



Introduction To Functional Safety

Webinar Series

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Abstract

The Introduction to Functional Safety webinar series develops the fundamental concepts of functional safety through the use of ISO 13849. While none of these topics can be developed in detail in short webinars, attendees will be exposed to the most important aspects of this complex engineering discipline. Topics include:

- What functional safety is, and why it matters
- Current functional safety sector standards
- The functional safety life cycle
- The linkage between risk assessment and functional safety
- Key concepts used in ISO 13849, including
 - Safety Requirement Specification
 - Performance level
 - Architecture
 - Mean Time to Dangerous Failure (MTTF_D)
 - Diagnostic Coverage (DC_{avg})
 - Common Cause Failures (CCF)
 - Verification and Validation
 - Safety-Related Software Development

Session 1

- What functional safety is, and why it matters
- Current functional safety sector standards
- The functional safety life cycle
- The linkage between risk assessment and functional safety



- Safety Requirement Specification
- Performance Levels

Session 2

- Short review of Session 1
- Key concepts used in ISO 13849, including
 - Figure 5
 - Architecture
 - Well-tried safety principles
 - Well-tried components

Session 3

- Short review of Sessions 1 & 2
- Key concepts used in ISO 13849, including
 - Mean Time to Dangerous Failure (MTTF_D)
 - Diagnostic Coverage (DC_{avg})
 - Common Cause Failures (CCF)
 - Verification and Validation
 - Safety-Related Software Development
- Further Reading

Attendee Materials

Attendees will be provided with a copy of the slides with speaker's notes and a full reference list.