

Safety is our Subject

SAFETY SERVICE

Training + services for the safety of your machines.

CONTENTS



SAFETY TRAINING

6

General information

Topics, target groups and seminar formats

7

Registration and dates

7

Seminars for beginners

Machinery Directive/Regulation, EC Declarations of Conformity and Liability Issues

8

Basic principles of functional safety

9

Programming with samos® PLAN 6

9

Advanced seminars

Validation of safety user software for machines + plants

10

Calculation of complex safety functions as per EN ISO 13849-1

10

Design of safety functions and calculation with SISTEMA

11

Software validation with SOFTEMA

11

Safe robot integration

12

Testing of optoelectronic protective devices (OPD)

12

Retrofit of used machinery and the substantial modification

13

Seminars for experts

CESE - Certified Electrical Safety Engineer

14

CFSE - Certified Functional Safety Expert

14



SAFETY SERVICE

16

CE process

Implementation/supervision of the CE process	19
Risk assessment	20
Verification in accordance with EN ISO 13849-1	20
Validation in accordance with EN ISO 13849-2	22
Review of the operating instructions	23

General services

Safety assessment of machines	24
Safety consulting on site	25



SAFETY ENGINEERING

26

Services

Testing/Inspection	28
Stop time measurement	28
Creation of safety-related user software	29

Extended workbench/service on site

Support during program creation (with samos® PLAN 6)	30
Commissioning check/support on site	31



SAFETY SOLUTIONS

32

OUR SERVICE

Our functional safety manual	34
Perfectly tuned software	34
General information + contact	35



THE **SAFETY OF YOUR MACHINES** IS OUR **CONCERN.**

Safety for man and machine is increasingly becoming the focus of machine builders, because legal requirements such as the Machinery Directive/Regulation and other Standards and Regulations must be met.

Compliance with these requirements is enormously time-consuming and labor-intensive. As one of the leading suppliers of safety technology and electrical connection technology, we offer you not only customized products and solutions but also a comprehensive range of services relating to machine safety. Our experts support and accompany you in all matters, so you can concentrate fully on your core business.



SAFETY TRAINING

- Versatile training offer
- For different target groups and levels of difficulty
- Also as in-house training on site



SAFETY SERVICE

- Support with the CE process and its sub-aspects
- One-to-One consultation on site
- Safety assessment of machines



SAFETY ENGINEERING

- Retrofit and safety-related modifications
- Extended workbench and on-site service
- Testing, inspection and other engineering solutions

OUR SERVICES:

- + SEMINARS
- + MONITORING OF THE CE PROCESS
- + ENGINEERING SERVICES
- + RETROFIT
- + SAFETY CONVERSION



SAFETY TRAINING



SEMINAR

REGISTRATION + DATES

You can conveniently view the dates of upcoming seminars and register online at www.wieland-electric.com/en/training.

We offer our seminars online or as face-to-face events. On request also as exclusive seminars in your premises.

Contact us by phone or e-mail, we will be happy to make an appointment with you:

Training@wieland-electric.com

All our seminars at a glance:



Machinery Directive/Regulation, EC Declarations of Conformity and Liability Issues
Basic principles of functional safety
Programming with samos® PLAN 6
Validation of safety user software in machine and equipment engineering
Calculation of complex safety functions as per EN ISO 13849-1
Design of safety functions and calculation with SISTEMA
Software validation with Softema
Safe robot integration
Testing of optoelectronic protective devices (OPD)
Modification of old machinery and major changes
CESE - Certified Electrical Safety Engineer
CFSE - Certified Functional Safety Expert

TRAININGS AROUND FUNCTIONAL SAFETY

Our team of trainers, consisting of experienced practitioners and standards experts, provides seminar participants with up-to-date expertise on laws, directives, regulations and standards.

The individual seminars are specially tailored to the different areas of responsibility and previous knowledge of the participants. This allows us to address your questions and concerns in a practical and application-oriented manner. The conception, structure and implementation of the training courses comply with general standards: The 5-day seminar CSE (Certified Safety Engineer) as well as the 3-day seminar CESE (Certified Electrical Safety Engineer) were certified by SGS-TÜV Saar.

GENERAL INFORMATION

Subjects

- Machine safety
- Liability and law
- Safety engineering of electrical engineering, hydraulics and pneumatics
- Safety Software
- Machinery conversion

Target groups

- Operations Manager
- Mechanical Engineer
- Machine setter
- Service Technician
- Maintenance personnel
- Developers
- Safety officers

Seminar formats

- Daily to weekly courses
- With/without testing by SGS-TÜV Saar
- At the Wieland site in Bamberg/BY, selected other sites, at your site or online.

	Management	Development / Construction	Maintenance	Safety Professionals	Duration (days)	TÜV test (optional)	Level	Required experience in functional safety fundamentals
	x	x		x	1		Beginner	none
		x	x		1		Beginner	none
		x	x		1		Beginner	none
		x	x	x	1		Advanced	Basic knowledge
		x	x	x	1		Advanced	Basic knowledge
		x	x	x	1		Advanced	Basic knowledge
		x	x	x	1		Advanced	Basic knowledge
		x	x	x	1		Advanced	Basic knowledge
	x	x	x	x	1		Advanced	Basic knowledge
		x	x	x	3	x	Experts	2 years experience
		x	x	x	5	x	Experts	2 years experience



SEMINARS FOR **BEGINNERS**



MACHINERY **DIRECTIVE/REGULATION** + **EC DECLARATIONS** OF CONFORMITY AND **LIABILITY** ISSUES

For management, development managers, purchasers of machines and components for safety technology, safety officers and safety managers in mechanical engineering.

SEMINAR OBJECTIVE

The seminar covers the most important issues of machine safety from a management perspective. The focus is on legal certainty in the purchase, operation and sale of machinery in the European trade area.



◀ **Log in directly:**

<https://wie.li/trainingmrlen>

SEMINAR CONTENT

- Who is liable for the safety of the machine?
- May machines for own use be used without CE marking?
- Can responsibility for machine safety be delegated?
- What documentation is required for machinery?
- Dealing with liability issues in the event of damage

DURATION

- 1 day

BASICS OF FUNCTIONAL SAFETY

For designers, developers, maintenance personnel, safety officers and safety managers in mechanical engineering.

SEMINAR OBJECTIVE

The seminar provides the legal and normative basis for the evaluation of the functional safety of a machine. Participants learn the most important standards and terms of functional safety and gain a basic understanding of their principles.



