

Functional Safety of Machinery (ISO13849-1 /2)

Safety Education

SICK LifeTime Services Training Course



Description

This training module covers how current functional safety standards (ISO13849-1 /2) dictates the design and proof of functional safety for machines. Trainees learn how the selection of components affects performance levels achieved based on category structure, MTTFd, diagnostic coverage, common cause failure, and standard engineering principles. Practical examples will demonstrate applying technical measures during the risk reduction process.

In addition to the technical requirements, students will learn about quality assurance measures, and documentation for lifecycle design and validation.

Objectives

- Defining new standards regarding safety of machinery
- Review types of technical measures for risk reduction
- Identifying safety functions of machines
- Identifying circuits, schematics and examples
- Performing calculations (ISO13849-1)
- Introduction to SISTEMA
- Defining a validation plan
- Completing documentation

Course Benefits

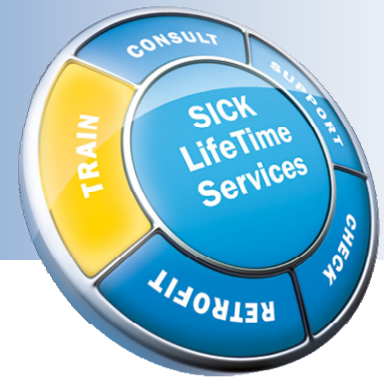
- Learn how to correctly apply functional safety concepts to the SRP/CS (Safety Related Parts of a Control System) to meet ISO13849 and OSHA requirements
- Learn how to identify shortcomings of component selection to replace with an appropriate device to avoid degrading the system safety rating
- Learn how to build a Validation Plan to ensure the safety functions are evaluated properly to meet ISO13849
- Obtain practical hands-on experience to reduce design and implementation costs



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Target Audience

Application engineers, system integrators, developers, and safety specialists

Prerequisites

- Knowledge of risk assessment process
- Familiarity with safety products
- Basic computer skills

Recommended Additional Course(s)

Risk Assessment Training
SISTEMA Training and Labs

Duration

4 Hours

Class Size

Maximum of 8

Where Offered

- SICK North American Training Center
- Customer Site

Format

Lecture and hands-on

Testing Available

No

Customer Required Materials

Every student:

- Computer

Logistics

The following must be made available for the duration of the training:

- A suitable training room/area for the lecture portion of the training
- A projector with screen for use with a PC

Failure to have the customer required material and/or logistics available may lead to ineffective training and may result in the class not being able to achieve the described objectives and course benefits.

Part Number

1065480

Travel expenses additional. Please contact SICK for information.

SICK Training & Education

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SICK offers several types of training programs to help you learn more about our innovative products and systems. Many of our training modules offer hands-on, real-world application examples and problem-solving experiences. Please visit our website at <http://www.sickusa.com> for more information