# Flexible automation – the key to Industry 4.0

Customization of goods in the packaging process with Smart Sensor Solutions

Waldkirch/Hanover, April 2015 – At the Hannover Messe Industrie (HMI) trade fair, SICK AG will be using the example of a packaging machine to demonstrate how a higher product variance and general increase in productivity can be achieved using automatic batch changes without manual intervention by means of intelligent, autonomous components. Achieving maximum productivity with product variation up to “batch size 1” is a central goal of the concept of Industry 4.0.

Manufacturing plants must be flexible and must adapt to individual customer requirements. With high product variance but ever-smaller quantities, intelligent components (smart sensors) must be able to adapt and control themselves.

SICK is demonstrating the final packaging of pre-packed batches with bottle sizes of 0.5 l and 1.5 l, which can be packaged on one system using smart sensor detection with automatic format adjustment. The sensors detect the change in product and signal to the control that the system needs to reset itself so that the right box can be set up, the bottles can be placed inside, and the box can be labeled and transported away. The changeover steps are listed on a monitor as the machine adjusts itself. The system continues running automatically and does not need to be put back into operation manually.

If the sensors detect an incorrect classification when measuring the length of the product, they signal this to the control. The product is rejected without having to stop the system. The sensors also provide data to enable predictive maintenance – for example, monitoring the system for fine dust so that measures to safeguard the packaging process can be introduced automatically.

Industry 4.0 will only be possible with intelligent, communicative sensors: With Smart Sensor Solutions – the use of state-of-the-art sensor technologies in conjunction with complete integration into the control level – there is a particular focus on the decentralization of certain automation functionalities in the sensor, in order to relieve pressure on the control and increase machine productivity.

Image: Flexible\_Automation\_IM0048775.jpg

Customization of goods in the packaging process with Smart Sensor Solutions.

SICK is one of the world's leading manufacturers of sensors and sensor solutions for industrial applications. Founded in 1946 by Dr.-Ing. h. c. Erwin Sick, the company with headquarters in Waldkirch im Breisgau near Freiburg ranks among the technological market leaders. With more than 50 subsidiaries and equity investments as well as numerous representative offices, SICK maintains a presence all around the globe. In the 2013 fiscal year, SICK had more than 6,500 employees worldwide and achieved Group sales of EUR 1,009.5 million.  
  
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