



i TwinSAFE SC (TwinSAFE Single Channel)

With the aid of the TwinSAFE SC technology it is possible to make use of standard signals for safety tasks in any network or fieldbus. To do this, EtherCAT Terminals from the areas of analog input, position measurement or communication (4...20 mA, incremental encoder, IO-Link, etc.) are extended by the TwinSAFE SC function. The data from these extended EtherCAT Terminals is fed to the TwinSAFE Logic, where they undergo safety-related multi-channel processing.

In the Safety Logic the data originating from different sources is analysed, checked for plausibility and submitted to a "voting". 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. The remainder of the data can originate from other standard Bus Terminals, drive controllers or measuring transducers. In this way, it is possible to use all the process data existing in

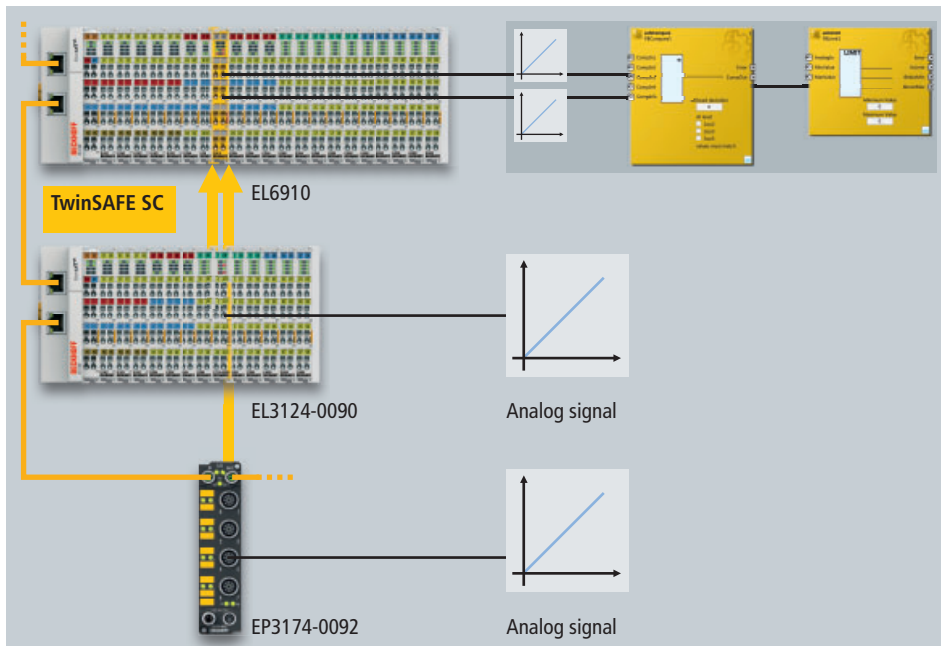
the system for the safety technology. The TwinSAFE SC technology thus opens up completely new possibilities in the Beckhoff system world and offers a simple, efficient and inexpensive possibility to fully integrate the safety tasks into the existing infrastructure.

With the aid of the TwinSAFE SC technology it is typically possible to achieve a safety level equivalent to PL d/Cat. 3 in accordance with EN ISO 13849-1 or SIL 2 in accordance with EN 62061.

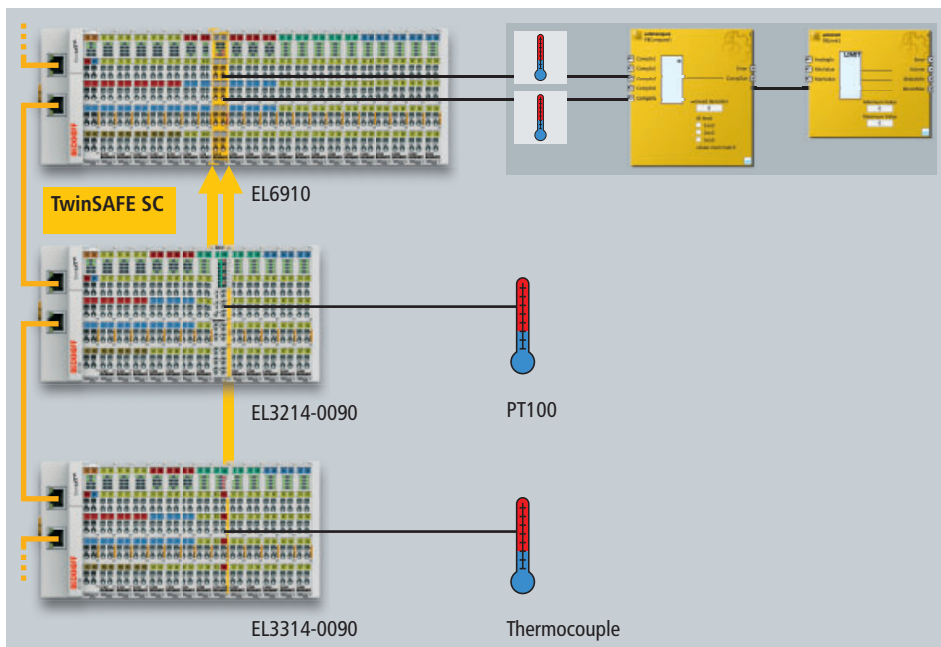
EP3174-0092 | TwinSAFE SC EtherCAT Box, IP 67, 4-channel analog input ± 10 V or 0/4...20 mA, see page **39**

EL6910 | TwinSAFE Logic see page **82**

EK1960 | TwinSAFE Compact Controller see page **80**



Safe analog value processing with TwinSAFE SC



Safe temperature monitoring with TwinSAFE SC

Ordering information	
Analog input	
EL3124-0090	4-channel analog input terminal 4...20 mA, differential input, 16 bit, TwinSAFE SC
EL3214-0090	4-channel input terminal PT100 (RTD) for 3-wire connection, TwinSAFE SC
EL3314-0090	4-channel thermocouple input terminal with open-circuit recognition, TwinSAFE SC
Position measurement	
EL5021-0090	1-channel SinCos encoder interface, 1 V _{PP} , TwinSAFE SC
EL5101-0090	incremental encoder interface, TwinSAFE SC
Communication	
EL6224-0090	IO-Link terminal, TwinSAFE SC
i Product announcement	for availability status see www.beckhoff.com/TwinSAFE-SC

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