◀ **Log in directly:**

<https://wie.li/trainingbasen>

SEMINAR CONTENT

- EU directives, laws, regulations and standards
- Risk assessment in accordance with EN ISO 12100
- Functional safety according to EN ISO 13849-1 and -2
- Consideration and validation of the entire safety-related system

DURATION

- 1 day

PROGRAMMING WITH SAMOS® PLAN 6

For designers, developers, maintenance personnel, safety officers and safety managers in mechanical engineering.

SEMINAR OBJECTIVE

The seminar explains the operation and use of samos® PLAN 6 and the associated samos® PRO COMPACT safety controller using practical examples. The focus is on design, programming, verification and validation of safety functions.



◀ **Log in directly:**

<https://wie.li/trainingsamen>

SEMINAR CONTENT

- Programming with samos® PLAN 6
- Basic principles of software validation
- Diagnostic functions
- Visualization with Modbus
- Gateway functions and data exchange with standard controls

DURATION

- 1 day



SEMINARS FOR ADVANCED

VALIDATION OF SAFETY USER SOFTWARE FOR MACHINES + PLANTS

For software developers, safety officers and safety managers in mechanical engineering - Prerequisite: Knowledge of EN ISO 12100 and EN ISO 13849-1.

SEMINAR OBJECTIVE

Since there are no uniform specifications for the type and scope of validation of safety software, validation poses a significant problem for machine builders even when using safety controllers. The seminar shows the efforts required for validation and covers the typical characteristics of development environments, related to the requirements of EN ISO 13849-1.

It also shows how flexibility, development and validation efforts depend on typical tool features.

SEMINAR CONTENT

- Validation of application safety software on safety controls per EN ISO 13849-1

DURATION

- 1 day



◀ Log in directly:

<https://wie.li/trainingvalen>

CALCULATION OF COMPLEX SAFETY FUNCTIONS ACCORDING TO EN ISO 13849-1

For designers, developers, maintenance personnel, safety officers and persons responsible for safety in mechanical engineering - Prerequisite: Knowledge of the basics of EN ISO 13849-1.

SEMINAR OBJECTIVE

In the seminar, procedures for modeling and calculating safety functions according to EN ISO 13849-1 are explained, which do not correspond to the structures shown in the standard. The use of SISTEMA will also be presented. The focus here is on safety functions that do not follow the simple input-logic-output scheme.

SEMINAR CONTENT

- Basis – the structures of EN ISO 13849-1
- Safety functions – Leveraging freedoms
- Principles of modeling - ideal and reality
- Key component data
- Diagnostics
- Special cases
- SISTEMA

DURATION

- 1 day



◀ Log in directly:

<https://wie.li/trainingspcen>

DESIGN OF SAFETY FUNCTIONS AND CALCULATION WITH SISTEMA

For designers, developers, maintenance personnel, safety officers and persons responsible for safety in mechanical engineering - Prerequisite: Knowledge of EN ISO 12100 and EN ISO 13849-1.

SEMINAR OBJECTIVE

The course teaches the implementation and evaluation of safety functions in structures and categories of EN ISO 13849-1 and their calculation using SISTEMA. In addition to common solutions, limitations of EN ISO 13849-1 are addressed and approaches for solutions to non-normative structures are discussed.

SEMINAR CONTENT

- Procedure of modeling safety functions according to EN ISO 13849-1
- Modeling and calculation of safety functions in SISTEMA

DURATION

- 1 day



◀ Log in directly:

<https://wie.li/trainingsisen>

SOFTWARE VALIDATION WITH SOFTEMA

For designers, software developers and programmers, maintenance personnel and persons responsible for occupational safety with basic knowledge of EN ISO 12100 and EN ISO 13849.

SEMINAR OBJECTIVE

The SOFTEMA software wizard provides support for a structured work process to avoid errors. The tool manages necessary information and tables. In addition, it guides through the normatively defined work steps. In addition to the normative basics, our experts teach you how to use the tool and provide you with approaches for your own validation processes.

SEMINAR CONTENT

- Normative background to the need for a Software validation
- Validation concept behind SOFTEMA
- Basic structure and worksheets in SOFTEMA
- Operation of the worksheets using concrete examples
- Limitations and restrictions of the current version
- Possibilities to derive own validation processes

DURATION

- 1 day



◀ Log in directly:

<https://wie.li/trainingsofen>



SEMINARS FOR ADVANCED

SAFE ROBOT INTEGRATION

For designers, software developers and programmers, maintenance personnel and persons responsible for occupational safety with basic knowledge of EN ISO 12100 and EN ISO 13849-1

SEMINAR OBJECTIVE

The use of industrial robots in the production environment is common practice. The aim of the course is to teach the safety requirements for the integration of industrial robots. The implementation of protective measures from layout design (robot cell) to validation of robot systems is addressed. Likewise, safety aspects and the approach for the implementation of human-robot collaborations (HRC) are taught.



◀ Log in directly:

<https://wie.li/trainingroben>

SEMINAR CONTENT

- Basic knowledge: Robot
- Basic knowledge: Machinery Directive/Regulation
- Robot standards
- Implementation of robot safety (safety requirements and protective measures)
- Collaborating robots (HRC basic knowledge)
- Approach / implementation of machine safety for HRC applications

DURATION

- 1 day

TESTING OF OPTOELECTRONIC PROTECTIVE DEVICES (OPD)

For designers, developers, maintenance personnel, safety officers and safety managers in mechanical engineering.

SEMINAR OBJECTIVE

In the seminar, the legal and normative basics for the design and inspection of safety devices with opto-electronic protective devices (OPD) are taught. In addition, the initial and periodic testing and evaluation of the functional safety of optoelectronic protective devices is practiced.



◀ Log in directly:

<https://wie.li/trainingbwsen>

SEMINAR CONTENT

- European and German law
- Relevant standards (EN ISO 13857, 13855, 13849-1 & -2, EN 61496)
- Evaluation of safety functions with optical protective devices according to EN ISO 13849
- Determination and calculation of safety distances
- Correct installation
- Overtravel measurement

DURATION

- 1 day

CONVERSION OF OLD MACHINES AND THE SUBSTANTIAL MODIFICATION

For management, heads of development, designers, developers, maintenance personnel, safety officers and persons responsible in mechanical engineering.

SEMINAR OBJECTIVE

The seminar will discuss when a new CE marking is required after a rebuild of an old machine and what methods can be used to avoid this. How the combination of machines affects their CE status is also explained.



