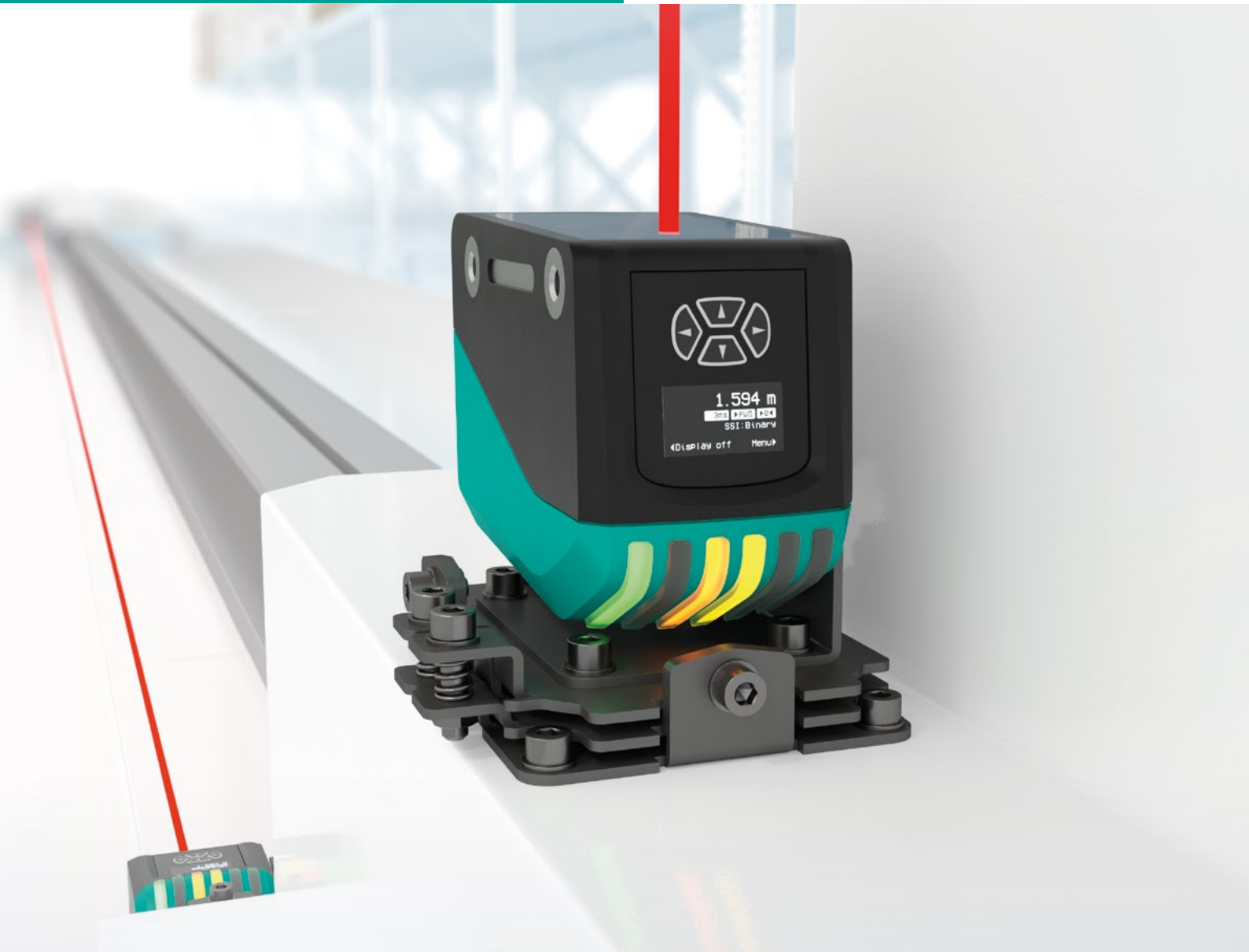


# Compact and Precise.

R1000 Distance Sensor  
with Pulse Ranging Technology

Position accuracy down to  
a millimeter—even over  
long distances.



Your automation, our passion.

