

IO-Link Safety

Status of IO-Link Safety

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 depending on customer requirements manufacturers have to support all of them.

Safety device manufacturers have the possibility to 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 digitalisation 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 communications (OSSD or IO-Link Safety) allow 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 was published in April 2018. Technology providers already offer support with functional versions of FS-Master (with tool) and FS-Device. Developers do not depend on availability of certified products as a counterpart. Certified safety communication layer stacks are in progress.

The test specification is available for the protocol testing and is going to be enhanced for additional function tests. FS-Master and FS-Device testers are planned for fall 2019.

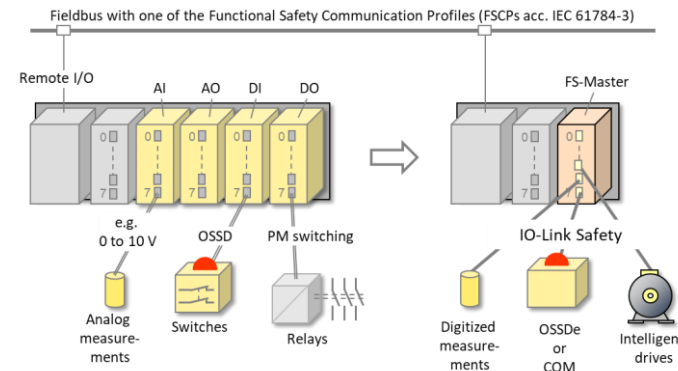
IO-Link Safety

Purpose of the workshop

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

- Deep insight into all design and safety aspects of the 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

The training and feedback of IO-Link Safety requires two days. There will be no written test.



The benefits for the participants:

- To get the most actual information about 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

IO-Link Safety

Workshop program

Program:

- **Day 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)
- **Day 2**
 - Technology provider: Support overview
 - Technology provider: Functional counterparts
 - Technology provider: Certified layer stacks
 - Test strategy and specification
 - FS-Device tester
 - FS-Master tester
 - Conformance testing and certification

Target groups:

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

Times:

Day 1:

Begin: 10:00 am
End: 06:00 pm
Joint Dinner: 07:30 pm (not included in fee)

Day 2:

Begin: 09:00 am
End: 03:00 pm

The attendance fee is **100 €**.
Soft drinks and lunch are free of charge.
Maximum number of participants is 40.
Please register online at the following Link:

https://www.io-link.com/work/de/UserWorkshop/Registration_Safety_Workshop2019.php

Or scan the following QR-Code to get to the registration:



Your official confirmation will be sent to your E-Mail address. If you have any questions please contact events@profibus.com or +49 721 96 58 590

Each registration will be confirmed separately by the organizer via E-Mail. The consent to the collection and processing of data via registration for the event is a prerequisite for participation. The organizer reserves the right to cancel the event in case of too low participation.

IO-Link Community
c/o PROFIBUS Nutzerorganisation e.V.
Haid-und-Neu-Straße 7
76131 Karlsruhe
Germany

Tel.: +49 721 96 58 590
Fax: +49 721 96 58 589
Email: info@io-link.com
www.io-link.com

IO-Link Safety Workshop

2 days training and feedback



October 9-10, 2019

**Technologiefabrik, Room H120
Haid-und-Neu-Straße 7
Karlsruhe/Germany**