# Press Release

**Leaving nothing to chance – inductive IO-link sensors provide comprehensive diagnostic data for the greatest process safety**

(11/11/2019) Baumer introduces fully digitized inductive IO-link sensors with the most comprehensive diagnostic data on the market. In addition to sensor temperature, operating voltage, and operating time, the sensors also collect the number of boot cycles, the switching frequency, and distances. When required, this information is easy to retrieve via the IO-link interface and can be directly digitally processed in the control. The sensors are additionally equipped with a memory function. The histogram function allows the evaluation of the frequency distribution of process and diagnostic data across a relevant period of time. For condition monitoring, information regarding the condition of machines and systems is very easy to collect and evaluate. This data constitutes the basis for predictive maintenance. Specific analysis of the collected diagnostic and process data allows the targeted improvement of system effectiveness and the optimization of processes.

The inductive distance sensors AlphaProx primarily provide highly precise, micrometer-accurate digital distance information. With a cycle time of 0.6 ms and a switching frequency of 1.25 kHz, the inductive sensors of Baumer are the fastest on the market. The above-mentioned comprehensive diagnostic data have been newly added. For example, recording the number of boot cycles or the previous operating time allows a very precise determination of the sensor's age. This permits the system operator to draw future-oriented conclusions of when a component needs to be replaced or serviced. Machine downtimes can then be optimally and efficiently planned.

In case of undesired machine conditions, the unique histogram function for logging process and diagnostic data makes it easier to understand errors and thus simplifies error analysis. The evaluation of trends is also facilitated. An increase in the sensor temperature can indirectly indicate that a machine component in the vicinity of the sensor is overheating or the immediate ambient temperature is increasing. This may be an advance indication of an imminent machine downtime. In addition to temperature values and power supply, the measured distance and frequency values are also available for evaluation as a histogram. To prevent the distortion of statistics during the process when commissioning or replacing a sensor, the statistics data can be reset any time. Each plant engineer can intuitively retrieve the data for histogram evaluation as required via the user-friendly IO-link interface. At the same time, the elaborate conversion of units is also eliminated, as the sensor already processes this information internally and issues it in the desired unit.

Baumer offers inductive sensors with the most comprehensive diagnostic data via the IO-link in sizes ranging from 6.5 mm to M30 with a range of up to 18 mm with flush mounting. Most of this diagnostic data is also available with the Baumer ultrasonic sensors UR18 and U500.

Further information: www.baumer.com/c/38671

Photo: Fully digitized inductive sensors facilitate condition monitoring with the most comprehensive diagnostic data ranging from the number of boot cycles to sensor temperature.

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Text and picture download at: [**www.baumer.com/press**](http://www.baumer.com/press)

**Baumer Group**

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| **Press contact:**  Christina Frick  Baumer Group  Phone +49 7771 6474 1205  Fax +41 (0)52 728 11 44  cfrick@baumer.com  www.baumer.com | **Company contact global:**  Baumer Group  Phone +41 (0)52 728 11 22  Fax +41 (0)52 728 11 44  sales@baumer.com  [www.baumer.com](http://www.baumer.com) |