◀ **Log in directly:**

<https://wie.li/trainingreten>

SEMINAR CONTENT

- The (un)substantial modification of old machines
- Interfaces of networked machines
- CE declaration after modifications
- Documentation of modifications

DURATION

- 1 day



SEMINARS FOR EXPERTS

CESE - **CERTIFIED** ELECTRICAL SAFETY ENGINEER

For designers, developers, maintenance personnel, safety officers and safety managers in mechanical engineering.

SEMINAR OBJECTIVE

The seminar provides the necessary legal and normative basics to be able to evaluate the functional safety of a machine as well as to design and calculate safety functions. This cooperation course by Wieland Electric and SGS-TÜV Saar covers the safety aspects of machines with a focus on electrical engineering.



◀ **Log in directly:**

<https://wie.li/trainingcesen>

SEMINAR CONTENT

- EU directives, laws and standards
- Risk assessment in accordance with EN ISO 12100
- Functional safety according to EN ISO 13849-1 and -2
- Safety-relevant sensors, logic and electrics
- How to identify and achieve the performance level (PL)
- Verification of a complete system
- Validation of safety-relevant overall systems
- Introduction to the IFA SISTEMA software wizard

DURATION

- 3 days

CFSE – **CERTIFIED FUNCTIONAL SAFETY EXPERT** FOR ELECTRICAL AND FLUID POWER SYSTEMS

For designers, developers, maintenance personnel, safety officers and safety managers in mechanical engineering.

SEMINAR OBJECTIVE

The seminar covers hydraulics and pneumatics in addition to the topics covered in the CESE seminar. The extension with the fluid power content by two days also leaves a little more time for practical exercises.

This course is held in cooperation with Ross Controls, SGS-TÜV Saar and Wieland Electric.



◀ **Log in directly:**

<https://wie.li/trainingcseen>

SEMINAR CONTENT

- EU directives, laws and standards
- Risk assessment in accordance with EN ISO 12100
- Functional safety according to EN ISO 13849-1 and -2
- Safety-related sensors, logic, electrics, pneumatics and hydraulics
- How to identify and achieve the performance level (PL)
- Verification of a complete system
- Consideration and validation of the entire safety-related system
- Introduction to the IFA SISTEMA software wizard

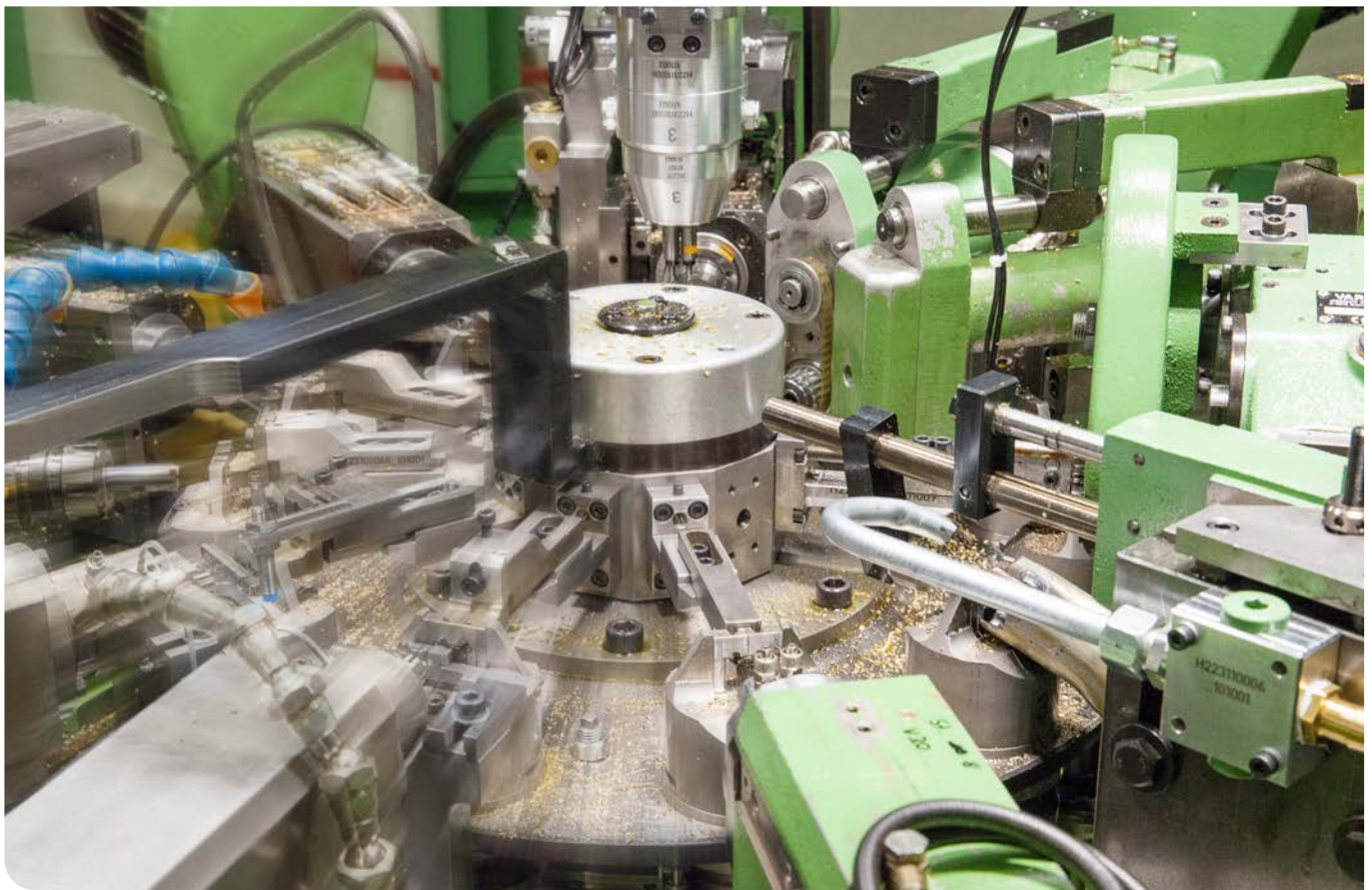
DURATION

- 5 days





SAFETY SERVICE



SUPPORT

INFORMATION + CONTACT

Are you interested in our Safety Service?

Would you like support with the CE process?

We are here for you. Contact us by phone or e-mail, we will be happy to make an appointment with you:

Training@wieland-electric.com

Our Safety Service
at a glance:



CE monitoring/implementation

Risk assessment

Verification in accordance with EN ISO 13849-1

Validation in accordance with EN ISO 13849-2

Review of the operating instructions

Safety assessment of machines

Safety consulting on site

SERVICES + SERVICE OFFERS

Our team of experts supports you throughout the entire life cycle of a machine with comprehensive services, also on site.