 **PEPPERL+FUCHS**

# Compact Design and High-Precision Measurement—Even at Long Distances

The R1000 distance sensor with Pulse Ranging Technology impresses with absolutely precise measurement—even at distances of up to 150 meters. Additional highlights of this high-performance device include a very compact and easy-to-handle housing that is perfect for installation in confined locations.

### Quick and Easy Installation and Setup

The compact R1000 distance sensor is ideal for mechanical integration into small vehicles and for use in lifting applications. The sensor can be easily and conveniently installed using M6 screws. The integrated threaded metal holes allow the device to be mounted directly without the use of additional accessories. A separate mounting device is available for long-range applications. This enables exact alignment/fine

adjustment of the device even over long distances. Since the R1000 works with a red laser emitter, the resulting light spot can be used to align the device. The Pepperl+Fuchs sensor perfectly combines maximum cost efficiency with top performance.

#### Excerpt of Technical Data

#### OMR\*-R1000\*

<b>Dimensions (W×H×D)</b>	55 × 107 × 81 mm
<b>Measuring range</b>	0.3 m ... 50 m 0.3 m ... 150 m
<b>Repeat accuracy</b>	< 1 mm
<b>Resolution</b>	0.1 mm
<b>Interface</b>	SSI
<b>Ambient temperature</b>	-10 °C ... 55 °C -30 °C ... 55 °C (deep-freeze version)



More information is available at  
[pepperl-fuchs.com/pf-R1000](https://www.pepperl-fuchs.com/pf-R1000)

### Optimal Handling

The practical combination of the display and push buttons allows the sensor status and measured values to be read directly from the unit and enables convenient setup and adjustment on the device.

### Easy Status Monitoring and Diagnostics

Highly visible LEDs on the top and rear of the housing make monitoring the device status during operation quick and easy.

### Extra Compact and Rugged

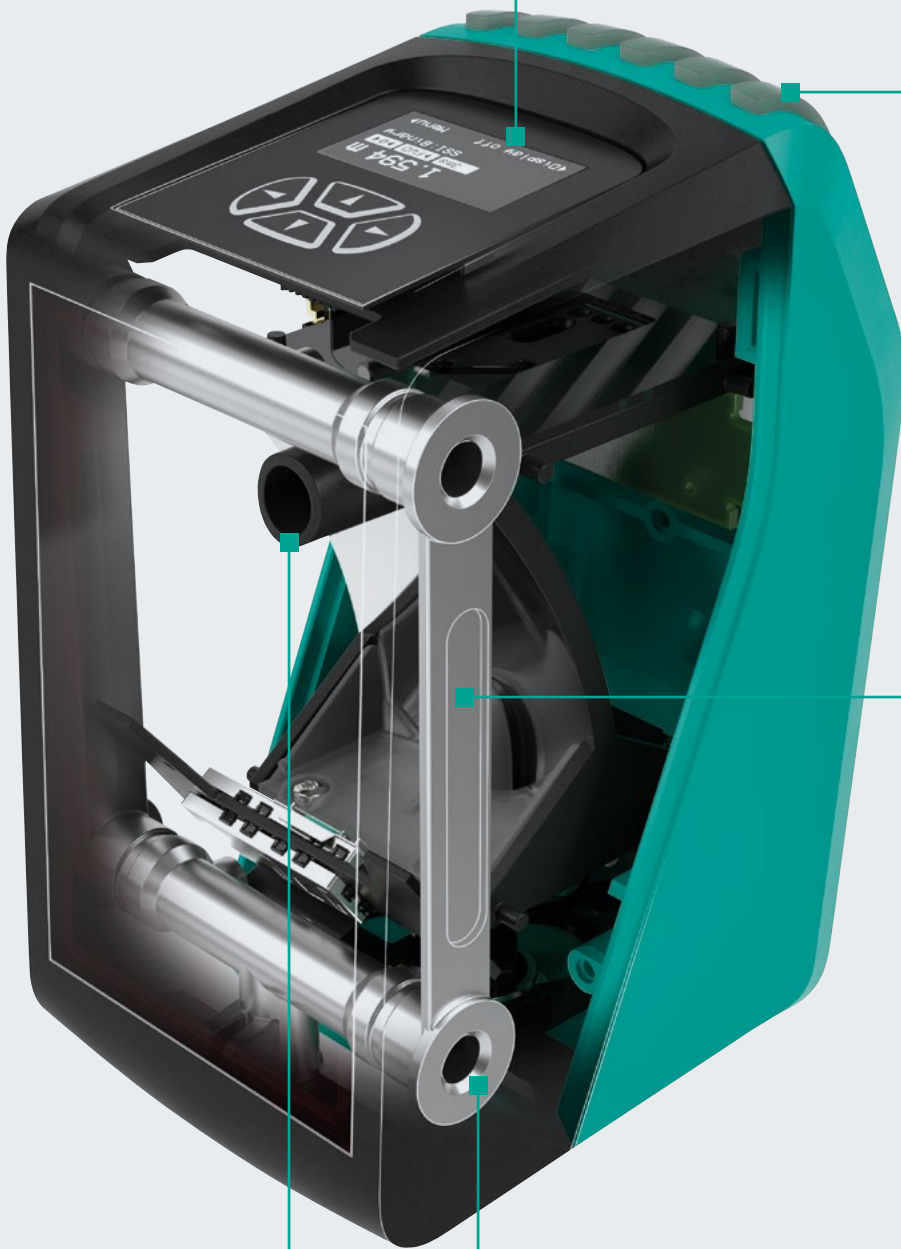
The internal housing design is based on a metal frame, which lends it a high level of ruggedness. Its compact dimensions of 55 × 107 × 81 mm make it perfect for use in even the most confined of installation locations—the exceptionally small housing depth of 81 mm is especially advantageous in this regard.

