IO-Link Safety
Status of IO-Link Safety

IO-Link Safety
Purpose of the webinar

IO-Link Safety
Webinar program

Twenty years ago, the revolutionary idea of using functional safety communication across standard fieldbuses became a reality. In the meantime, several fieldbuses around the world offer their individual solution and in the worst-case machine manufacturers are forced to support all of them depending on customer requirements.

Safety device manufacturers could either integrate such fieldbus safety communication interfaces or stay with classic interfaces such as digital or analog inputs and outputs (0 to 24 V, OSSD, 4 to 20 mA, etc.). Since these classic interfaces are supported by most of the fieldbuses through Remote I/O it is possible to avoid a broad model range. However, safety devices, connected these ways, are missing digitalization and the chance to participate in new trends such as Internet-of-Things or Industry 4.0.

This is, where IO-Link Safety comes into play. FS-Masters build gateways to the various safety fieldbuses and provide ports for point-to-point communication with FS-Devices. Dual mode transmission (switching or digital communication) allows for easy migration from classic interfaces to the world of IO-Link. The plain and powerful protocol has been designed according to IEC 61784-3. IO-Link Safety can be used for applications up to SIL3 (IEC 61508) or PL "e" (ISO 13849).

The specification V1.1 has been approved by TÜV-SÜD and IFA and is published since April 2018. Technology providers already offer support with functional versions of FS-Master (with tool) and FS-Device kits. Developers do not depend on availability of certified products as a counterpart. Certified safety communication layer stacks are available.

Tier 1 of the test specification is available for protocol testing and is going to be enhanced for additional function tests. FS-Master and FS-Device tester are planned for spring 2021.

Besides the digital communication protocol, IO-Link Safety provides further important features such as detection of misconnection, parameter backup & restore, etc. Thus, the purposes of this workshop are:

- Deep insight into all design and safety aspects of IO-Link Safety technology and companion specifications
- Overview of the safety development process
- Architecture and implementation issues
- Development and test support
- Safety assessment and certification
- Discussion on user applications (feedback)

The training and feedback of IO-Link Safety requires two webinar sessions of 3 hours. There will be no written test.

Fieldbus with one of the Functional Safety Communication Profiles (FSCPs acc. IEC 61784-3)
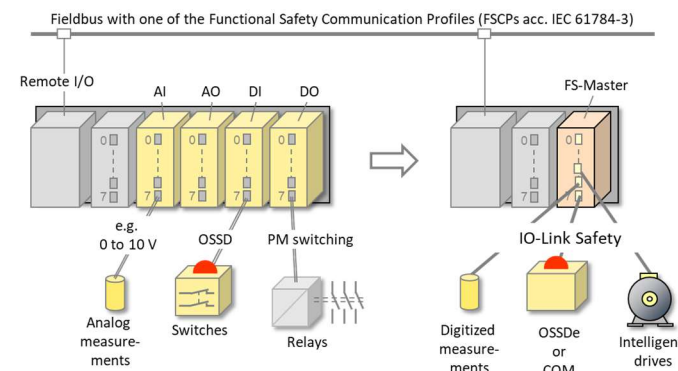
The benefits for the participants:

- To get the most actual information on IO-Link Safety
- To understand modern safety aspects
- To achieve skills in design and implementation
- To know more about test and certification
- To become a member of the expert network
- To increase the person's market value

Program:

- **Webinar 1**
  - IO-Link Safety organization and policy
  - IO-Link Safety (OSSDe, protocol, safety measures, backup, misconnections, etc.)
  - IO-Link Safety (engineering and integration)
  - Environmental requirements
  - Functional Safety applications
  - Safety design and implementation (IEC 61508)
  - Questions & answers

- **Webinar 2**
  - Development process
  - Technology provider: Development support
  - Test strategy and specification
  - FS-Device tester
  - FS-Master tester
  - Conformance testing and certification
  - Questions & answers

Target groups:

- Design engineers of functional safety devices
- Product managers
- HW and SW development engineers
- Test engineers and safety assessors

Times:

Webinar 1:	Morning	or	Afternoon
Begin:	8 am		4 pm
End:	11 am		7 pm

Webinar 2:	Morning	or	Afternoon
Begin:	8 am		4 pm
End:	11 am		7 pm

IO-Link Safety Webinars
Registration

IO-Link safety

Hereby I apply for the IO-Link Safety training class on

☐ April, 20th, 2021, 8 to 11 am (Webinar 1) **or**

☐ April, 20th, 2021, 4 to 7 pm (Webinar 1)

☐ April, 27th, 2021, 8 to 11 am (Webinar 2) **or**

☐ April, 27th, 2021, 4 to 7 pm (Webinar 2)

Name: _____

Company: _____

Street: _____

City: _____

ZIP/PLZ: _____

E-Mail: _____

Fon: _____

Fax: _____

Place, Data: _____

Signature: _____

Please mail to: info@io-link.com

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IO-Link Safety Webinar

2 sessions training and feedback

**April 20th and 27th, 2021
8 to 11 am or 4 to 7 pm**

Webinar tool: Microsoft Teams