

Safety over  
**EtherCAT®**



Sicherheitstechnik  
in Kooperation mit

**PILZ**  
THE SPIRIT OF SAFETY

# Level up your safety! SX6 safety module

## A new level of safety.

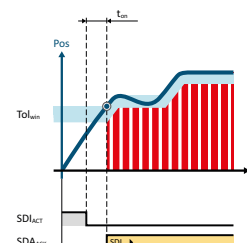
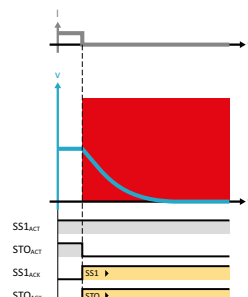
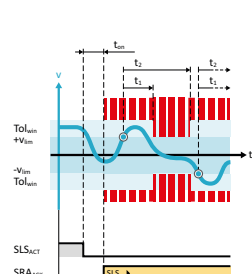
With its 6th generation of drive controllers, STÖBER offers innovative solutions for the increasing requirements in automation and mechanical engineering. The SX6 safety module is a brand new addition to the portfolio. It adds numerous safety functions to the range of functions of SB6, SC6 and SI6 drive controllers. It is controlled via EtherCAT® (Fail Safe over EtherCAT, FSoE).

## Many ways to achieve machine safety.

The SX6 enables the conventional Safe Torque Off (STO), Safe Stop 1 (SS1) and Safe Stop 2 (SS2) stop functions.

A special highlight is that the STO function can be activated individually for each axis on multi-axis controllers.

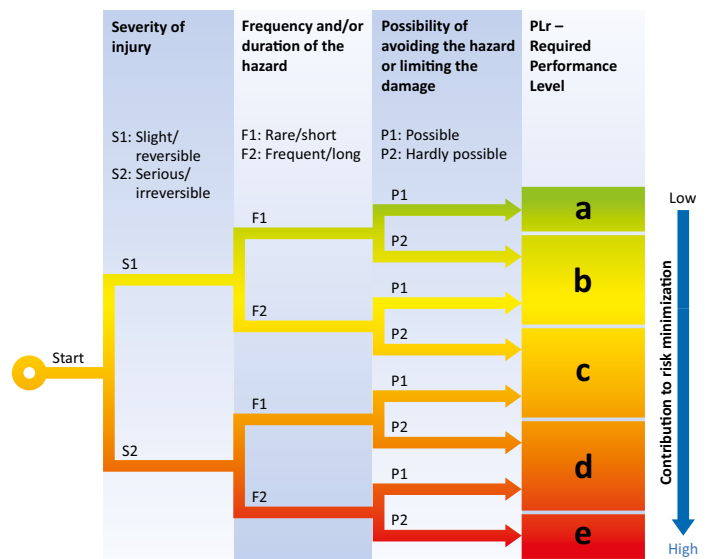
In addition, Safely-Limited Speed (SLS) and Safe Speed Range (SSR) ensure that the projected velocity limits are always adhered to. Safe Direction (SDI) monitors the direction of motion, while Safely-Limited Increment (SLI) limits the increment and Safe Operating Stop (SOS) ensures a safe standstill.



## Brake management: Protection against falling axes.

Gravity-loaded axes can drop uncontrollably due to wear or contaminated brakes and thus pose a considerable risk. For this application, STÖBER is expanding the SX6 with a powerful brake management system that meets the requirements of German Social Accident Insurance (Deutsche Gesetzliche Unfallversicherung – DGUV) for such axes.

At its core are two functions: Safe Brake Control (SBC) ensures that the brakes are applied safely. Safe Brake Test (SBT) checks the specified braking torque at defined intervals as needed, detects deviations at an early stage, and uncovers possible defects – before the braking torque reaches a critical state. Since the brake management system supports control of up to two brakes, it covers all the applications specified in the DGUV Division Information Sheet on gravity-loaded axes.



„To increase productivity and availability, we have extended the monitoring mechanisms beyond the basic standardized requirements. Position-based limit value monitoring and predictive suppression of interference signals enable the intended limit values to be approached with a minimal interference distance..“

– Matthias Meyering, Technical Product Manager, STÖBER

## Fail Safe over EtherCAT.

The SX6 is controlled via the secure Fail Safe over EtherCAT (FSoE) protocol and uses the existing EtherCAT® infrastructure – which significantly reduces the effort required for cabling. Secure communication functions according to the black channel principle and is transmitted together with the functional EtherCAT® communication via the same connection.

## The benefits at a glance.

- FsoE certified product.
- Extended safety functions up to SIL 3, PL e, category 4.
- Safe brake management for standard-compliant protection of gravity-loaded axes.
- Compatible with SB6, SC6 and SI6 drive controllers.
- No safety encoder necessary.
- Free selection of motors and cables.
- Elimination of standstill or speed monitors.
- Straightforward project configuration and commissioning.
- Simple, quick service concept.