We take you through the CE process and its various phases, or handle this completely on your behalf. In addition, we advise you on topics related to machine safety and prepare safety assessments of your machines.

	Software tool	Risk assessment	Provision of safety-related data	Provision of technical documentation	Concept / specification Fixation	Examinations, tests and measurements	Validation plan/test lists/fault exclusions	Documentation/review/4-eyes principle	Customer presentation/final report
	●	●	●	●	●	●	●	●	●
	●	●		●	●			●	●
	●	●	●	●			●	●	●
	●	●	●	●		●	●	●	●
	●	●		●					●
	●	●		●	●			●	●

- Power Wieland Electric
- Performance customer
- Performance Wieland Electric + Cooperation Customer
- by arrangement

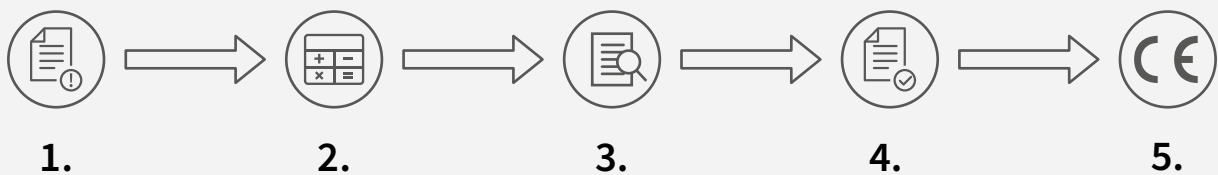
CE PROCESS

THE WAY TO CE MARKING

CE marking - and thus compliance with European legislation - is associated with many difficulties in practice for machine builders. Be it general questions about the CE marking obligation - e.g. for machines for own use or after modifications - verification and validation or checking the operating instructions.

Failure to comply with the Machinery Directive (MRL) 2006/42/EC and the new Machinery Regulation can damage your company's reputation and business operations, and can result in fines and criminal penalties for personal injury caused by non-compliant machinery.

CE process to CE marking.



- 1. Risk assessment** Creation of the risk assessment for a machine in the sense of the Machinery Directive / Machinery Regulation.
- 2. Verification** Computational verification of the performance level for each safety function, with documentation.
- 3. Validation** Validation of the documentation by analyzing the customer's documentation according to EN ISO 13849-2 and validation of the machine by testing, with documentation.
- 4. Checking** Check the existing operating instructions for compliance with the Machinery Directive/Regulation with documentation of the test points.
- 5. CE certification** Final report with a recommendation/conclusion for the issuance of the EC Declaration of Conformity by the machine manufacturer.

IMPLEMENTATION/GUIDANCE OF THE CE PROCESS BY US

Only after passing through the entire CE process does a machine receive the CE marking. We carry out the CE process for you or accompany you in the process.

OUR CE MONITORING/IMPLEMENTATION IS BASED ON THE FOLLOWING CONTENTS:

- Design documents (e.g. CAD drawing)
- User information
- Specifications
- Technical documentation (e.g. EPLAN)
- etc.

We accompany you through the individual (partial) steps or the complete CE process up to CE marking.



Prepare **risk assessment** (if not already done).

Verification of the safety functions according to EN ISO 13849-1.

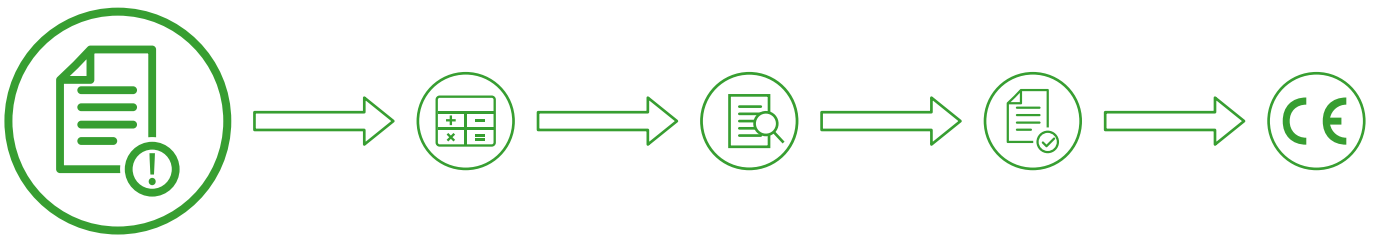
Validation of the documentation, performance of necessary inspections, tests and measurements, post evaluation.

Check the existing operating instructions.

CE certification Final report (recommendation/conclusion for issuance of the EC Declaration of Conformity by the machine manufacturer).

RISK ASSESSMENT

Preparation of a risk assessment for a machine in the sense of the Machinery Directive/Regulation.



The Machinery Directive 2006/42/EC / Machinery Regulation requires that a risk assessment be carried out on machinery before it is placed on the market. For this purpose, it is necessary to determine which essential health and safety requirements apply to the machines. Appropriate measures must then be taken. We help you comply with the latest directives and standards to produce confirmed documentation.

SERVICE DEFINITION

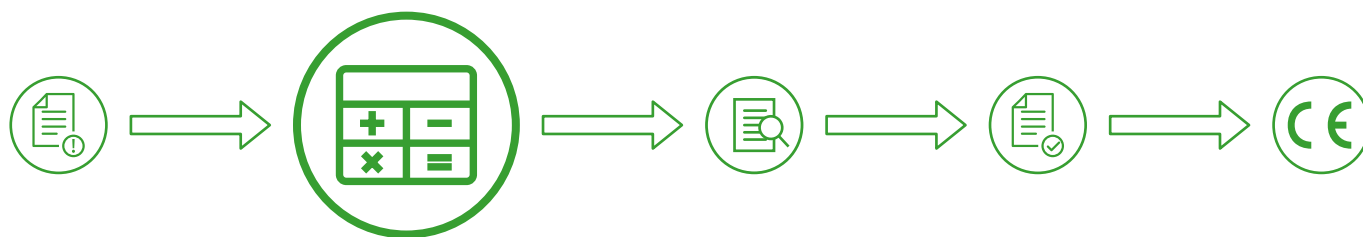
- Standards research and guideline determination
- Execution of the risk assessment according to EN ISO 12100
- Documenting all hazard points
- Classifying the performance level of the hazard points
- Describing the risk minimization concepts
- Formalizing the risk minimization measures
- Final report

THE RISK ASSESSMENT IS BASED ON THE TECHNICAL DOCUMENTATION:

- Design documents (e.g. CAD drawing)
- User information
- Specifications
- etc.

