



## W12

Strong performance in rugged metal housing for demanding detection tasks

**SICK**  
Sensor Intelligence.

## Advantages



## Suitable for all applications – photoelectric sensors in a metal housing

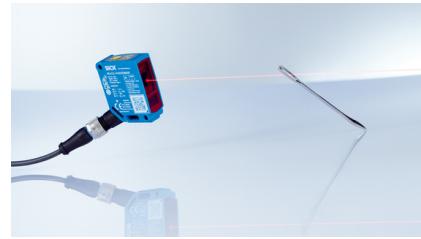
The W12 devices are genuine all-rounders. The portfolio comprises photoelectric proximity sensors, photoelectric retro-reflective sensors and through-beam photoelectric sensors with laser technology, PinPoint Pro or hybrid infrared LED. Different sensing ranges, switching frequencies, and connection options ensure almost limitless selection and combination possibilities. W12 sensors, for example, can be perfectly tailored to the equipment system and the requirements of the specific application – regardless of whether it be a packaging technology, automotive, logistics, pharmaceutical or beverage application.



As individual as the requirements on site: Thanks to the numerous product variants available (such as the W12 with line light spot), you can choose the ideal W12 for your needs.



From glass bottles to cling film: Transparent objects can be precisely and reliable detected using the WLG12 photoelectric retro-reflective sensors.



No problem with long distances: The W12 enables precise object detection of small and poorly remitting objects over distances of up to 1 m (LED) or 1.2 m (laser).



**Single device for everything: The W12 product family is the universal detection solution for a large number of industrial applications and industries**



## Incredibly easy – installation and commissioning using BluePilot

**Set up and aligned in seconds:** Using the BluePilot operating concept. The blue LED provides immediate feedback on whether the sensor is aligned correctly. The W12 devices can be quickly and precisely parameterized using a Teach-Turn adjustment. While doing so, the LED display serves as an orientation aid for the desired sensing ranges or for assistance, thereby ensuring a very high operational safety. Thanks to the innovative hybrid LED of the W12 photoelectric sensors, infrared sensors can be easily aligned. At the touch of a button, the hybrid LED displays a red auxiliary light beam for alignment with the object or reflector.



The BluePilot LED display provides an immediate visual quality check when aligning the sensor and during installation.



Fast parameterization of photoelectric sensors thanks to Teach-Turn control element for commissioning and fine adjustment.



Fast and low-error alignment during commissioning thanks to the W12 hybrid LED with a visible infrared auxiliary light beam.



**Uncomplicated mounting, fast parameterization: The W12 devices save you valuable time during commissioning**



## Reliable detection – regardless of application requirements

Whether transparent, dark, small or highly reflective – different objects must be reliably detected in industrial automation. The application-specific sensor variants reliably detect challenging objects and enable long sensing ranges. With tailored technologies for a wide range of applications, the W12 photoelectric sensors ensure high process stability and reduce down-times.



The W12 laser variants are particularly suitable for applications with a large sensing range. Thanks to the new PinPoint Pro LED, objects can also be detected at a distance of over 1.4 m.



For uneven, shiny and reflective objects, the TwinEye technology® with two receivers of the WTS12 offers high operational safety. Background influences such as reflective high-visibility vests do not interfere with the sensor.



With the help of application adjustment via ApplicationSelect, the WTM12 also detects poorly remitting and obliquely-oriented objects. The WTM12 sensors can be adjusted in several stages for individual requirements.



In the case of transparent objects of almost any kind, the ClearSens technology ensures reliable detection results. AutoAdapt technology allows the sensor to adapt to changing conditions.



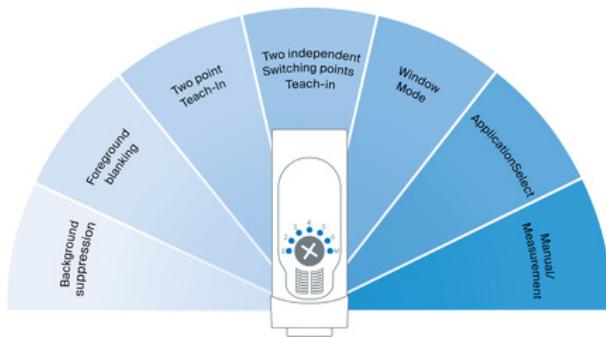
The LineSpot technology offers a high detection reliability for perforated, structured and uneven objects. The line light spot is available as a laser or LED variant.



Thanks to foreground suppression, the sensors reliably detect flat, poorly remitting, reflective, and uneven objects.



