TURCK

Your Global Automation Partner

Products and Solutions for Smart Automation

Detect Precisely

Inductive uprox sensors

- Highest switching distances up to 50 mm and factor 1 for all metals
- Excellent EMC and magnetic field strength
- Uniquely flexible installation conditions

Capacitive sensors

- Compact designs
- Interference-free operation, mechanically and chemically robust
- User-friendly thanks to Easy Teach

Linear position sensors and inclinometers

- Measuring ranges from 25 to 2000 mm, 0…360°
- Fault-proof signal acquisition and non-contact wear-free operation
- Different outputs (U/I, SSI, IO-LINK, etc.)

Cabinet Guard

- Monitoring important environmental variables in control cabinets and protective enclosures
- Easy assembly, commissioning and configuration
- A variety of interfaces for extending and forwarding information to higher-level systems
- Scalable solutions from proof-of-concept to cloud

NAMUR sensors

- A wide range of designs, sizes and housing materials
- Inductive, capacitive and magnetic field sensors
- Ex approvals and SIL-certification

iVu vision sensors

- Compact image processing solution for inspection and code reading tasks
- Built-in or external display
- Directly teach and operate without a PC

Ultrasonic and radar sensors

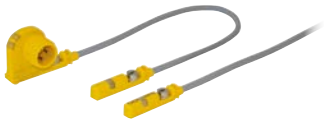
- Large measuring ranges up to 15,000 mm
- Robust mechanics in metal housing
- Simple operation and IO-Link communication

Pressure, temperature, flow sensors

- A wide variety of measuring principles, designs and process connections
- Easy operation and installation
- Highest accuracy and safety, also available as EX-i devices

Magnetic field sensors

- Suitable for all pneumatic cylinder types and makes
- Secure mounting
- Smallest design



Photoelectric sensors

- Miniature and compact designs in all operating modes
- Laser classes 1 or 2
- Measuring and inspection tasks, personnel safety (categories 2 and 4)

Encoder

- Extensive standard program
- Highest accuracy and interference immunity
- Model QR24 non-contact and wear-free

Connect Reliably

Cables and connectors

- Connectors in numerous designs and variants, ready-made or field-wireable
- Different cable qualities for all types of applications
- Cables for various bus systems and for connecting actuators and sensors

Passive splitters

- Signal transmission and voltage distribution
- Different circuits
- Various designs

Inductive couplers

- Non-contact data and power transmission
- Large transmission distance up to 7 mm
- High power transmission up to 18 W
- Wear-free transmission of PNP and IO-Link signals

Interface and power supply modules

- Modules for galvanic isolation, for converting, processing and adapting analog or digital signals, even from the hazardous area
- IP20 and IP67 solutions, including for SIL applications
- Slim designs with high signal density for a small footprint
- 24 VDC power supply modules in IP20 and IP67, also with built-in fuses and remote configuration

Communicate Effectively

EtherNet/IP · PROFIBUS · CANopen · Modbus · PROFINET · DeviceNet · Fieldbus Foundation · EtherCAT

Compact I/O modules in IP67 and IP20

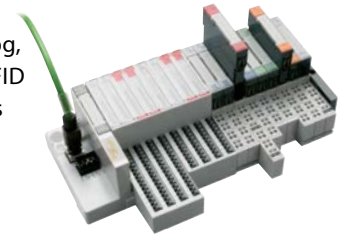
- Multiprotocol technology*
- Fully encapsulated (IP65/IP67/IP69K), vibration and shock tested
- Various designs with 4 to 16 I/O channels, analog signals, IO-Link master
- Browser-based programming environment ARGEE turns Ethernet block I/Os into field logic controllers (FLC)

Industrial Ethernet switches in IP67

- Managed and unmanaged
- Fast Ethernet at 100 Mbps and Gigabit Ethernet
- Firewall, NAT, VLAN, network load monitoring
- Multicast support
- Profinet, Ethernet/IP, Modbus TCP

Modular I/O System BL20

- Gateways for numerous fieldbuses and Ethernet, also programmable with CODESYS V3
- Multiprotocol technology*
- I/O modules, including digital, analog, temperature, RS232/485/422, SSI, RFID
- Economy gateways and I/O modules



