



# NT8-21412

NT8

CONTRAST SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ

## Ordering information

| Type      | part no. |
|-----------|----------|
| NT8-21412 | 1006039  |

Other models and accessories → [www.sick.com/NT8](http://www.sick.com/NT8)

## Detailed technical data

### Features

|                                   |                                              |
|-----------------------------------|----------------------------------------------|
| <b>Housing design</b>             | Middle                                       |
| <b>Dimensions (W x H x D)</b>     | 76 mm x 30 mm x 58.8 mm                      |
| <b>Light source</b>               | White                                        |
| <b>Light emission</b>             | Long and short side of housing, exchangeable |
| <b>Light spot size</b>            | 1.5 mm x 3.5 mm                              |
| <b>Light spot direction</b>       | Vertical <sup>1)</sup>                       |
| <b>Supply voltage lamp</b>        | 4,5 V ± 10%                                  |
| <b>Power consumption lamp</b>     | 840 mA                                       |
| <b>Sensing distance</b>           | ≤ 9 mm <sup>2)</sup>                         |
| <b>Sensing distance tolerance</b> | ± 2 mm                                       |
| <b>Function</b>                   | Light/dark switching                         |
| <b>Special features</b>           | S10                                          |

<sup>1)</sup> In relation to long side of housing.

<sup>2)</sup> From leading edge of lens.

### Electronics

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <b>Supply voltage</b>                  | 10 V DC ... 30 V DC                            |
| <b>Ripple</b>                          | ≤ 5 V <sub>pp</sub>                            |
| <b>Current consumption</b>             | < 50 mA <sup>1)</sup>                          |
| <b>Switching frequency</b>             | 10 kHz <sup>2)</sup>                           |
| <b>Response time</b>                   | > 50 μs                                        |
| <b>Switching output (voltage)</b>      | NPN: HIGH = approx. U <sub>V</sub> / LOW ≤ 2 V |
| <b>Output current I<sub>max.</sub></b> | 200 mA                                         |

<sup>1)</sup> Without load.

<sup>2)</sup> With light/dark ratio 1:1.

<sup>3)</sup> Reference voltage DC 50 V.

|                           |                                                                                                                              |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------|
| <b>Time delay</b>         | None                                                                                                                         |
| <b>Protection class</b>   | II <sup>3)</sup>                                                                                                             |
| <b>Circuit protection</b> | U <sub>V</sub> connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>Connection type</b>    |                                                                                                                              |
|                           | 2 m                                                                                                                          |

<sup>1)</sup> Without load.

<sup>2)</sup> With light/dark ratio 1:1.

<sup>3)</sup> Reference voltage DC 50 V.

## Mechanics

|                         |              |
|-------------------------|--------------|
| <b>Housing material</b> | Zinc diecast |
|-------------------------|--------------|