**Thanks to innovative technologies, the sensors solve demanding detection tasks in a wide range of applications. The W12 photoelectric sensors detect objects with a variety of properties, even at large sensing ranges.**



## High flexibility – with just one device

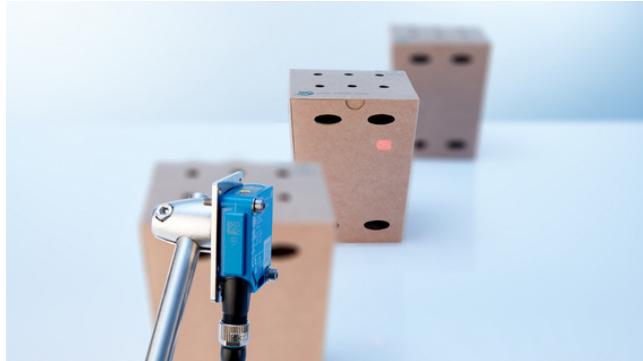
The WTM12 variants come with a MultiMode feature: Various operating modes such as background suppression, foreground suppression, two-point teach-in, two independent switching points or window teach-in can be set directly on the device or via IO-Link. It is also possible to read the distance value from the device. The advantage: The same sensor can meet a wide variety of detection requirements. This means, for example, that the settings can be adjusted with a single action when changing the product. A sensor for almost any challenge – reduces the number of variants and simplifies warehousing.



All of the available modes can be easily and quickly selected via the Teach-Turn adjustment.



Using the “Two independent switching points” mode, standing and lying objects can be detected and distinguished from one another.



ApplicationSelect mode allows the photoelectric sensors to be adjusted in three stages. This enables the sensors to be adapted to the particular application conditions, thereby making them flexible in use. ApplicationSelect can be combined with almost all other settings.



Distance values via IO-Link: the output of precise distance values during detection extends the application possibilities of the photoelectric proximity sensors. The values can, for example, be used for positioning tasks in downstream processes.



**Versatile problem solver thanks to MultiMode: The W12 devices can be flexibly adjusted to changing requirements at the press of a button**



### Rugged metal housing – for very high resilience

SICK uses only zinc die cast metal housings for its W12 photoelectric sensors. This makes the sensors impervious to aggressive chemicals, high temperatures, dust, and water spray. The W12 effortlessly withstands shocks and vibrations due to machine movements or high-pressure cleaning. A high EMC resistance also protects the electronics of the sensors.



The high quality zinc die cast according to EN 60068 makes the housing especially break-proof and resilient. It is also certified according to IP69.



The chemical and thermal resistance of the housing enables it to be used under extreme ambient conditions.



Thanks to a special printing method, the information on the sensor housing remains permanently readable and durable.



**Withstands all stresses: Thanks to the rugged metal housing, the W12 is suitable for demanding tasks in harsh environments**



## Technical data overview

|                                       |  |
|---------------------------------------|--|
| <b>Dimensions (W x H x D)</b>         | 15.6 mm x 49.5 mm x 43.1 mm<br>15.6 mm x 48.5 mm x 42 mm<br>15 mm x 49 mm x 41.5 mm<br>15.5 mm x 48.5 mm x 42 mm   |
| <b>Sensing range max.</b>             |  |
| Photoelectric proximity sensor        | 15 mm ... 800 mm <sup>1)</sup><br>50 mm ... 100 mm <sup>2)</sup>   |
| Photoelectric retro-reflective sensor | 0 m ... 7 m <sup>3)</sup><br>0 m ... 2 m <sup>3)</sup><br>0.15 m ... 10 m <sup>3)</sup><br>0 m ... 5 m <sup>3)</sup><br>0 m ... 4 m <sup>3)</sup><br>0 m ... 0.8 m <sup>4)</sup><br>0 mm ... 500 mm <sup>5)</sup><br>0 m ... 500 mm <sup>6)</sup><br>0 m ... 3 m <sup>6)</sup><br>0 m ... 1.5 m <sup>3)</sup><br>0 mm ... 3 m <sup>7)</sup><br>0 m ... 4 m |
| Through-beam photoelectric sensor     | 0 m ... 80 m<br>0 m ... 1.7 m <sup>8)</sup>  |
| <b>Light source</b>                   | Hybrid LED<br>PinPoint Pro LED<br>PinPoint LED<br>LED<br>Laser (depends on variant)  |
| <b>Type of light</b>                  | Infrared light / visible red light (depends on variant)  |
| <b>Enclosure rating</b>               | IP66<br>IP67<br>IP69<br>IP69K (depends on variant)   |
| <b>Housing material</b>               | Metal / metal / plastic (depends on variant)   |

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Object with 6% remission (based on standard white, DIN 5033).

