

FAQs

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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 0.34mm². 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