*** Turck's multiprotocol technology allows use in PROFINET, Ethernet/IP and Modbus TCP**

Communicate Effectively

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Wireless system DX

- Flexible network modules for wireless transmission of sensor signals
- Point-to-point connectivity, star topology, multi-hop repeater network
- Configuration software

Modular I/O system BL67

- Gateways for numerous fieldbuses and Ethernet, also programmable with CODESYS V3
- Multi-protocol technology*
- I/O modules, including digital, analog, temperature, RS232/485/422, SSI, RFID, valve manifolds
- Connector terminals M8, M12, M23 and 7/8″

FDT

Remote I/O system excom for zones 1, 2 and non-Ex area

- High system availability through redundant communication and power supply
- Multiprotocol technology* and FDT for easy operation
- Integrated HART communication for parameterization, diagnostics and process values

PACTware

Automate Efficiently

HMI panels with CODESYS PLC

- Easy programming of control and visualization functions with CODESYS V3
- Can be used flexibly as PROFINET master, Ethernet/IP scanner, Modbus TCP/RTU master or Modbus TCP/RTU slave
- Brilliant TFT displays with screen sizes from 4 to 21 inches
- Also as a pure HMI without control functions

CODESYS

Decentralized controllers

- CODESYS programmable gateways for BL67 and BL20 I/O systems
- CODESYS programmable BLOCK I/O PLC modules in IP65/IP67/IP69K

Cloud solutions

- Secure global access to machines and plant data
- Monitoring, alarm messaging, reports, trends and location information are already integrated
- Secure transmission protocol, including via WLAN or mobile radio
- Easy and fast integration into existing architectures

Image processing

- Intelligent camera systems for numerous fields of application
- Integrated or external control units, IP68 versions
- Wide variety of standard and special lighting

Automate Efficiently

Safety technology

- Space-saving hybrid module in IP67 for safety and standard I/Os with IO-Link
- IP67 block I/O modules with eight safe inputs and outputs
- Profisafe and CIP Safety up to SIL3/PLe
- Safety light curtains, laser scanners, two-hand buttons
- Safety control with connection to standard fieldbuses

RFID System BL ident

- Flexible, easy integration thanks to numerous communication modules in IP67 and IP20
- Innumerable applications thanks to HF and UHF in mixed operation
- Application-optimized tags and read/write heads, including for hazardous areas

Compact signal displays

- Long-lasting LED technology for more than 100,000 hours of continuous use
- Insensitive to shock, impact, vibration and electromagnetic interference
- IP67 protection category, water- and oil-tight, can be mounted directly in the system

Pick-to-Light system

- Optical user guidance for manual installation and commissioning processes
- Contactless pick-up alert
- Easy integration into systems via BL20 and BL67 I/O systems

