**Add value.
Inspire trust.**

SIL/PL Certification

Test and certify your systems to functional safety standards.

Your challenges

Hardware and software safety systems in the industrial sector are becoming increasingly complex. Components are now sourced from multiple markets. In addition, development lifecycles have been significantly compressed. To mitigate these factors, your company must have a strategy for dealing with safety risks.

What is functional safety?

Functional safety is the aspect of a system's overall safety that depends on the system or equipment operating correctly in response to its inputs. This includes the safe management of potential operator errors, environmental changes, and hardware and software failures. Functional safety is an additional step beyond the traditional product safety assessment, as it deals with complex and interconnected technologies.

Why is functional safety important?

Companies operating in industrial environments are responsible for reducing safety risks to an acceptable level, including hazards caused by malfunctions of complex systems. Functional safety failures can result in serious liability claims. IEC 61508 is the standard governing functional safety worldwide as well as the derived standards: EN ISO 13849-1, IEC 62061, ISO 26262 and the EN 5012X series.

How can we help you?

TÜV SÜD offers extensive sector specific experience in functional safety issues. Our extensive suite of in-house services includes independent safety assessment, certification, knowledge services and training. We can serve as a testing and certification partner to help your company achieve compliance at an acceptable cost.

TÜV SÜD

TÜV®

Our functional safety services

We provide a complete portfolio of services for safety system manufacturers, including functional safety services.

- **Independent safety assessment**

  TÜV SÜD provides independent safety assessments during the development lifecycle. We conduct assessments though a combination of on-site inspections and documentation review, resulting in an independent safety assessment report.
- **Certification**

  Our experts can certify your product in accordance with IEC 61508 and all relevant sector-specific safety standards.
- **Knowledge services**

  We provide consulting services throughout the development lifecycle to help you design safer products. These services include concept analyses, verification of development documentation, qualitative and quantitative analyses, validation of generic products and applications, software development processes, and software analyses.
- **Training**

  TÜV SÜD conducts functional safety training programmes for your development teams. Topics include IEC 61508, EN ISO 13849-1 and the EN 5012X series or the equivalent IEC standards. We can also customise in-house training to suit your needs.

Your business benefits

- **Enhance product marketability** – with certificates from a trusted third-party testing organisation that increase acceptance of your products.
- **Save time and money** – through our experience in functional safety and compliance strategy. We help you to meet safety requirements swiftly while avoiding costly rework of test specifications.
- **Minimise risk** – of time-consuming delays and rework, especially at the later stages of a project.
- **Take advantage of reliable expertise** – by outsourcing non-core activities to a trustworthy partner so that you can focus on your main business.

Why choose TÜV SÜD?

With more than 140 years of experience in the industrial sector, TÜV SÜD has established a strong track record in generic safety system services. The knowledge, capabilities and network we have developed over the years enables us to provide complete one-stop support for functional safety issues.

In addition, TÜV SÜD holds all necessary accreditations as a testing lab according to ISO 17025 and for safety components according to the Machinery Directive Annex IV.

Add value. Inspire trust.

TÜV SÜD is a trusted partner of choice for safety, security and sustainability solutions. It specialises in testing, certification, auditing and advisory services. Through more than 24,000 employees across over 1,000 locations, the company adds value to customers and partners by enabling market access and managing risks. By anticipating technological developments and facilitating change, TÜV SÜD inspires trust in a physical and digital world to create a safer and more sustainable future.

Related services

TÜV SÜD provides the following related services:
- Approval management
- Complete system services
- Machinery safety training