### Laser Class 1

Laser Class 1 is eye-safe under all operating conditions.

### Convenient Direct Mounting

Integrated M6 threaded metal holes enable direct installation of the device. No additional accessories are required.



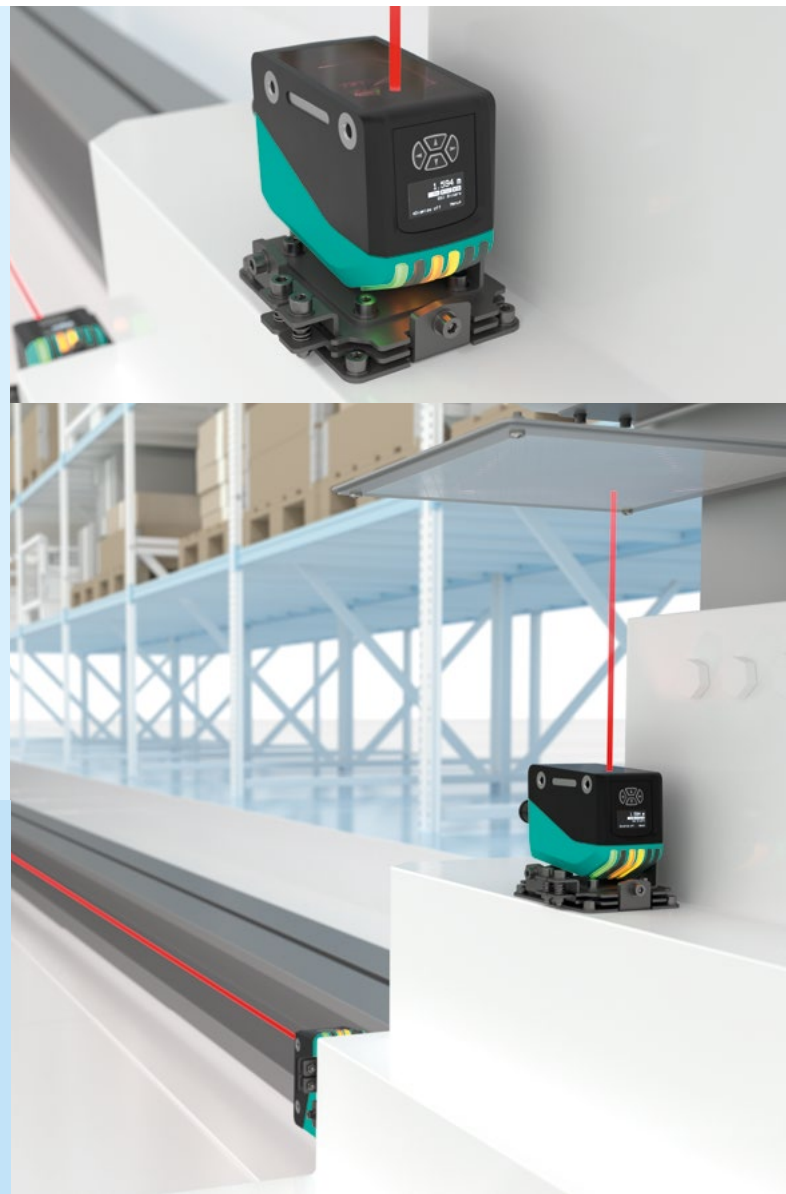
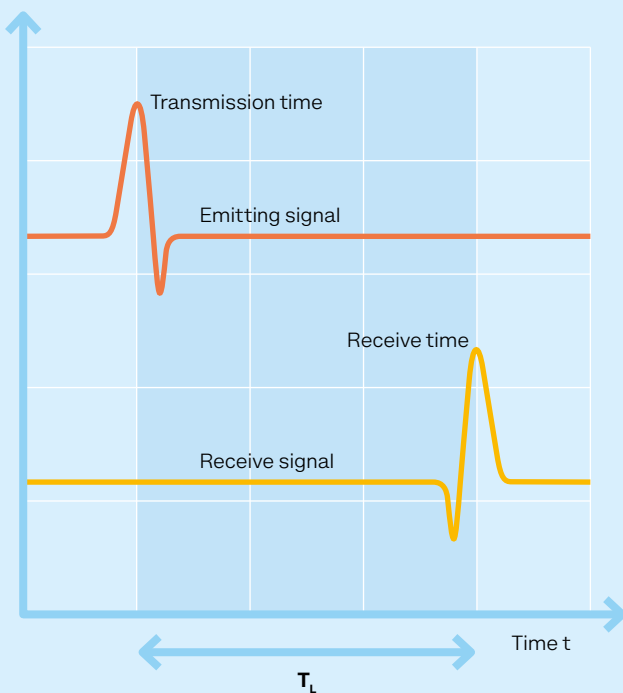
## Intelligent Technology, High-Precision Measurement Results

The R1000 photoelectric distance sensor ensures optimal positioning in the application area with an accuracy of  $< 1$  mm over the entire measuring range. This is guaranteed with the integrated Pulse Ranging Technology (PRT)—currently the most precise method for measuring distances in industrial applications.

PRT enables noncontact positioning even over long distances, eliminating the need for additional fine positioning means. In contrast to comparable devices, PRT ensures that the accuracy of the R1000 remains high as the detection range increases. High-end technology ensures maximum reliability even in challenging ambient conditions, such as in the case of ambient light from hall lighting, dirt, and dust.

