



Choose certainty.
Add value.

TÜV SÜD services for functional safety

Reduce risk to an acceptable level and secure international markets.



Why is functional safety becoming increasingly important?

The tradition of functional safety dates back to the 1970s, when an uncontrolled reaction from overheating caused a major dioxin leak at the Seveso chemical plant in the north of Italy. This event led to stricter industrial safety regulations that formed the basis for international standards. Functional safety has become a critically important issue across all areas of industry, from transportation, healthcare and medical devices to the design of energy plants or amusement parks and rides. As a result, manufacturers and operators place top priority on the quality and safety of products and plants in order to protect people, property and the environment against technology-related risk.

On one hand, the expanding digitalisation and automation of life and industry enables reliable control of increasingly complex and networked processes and systems. On the other hand, this development

gives rise to growing challenges and requirements for functional safety technology. A good example of this is collaborative robotics, where humans and machines work together hand in hand.

Your challenges

Given the increasing importance of functional safety, you may face one or more of the following challenges:

- You have to develop a Safety Integrity Level (SIL)-compliant device and/or get it certified
- You have to comply with certain functional safety regulations when constructing or operating an industrial plant
- You want to export machinery or electrical/electronic programmable devices to other countries
- You are an operator of an industrial plant, but have assembled or renewed a machine on your own
- You are active in an industry with high safety requirements (e.g. energy, medicine, transportation)

How can we help you?

With years of experience in functional safety, TÜV SÜD offers proven capabilities backed by international recognition. Our multidisciplinary team of experts understands the complex requirements in the field of functional safety and has the experience to support projects from chip design to the entire assessment of a plant. We offer TÜV SÜD certification marks that are globally recognised and synonymous with quality and safety.

Our functional safety services

TÜV SÜD provides support in a wide variety of fields including for example:

- Automotive
- Consumer goods
- Conveyor technique, mobile constructions and stage technology
- Furnace systems and products
- Generic components for embedded systems
- Household devices for industrial use
- Industrial machines
- Industrial robotics
- Lifting equipment in nuclear power plants
- Medical equipment
- Mobile machinery
- Power plants
- Process technology
- Rail rolling stock
- Rail signalling
- Steam and pressure installations

Our service portfolio includes but is not limited to:

- **Testing**
TÜV SÜD offers testing of safety-related components, devices, protection systems, machines, industrial plants, etc.
- **Certification**
Our certification services cover device certification and type certification.
- **Training**
We instruct your staff regarding all the relevant functional safety norms, both generic and for the different application fields.
- **Assessment during development**
Our experts conduct assessment of the functional safety management process during development of protection devices and systems.

For a detailed service catalogue of all our functional safety services, visit www.tuv-sud.com/functional-safety

Your business benefits

- **Minimise risk** – of downtime and damage by ensuring functional safety requirements are met.
- **Increase transparency** – by working with a partner accredited for functional safety by many national and international organisations including for example DAkkS, European Commission, IECCE, NRTL, UKAS etc.
- **Gain a competitive edge worldwide** – with a line of products trusted for quality and safety.
- **Improve your processes and product quality** – by applying the functional safety expertise gained through the project work with us.

Why choose TÜV SÜD?

TÜV SÜD possesses global expertise, local knowledge and 150 years of industry experience. We offer the best possible solutions for manufacturers, operators and suppliers working in fields with high safety requirements. By assessing systems for reliability and functionality, our functional safety services strengthen the confidence of your business partners and end users.

Choose certainty. Add value.

TÜV SÜD is a premium quality, safety and sustainability solutions provider that specialises in testing, inspection, auditing, certification, training and knowledge services. Represented in over 800 locations worldwide, we hold accreditations in Europe, the Americas, the Middle East, Asia and Africa. By delivering objective solutions to our customers, we add tangible value to businesses, consumers and the environment.

Contacts

For a list of our functional safety experts in the different application fields, visit www.tuv-sud.com/functional-safety