Baumer

Passion for Sensors

Press Release

Ethernet interface in rotary encoders - important or technical overhead?

It really took some time until Ethernet as well-established communication standard in office technology finally conquered automation. Meanwhile, “Industrial Ethernet” has secured its place and is much appreciated by high performance and comfortable functionality. Industry-oriented Ethernet interfaces such as EtherCAT, Profinet, PowerLink or Ethernet/IP are gaining ground in all levels of industry automation, from process control level down to field and sensor level.

So the question arises: Ethernet interface - a really practice-oriented feature or rather technical overhead? In concrete terms, you will get the answer when looking at the numerous industry applications. The decision for Ethernet is made when deciding for an Ethernet control. Deploying encoders which feature another bus interface would not make sense, all the more since there is no cost advantage. You will come across encoders with EtherCat, Profinet, PowerLink or Ethernet/IP interface in machinery for metal sheet processing, presses and punches as well as laser cutting equipment, in bottling plants or in the transport and packaging industry. Ethernet-capable encoders are tried and trusted in sawing machines, high-bay warehouses or tyre production.

A glance on the varied application fields is proving the significance of configuration diversity as an important aspect in encoder selection. Manifold applications – no matter which interface – require individually appropriate encoder designs. Baumer fulfils this ever-growing demand by a product portfolio which not only supports all common industrial Ethernet interfaces but further comprises a wide variety of encoder configurations intended for shaft or hollow shaft attachment. The user can opt between magnetic or optical sensing techniques. Encoders operating on the magnetic principle are optimally suited for soiled, dusty or damp environments with shocks and vibrations. When it comes to extreme accuracy, optical encoders play to their strength. Absolute encoders provide up to 10,000 pulses per minute and are available with a maximum resolution of 29 bits (gearless multiturns). Multiturn encoders with modular bus concepts where the bus cover hosting the interface can be combined at will with any basic encoder add a plus on flexibility and reduce inventory.

The trend towards Ethernet diversity is set to continue: Presently Baumer is elaborating on the integration of Profinet Safety. The “Power over EtherCAT” functionality requires only a single cable for data exchange and power supply and opens up more interesting application possibilities.

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Baumer Group

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