Components and Solutions for Industrial Automation

A multifaceted line of sensors for measurement, detection, positioning, identification, and navigation applications.

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Proximity Sensors

A comprehensive portfolio of over 6,000 sensors with a variety of features and housing styles

- Inductive sensors offer accurate, noncontact detection of metallic objects up to 100 mm
- Capacitive sensors can detect both metallic and non-metallic materials at a distance of up to 40 mm
- Inductive sensor types: IO-Link, NAMUR, safety, metal face, weld-immune, valve position, reduction factor 1, measurement, and more
- Customized solutions based on existing technologies, including design adjustment, mounting options, hardware, and software



Photoelectric Sensors

A diverse line of around 3,000 sensors for standard and advanced object detection and distance measurement applications

- Thru-beam sensors up to 60 m, retroreflective sensors up to 50 m, and diffuse mode sensors up to 4 m
- Triangulation sensors with background suppression
- Distance sensors with measuring range up to 150 m
- Area sensors with 60 mm array
- Contrast and color sensors, light grids, optical data couplers, slot and slot grid sensors, and sensors for pedestrian doors and gates
- Broad selection of IO-Link models



LiDAR Sensors

New generation of photoelectric sensors combined with millimeter-precise Pulse Ranging Technology (PRT)

- The extremely high energy density of light pulses with PRT enables reliable and precise measurements with high accuracy and short response times
- Ideal solution for collision avoidance, object detection, navigation, localization, and mapping
- R2000 series, including detection versions, with gapless 360 degree all-around visibility in angular resolutions of 0.05°, 0.042°, and 0.014°
- R2300 series offers four scanning planes providing a 3-D scan or 100 Hz single-plane scanning



Industrial Vision Sensors

High-precision 2-D and 3-D vision sensors that close the gap between standard photoelectric sensors and costly machine vision systems

- Vision sensors for fine positioning and sheet verification in collating, folding, and binding machines
- VOS series 2-D universal vision sensors for object positioning, feature matching, 1- and 2-D code reading, OCR reading, optical gauging, and more
- Laser profile sensors with SmartRunner technology for profile comparison and area monitoring
- VOS series industrial event camera for event-driven video recordings up to 120 s before and after a trigger signal



Ultrasonic and Radar Sensors

An extensive, diverse portfolio of robust and reliable ultrasonic and radar sensors

- Diffuse, retroreflective, and thru-beam ultrasonic models with varying measurement ranges
- Double sheet and splice control ultrasonics for multilayer detection, as well as safety ultrasonics up to Category 3 PL d
- Outputs: IO-Link, analog, and switch-point (ultrasonic), CANopen and J1939 (radar)
- Radar sensors with distance and velocity measurement of more than 25 m

Your automation, our passion.

PEPPERL+FUCHS



Vibration Sensors

Reliable machine condition monitoring to avoid premature failures

- Machine monitoring—averaging vibration to create trends for predictive maintenance
- Vibration and ambient diagnostics
- Maximum machine protection
- Analog or IO-Link output
- Select models with safety up to SIL 2



Industrial Communication

Intelligent gateways and connectivity for industrial fieldbus and Ethernet networks

- IO-Link masters facilitate communication via EtherCAT, CC-Link, PROFINET IO, EtherNet/IP, MODBUS TCP, MQTT, and OPC UA
- AS-Interface provides an I/O connection solution with the ability to easily add safety
- DeviceMaster industrial gateways integrate serial devices into industrial Ethernet networks such as TCP/IP, MODBUS TCP, EtherNet/IP, and PROFINET IO
- Ethernet switches enable easy connection of Ethernet-enabled devices at the field level
- I/O hubs allow additional discrete IO



Identification Systems

A flexible portfolio of optical and radio-based identification systems

- RFID (radio frequency identification) is available in low frequency, high frequency, and UHF ranges
- Offered in IO-Link, stand-alone Ethernet, or IDENTControl
- RFID handhelds are available for each frequency range
- Stationary readers and handhelds supporting all common 1-D and 2-D codes
- UHF gate reader device with up to four external antennas for reading large tag quantities simultaneously



Rotary Encoders

High-performance portfolio with optical, magnetic, or inductive sensing technology

- Incremental and absolute rotary encoders
- Wide range of electrical and mechanical interfaces including IO-Link, SSI, ASi, CANopen, DeviceNet, EtherNet/IP, PROFIBUS, PROFINET, and J1939
- Accessories include cable pulls, couplers, and measuring wheels



Positioning Systems

Optical, camera-based, and inductive systems for virtually any positioning task

- Inductive positioning systems with IO-Link interface for high-precision detection of linear and rotational movement
- Data Matrix positioning system captures two-dimensional codes and evaluates exact position
- PosiTrack position encoding system for absolute position detection over long distances even on curved tracks, inclines, declines, lane changes, and gradients



Inclination and Acceleration Sensors

Intelligent sensors that monitor and control level, vibration, and acceleration while compensating for multidirectional motion

- Inclination sensors reliably detect angles for factory and mobile equipment applications, available with analog, CANopen, or J1939 interface types
- Acceleration sensors monitor acceleration peaks
- Inertial measurement units combine an acceleration sensor and gyroscope in one device for angle measurement while in motion



Connectors, Cordsets, and Splitters

Durable cables, connectors, and junction blocks for reliable performance, even in harsh industrial environments

- Sensor-actuator cables are available with different connectors, such as M8 and M12, and a wide variety of cable jackets (PVC, PUR, POC, and more)
- Junction blocks and splitters reduce the total number of separate connections needed
- Field-attachable connectors, panel mount bulkhead connectors, and bulk raw cables can be used to produce the ideal cable length on site
- Data connectors for Industrial Ethernet and all common fieldbus types

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