

# QR series



## Application example

The contactless incremental encoder is used to measure the direction and speed of rotation of a shaft.

This technology is used in many machines in which a linear displacement is achieved by means of a rotary motor. This sensor is often used as an alternative for two inductive limit switches or expensive optical encoders.

The contactless absolute encoder is used to measure the absolute angle of a rotating shaft that turns through an angle of less than 360°. Typical applications include steering systems, throttle levers and automatic doors.

This rotary encoder is therefore highly suitable for continuous feedback of the shaft position to the controller.

Also available in QR46, as replacement for rotary encoders from other brands. This model has a compatible shaft and mounting bracket.

## Rotary encoders

Our rotary encoders (absolute & incremental) enable contactless measurement of an angular displacement from 0° to 360° without a mechanical stop. We offer three different types: QR30(N), QR40 and QR40EMN. In the QR30(N) and QR40EMN range, the sensor is mounted on the fixed assembly, and the magnet is separately mounted on the rotating shaft.

The maximum distance up to 10 mm (depending on model and magnet) between the magnet and the sensor provides sufficient clearance for mechanical tolerances under extreme conditions. Various outputs are available with a 12-bit resolution and a high repeatability for a wide range of applications.

The QR40 series is supplied complete with output shaft. The bearing is equipped with a fibreglass plain bearing. The QR40 has a zero-input, enabling the device to be zero-calibrated after installation, and making the sensor mounting procedure non-critical. The QR40EMN is available as full-redundant model, what makes it the perfect solution for designs where safety is required.

## Specifications:

	Absolute	Incremental
measurement range:	0 - 360° (subranges possible)	0 - 360°
energy supply:	5 V dc or 10 - 30 V dc	5 V dc or 10 - 30 V dc
output:	0 - 5 V or 4 - 20 mA (both single & redundant)	A/B pulse (32 - 1,024 ppr) push/pull
level of protection:	IP67 (QR40: IP66)	IP67
resolution:	0.09°	0.09°
housing:	plastic	plastic

## Functions:

replacing potentiometers, measurement of angle, speed and direction

## Applications:

agricultural machinery, excavators, mobile and fixed waste compactors, valve control, robotics

