Breakthrough in communication

Improve your competitive position in the global market!
IO-Link provides you with a number of arguments to keep you one step ahead of the global competition. IO-Link not only simplifies the design and construction of machines by virtue of its standardization, it also significantly extends the functionality of machines. Short setup times, higher productivity, and new modern maintenance concepts send a clear message for IO-Link.

Implement innovative machine concepts!
Nowadays the expenses involved in developing and designing machines, especially for customized projects, amount to more than 50% of the total machine costs. IO-Link accelerates your development cycle and helps you to implement innovative and flexible machine concepts through:
- Reduction in the number of interfaces
- Central data management and reproducibility of parameter sets
- Fieldbus neutrality and easy integration
- Diagnostics capability all the way to the field level

Shorten your commissioning time!
The time required to install and commission a machine these days is still quite considerable. With IO-Link, the effort required to install and commission your machine is significantly reduced. In addition, the number of variants is also reduced.
- No more manual parameter setting for sensors, since the parameter sets can be downloaded from the controller to the IO-Link sensors or actuators.
- Reduction of variants ensures that time-consuming cable assembly work for field devices is eliminated.

Increase the productivity of your machine!
Plant availability is the most critical criterion during operation. IO-Link provides maximum transparency all the way to the sensor/actuator level and thus increases the output of the machine.
- The automated parameterization of sensors and actuators reduces the downtimes associated with machine change-over.
- Process quality improvement is achieved as a result of the continuous monitoring of process data during runtime of the machine.
- Continuous logging of machine parameters aids you in complying with the ever increasing requirements for documentation.

Revolutionize your maintenance!
Thanks to diagnostics, downtimes are avoided and maintenance costs are reduced. Frequent preventive maintenance activities can be replaced by demand-oriented maintenance.
IO-Link devices can provide information about the device status. Thus, for example, the build-up of contamination on an optical sensor can be signaled early enough and maintenance can be requested.
Examples of diagnostic messages include:
- Device malfunction (contamination, undervoltage, pressure loss, temperature, timeout, etc.)
- Wire break (communication interrupt)
Are you fit for the global market?
Are you ready for new innovative machine concepts?
Are you producing or are you stuck in setup mode?
Does it take too long to commission your machine?
Are you ready for a revolution in maintenance?

IO-Link has set up Competence Centers for the purpose of helping interested device manufacturers and users in getting started with IO-Link. In addition to providing information and consultation in response to technology and organization questions, the Competence Centers hold seminars and workshops, provide development services, and offer support for the tests leading to the manufacturer’s declaration. The Competence Centers are bound by a Quality of Service agreement, which ensures the quality of the services offered. The trained experts in our accredited Competence Centers are your first point of contact and are eager to assist you. For more information on the IO-Link technology, technical documentation, and the Competence Centers, we look forward to your visit!

If you would like to become an IO-Link member, please contact:
IO-Link, Haid-und-Neu-Str. 7, 76131 Karlsruhe, Germany,
Tel. +49 721 9658-590, E-mail info@io-link.com

A group consisting of the leading providers of automation products has joined forces to provide a full range of sensor, actuator, and controller technology in support of this new concept. IO-Link is a neutral interface and is thus independent of fieldbus systems. IO-Link may be integrated into other higher-level bus systems at the initiative of the various fieldbus user organizations. This is strongly encouraged by IO-Link and will be actively supported.

The specification is available along with an extensive selection of sensors, actuators, IO-Link masters for Ethernet or fieldbus connection, and tools. To assure its international use, IO-Link has been incorporated into the globally recognized IEC standard 61131. Mandatory test specifications, test tools for masters and devices, and the resulting manufacturer’s declaration ensure the interoperability and quality of IO-Link.

The members of the IO-Link group are available to help you with any technical questions and requests for support. At www.io-link.com you will find a competency matrix that summarizes what is available from the IO-Link companies, ranging from devices to protocol software and semiconductor components to services. For those who are interested, we offer our “IO-Link Specification in brief” brochure and our technical specifications, for example, for a more in-depth introduction to IO-Link.

IO-Link communication is realized through a dual function of the sensor’s switching output. In addition to serial communication in IO-Link mode, IO-Link sensors can also be operated in simple switching mode, also known as ISO Standard I/O mode, for downward compatibility.

In terms of the connection technology, nothing has changed – IO-Link uses the familiar M12, M8, and M5 standard cables. Shielded cables and multi-pole parallel wiring are eliminated. This benefits bi-directional communication in IO-Link. Parameter and configuration data are written to the sensor/actuator from the controller, and process and diagnostic data are read from the sensor/actuator to the controller.

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