



## **Inductive Automation = Intelligent Automation**

**Waldkirch, Innovation N° 7 – Precision, maximum availability and durability are the most important qualities required of inductive sensors. If they also form part of a product family encompassing all sizes and are designed to provide the best possible switching accuracy and global availability – such as the IME series made by SICK – then it becomes perfectly feasible to think in terms of single-source solutions based on inductive and therefore intelligent automation.**

### **Silent sensor intelligence**

There are millions of inductive sensors deployed in almost every area of factory automation. They often perform their work discretely in the background, hidden away inside an application. But if these sensors are unreliable, the result is usually frequent downtimes and high replacement costs. SICK inductive sensors conceal high-tech features within their compact housing. Their integrated electronic switch – an application-specific integrated circuit (ASIC) based on extremely compact platform technology – offers a distinctly improved manufacturing tolerance whatever the device in question. Each sensor is 100% identical to the next. In practice, this means a 10% higher assured switching distance. This provides a significantly greater useful switching distance compared to conventional proximity switches. As well as simplifying the mechanical design of the machines and the configuration of the sensors, this also makes it possible – if ever needed – to rapidly replace a device with its 1:1 equivalent.



### **Perfectly precise**

The distinctly improved manufacturing tolerance enables inductive sensors containing the SICK ASIC to operate far more precisely than the usual type of device composed of discrete components. The latter are generally calibrated mechanically during the manufacturing process using a potentiometer or by laser trimming. But these set characteristics may change when the sensors are subsequently cast. Inductive sensors from Sick, by contrast, are calibrated digitally at the very end of the manufacturing process. A very precise switching point and highly reproducible characteristics are obtained by programming the relevant parameters in the ASIC – settings that remain stable and can be guaranteed from one production lot to another. The advantage for the user is that the sensors operate reliably and provide high positioning accuracy when incorporated in the machine.

### **A soft kernel in a hard shell**

The use of hotmelt adhesive inside the housing ensures a high resistance to impact and vibration. A hotmelt compound is employed to cast the IME platform, a long-established technique in the automobile industry. The robust cylindrical housing with a tightening torque of up to 100 Nm is an additional feature of these sensors, guaranteeing maximum availability and a long service life.

### **The right solution for every application**

SICK AG in Waldkirch – a global leader and technological innovator in many areas of the industrial sensor market – has a strong edge in ASIC technology and has built up an extensive portfolio of inductive proximity sensors over recent years. SICK can always provide the right solution to meet your requirements – from cylindrical and rec



tangular standard sensors with one, two or three set switching distances to special sensors for EX-zone applications and harsh environments. A new addition to the SICK portfolio is a line of inductive sensors designed specifically to meet the requirements of the food and beverage industry. These stainless-steel sensors provide IP69K protection and high temperature resistance. Customers are sure to find the ideal answer to their specific needs among the SICK portfolio of inductive proximity switches. It is the intelligent, reliable route to implementing industry-specific and customized solutions to any task involving automation.



For decades, SICK has been one of the most innovative companies in the sensor sector. The latest technological knowledge and processes are implemented in innovative products and system solutions. They position SICK as a technology and market leader in the customer segments of factory, logistics and process automation.

More than 50 innovations in sensor and control solutions are planned for 2009. SICK will launch a new product each week as part of its "SICK Innovation Marathon 2009". All innovations – from No. 1 to No. 52 – are more than just a product: they solve tasks intelligently, efficiently and precisely. And create unbeatable customer advantages.