sensor RSA-3200 offers full 360° angle measurement, smaller measurement angles are also available. The mounting holes are reinforced with stainless steel inserts for safe and secure mounting. Various lever arms can be mounted on the stainless steel shaft which is guided in a robust sleeve bearing.

Hall Sensing Technology - Robust Position Detection
The analog interfaces (ratiometric interface, current and voltage outputs) were developed for safety-critical applications according to DIN EN ISO 13849 and are approved to E1 type approval according to the ECE directive. Alternatively, the sensor communicates via Fieldbus CANopen or CAN SAE J1939.

Resilient in Harsh Environments
The RSA-3200 meets the requirements of mobile applications: high seal rating, media and temperature resistance as well as excellent EMC robustness. 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. The shaft is sealed against water ingress with a double O-ring seal.

Recommended Accessories
- Standard measuring angles: 60°, 120°, 180°, 240°, 360°
- Sintered bronze bushing for high bearing loads
- Typical life rating: 30 Mio. movements
- Industry-specific connector (Micro Quadlock System)
- European E1 approved
- Suitable for safety-critical applications
- Position and speed
- Resolution up to 14 bits
- Single and dual-channel versions
- Supply voltage 12/24 VDC
- Protection class up to IP6K9K (electronics encapsulated)
- -40 ... +125°C
- Interference immunity up to 200 V/m according to ISO 11452-5

For more information and detailed ordering specifications, see https://www.novotechnik.com
The specifications contained in our datasheets are intended solely for informational purposes. The documented specification values are based on ideal operational and environmental conditions and can vary significantly depending on the actual customer application. Using our products at or close to one or more of the specified performance ranges can lead to limitations regarding other performance parameters. It is therefore necessary that the end user verifies relevant performance parameters in the intended application. We reserve the right to change product specifications without notice.

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