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Sensorik 4.0 Customizable Automation with Sensor Technology 4.0

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Your automation, our passion.

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- Electrical Explosion Protection Equipment
- Solutions for Explosion Protection

Industrial Sensors
- Proximity Sensors
- Photoelectric Sensors
- Industrial Vision
- Ultrasonic Sensors
- Rotary Encoders
- Positioning Systems
- Inclination and Acceleration Sensors
- AD-Interface
- Identification Systems
- Logic Control Units
DuraBeam: The New Laser Technology for a Noticeable Power Boost

In addition to the PowerBeam LED, the R100 features a powerful new laser technology: DuraBeam. For the first time, the strengths of LED technology are combined with the innovative benefits of laser technology, offering the best of both worlds. The eye-safe Class 1 lasers offer an exceptionally long service life and open up new application options, even at high ambient temperatures.

Another feature of this new laser technology is the special beam profile, which always casts a sharp, circular light spot on an object. This particular feature is ideal for extremely precise detection and distance measurement of small objects.

MPT Distance Measuring in a Compact Size

The R100 series distance sensors feature proven Multi Pixel Technology (MPT) from Pepperl+Fuchs. The small size of the measuring core makes this series the first to integrate high-precision, reliable distance measurements for close-range applications in a standard compact housing. Combined with IO-Link, the R100 distance sensors offer powerful new possibilities in a small housing design. They achieve accurate measurements: Object detection and background suppression are extremely precise and the distance measurement function is highly reliable and adaptable in every situation.

A Complete Family in One Housing Type

The sensors in the R100 series vary only on the inside. The pioneering product design of the R100 series is the first to combine the complete family of photoelectric sensing modes in one housing.

Cutting-Edge Product Design Combines Sensing Modes

The R100 series includes the complete family of photoelectric sensing modes in a single housing design. The thru-beam sensors to measuring and distance sensors. Regardless of which sensing mode is required in the application, housing characteristics such as dimensions, wiring, and installation are identical throughout the series.

The integration of IO-Link in every version of the R100 enables communication all the way down to sensor level, allowing sensor intelligence to be used to its full potential.

More Installation Possibilities than Ever Before

The R100 series offers several mounting options with just a single housing. This gives the user a unique level of flexibility. The diffuse and measuring sensors can be installed in identical mounting locations with no further adjustments required. All sensors are available with integrated M8 connection, M12 or M18 plugs, and cables options. An accessory specifically for the integration of the R100 into machines and systems.

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- Equipment
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- Relays
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- Inclination and Acceleration Sensors
- AG-Interface
- Identification Systems
- Logic Control Units

www.pepperl-fuchs.com

Mastering challenges.
Opening communication channels.
Redefining flexibility.

R100 Series
A Unique Family of Small Photoelectric Sensors

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The New Generation of Photoelectric Sensors

A new generation of photoelectric sensors—the R100 series—redefines versatility and opens doors to the automation factory of the future. First, it packs an entire family of sensing modes into a single, standard housing. To ensure reliability and precision, the R100 is available with DuraBeam laser technology and combines it with MPT distance measurement. IO-Link is built into the entire portfolio to unlock the R100’s ability to deliver diagnostic and status information down to the sensor level.

This unique family of photoelectric sensors from Pepperl+Fuchs does more than just deliver data. These sensors actually communicate with higher-level communication systems, bringing intelligent sensing solutions to the plant floor. This is Sensor Technology 4.0, Sensorik 4.0, an advanced generation of sensing technology to meet the requirements of Industry 4.0.

Welcome to the future!

Cutting-Edge Product Design Combines Sensing Modes

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More Installation Possibilities than Ever Before

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Additional information is available at:
www.pepperl-fuchs.com/r100

Highlights

• State-of-the-art product design: integrating several photoelectric sensing technologies in one housing design
• Maximum flexibility and more installation possibilities than ever before
• Precise and reliable MPT distance measurement in a standard small housing
• Inherently safe and reliable DuraBeam laser technology for an exceptionally long life and increased operating temperature range
• Communication all the way down to sensor level with IO-Link as the basis for Sensor Technology 4.0 — in all sensor types
Sensorik 4.0: Customizable Automation with Sensor Technology 4.0

To manage the tasks of the future, sensors need to do more than simply deliver the process data to the machine controller. They must be able to communicate with different kinds of receivers and send and receive sensor data to and from higher-level information systems. The key to achieving this is the ability of the sensors themselves to communicate. This is the defining characteristic of Sensor Technology 4.0—the sensor technology of the future that Pepperl+Fuchs is developing to meet the requirements of digital networking in Industry 4.0.

The state-of-the-art IO-Link technology serves as an interface that allows us to unlock the sensor’s ability to communicate. IO-Link is built into the entire R100 portfolio. This opens up a host of new possibilities for the user—whether for configuration, diagnostics, or maintenance. Even wireless communication is possible. Using SmartBridge® technology, data can be sent wirelessly to mobile devices.

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