IO-Link Benefits

Simple and robust

- The connection between the IO-Link master and the device is established over an unshielded, 3 or 5 core cable with a maximum length of 20 m.
- Each port of an IO-Link master is able to process binary switch signals and complex measurement values.

Flexible and powerful

- For each cycle, 2 to 32 bytes of process data can be exchanged between master and device. The minimum cycle time for 2 bytes is 400 µs.
- The bi-directional communication allows extensive diagnostics and parameterization. Remote access is also possible, for example for maintenance purposes.

Standardized and universal

- IO-Link is an international standard according to the IEC 61131-9 standard.
- IO-Link is independent of fieldbus, and can be integrated into all fieldbuses.

Your Global Automation Partner

TURCK

TBEN-L | TBEN-S | TBPN | TBIP
Multiprotocol I/O Modules with IO-Link Master
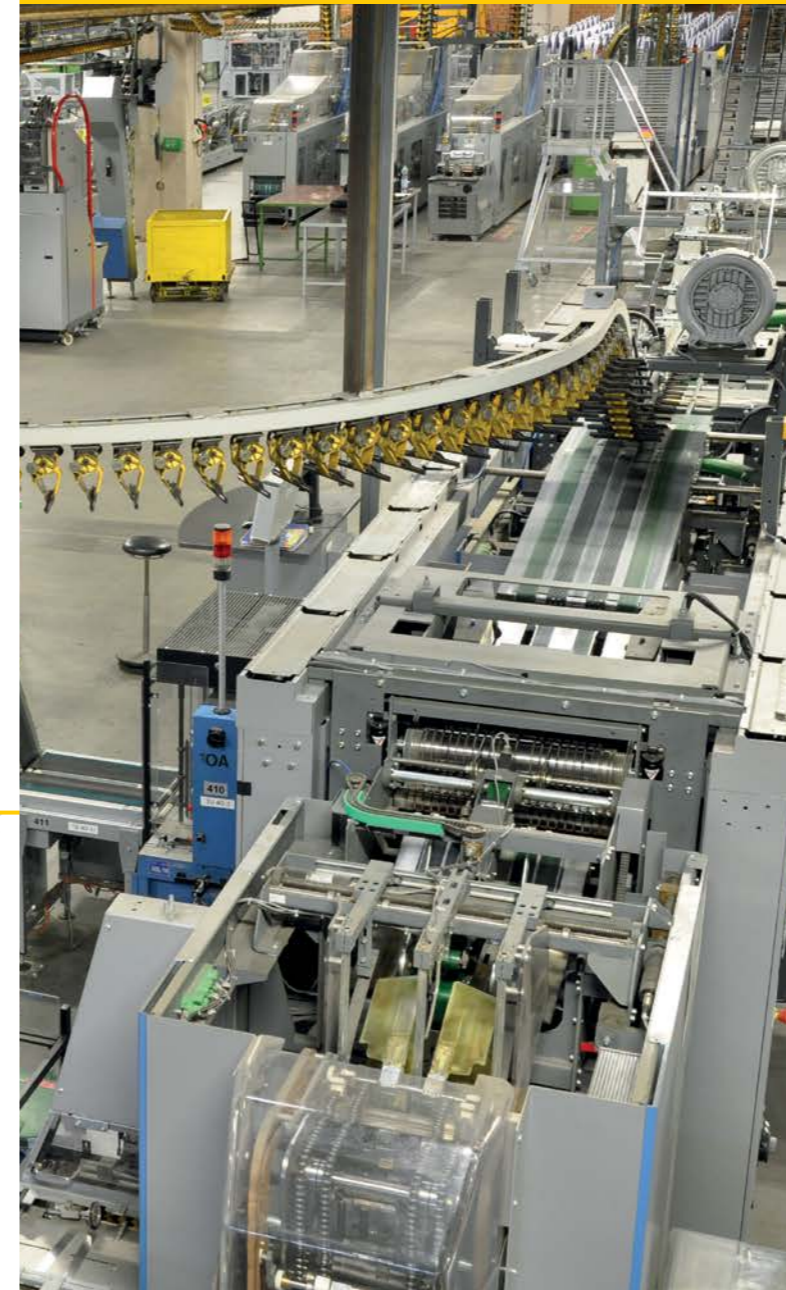
Did you know, ...