VERIFICATION ACCORDING TO EN ISO 13849-1

When using technical protective devices in accordance with EN ISO 13849-1, the associated performance level for each individual safety function must correspond to the specific required performance level.

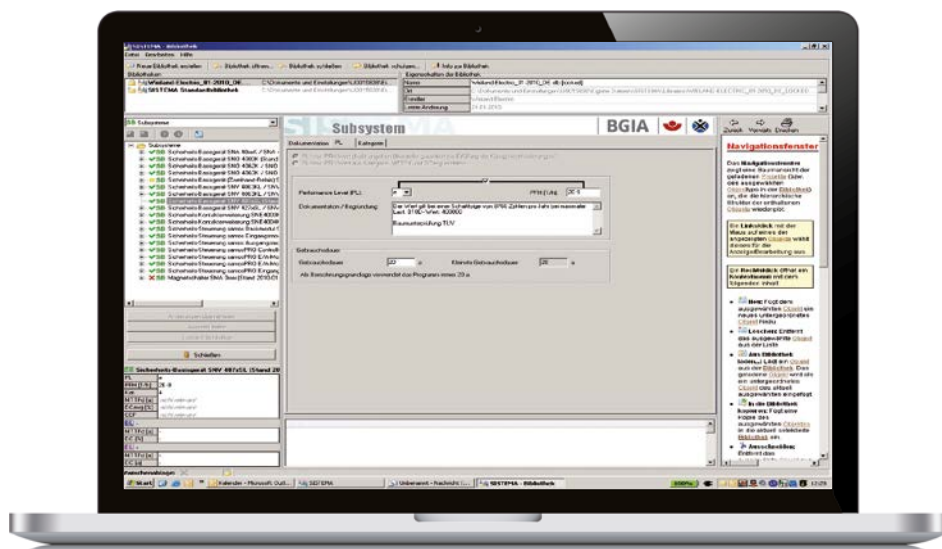


SERVICE DEFINITION

- Arithmetic proof of the performance level PL for each and every safety function.
- Software-supported verification and documentation (e.g. by means of SISTEMA tools of the IFA)

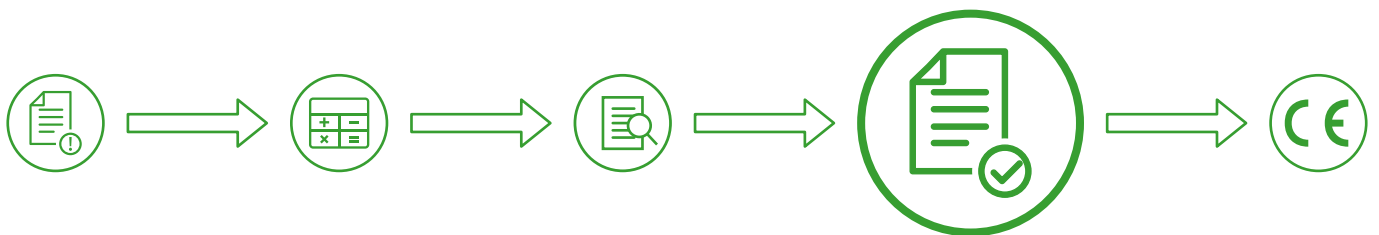
VERIFICATION IS BASED ON THE TECHNICAL DOCUMENTATION:

- Design documents (e.g. Risk assessment)
- Specifications
- Technical documentation (e.g. EPLAN)
- Safety characteristics of the components used



VALIDATION ACCORDING TO EN ISO 13849-2

When using technical protective devices in accordance with EN ISO 13849-1, it must be confirmed that the design of the safety function meets the specifications of the machine's safety requirement. This is to support error prevention during implementation/realization. We ensure for you that functional safety is guaranteed.



Validation of documentation through analysis of technical documentation according to EN ISO 13849-2

SERVICE DEFINITION

- Creating the validation plan
- Analyzing the safety functions
- Documentation on the validation in a confirmed customer report

THE VALIDATION IS BASED ON THE TECHNICAL DOCUMENTATION:

- Design documents (e.g. Risk assessment)
- Specifications
- Technical documentation (e.g. EPLAN)
- etc.

Validation of the machine by testing

SERVICE DEFINITION

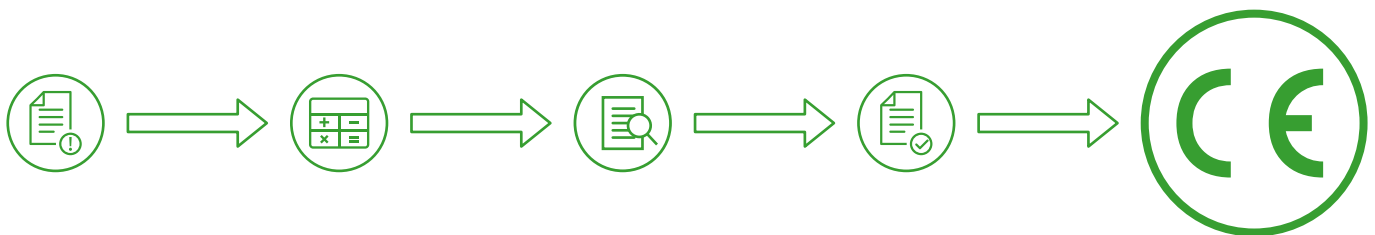
- Performing the required inspections, tests and measurements
- Safety-related test (Black box test specification)
- Documentation of the tests in a confirmed customer report

THE VALIDATION IS BASED ON THE TECHNICAL DOCUMENTATION:

- Design documents (e.g. Risk assessment)
- Specifications
- Technical documentation (e.g. EPLAN)
- etc.

CHECKING THE OPERATING INSTRUCTIONS

Each machine must be accompanied by operating instructions (in the official Community language(s) of the respective member state). We check your operating instructions with regard to compliance with the Machinery Directive / Machinery Regulation.