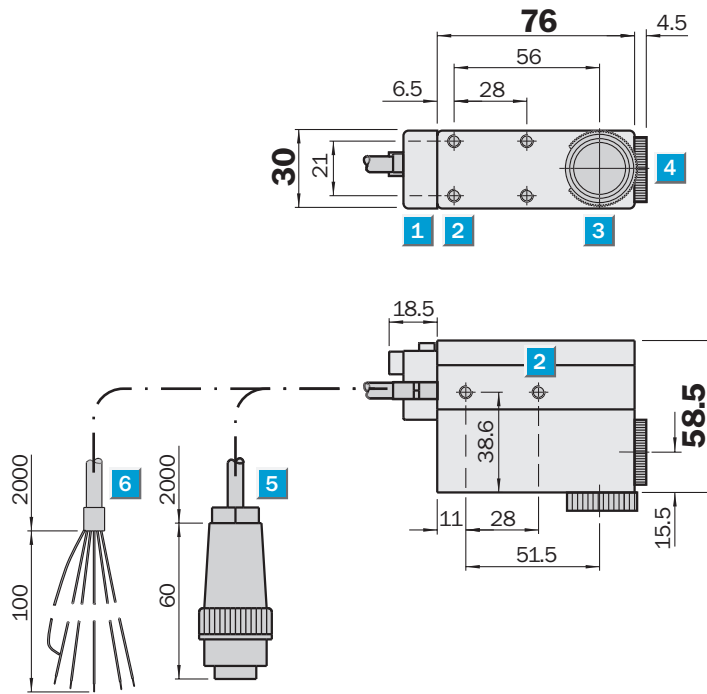
## Ambient data

|                                      |                        |
|--------------------------------------|------------------------|
| <b>Ambient operating temperature</b> | 0 °C ... +55 °C        |
| <b>Ambient temperature, storage</b>  | -25 °C ... +85 °C      |
| <b>Shock load</b>                    | According to IEC 60068 |
| <b>Enclosure rating</b>              | IP67                   |

## Classifications

|                       |          |
|-----------------------|----------|
| <b>ECLASS 5.0</b>     | 27270906 |
| <b>ECLASS 5.1.4</b>   | 27270906 |
| <b>ECLASS 6.0</b>     | 27270906 |
| <b>ECLASS 6.2</b>     | 27270906 |
| <b>ECLASS 7.0</b>     | 27270906 |
| <b>ECLASS 8.0</b>     | 27270906 |
| <b>ECLASS 8.1</b>     | 27270906 |
| <b>ECLASS 9.0</b>     | 27270906 |
| <b>ECLASS 10.0</b>    | 27270906 |
| <b>ECLASS 11.0</b>    | 27270906 |
| <b>ECLASS 12.0</b>    | 27270906 |
| <b>ETIM 5.0</b>       | EC001820 |
| <b>ETIM 6.0</b>       | EC001820 |
| <b>ETIM 7.0</b>       | EC001820 |
| <b>ETIM 8.0</b>       | EC001820 |
| <b>UNSPSC 16.0901</b> | 39121528 |

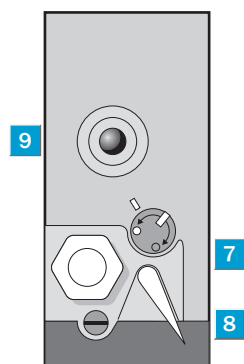
## Dimensional drawing



Dimensions in mm (inch)

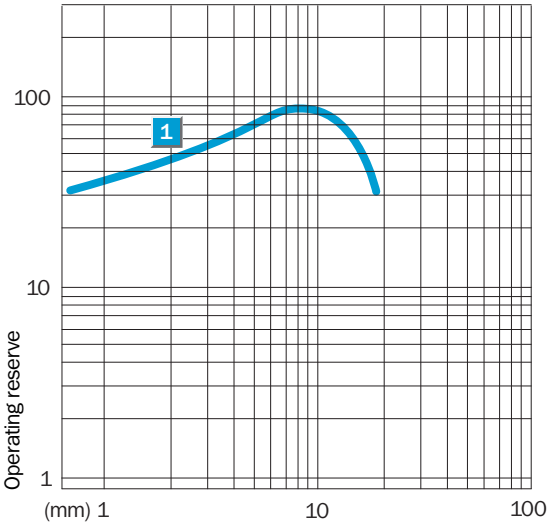
- ① cover for adjuster
- ② M5 threaded mounting hole, 5.5 mm deep
- ③ desiccant cartridge with inspection window, can be swapped with item 4
- ④ Lens (light transmission), can be exchanged for pos. 3
- ⑤ 2 m cable with male connector, 6-pin + PE
- ⑥ 2 m cable
- ⑦ Switching threshold adjustment
- ⑧ changeover switch "light/dark switching"
- ⑨ function indicator

## Adjustments



- ⑦ Switching threshold adjustment
- ⑧ changeover switch "light/dark switching"
- ⑨ function indicator

Operating reserve



## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)