

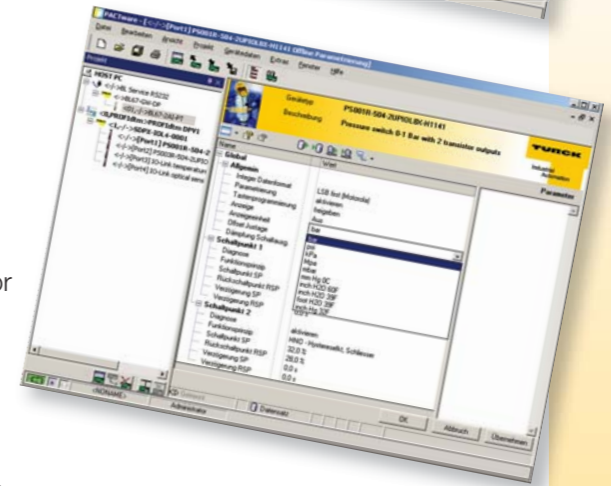
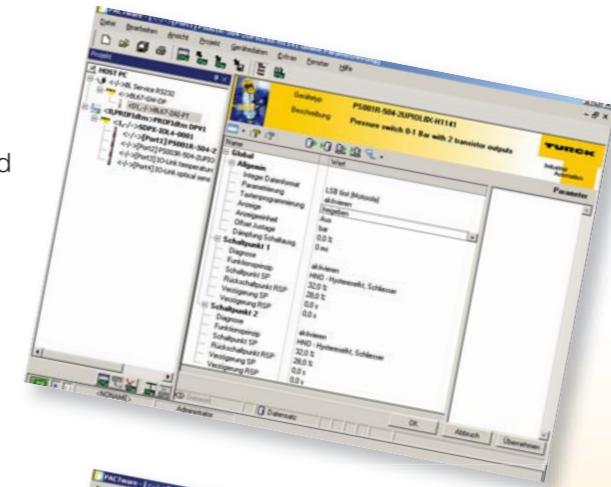
IO-Link**NEW
COMMUNICATION
USING WELL-
KNOWN METHODS****IO-Link integration**

The integration of the IO-Link system in the fieldbus environment is an important point. How can process and parameter data be transferred and managed? The users have different possibilities available to them:

For customers who only want to transfer pure process data, simple GSD files will be available on an input and output data basis and are independent of the devices. Parameterisation is not possible hereby.

Specific GSD files are available which can be run to suit the device design or type for the case where the individual devices are to be configured and parameterised. The data is stored in the control. A comfortable solution is provided by the use of device-specific DTMs.

The configuration can be modified during operation via an integrated FDT-frame. The operation is implemented via menu control. This solution is independent of the fieldbus used and the manufacturer.

**IO-Link integration
from a single source**

TURCK the specialist for sensor, fieldbus and interface technology will in the future provide complete IO-Link solutions consisting of interfacing modules and sensors. Initially an interfacing module consisting of a compact module with four IO-Link ports and direct Profibus interfacing is intended. Pressure and temperature sensors as well as ultrasonic sensors with an IO-Link interface will be available.

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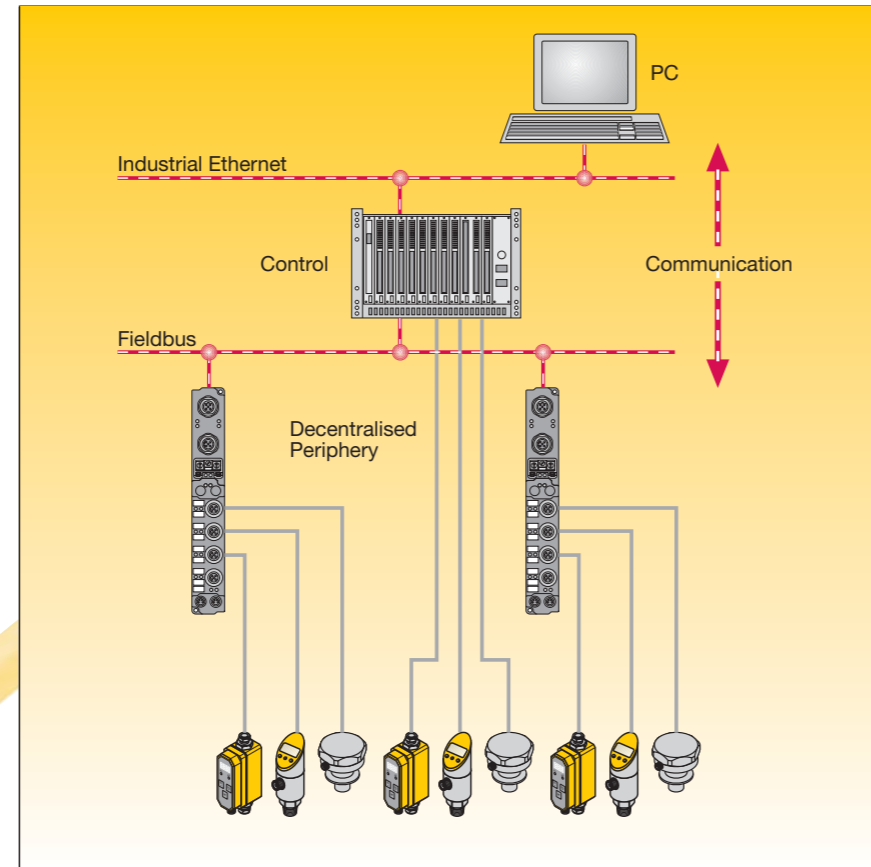
IO-LINK - NEW COMMUNICATION USING WELL-KNOWN METHODS