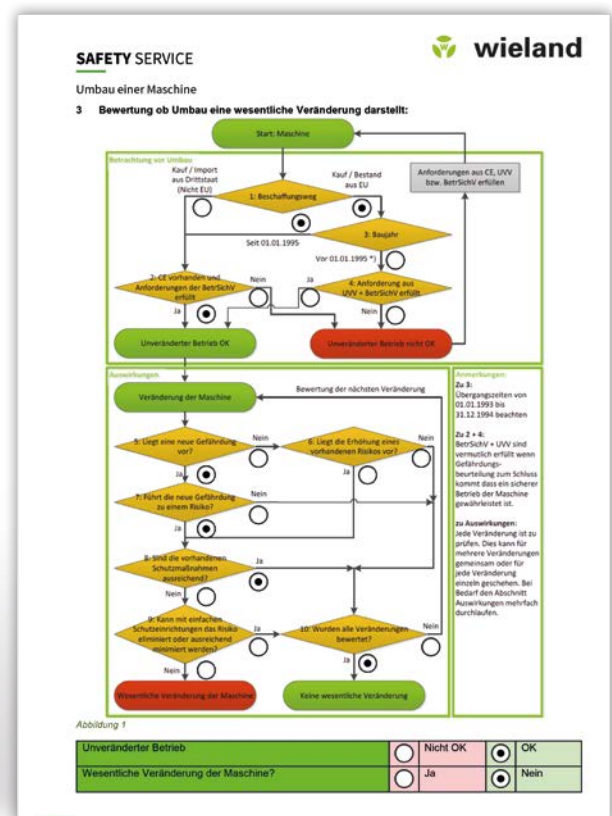


SERVICE DEFINITION

- Checking the existing operating instructions for compliance with the requirements of the Machinery Directive/Regulation
- Documenting the test points

THE TEST IS BASED ON THE TECHNICAL DOCUMENTATION:

- Operating instructions
- Risk assessment
- etc.





OTHER SAFETY SERVICES



SAFETY ASSESSMENT OF MACHINES

It is required that only safe work equipment be made available to employees. We support you in the identification of hazards and, if necessary, the necessary risk reduction on your existing machines.

SERVICE DEFINITION

- Standards research
- Execution of the risk assessment according to EN ISO 12100
- Documentation of all existing danger points
- Classification of existing hazardous points according to EN ISO 13849-1
- Describing the risk minimization concepts
- Concretization of the risk mitigation concept
- Documentation with explanation

THE SAFETY ASSESSMENT IS BASED ON THE TECHNICAL DOCUMENTATION:

- Design documents
- User information
- Specifications
- Technical documentation (e.g. EPLAN)
- etc.



SAFETY CONSULTING ON SITE

Our experienced machine safety experts will advise you on site on all relevant topics relating to machine safety.

SERVICE DEFINITION

- Explanation of the Machinery Directive/Regulation and the CE process
- Review of the CE-relevant documents of your machine
- Risk assessment (approach and implementation)
- Verification of safety functions according to EN ISO 13849-1
- Explanation of EN ISO 13849-1
- Substantial modifications of machines
- Total of machines
- Verification/validation of "safety related software".
- and other topics



SAFETY ENGINEERING



SUPPORT

	Software tool	Internal process manual & programming guideline	Risk assessment	Creation of specifications	Provision of safety-related data	Provision of technical documentation
Testing/Inspection	●	●			●	
Stop time measurement	●	●			●	
Creation of safety-related user software	●	●	●	●	●	
Support: Program creation with samos® PLAN 6	●	●	●	●	●	
Commissioning check/support	●	●			●	

PRACTICAL IMPLEMENTATION + TESTING OF THE SAFETY FUNCTIONS

We offer comprehensive engineering services to keep your machines safe and effective. Our services range from on-site support, testing and inspection to retrofits and safety-related conversions.

Concept/ specification Fixing	Design (Electr./Mech./Pneum./Hydr.)	Installation (Electr./Mech./Pneum./Hydr.)	Support/ Maintenance	Examinations, Tests & Measurements	Validation plan/test lists/fault exclusions	Commissioning	Testing/ Acceptance	Documentation/review/4-eyes principle	Customer presentation, final report	Customer training, instruction
							●		●	
							●		●	
●				●		●		●	●	●
						●			●	

- Power Wieland Electric
- Performance customer
- Performance Wieland Electric + Cooperation Customer
- by arrangement



TESTING/INSPECTION

We carry out both initial and repeat tests of optoelectronic protective devices (OPD) (light grids/curtains) for you.

SERVICE DEFINITION

- Verification of the applicable safety distance
- Ensuring safety, availability and productivity
- Creation of an inspection report
- Tested safety at a glance - thanks to the Wieland test seal on the machine

OVERRUN MEASUREMENT

We carry out the overrun measurement for you, when using:

- OPD, Scanner
- 2-hand control panel
- Pressure-sensitive mat
- etc.

CREATION OF SAFETY-RELATED USER SOFTWARE .

Safety functions are increasingly implemented through the application programming of safety-related controllers.

The requirements of the current EN ISO 13849 standard for the software development of safety functions must be met. A key requirement of this standard is that a structured development process is followed via the V-Modell. This is to avoid dangerous systematic errors in the safety-related application software for a machine. We implement the security functions in the user software for you.

