

EtherCAT® encoders – provides fast feedback of position, speed and acceleration value

With no underlying subsystems and the industrial Ethernet communication protocol, the EtherCAT interface is stable, flexible and fast.

Leine & Linde are aware of the requirements within their industries, how automation systems are required to send more data than earlier to control more complex movement, still in real-time.

Ethernet for Controlled Automation Technology

The functional principle of EtherCAT can be likened to a train, where data can be loaded and unloaded at each station (network device) while the train is passing the station at full speed. The train never stops and always sticks to its timetable. It returns to the same station with a precision of less than one microsecond. The time between two delivery times is called the 'cycle time' and for EtherCAT can be set to as little as a few tenths of a microsecond. In order to deliver new data each time the train passes, speed at each station is also necessary. Between two delivery times, a connected position sensor must, for example, read the current position, process the value according to the chosen configuration and compute a speed value. Based on Ethernet, EtherCAT enables to have both an adaptable network topology and a flexible number of nodes in the system.

Simple configuration

To continue on being flexible, EtherCAT has a simple configuration. In traditional fieldbus devices, the user has to set the address for each device on the bus. With Ethernet-based solutions, this is handled by the system. The user only connects the device and configures it via the accompanying ESI file.

Fast feedback of position, speed and acceleration value

Leine & Linde's encoders with an EtherCAT interface have powerful electronics and, in addition to the position value, can deliver speed and acceleration values with great position and speed. This enables direct feedback for fast control systems via EtherCAT. The encoder interface supports CANopen over EtherCAT according to CiA 301 and the device profile range CiA 406.

Broad assortment

EtherCAT is being introduced into Leine & Linde's 600 and 900 series inductive encoders which makes the interface available in absolute encoder sizes Ø58mm and Ø100mm. Solid shaft and hollow shaft variants are available.

The 600 series encoder is one of the most robust encoders in the standard Ø58mm market and has a total up to 31 bit resolution. With the 900 series, Leine & Linde offers an absolute Ø100 mm heavy duty inductive encoder for the most demanding environments. This encoder series is available with a total up to 35 bit resolution.

Thanks to optimization of the electronics, the interface can also cope with the shortest cycle times, resulting in a broad range of applications in everything from process industry to steelworks and wind farms.

Backed up with fast delivery times and local technical support we are there to help you to find the best solution for your needs.

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