- that IO-Link is a fundamental technology of the digital factory, and that Turck offers many other products for Industry 4.0?
- that I/O hubs and numerous sensors with IO-Link interfaces are also part of the Turck product range?
- that IO-Link significantly reduces the costs of electrical installation and plant planning?
- that the IO-Link communication is extreme robust and does not require shielded cables?
- that IO-Link allows automated parameterization via the PLC?
- that the data retention of IO-Link enables configuration-free exchange of devices?
- that Turck is a founding member of the IO-Link community?

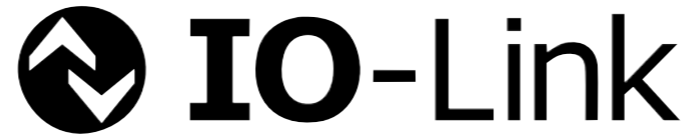28 subsidiaries and over 60 representations worldwide!

www.turck.com

Multiprotocol I/O Modules with IO-Link Master

IO-Link

Turck's IO-Link masters are the connecting pieces for digital communication on the "final meter" at sensor or field level. They allow simple integration of IO-Link devices such as sensors and field devices, I/O hubs, valve manifolds, robot grippers, or motors.

Reduced machine costs

Save storage costs, installation time, and commissioning time. The standardized IO-Link interface provides a protocol on a standard 3-wire cable.

More efficient production processes

Configure your machine according to your requirements at any time. During process changes, you can switch the IO-Link devices from the controller during operation, which enables highly flexible production.

Higher plant availability

The status of your machine is always up-to-date. You have access to diagnostics or error messages at any time. This allows predictive maintenance and preventative measures.

TBEN-Lx-8IOL

- Compact Block-I/O Module with Protection Class IP67
- Eight IO-Link master ports, four of which with additional actuator supply (IO-Link Class B)
- Switchable power supply on each port for intelligent power management
- Port 1 and port 5 with up to 4 A for energy-thirsty IO-Link devices
- Field Logic Controller (FLC), programmable with ARGEE
- Ethernet multiprotocol: Can be used in PROFINET, EtherNet/IP and Modbus TCP
- With galvanically isolated actuator supply; also suitable for connecting valve manifolds and robot grippers
- Simple IO-Link device integration (SIDI)

TBEN-S2-4IOL

- Ultra-compact block I/O module with protection class IP67 (32 x 144 mm)
- Four IO-Link master ports
- Field Logic Controller (FLC), programmable with ARGEE
- Ethernet multiprotocol: Can be used in PROFINET, EtherNet/IP and Modbus TCP
- Simple IO-Link device integration (SIDI)

TBPN-L1-FDIO1-2IOL

Hybrid PROFINET/PROFIsafe block I/O module

TBIP-Lx-FDIO1-2IOL

Hybrid Ethernet/IP/CIP Safety block I/O module

- Combines safety technology, standard I/Os and IO-Link in a confined space
- Two IO-Link master ports with additional actuator supply
- Safety related shut down of the second IO-Link port acc. to SIL3
- Two secure digital SIL3 inputs
- Two secure digital SIL3 channels as FDI or FDO (PP, PM)
- Four non-secure digital I/O channels
- Can also be used without F-SPS thanks to local security logic

FLC – Field Logic Controller

The web-based engineering environment ARGEE transforms Turck's Block I/Os into compact controllers (Field Logic Controllers). The FLCs relieve the central PLC with decentralized preprocessing, or can perform smaller control applications without any higher level control.

Ethernet multiprotocol
All modules can communicate via PROFINET, EtherNet/IP™ or Modbus TCP. The module automatically recognizes the bus protocol during the startup phase. This reduces the number of device variants required, and it is possible to operate a machine on different controllers.
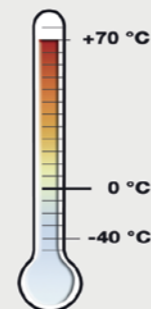
Tough environmental conditions
In addition to the fully encapsulated module electronics, the extended temperature range of -40…+70 °C and the high protection classes IP65, IP67 and IP69K all contribute to the robust overall concept. This increases the possible applications in industrial environments.

+70 °C
0 °C
-40 °C

SIDI
"Simple IO-Link Device Integration" configuration of IO-Link devices directly from engineering, e. g., TIA Portal or CODESYS. During the system startup, the parameterization is performed automatically by the controller. This saves time and allows configuration-free replacement of IO-Link masters and devices.

CODESYS

Integrated web server
The web server offers further support during commissioning, maintenance and diagnostics. The IP address or PROFINET name can therefore also be set without additional tools. The web server provides clear diagnostics and information in clear text – including on mobile devices thanks to Responsive Design.