



# BEARINGLESS ENCODERS

REDUCE SYSTEM COSTS.  
SAVE INSTALLATION SPACE.  
INCREASE ROBUSTNESS.

From standard applications up to the realization of **Smart Motors**.

# COMPACT INTEGRATION

Bearingless encoders. Incremental and absolute.

Thanks to their contactless measuring principle, the magnetic bearingless encoders are at the same time wear-free and robust. They ensure faultless continuous operation of your motors. Their compact design is particularly suitable for tight installation spaces. Unlike encoders with bearings, they allow a large hollow shaft up to  $\varnothing$  390 mm. This ensures perfect integration of the bearingless encoders in any motor concept.

## + YOUR BENEFIT

- Space and costs savings
- Faultless continuous operation of your motors
- Sensor solution scalable thanks to different magnetic ring sizes
- Optimal mounting solution in smallest installation spaces



## INCREMENTAL BEARINGLESS ENCODERS

**Ideal for accurate rotary speed measurement.** Resolution of up to 16,000 pulses per revolution and available as HTL or TTL variants. Easy and fast installation thanks to various shaft mounting possibilities such as press-fit, hub screw or screwed flange. Large mounting tolerance between the magnetic ring and the sensor head.



**Suitable for shaft diameters  $\leq$  35 mm**

RLI20  
RLI50 with zero pulse

Resolution  $\leq$  3,600 ppr



**Suitable for shaft diameters  $\leq$  390 mm**

RLI200  
RLI500 with zero pulse

Resolution  $\leq$  16,000 ppr



## ABSOLUTE BEARINGLESS ENCODERS RLA50

**Ideal for accurate position and angle measurement.**

Resolution of up to 16,000 measuring steps per revolution and available as SSI or CANopen variants. Additional incremental signals for highly dynamic drives.

# SMART BEARINGLESS ENCODERS

Reduce system costs. Increase robustness. Save installation space.

Kübler will find, together with you, the suitable solution that will allow making your motors even more compact both today and in the future. You will thus reduce your system costs and obtain an individually integrated sensor solution. The Smart Technology provides evaluated data for Condition Monitoring and Predictive Maintenance.

## YOUR BENEFIT

- 100% integration in the motor
- Slim motor design
- High assembly tolerance
- Accurate control
- Ready for the Smart Motor

## THE SUITABLE SOLUTION FOR EVERY APPLICATION

### RLI – PERFORMANCE

The smart bearingless encoder

#### Smart Technology:

- The digital signal processing with active signal errors correction ensures highest signal quality
- Integrated digital signal filters and electronic nameplate with user memory
- Adjustable line number and application-specifically programmable filters
- Possibility for Condition Monitoring and Predictive Maintenance

### FOR HIGH-PERFORMANCE APPLICATIONS

- Very high resolution reaching 2,000,000 ppr
- Direct digital output of position, speed and acceleration
- Highest signal quality over the whole speed range from 0 to 12,000 rpm
- Digital interface SPI, RS485 and BiSS

### RLI – STANDARD

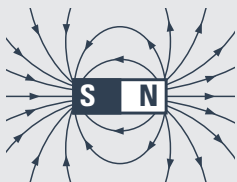
### FOR STANDARD APPLICATIONS

- Resolution 16,000 ppr
- High signal quality

### RLI – BASE

### FOR SIMPLE APPLICATIONS

- Resolution up to 500 ppr
- Low signal quality requirements



### INTERFERENCE FIELDS – NO PROBLEM. KÜBLER SHIELDING TECHNOLOGY.

Electromagnetically actuated brakes generate strong magnetic fields, which make the operation of a bearingless magnetic encoder in their immediate proximity impossible. A shielding method calculated by FEM manages to shield the interference field of the brake at 100 % in the area of the sensor.



# Kuebler worldwide

480 Employees worldwide · 4 Production plants · Presence in over 50 countries

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