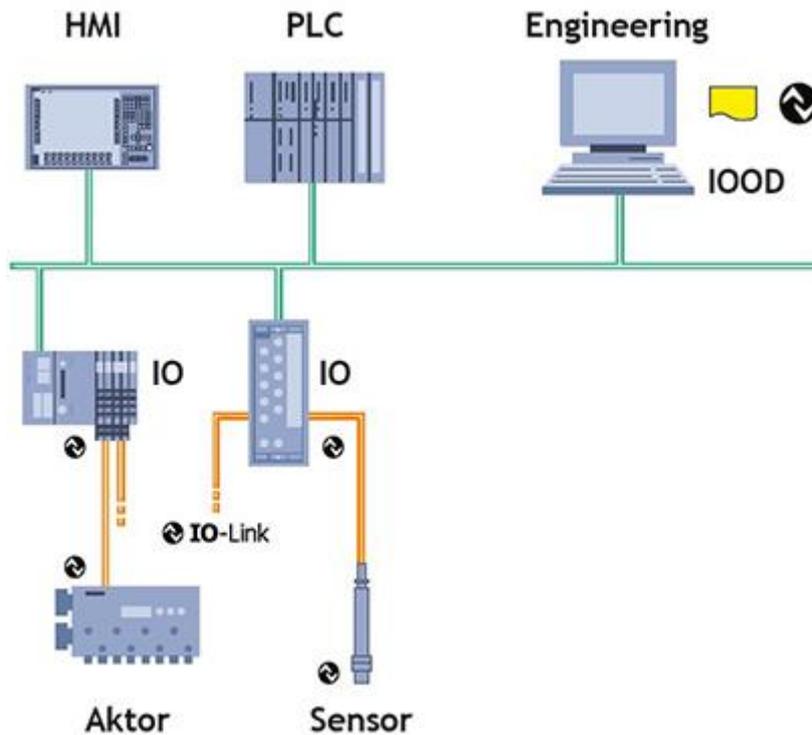


## IO-Link Overview

IO-Link is the first standardised IO technology worldwide (IEC 61131-9) for the communication with sensors and also actuators. The powerful point-to-point communication is based on the long established 3-wire sensor and actuator connection without additional requirements regarding the cable material. So, IO-Link is no fieldbus but the further development of the existing, tried-and-tested connection technology for sensors and actuators.

The system architecture could look as follows:



Use  **IO-Link**  
Universal · Smart · Easy

Example of system architecture

### Easy and compatible (universal)

The connection between IO-Link master and device is established via a max. 20 m long, unshielded 3-wire cable. The wiring is standardised on the basis of M5, M8 and M12. The vast majority of IO-Link devices is equipped with M12 connectors which can be used without any restrictions for IO-Link's switching mode and communication mode. Each port of an IO-Link master is capable of processing binary switching signals and analogue values (e.g. 8 bits, 12 bits, 16 bits). Serial IO-Link communication takes place via the same port. Easy wiring, automated parameter setting and extended diagnosis are but a few advantages of IO-Link.

# SENSOR TIP

## High functionality (smart)

As a standard, 2 bytes of process data are available per cycle. The transmission between IO-Link master and device takes 400  $\mu$ s at a speed of 230 kBaud. The user can also choose larger frame types. Therefore, greater process data with up to 32 bytes length can also be transmitted at a correspondingly lower cycle time. To ensure that the parameter data of a device are not lost when replacing a device, they can be automatically stored directly in the IO-Link master. If a new, identical substitution device is connected, the parameters of the previous device are automatically transferred onto the new device.

## Easy handling

Each IO-Link device has an IODD (IO Device Description). This is a device description file which contains information about the manufacturer, article number, functionality etc. This information can be easily read and processed by the user. Each device can be unambiguously identified via the IODD as well as via an internal device ID.