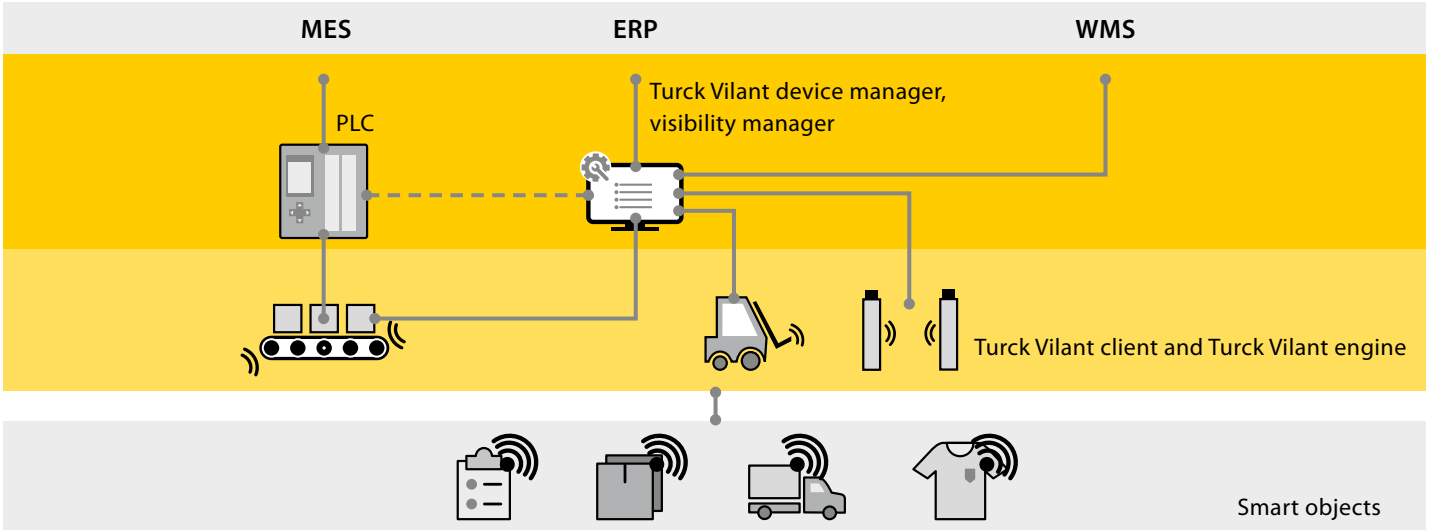
IO-Link

- Fieldbus-neutral communication standard for sensors and actuators
- Largest integrated IO-Link portfolio – from sensor to master
- Simple device configuration via controller or FDT/DTM
- Passive safety can be implemented via IO-Link

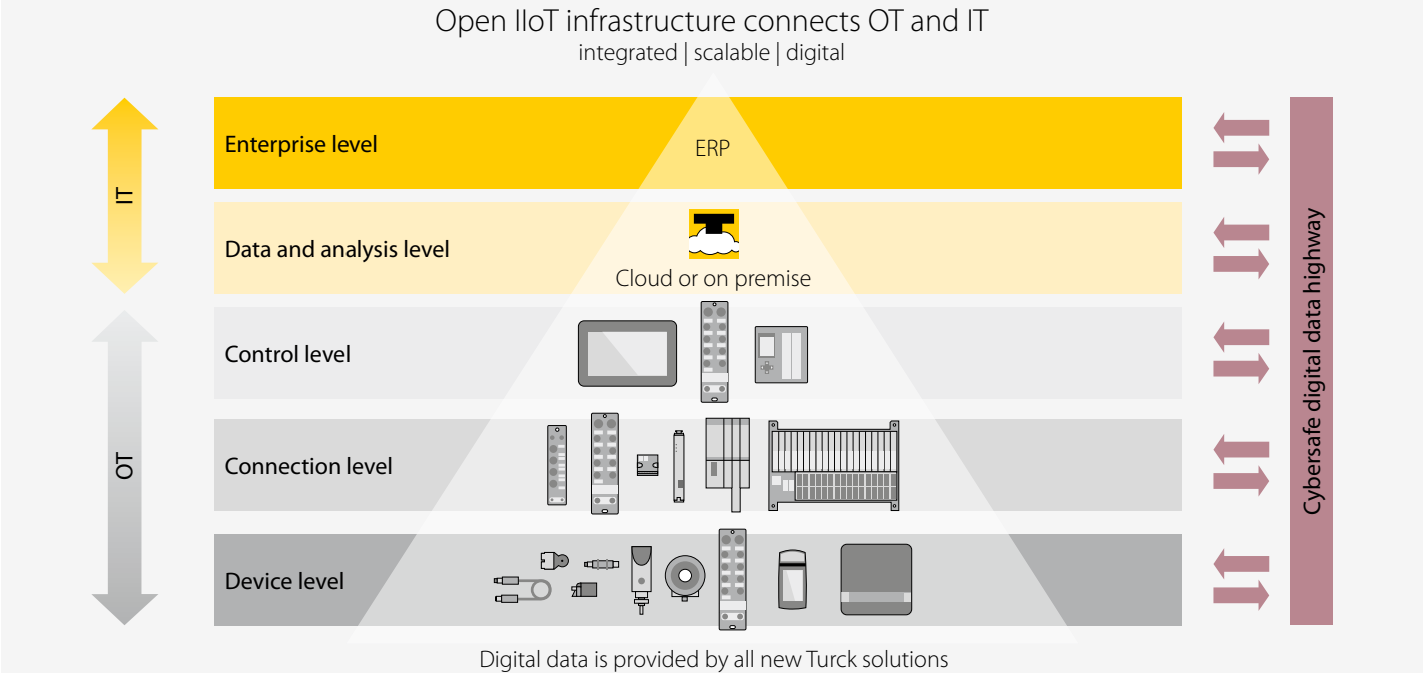
IO-Link

Identify Reliably

Turnkey track and trace solutions: Turck Vilant Systems



We Support Your Digital Transformation



Industry 4.0 and IIoT

We support your digitalization efforts to implement Industry 4.0 and IIoT with these solutions:

- End-to-end network – from the sensor to the Edge to the cloud and back
- Secure data retention in the cloud
- Efficient RFID identification solutions for process optimization, from tool recognition to traceability in production and logistics
- Competent partners from product to complete solution via Turck Vilant Systems
- Integrative networking of OT and IT
- Ethernet and IIoT solutions available up to hazardous areas in the process industry

Decentralized automation

We support your modular machine and plant concepts with short time-to-market with these solutions:

- Safe, robust IP67 technology for modular machine and plant engineering
- Decentralized control logic (ARGEE, CODESYS) for autonomous units
- Smart condition monitoring solutions for simple and reliable monitoring of machine conditions
- Track-and-trace systems for decentralized identification of products and goods
- Complete portfolio of connection technology for cabinet-free mechanical engineering and greater flexibility

Software and services

We support data processing and delivery to your software systems and cloud services with the following solutions:

- Central IIoT service platform TAS to easily manage your Turck devices in Ethernet industrial networks
- Software modules to easily integrate our solutions in controllers (SIDI)
- Systems for efficiently reducing IP address spaces (BEEP)
- Turck Cloud Solutions as the bridge between shop floor and smartphone for efficient automation with every end device
- Complete track and trace systems from Turck Vilant Systems including software for connecting to your ERP

Hand in hand to the cloud – and back

How do you extract the information that is really relevant to you from the Internet of Things – without overloading networks or revealing protected content? Turck's answer: With networked sensors, efficient edge controllers and simple cloud solutions – in short, with decentralized automation. With end-to-end IIoT architecture, you benefit from digital value creation between shop floor and cloud.

With decentralized automation on the path to success

Decentralized automation reduces commissioning and time-to-market while simplifying the expansion or movement of production resources. Sensors that detect wear, RFID tags that control machines, or an intelligent I/O module that independently actuates actuators: It is no longer possible to place the present and future of automation at the levels of the classic automation pyramid.

News and trends in the Digital Innovation Park

From current highlights to trends and topics such as IO-Link, Ethernet and sensor to cloud to decentralized automation, condition monitoring or track and trace – our "digital showcase" at www.turck.de/dip gives you a quick overview of news, trends and innovations for Industry 4.0 and IIoT as well as links to webinars, white papers and more.

Your Global Automation Partner

Turck is a global partner for automating factories, processes and logistics across numerous industries. Our digital solutions for efficient automation systems support the digital transformation and make us one of the pioneers of Industry 4.0 and IIoT.

In its role as a specialist for smart sensor technology and decentralized automation concepts, Turck offers intelligent machine solutions and provides not only robust I/O solutions with the IP67 rating, but also user-friendly software and services for the reliable detection, processing and transfer of relevant production data – from the sensor to the cloud.

Turck automation solutions support profitability, efficiency and sustainability of machines and plants. They not only increase competitiveness, but also help make production more environmentally friendly – in numerous industries and applications, from the food, pharmaceutical and chemical industries to the automotive industry and mobile machinery, to intralogistics and packaging. We provide you with optimal solutions for your automation lines. This is possible thanks to the industry-specific expertise we have acquired in close cooperation with customers and through electronics development and production at the highest level.

Around 5000 employees worldwide develop, produce and distribute products and solutions for sensor, fieldbus, control, cloud, connection and interface technology as well as HMI and RFID.

Turck's global production and sales network includes more than 30 subsidiaries as well as representatives in a further 60 countries. State-of-the-art production facilities in Germany, Poland, the USA, Mexico and China enable our family-owned enterprise to meet the requirements of the local markets quickly and flexibly at any time.

Over 30 subsidiaries and
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