







KMY20



# **KMY\_KMZ** Linear Magnetic Field Sensors

# **SPECIFICATIONS**

- AMR sensor
- Very high sensitivity
- Almost no hysteresis
- Various applications
- Available with internal magnet
- Available in several packages

Due to its featured properties - high sensitivity and almost no hysteresis – the **KMY** / **KMZ** sensors are used in a wide range of applications, like magnetic field measurement, revolution counters, proximity detecting, and position measurement.

An uniaxial linear magnetic field will generate a linear output within the specified magnetic field range.



## FEATURES

- Output proportional to magnetic field strength with very high sensitivity
- Very small hysteresis
- Large operating temperature range, from -40°C up to +150 °C
- Highly reliable
- With / without internal magnet

### **APPLICATIONS**

- Detection of very weak magnetic fields, like earth magnetic field, or field generated by small magnetic particles
- Detection of objects that distort non-local magnetic fields
- Revolution measurement on ferromagnetic gears
- Contactless switch
- Contactless displacement / position sensor

#### DESCRIPTION

An uniaxial linear magnetic field (in y-direction) will generate a linear output within the specified magnetic field range. The sensor is available in two types: the **KMY 20 M**, **KMY 21 M** and **KMZ 20 M** sensor types contain intrinsic magnets which provide an auxiliary magnetic field (in x-direction) at the sensor die which prevents magnetic domains from flipping irregularly.

If the dies **MR174B** or the components **KMY22**, **KMY20S** or **KMZ20S** are used, the auxiliary field has to be provided by the user. The dependence of the sensitivity with auxiliary field strength is depicted in the figure aside.

**Figure 1**: Sensitivity dependence on auxiliary field strength

#### Auxiliary Field Dependence

