# Resistant to magnetic and welding fields: inductive proximity sensors with a reduction factor of 1

IMR product family with a larger sensing range provides lasting operational safety

Waldkirch, November 2018 – Consistent switching behavior for all non-ferrous metals – at the same time a larger sensing range, maximum detection reliability and availability even in magnetic and welding fields, as well as extreme load capability thanks to an anti-slip PTFE coating and durable thermosetting plastic housing – these are the performance highlights of the IMR inductive proximity sensors that SICK is due to launch at the SPS IPC Drives trade fair held in Nuremberg from November 27 to 29, 2018 (hall 7A, booth 340). State-of-the-art ASIC technology also guarantees excellent EMC properties. The reduction factor 1 sensors, which come in various metric and cubic housings, are able to detect objects in harsh environments over incredibly long distances. This means they can be mounted so they are not exposed to any mechanical damage. A high IP enclosure rating and an extended temperature range prove just how rugged these IMR sensors are.

The IMR inductive proximity sensors are employed, for example, in welding processes for detecting the presence of parts and monitoring clamping devices, for positioning skid conveyors, for detecting the presence of sheet metal in punching processes, or for monitoring material transportation to machine tools.

**Reduction factor 1: one sensing range for all metals**

Steel, stainless steel, aluminum, copper – while conventional inductive sensors respond differently to different metals and therefore need to be attached closer to the detection object, sensors from the IMR product family by SICK have an identical and consistent sensing range for all non-ferrous metals. This guarantees maximum detection and operational safety – especially since the sensors work with a sensing range of up to 75 mm (up to three times larger than the standard) and so can be mounted in a safe position. This prevents damage caused by operation and stops sensors failing, which improves machine availability at the same time.

**Reliable detection even where there are magnetic interference fields or weld spatter**

The IMR initiators are made without a ferrite core, which protects the inductive proximity sensors from the effects of magnetic interference fields or weld spatter, such as arise in resistance welding applications. Their excellent resistance to magnetic and welding fields is supplemented by a very high level of electromagnetic compatibility, which is ensured by the use of state-of-the-art ASIC technology. This enables switching errors to be consistently avoided in harsh environments, leading to a high degree of process reliability.

**Long service life – even when subjected to flying sparks or contamination**

The sensors from the IMR product family have been designed for use in harsh operating environments from a mechanical point of view too. The cylindrical metal sleeves in M8 to M30 designs feature a hard-wearing PTFE coating, which protects the sensors from flying sparks, slag deposits, and other contamination. The cubic sensor housing is made of rugged thermosetting plastic and available in 40 x 40 mm and 80 x 80 mm versions. All IMR sensor variants have an IP68 enclosure rating and can withstand an extended temperature range of -30 °C to +85 °C. IMR inductive proximity sensors are therefore optimally equipped for long-term use in demanding environments.

# Photo: IMR product family *IMR from SICK: inductive proximity sensors with a reduction factor of 1 in a design that is resistant to magnetic and welding fields.*

SICK is one of the world’s leading producers of sensors and sensor solutions for industrial applications. The company, which was founded in 1946 by Dr. Erwin Sick and has its headquarters in Waldkirch im Breisgau near Freiburg in Germany, is among the technology market leaders. With more than 50 subsidiaries and equity investments as well as many agencies, SICK has a representative office all over the world. In the 2017 fiscal year, SICK had almost 9,000 employees worldwide and a group revenue of around EUR 1.5 billion.

Additional information about SICK is available on the Internet at http://www.sick.com or by phone on +49 (0) 7681 202 4183.