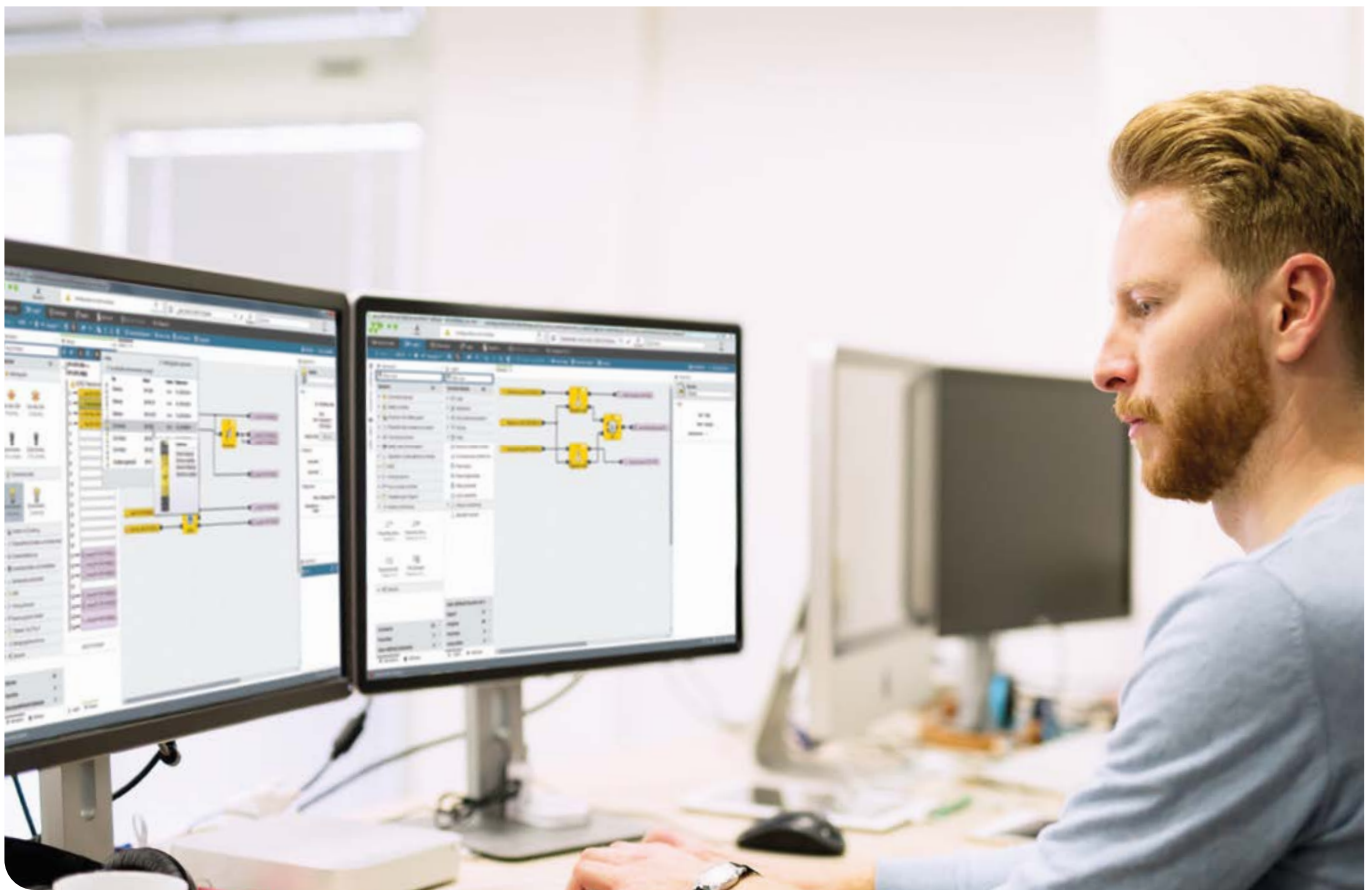
SERVICE DEFINITION

- Gathering customer requirements
- Preparation of a compulsory specification and verification and validation documents
- Creation of the acceptance protocol for commissioning
- Program creation with samos® PLAN 6
- Commissioning
- Performance of the safety-related test (black box test) on site
- Documentation of the test





SAFETY **ENGINEERING** SERVICES

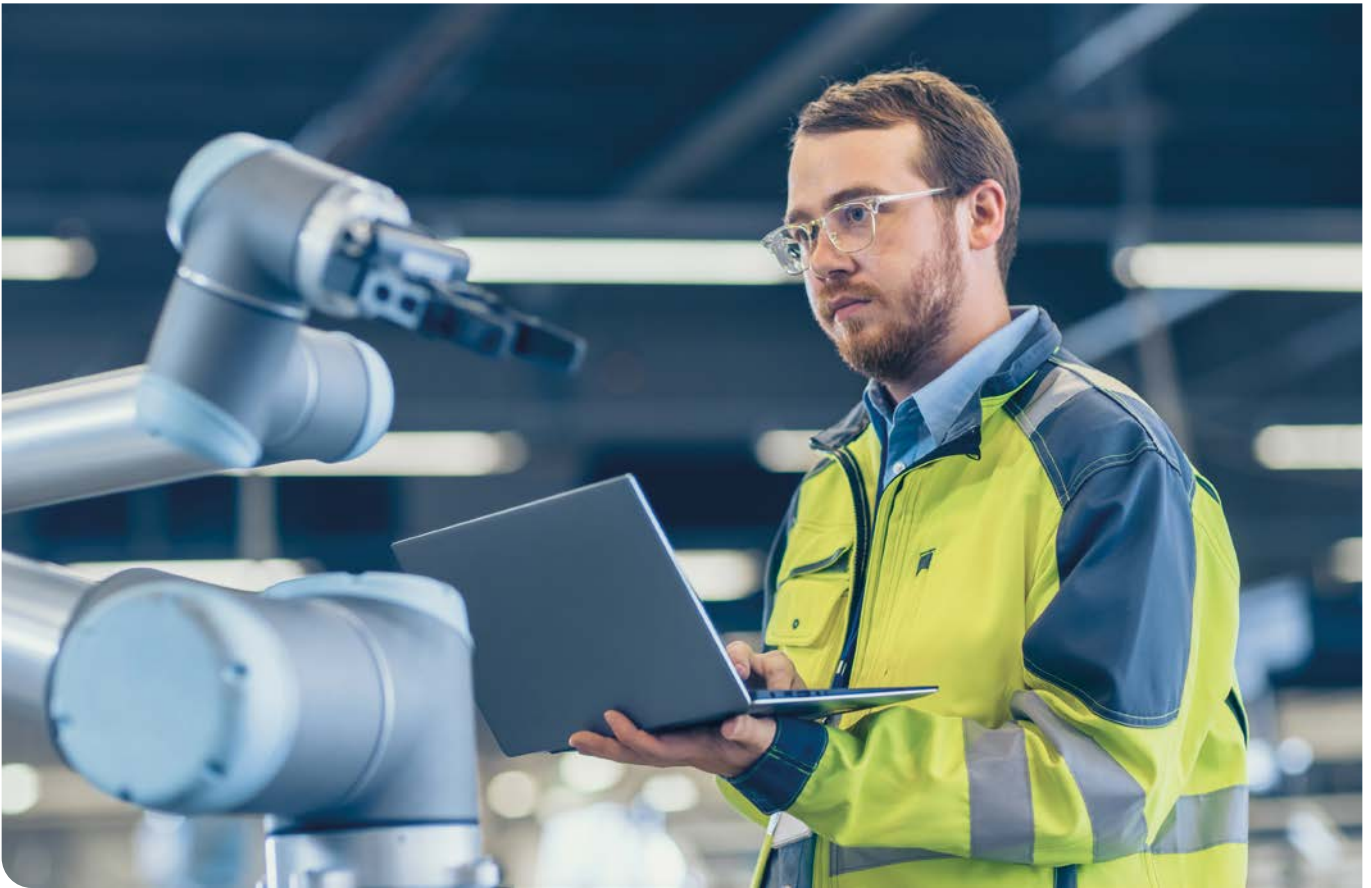


SUPPORT DURING PROGRAM CREATION (WITH SAMOS[®] PLAN 6)

The programming tool for the samos[®] PRO safety controller simplifies the programming, diagnosis and documentation of all safety functions on a machine. We support you in the creation of the program.

