

Phase 5: Verification

Verifying the design of hardware and software



AUTOMATION

Product information

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The proportion of dangerous systematic errors relating to safety functions is well above 60% of all possible errors.

In order to prevent this type of error, all safety functions must be implemented based on tested and approved technical specifications.

Since incorrect implementation can also lead to systematic errors, however, it is essential to check the safety-related programming and assigned device parameters against the released hardware and software technical specifications.

The circuit diagrams must also be included in these checks in order to verify the correct installation of the safety functions.

This is important if you are responsible either for the functional safety of machines or the documentation, or if you are a project manager, planner, designer or tester of safety functions.

User benefits

The tests to be performed on your safety-related software, parameters, and on the installation of safety functions are managed and documented in standardized log books based on proven and established procedures.

This means:

- The avoidance of dangerous systematic errors
- Documentation specifications or standardized documentation templates
- Shorter startup and release times
- Fewer resources used

Requirement

The individual safety functions are described in the software technical specification in accordance with the software architecture model of DIN EN ISO 13849-1.

All device parameters are defined in the hardware technical specification.

The approved technical specifications form the legally binding basis for verification by safety experts from PHOENIX CONTACT.

Depending on the agreed scope of the tests, the created and released circuit diagrams may also be required.

Description of performance

Depending on your requirements, we can provide support for the verification of

- Safe programming
- The parameterization of safe devices
- Installed safety functions

We offer competent and comprehensive advice in relation to the procedure for the required tests.

You will receive information on how you can perform the tests, how to handle any deviations you may find, and how to document modifications.

We will also be happy to verify the safe software, device parameters, and installed safety functions by carrying out inspections and documenting the results in test log books. You can then refer to these test log books when revising the safety functions and for the subsequent release of software projects and installed safety functions.

Duration

The duration of our services depends on your requirements. We discuss your machine experts' previous experiences to agree on the time required for your individual case. This may be a general consultation lasting half a day or may involve intensive consultation or process support over a number of days.

For large-scale projects we are also happy to provide support for a longer period.

Costs

We will be happy to prepare a non-binding quote for you.

To request this, speak to your personal sales partner directly or contact our headquarters in Blomberg.

Do you want to expand your in-house expertise?

The following training will help you with verification:

Safety Lifecycle P5-P7

Order No. 2700791

By offering you custom-made training tailored precisely to your needs, we can impart the specific knowledge you need for your safety environment.

The following may also be of interest to you when it comes to the lifecycle of your application:



Do you want to find out quickly whether you are on the right track to achieving functional safety? Then simply use our functional safety app check! By using a checklist, you can find out interactively whether you meet the essential requirements of the Machinery Directive. Simply search for the term *Safety* in the App Store.