

Phase 7: Validation

Function test, verification and validation report, and configuration management

AUTOMATION

Product information

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Right up to the release of a machine, various fault avoidance measures are defined in the sector standards for the functional safety of machines in order to prevent systematic errors.

Only by taking all measures into account can the risk of these systematic errors, which in the worst case can lead to a loss of safety, be reduced to an acceptable level.

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.

The last measure before releasing a machine is the structured and fully documented function test (black box test) of all safety functions on your machine.

This function test must be planned and performed in all defined operating modes for both regular and irregular operation of your machine and safety functions.

As the person responsible for the safety of your machine, you must verify and document that all risk reduction measures have been planned and implemented.

User benefits

You can benefit from the specialist knowledge of our certified safety experts. You will receive documentation specifications or standardized documentation templates for creating the verification and validation report and for creating a configuration management plan (CM plan).

If you request advice, we will help you to formulate processes.

Requirement

The following approved documents are required for moderation and engineering:

For performing the function test:

- Black box test specification

For creating the V&V report:

- All review reports created in accordance with the safety project plan
- White box and black box test log books

For creating the CM plan:

- Safety project plan
- Hardware and software technical specifications
- White box and black box test specifications
- White box and black box test log books
- Review reports, verification and validation report
- Circuit diagrams, software

Description of performance

We offer competent and comprehensive advice for performing function tests in accordance with your black box test specification.

You will receive information on how to handle any deviations you may find and how to document modifications. We will explain how to document all measures together centrally and how the configuration management of your documents and software must be set up in order to enable full verification of your planned and implemented measures.

We will also be happy to perform the function tests of your safety functions on your behalf. We will document all fault avoidance measures in the verification and validation report and then combine all documents, circuit diagrams, and software projects in the CM plan.

This will allow you to document your risk reduction activities in terms of functional safety until the release of your machine.

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 validation:

Safety Lifecycle P5-P7	Order No. 2700791
INTERBUS Safety Diagnostics	Order No. 2884680
PROFIsafe Diagnostics	Order No. 2692364

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.