KMY22

KMY20

KMZ20

# KMY_KMZ

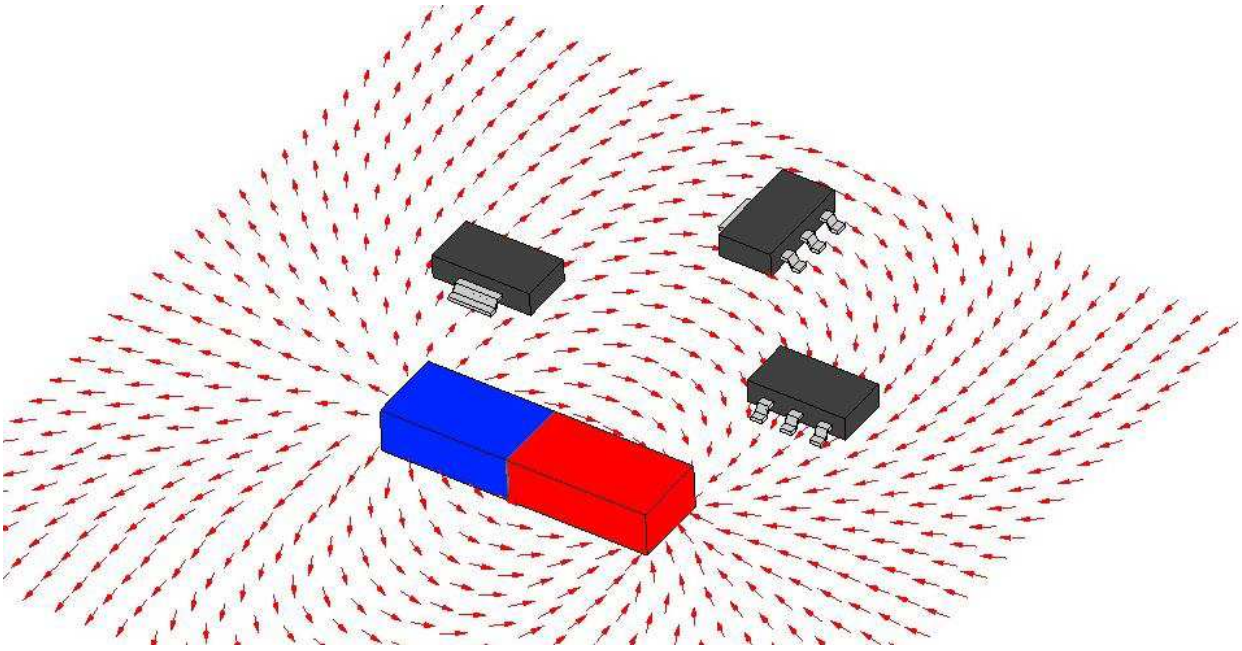
## Linear Magnetic Field Sensors

### 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.

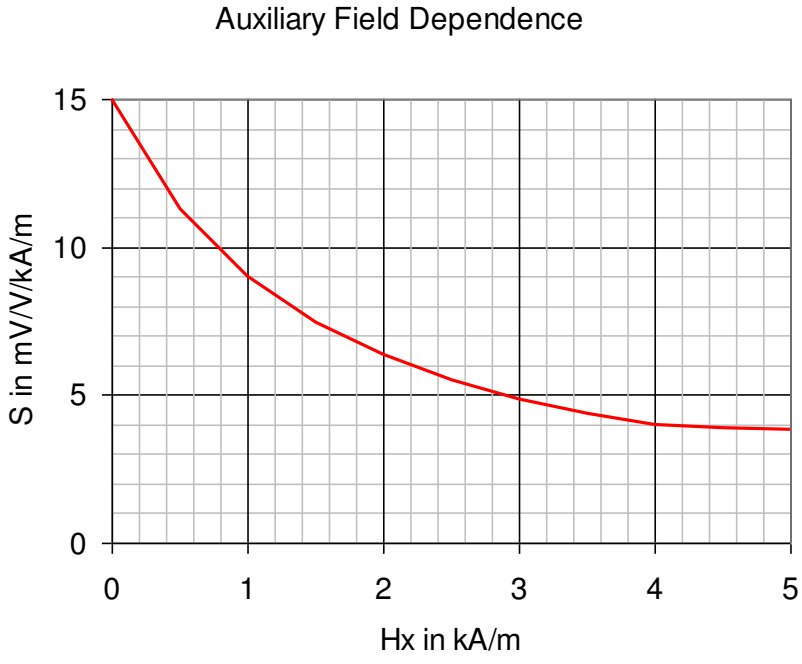



**Figure 1**: *Sensitivity dependence on auxiliary field strength*