

ELX series EtherCAT Terminals expanded with TwinSAFE SC technology

Intrinsically safe signal transmission and functional safety combined in one highly compact package

The EtherCAT Terminals in the ELX series have been expanded by the addition of analog input terminals with TwinSAFE SC (Single Channel) technology. These highly compact I/O terminals can be used to support applications in hazardous areas that require both intrinsically safe signal transmission and functional safety capabilities.

The highly compact ELX series terminals, which are certified in compliance with the specifications of the ATEX and IECEx standards, enable direct connection of intrinsically safe field devices through to Zone 0/20 based on an integrated safety barrier. The new terminal designs extended by TwinSAFE SC technology now also make it possible to achieve a safety level equivalent to PL d/Cat. 3 according to EN ISO 13849-1 or SIL 2 according to EN 62061. In this way, it is possible to use all process data existing in a system for safety technology too, such as to monitor the speed of fans in areas sensitive to explosion hazards, for example.

The new I/Os are available as 12 mm wide terminals with two or four analog input channels for 0/4...20 mA, and for RTD resistance sensors, thermocouples/mV and strain gauges. Furthermore, a single-channel terminal is available for the direct connection of intrinsically safe incremental encoders, which evaluates a diagnostic-enabled NAMUR signal in accordance with IEC 60947-5-6.

TwinSAFE SC technology

With the aid of TwinSAFE SC technology, it is possible to make use of standard signals for safety-related tasks in any network or fieldbus system. The data from a TwinSAFE SC terminal is fed to the TwinSAFE Logic, where it undergoes safety-related multi-channel processing. The data originating from different sources is analysed, checked for plausibility and submitted to a "voting" process. This is done by certified function blocks such as Scale, Compare/Voting (1oo2, 2oo3, 3oo5), Limit, etc. For safety reasons, however, at least one of the data sources must be a TwinSAFE SC component.



**Explosion
protection**



Safety

The new ELX EtherCAT Terminals with added TwinSAFE SC technology enable highly compact safety solutions in hazardous areas.

Further information:

www.beckhoff.com/elx-twinsafe-sc