SERVICE DEFINITION

- On-site support during program creation and commissioning
- Consultation regarding the correct program documentation
- Instruction/training on samos[®] PLAN 6 software



COMMISSIONING CHECK/SUPPORT ON SITE

We support you on site during commissioning of your machine.

SERVICE DEFINITION

- Design, planning of safety technology for new plants and retrofits
- Determination of the proper installation and function of a protective device
- Safety-related functional test including confirmed documentation



SAFETY SOLUTIONS



SAMOS[®]PRO

The samos[®] PRO safety controller sets new standards in the field of safe machine automation with maximum performance in the smallest space.

- 24 safe inputs and outputs
- USB and Ethernet interfaces on board
- Modularly expandable up to 172 safe inputs/outputs
- License free software tool with TÜV-certified function blocks



SAMOS[®]

Our parameterizable system samos[®] closes the gap between switching devices and freely programmable solutions – being modularly extendable.

- Several functions in one module
- 2 modules replace up to 6 switchgears, that saves space and costs
- Diagnosis via gateways to common fieldbuses
- Parameterizable without software



SAFERELAY

The safe relay product group includes safe basic devices with and without time function and supplementary contact expansion relay – and thus covers the entire spectrum of important safety functions.

- Increased device availability through Monoflop function
- Multiple approvals also prove suitability for harsh conditions
- Universal relay with diagnostic function for quicker availability



APPLICATIONS

- Monitoring of emergency stop and door switch
- Realization of non-contact protection devices and muting devices
- Two-hand operation and press monitoring
- Fast Shut-Off - Applications for fastest reaction times



SOLUTIONS

sensor PRO, safe RELAY, samos® and samos®PRO are safety components of the highest quality, which protect man and machine in the operation of modern plants while maintaining high machine availability.

Depending on the required performance level and desired functionality, you will find the right solution for your application in our portfolio. A SISTEMA library containing all components is available for easy calculation of the PL in accordance with EN 13849-1.



BENEFITS

- All-in-one solutions for all safety applications
- Tested and certified technology "Made in Germany"
- Extensive support in assessment, design and system integration



SENSORPRO

- Safety with maximum efficiency at the same time: With a comprehensive portfolio for area and access protection as well as monitoring and safeguarding of separating protective devices, we offer the hardware for protection during frequent interventions in the production process.
- Light curtains + light grids
- Emergency stop button
- Contactless switches
- Mechanical switches
- Position switches

SAMOS®PLAN 6

With our samos® PLAN 6 programming software for the samos® PRO series, programming is now even easier. samos® PLAN 6 supports the PLC programmers, electrical designers and developers in project planning, validation, verification and documentation of the safety application

SAFETY MANUAL

With the "Functional Safety" manual, we offer user-oriented assistance in the design of safety solutions. Experienced practitioners and standards experts provide a comprehensive insight into the most important topics related to functional safety. Application examples and sample solutions help to put the theoretical knowledge into practice.

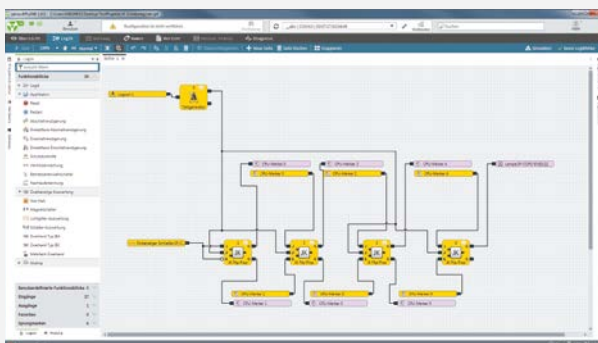
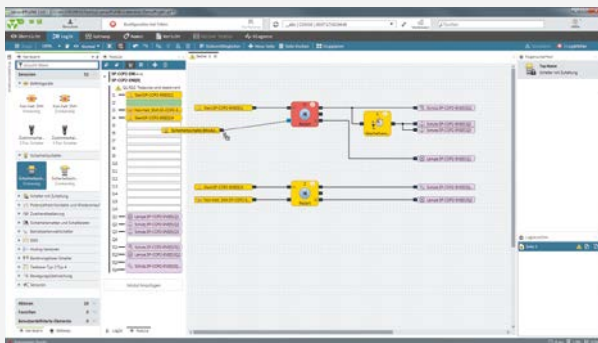
On our website you can download the practice manual free of charge.

<http://wie.li/04241>



PERFECTLY TUNED SOFTWARE

For easy and intuitive operation or for quick configuration and product selection, we offer the appropriate software specifically adapted to the individual product families.



SOFTWARE SOLUTIONS

- **samos® PLAN 6** The programming tool for samos® PRO supports designers and machine builders in programming safety functions.
- **SISTEMA and VDMA** libraries The SISTEMA and VDMA libraries of all safety components from Wieland Electric, in conjunction with the free SISTEMA software tool from the IFA (Institute for Occupational Safety), enable the calculation of safety parameters in accordance with EN ISO 13849-1 of the safety-related functions of a machine.



For more information, please visit our website.



INFO TO GO



All Wieland Electric brochures are available for download at:

<https://www.wieland-electric.com/en/support/downloads>

You might find interesting:

SAFETY CATALOG

Safe system solutions for automation technology

Art.No. 0860.1



SAMOS® PRO COMPACT

Safety controls for machines + plants

Art.No. 0881.1



Wieland on YouTube:
Watch our solutions in action



<https://www.youtube.com/user/WielandElectric>



Technical advice
Industrial Solutions

Email: industry@wieland-electric.com

Worldwide: <https://wie.li/contactinternational>



ONLY ONE TAP AWAY

Our Wieland E-Shop:

More than 25,000 products – anytime

In our online store you will find all the information about our products, prices, and technical data.

Order easily and conveniently online, and check availability.

<https://eshop.wieland-electric.com>

Scan QR code –
view products in the
Shop.



HEADQUARTERS

Wieland Electric GmbH
Brennerstrasse 10 – 14
96052 Bamberg · Germany

Phone +49 951 9324-0
Fax +49 951 9324-198
info@wieland-electric.com



0870.1 MC 07/24

Represented in over 70 countries worldwide:

www.wieland-electric.com