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Note to editors: Link to high res photo and picture caption follow news release text.

Beckhoff EL51xx EtherCAT Terminals Enhance Incremental Signal Analysis

Expanded EtherCAT I/O series adds four highly compact, high-performance and cost-effective terminals

SAVAGE, Minnesota, October 13, 2020 – Beckhoff Automation has introduced new EL51xx EtherCAT Terminals with built-in incremental signal analysis functionality. Incremental encoders have become indispensable in many applications due to their compactness and low price points. Beckhoff meets this important need with the comprehensive EL51xx series for analysis of 5 V incremental encoders via RS422 and TTL signals. These four new high-performance I/Os feature eXtreme Fast Control (XFC) technology and enable analysis of incremental signals in the controller in an even more space-saving and cost-effective manner.

The new EtherCAT Terminals acquire incremental signals with high frequencies up to 5 MHz and feature many parameterization options and integrated functions that enable optimum adaptation to control tasks. Each terminal offers an integrated sensor supply, which is parameterizable to 5, 12 or 24 V. Users can easily connect encoders with differential RS422, 5 V TTL or open collector interfaces. Based on internal pull-up resistors, no external wiring is required for open collector analysis. Additional 24 V digital inputs can save, lock and set the counter value. The EL51xx series now includes:

— EL5102: 2-channel incremental encoder interface, 5 V (RS422, TTL, open collector)

- EL5112: 2-channel incremental encoder interface, 5 V (2 x AB or 1 x ABC RS422, TTL, open collector)
- EL5122: 2-channel incremental encoder interface, 5 V single-ended (TTL, open collector)
- EL5131: 1-channel incremental encoder interface, 5 V with two parameterizable 24 V DC outputs

A wide range of additional integrated functions, such as rotary axis functionality, workpiece measurement and standstill monitoring enable data pre-processing directly in the I/O terminals. The measurement of period, frequency and speed with a resolution of 10 ns is also available. In addition, the terminals implement a duty cycle measurement of the incoming signal. Due to the optional interpolating micro-increment functionality, the EL51xx terminals can determine even more precise axis positions for dynamic axes. The synchronous reading of the position values with other process data in the EtherCAT system occurs via the high-precision EtherCAT distributed clocks. This enables simple and precise synchronization of controller tasks.

EL51xx EtherCAT Terminals

Link to high res photo:

https://download.beckhoff.com/download/press/2020/pictures/pr132020_Beckhoff.zip

Press picture:

Picture caption:

The four new EL51xx EtherCAT Terminals from Beckhoff enable the efficient use of incremental encoders.

Beckhoff Automation is a provider of advanced and open automation solutions based upon proven technologies for customers to implement high performance control systems faster and at a lower overall cost than traditional PLC and motion control systems. Beckhoff's "New Automation Technology" product range includes PC-based control, Industrial PCs, automation controllers, operator interfaces, I/O, servo drives and motors. With representation in more than 60 countries, Beckhoff is well positioned to provide global sales and service to its customers. Beckhoff sales and service are handled directly, with no intermediaries involved for exceptional customer service and consultation.

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Please send questions regarding "EL51xx EtherCAT Terminals" to:

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