# Press Release

**Baumer magnetic encoders: Precise, robust and enhancing efficiency**



(09/11/2019) The Baumer magnetic encoders of the EAM580/360 series are unbeaten when it comes to reliability and precision. "No competitive product of similar robustness and longevity could be a match for them in terms of absolute angular precision," says Mr. Daniel Kleiner, Head of the Industrial Encoder Business Unit. The Baumer absolute magnetic encoders feature an angular accuracy of +- 0.15 degrees for ultra-precise positioning tasks. According to Kleiner, with this generation of robust magnetic encoders Baumer has "reached a dimension of precision that previously only optical encoders could deliver". Furthermore more convincing features added to the encoder families are integrated efficiency-increasing interfaces.

Among other things, the secret for the outstandingly high precision and robustness of Baumer encoders lies in the patented arrangement of twin magnets (patent pending) and their innovative interaction with a powerful, energy-efficient microprocessor and sophisticated signal processing algorithms for conversion, filtering and interpolation of measured values. Operating on magneto resistive (MR) technology, the MAGRES encoders deliver two signal periods per revolution, which are twice as many as provided by Hall sensors that are deployed in competitive products. And, everything safely encased in a robust design to endure shocks and vibration.

In the EAM development, Baumer was backed by unique knowhow and experience. As one of world's leading manufacturers of sensors and measuring instruments, Baumer not only co-invented basic principles of magnetic encoders. For two decades by now, Baumer has been extremely successful in this domain and the MAGRES encoders of the fourth generation are the living proof.

Thanks to their outstandingly high accuracy, these encoders are even suited for medical products. In patient couches of X-ray machines and computer tomographs, for example, they ensure the exact positioning of patients during treatment. . Here, the fraction of an angular degree can be decisive for the success of the treatment. And in great many more industrial applications, the high-precision EAM 580/360 encoders are a primary factor for the “application’s overall efficiency and effectiveness”.

This is key and ever more influenced by encoder interface variety, particularly in industrial environments. Here too, the MAGRES encoders convince all along the line. Further to their varied fieldbus interfaces, Baumer offers the biggest real-time Ethernet interface variety including PROFINET, EtherCAT and EtherNet/IP. This is an enormous user benefit for simplified device integration. But in the first place, it means increased system uptime by Link Layer Discovery Protocol (LLDP) for neighborhood detection, as well as Media Redundancy Protocol (MRP) and Device Level Ring (DLR) for continued data transmission to the controller even in the event of network branch interruption.

. The OPC UA communication standard is also supported. This ensures a secure and non-reactive data exchange between different systems. Consequently, the EAM580/360 encoders are ready for the Industrial Internet of Things (IIoT) providing optional diagnostic data for position, speed, temperature and operating hours. This way, users are offered process optimization and optimum machine and installation designs. "The MAGRES encoders enable our customers to enhance efficiency and increase their competitive edge," says Daniel Kleiner.

Further information: [www.baumer.com/eam](http://www.baumer.com/eam)

Baumer at the **SPS IPC Drives in Nuremberg** from 26 to 28 Novemberin Hall 4A, Booth 335.

Further information: [www.baumer.com/io-link](http://www.baumer.com/io-link)

Photo: The Baumer magnetic encoders of the EAM580/360 series are unbeaten when it comes to reliability and precision. Furthermore the series offers many fieldbus interfaces as well as the biggest interface variety of real-time Ethernet interfaces such as PROFINET, EtherCAT and EtherNet/IP.

Number of characters (with spaces): approx. 3451

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

**Baumer Group**

The Baumer Group is one of the worldwide leading manufacturers of sensors, encoders, measuring instruments and components for automated image processing. Baumer combines innovative technologies and customer-oriented service into intelligent solutions for factory and process automation and offers an unrivalled wide technology and product portfolio. With around 2,700 employees and 39 subsidiaries in 19 countries, the family-owned group of companies is always close to the customer. Baumer provides clients in most diverse industries with vital benefits and measurable added value by worldwide consistent high quality standards and outstanding innovative potential. Learn more at [www.baumer.com](http://www.baumer.com) on the internet.

|  |  |
| --- | --- |
| **Press contact:**  Petra Reichle  Baumer Group  Phone +49 7720 942 264  Fax +49 (0)7720 942 955  preichle@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) |