## Highlights

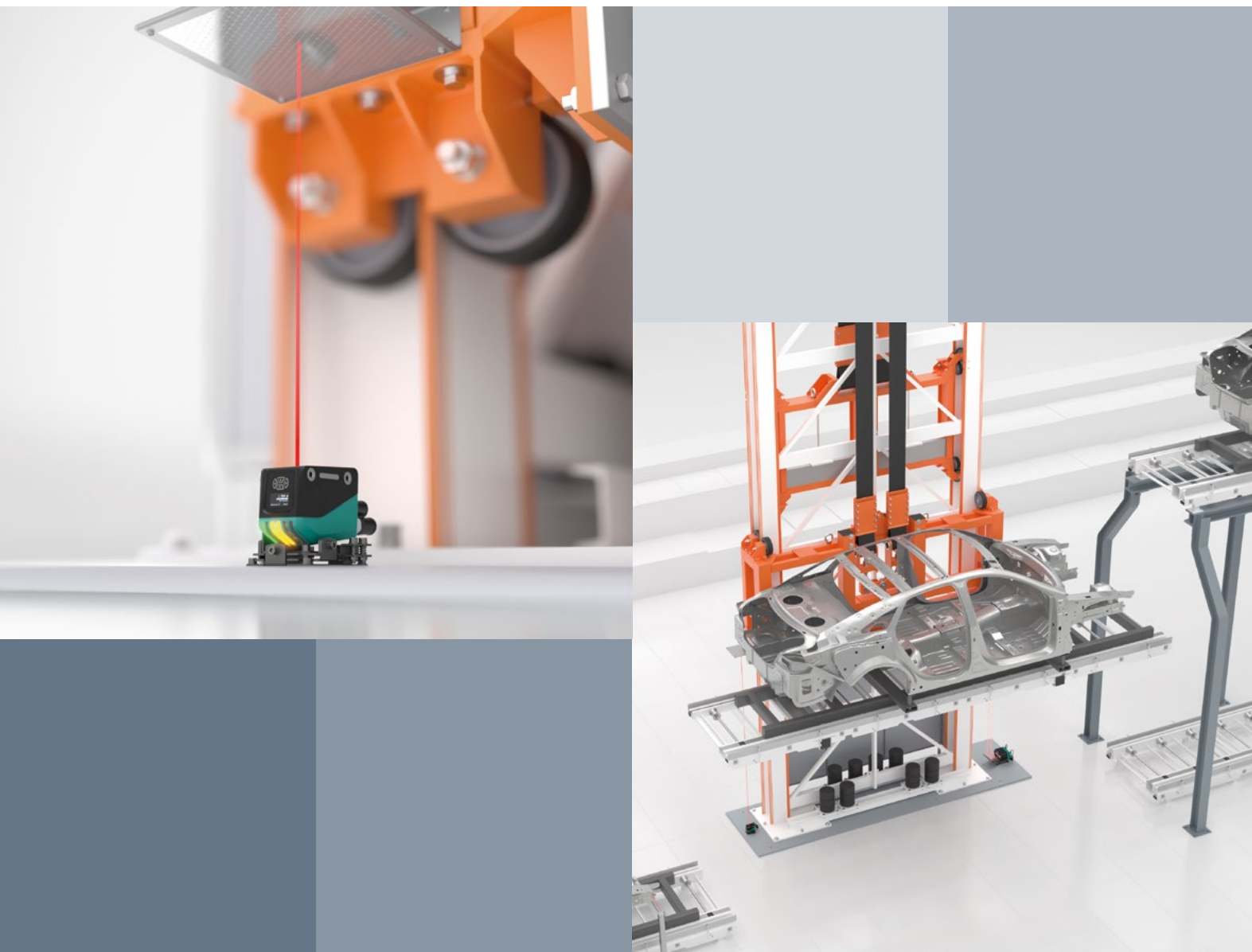
- Compact and robust housing for use in confined installation spaces
- Metal threaded hole for direct mounting at short measuring distances
- Mounting accessories for long-range adjustments
- Pulse Ranging Technology (PRT) for high-precision positioning even at long distances
- Resistant to environmental influences such as ambient light, contamination, or dust
- Eye-safe Class 1 laser



## Reliable Distance Measurements for Demanding Applications

A high measuring rate is a must for distance measurement and positioning in dynamic applications, such as in storage and retrieval systems in the warehousing and material handling sectors and lifting systems in the automotive industry. The integrated Pulse Ranging Technology makes the R1000 the perfect choice for such high-precision measurement tasks. The dimensions of the red light spot were chosen so that the sensor can optimally compensate for mechanical influences such as vibrations and shocks.

A special version of the R1000 is available for the precise positioning of stacker cranes and moving carriages in deep-freeze environments. This device is able to provide reliable measurement results in ambient temperatures ranging from  $-30^{\circ}\text{C}$  to  $55^{\circ}\text{C}$ .



# Your automation, our passion.

## Explosion Protection

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- HART Interface Solutions
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- Wireless Solutions
- Level Measurement

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- Photoelectric Sensors
- Industrial Vision
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- Rotary Encoders
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- Vibration Sensors
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- IO-Link
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