

## FAQs

Revision: 11.05.06

### **Is IO-Link another field bus?**

No, IO-Link describes a point-to-point connection between a periphery interfacing unit and a field device.

### **How long can the connection be between the interfacing unit and the field device?**

Any individual connection can be extended to a maximum of 20 m.

### **How fast is signal transmission via an IO-Link connection?**

The typical signal transmission time for a value of up to 16 bits in length is 2 ms.

### **Is it possible to transmit safety-relevant data such as emergency stop commands via IO-Link?**

The transmission of safety-relevant data is not planned at present.

### **How is voltage isolation achieved in the case of drive systems?**

The potential-free contact is achieved using pin 2 and pin 5. For this purpose, a 5-pin standard cable must be used.

### **What points must be observed when wiring?**

Standardized 3-wire connecting cables or single strands in the switch cabinet. No shielding is required.

### **What type of connectors are required on the sensor side?**

No special IO-Link plugs or cables are required. The recommended minimum cross -sections must be adhered to. For 20m conductor lengths, the minimum cross -section is 0.34mm<sup>2</sup>. As unshielded cables can be used, M8 and M12 standard plugs are certainly most commonly used.

### **Which data is transmitted using IO-Link?**

Payload data (e.g. analogue values, switching statuses) are cyclically transmitted, configuration data (e.g. activation, deactivation of functions) and identification data (manufacturer identifier) typically during start-up and parameters (sensitivity, switching threshold) on a demand-driven basis.

### **What happens when an IO-Link proximity switch is defective and there is no identical replacement?**

An IO-Link proximity switch (a switching output) can be exchanged for a corresponding standard proximity switch. Automatic identification, reparameterization and other communication capability-related functions are then not available. In this case, only the switching signal is transmitted.

### **Which sensors without IO-Link capability can be connected to an IO-Link (Master)?**

Standard PNP outputs or PushPull outputs

### **Is hybrid operation of IO-Link and conventional devices possible?**

Both device types can be operated on a hybrid basis within one system.

### **What is IO-Link in relation to AS-i?**

- A system which supplements intelligent wiring systems such as AS-Interface
- IO-Link is based on conventional point-to-point wiring
- IO-Link is directly integrated in the sensor
- IO-Link does not require a special cable
- IO-Link does not require sensor addressing
- IO-Link has no user limit

### **Is IO-Link a competitor AS-i?**

- No, as:
  - it is a point-to-point wiring system
  - it is a supplementary system on the lowest field level
  - it does not solve wiring problems

### **Why is IO-Link needed?**

IO-Link is needed because:

- It closes the communication gap at the lowest field level
- It renders machines and plants capable of validation right down to the lowest sensor and actuator level
- It minimizes interfaces (PNP, PushPull, 4-20mA, 0-10V, RS232, RS422 become IO-Link)

### **What changes in terms of installation and application?**

- In terms of wiring technology, everything remains the same
- NPN sensors cannot be connected to IO-Link
- All previously known communication structures in higher-level systems do not change

**Is the system simpler than known communication structures?**

- Higher-level communication structures are generally bus systems
- **IO-Link** is a point-to-point connection

**How can I integrate the system into known field bus technologies?**

- Using currently known technologies
- No special **IO-Link** integration / engineering tools are planned