Universal communication right down to the sensor and actuator level

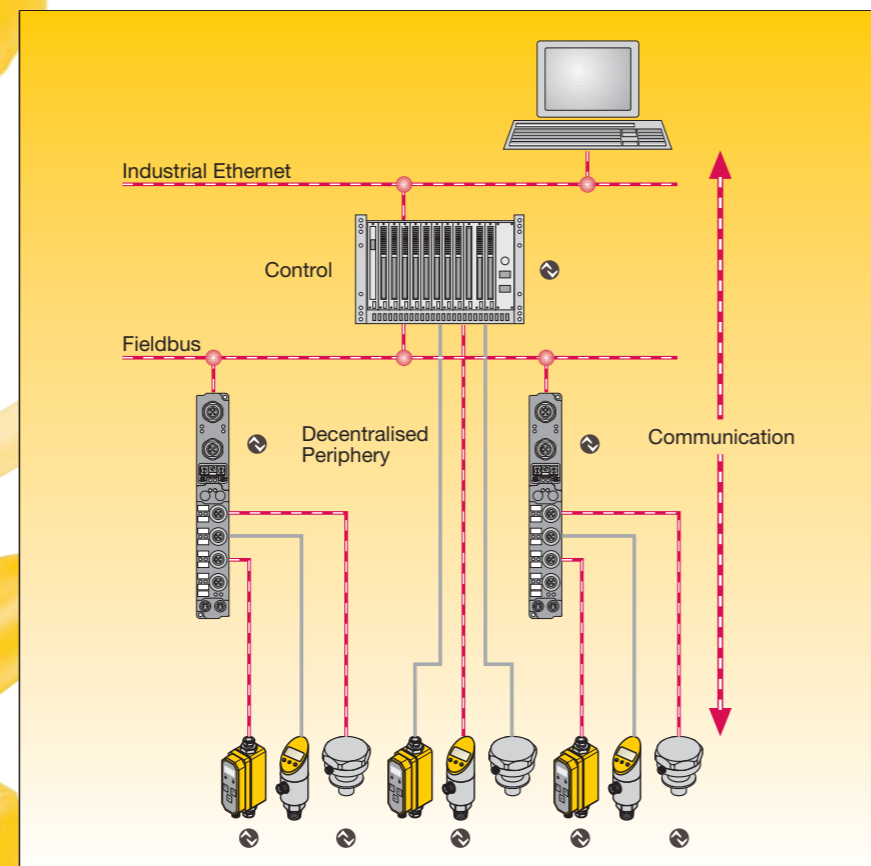
Many sensors and actuators today feature microprocessors which serve for example, to control displays, parameterisation and storage of configuration data. What could be more obvious than overcoming the bottleneck of the binary standard interface and to make additional functionalities centrally accessible for the automation system.

Attempts made up to now using proprietary systems were not very successful and not accepted by the customers. For this reason some well-known manufacturers from the field of automation have come together and developed "IO-Link", a fieldbus independent communication interface for sensors and actuators. Compatibility with existing technologies was the primary factor during development in order to guarantee protection of the investment.

State-of-the-art



Solution with IO-Link



What does IO-Link mean?

IO-Link is based on a point-to-point connection between the sensor/ actuator and an interfacing assembly. Up to now the binary interfacing was only designed for transferring switching information, but now with IO-Link 2 bytes can be transferred typically in a 2 ms cycle via a combined switching state and data channel. Thus communication with the "last meter" down to the sensors and actuators has been established for universal communication.

IO-Link does not require any special wiring. The sensors and actuators can be continue to be connected using the well-proven, attractively-priced and unshielded industrial cables. The operating modes available for selection are the standard switch mode and the communication mode.

Acceptance from the very outset

Whether it is serial data communication with the parameterisation of complex components or with the detection of analogue process signals: IO-Link provides universal communication between the fieldbus and wiring levels. Using an open communication standard IO-Link integrates the levels of the sensors and actuators into the automation system and thus combats the rising costing pressures as well as the demands for higher system availability.

High level of investment protection

- Standard 3-wire interface
- No additional wiring
- Standard cables, unshielded
- Binary sensors and IO-Link sensors can be connected to one IO-Link module

Simplified planning

- Combination of binary and analogue sensors on an IO-Link assembly
- Simple planning of the wiring
- Reduction of the mounting effort for sensors with on-site operation
- Integration into various bus technologies such as PROFIBUS, PROFINET, INTERBUS and DeviceNet™

Fast commissioning

- Configurations are saved in the control system and automatically transferred to the sensors
- Parameters and configuration can be simply changed via the control. Complex on-site programming is unnecessary
- Faults are quickly detected and localised by central diagnostics functions

Versatile in operation and service

- Flexible matching to changed demands, for example, with a change in production
- Improved quality control by clear data storage
- Reduced standstill times in a fault using extended diagnostics
- Simple exchange of sensors; parameters are automatically transferred to the new device

