

## IXD accelerometers for safety monitoring in industrial machines

- 2-axis and 3-axis acceleration sensors
- $\pm 2g$ ,  $\pm 3g$ , and  $\pm 16g$  measurement range
- Analogue outputs
- Compact and robust case, IP67 protection, reliable operation in critical environments



### Lika Electronic introduces a new range of 2-axis and 3-axis acceleration sensors.

IXD accelerometers are designed to be used throughout industry for precise detection of 'g' forces as well as for safety monitoring of vibration and shock levels.

They are available in three measurement ranges:  $\pm 2g$ ,  $\pm 3g$ , and  $\pm 16g$ .

IXD accelerometers are compact, rugged, and **IP67 protected**. They are designed in a robust metal enclosure and the electronics is coated with resin, so they excel also in harsh and critical environments such as under mechanical and thermal shocks, vibrations, moisture.

The range of the operating temperature is up to  $-40^{\circ}\text{C} \div +85^{\circ}\text{C}$  /  $-40^{\circ}\text{F} \div +185^{\circ}\text{F}$ .

IXD accelerometers utilize MEMS (Micro Electro-Mechanical Systems) technology and are offered in 2-axis and 3-axis models as well as in three measurement ranges:  $\pm 2g$ ,  $\pm 3g$ , and  $\pm 16g$ . They integrate a self-test capability that allows the user to check the operation of the sensor in the final application. 2-axis model is also equipped with safety limit switches with relay contact: they are provided on each axis and have a trip point of  $\pm 0.25g$  (open thresholds).

Accelerometer sensors provide voltage analogue signals at output (e.g. 0.25V for  $-2g \div 9.75V$  for  $+2g$ ) with bandwidth from 50 Hz to 500 Hz.

X, Y, and Z output signals are conditioned by an operational amplifier and can be processed by sixth-order Bessel filters to reject unwanted frequencies (5 Hz flatness).

As previously stated, accelerometers can be used in several industrial applications.

By measuring dynamic acceleration they can be used for safety-related purposes and for detection of vibrations and shocks in particular.

In such uses they can monitor, for instance, the operation of **wind turbines and gantry cranes** in order to prevent them from reaching dangerous levels of vibration; or they are ideal in safety prediction systems of all kinds of **industrial machinery and equipment** to protect them from exceeding critical vibrations that might lead to damage and deterioration and so decrease the lifespan of the system.

They also measure static acceleration and provide tilt information.