Leuze

Translation of original operating instructions

HT28CPP / HT28CXL

Diffuse reflection sensor



The Sensor People

We reserve the right to make technical changes
EN • 2026-10-12 • 24-105931

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1 About this document

Tab. 1.1: Warning symbols and signal words

	Symbol indicating dangers to persons
	Symbol indicating possible property damage
NOTICE	Signal word for property damage Indicates dangers that may result in property damage if the measures for danger avoidance are not followed.
CAUTION	Signal word for minor injuries Indicates dangers that may result in minor injury if the measures for danger avoidance are not followed.

Tab. 1.2: Other symbols

	Symbol for tips Text passages with this symbol provide you with further information.
	Symbol for action steps Text passages with this symbol instruct you to perform actions.
	Symbol for action results Text passages with this symbol describe the result of the preceding action.

NOTICE	
	↳ Follow the instructions and information in the technical data sheet.

Other applicable documents

These operating instructions describe several devices in a series. Device-specific notes and information regarding the following chapters can be found in the technical data sheet:

- Technical data
- Dimensioned drawings
- Electrical connection
- Operation and display
- Notes
- Accessories

2 Safety

CAUTION



Observe intended use!

The protection of personnel and the device cannot be guaranteed if the device is operated in a manner not complying with its intended use.

- Only operate the device in accordance with its intended use.
- Leuze electronic GmbH + Co. KG is not liable for damages caused by improper use.
- Read these operating instructions before commissioning the device. Knowledge of the operating instructions is an element of proper use.

CAUTION



UL applications!

For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).

NOTICE



Comply with conditions and regulations!

- Observe the locally applicable legal regulations and the rules of the employer's liability insurance association.

2.1 Intended use

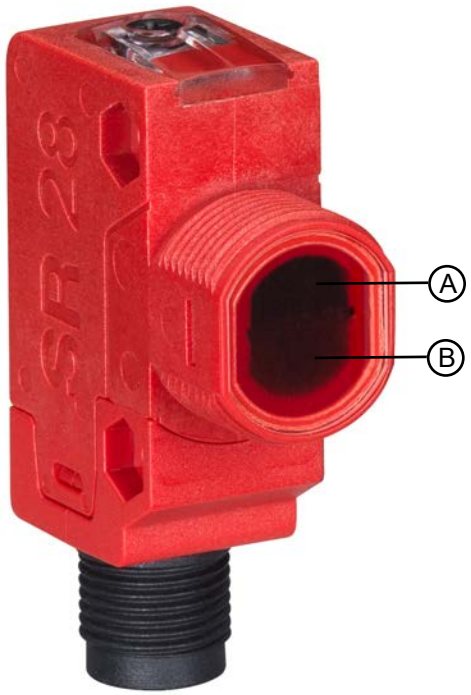
The sensors are designed to detect objects within the detection range.

2.2 Disclaimer

Leuze electronic GmbH + Co. KG is not liable in the following cases:

- The device is not being used properly.
- Reasonably foreseeable misuse is not taken into account.
- Mounting and electrical connection are not properly performed.
- Changes (e.g., constructional) are made to the device.

3 Device overview



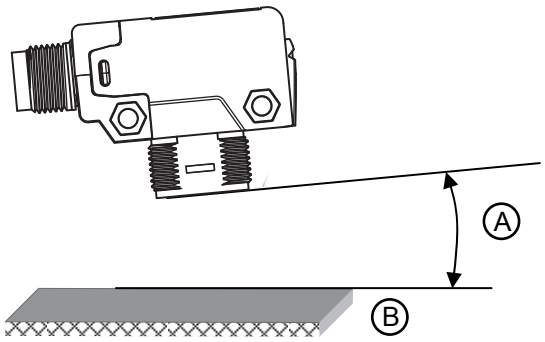
A Receiver
B Transmitter

Fig. 3.1: Device overview

4 Functions

4.1 Detection of glossy surfaces within the operating range

When detecting glossy surfaces (e.g. metals), the light beam should not hit the object surface at a right angle. A slight inclination is enough to detect the object reliably. The following applies: the smaller the range, the greater the angle of inclination (approx. 5 ° to 7 °).



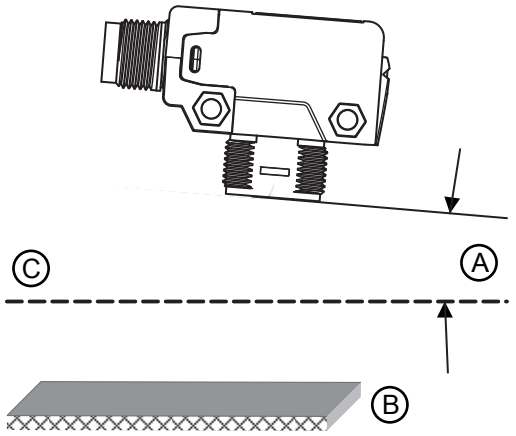
A Slight inclination5 ° … 7 °
B Glossy object surface within the operating range

Fig. 4.1: Inclination when detecting glossy surfaces

4.2 Avoiding interference from glossy surfaces in the background

If a glossy surface is in the background (distance larger than maximum range), reflections may cause interfering signals. They may be avoided by mounting the device at a slight inclination (see figure).

	NOTICE
	It is imperative to note the task and the associated inclination of the sensor of approx. 5 ° – 7 °.



A Slight inclination5 ° … 7 °
B Glossy surface in the background
C Maximum range

Fig. 4.2: Inclination with glossy surfaces in the background

- Only move objects in from the right or left side. Avoid moving in objects from the connector side or operating side.
- Outside of the operating range, the sensor operates as an energetic diffuse reflection sensor. Light objects can still be reliably detected up to the maximum range.
- The sensors are equipped with effective measures for the maximum avoidance of mutual interference should they be mounted opposite one another. Opposite mounting of multiple sensors of the same type must absolutely be avoided.

5 Service and support

Service hotline

You can find the contact information for the hotline in your country on our website **www.leuze.com** under **Contact & Support**.

Repair service and returns

Defective devices are repaired in our service centers competently and quickly. We offer you an extensive service packet to keep any system downtimes to a minimum. Our service center requires the following information:

- Your customer number
- Product description or part description
- Serial number or batch number
- Reason for requesting support together with a description

Please register the merchandise concerned. Simply register return of the merchandise on our website **www.leuze.com** under **Contact & Support > Repair Service & Returns**.

To ensure quick and easy processing of your request, we will send you a returns order with the returns address in digital form.

6 Declaration of Conformity

The HT28CPP / HT28XCL series diffuse sensors were developed and manufactured in compliance with applicable European standards and directives.

	NOTICE
	You can download the EC Declaration of Conformity from the Leuze website. ↳ Call up the Leuze website: *www.leuze.com* ↳ Enter the type designation or part number of the device as the search term. The article number can be found on the name plate of the device under the entry "Part. No.". ↳ The documents can be found on the product page for the device under the *Downloads* tab.