<sup>3)</sup> Reflector PL80A.

<sup>4)</sup> Reflective tape Diamond Grade.

<sup>5)</sup> Reflector PL20F.

<sup>6)</sup> Reflector P250F.

<sup>7)</sup> Reflector P250.

<sup>8)</sup> With apertures.

## Product description

The W12 photoelectric sensors offer reliable object detection in demanding industrial environments and are virtually universal in use. The rugged zinc die cast housing protects against mechanical and thermal influences. At the same time, the photoelectric sensors are resistant to optical interference such as ambient light. Thanks to laser, LED and infrared technology, the sensors are versatile in use. The local BluePilot user interface with teach-turn adjustment and IO-Link enable fast and intuitive commissioning. Application-focused variants ensure a high detection reliability – even for transparent, uneven, reflective, high-contrast, perforating or depolarizing objects. Thanks to multifunctional variants, the photoelectric sensors are flexible in use and can be adapted to individual requirements.

## At a glance

- Innovative technologies for precise object detection
- Switchable sensor with distance value output
- SICK Optical Expert with TwinEye and ClearSens
- Metal housing with IP69 protection class
- Protection against ambient light, reflections and contamination
- Teach-turn control element and pilot light beam
- IO-Link for integration into digital systems

## Your benefits

- High performance and reliability
- Multifunctional for a multitude of applications – one sensor for a variety of challenges
- Reliable detection – even with demanding objects or challenging ambient conditions
- Protection from disruptive environmental influences
- Intuitive and quick commissioning, alignment and adjustment
- Simple digital integration and parameterization

## Ordering information

Other models and accessories → [www.sick.com/W12](http://www.sick.com/W12)

- **Sensing range min. / max.:** 10 mm / 800 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** Hybrid LED
- **Type of light:** Infrared light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTB12H-34161120A00ZDZzzzzzzz1 | 1152363  |
| Cable, 4-wire, 2 m                           | WTB12H-1H161120A00ZDZzzzzzzz1 | 1152364  |

- **Sensing range min. / max.:** 15 mm / 800 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN

| Light source | Type of light  | Connection type           | Housing     | Type                          | Part no. |
|--------------|----------------|---------------------------|-------------|-------------------------------|----------|
| Hybrid LED   | Infrared light | Male connector M12, 4-pin | Rectangular | WTB12H-24161120A00ZDZzzzzzzz1 | 1150614  |

- **Sensing range min. / max.:** 18 mm / 600 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression, TwinEye technology
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTS12A-34161120A00ZDZzzzzzzz1 | 1150607  |
| Cable, 4-wire, 2 m                           | WTS12A-1H161120A00ZDZzzzzzzz1 | 1150608  |
| Male connector M12, 4-pin                    | WTS12A-24161120A00ZDZzzzzzzz1 | 1149430  |

- **Sensing range min. / max.:** 0 m / 12 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WLA12P-34162130A00ZDZzzzzzzz1 | 1150053  |
| Cable, 4-wire, 2 m                           | WLA12P-1H162130A00ZDZzzzzzzz1 | 1150596  |
| Male connector M12, 4-pin                    | WLA12P-24162130A00ZDZzzzzzzz1 | 1145912  |

- **Sensing range min. / max.:** 0 m / 7.6 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics), ClearSens, MultiMode
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WLG12P-34162120A00ZDZZZZZZZZ1 | 1150054  |
| Cable, 4-wire, 2 m                           | WLG12P-1H162120A00ZDZZZZZZZZ1 | 1150603  |
| Male connector M12, 4-pin                    | WLG12P-24162120A00ZDZZZZZZZZ1 | 1146667  |

- **Sensing range min. / max.:** 0 m / 5 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics), ClearSens, MultiMode
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** Hybrid LED
- **Type of light:** Infrared light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WLG12H-34162120A00ZDZZZZZZZZ1 | 1150604  |
| Cable, 4-wire, 2 m                           | WLG12H-1H162120A00ZDZZZZZZZZ1 | 1150605  |
| Male connector M12, 4-pin                    | WLG12H-24162120A00ZDZZZZZZZZ1 | 1146668  |

- **Sensing range min. / max.:** 0 m / 25 m
- **Functional principle:** Through-beam photoelectric sensor
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** LED
- **Type of light:** Infrared light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WSE12I-34162100A00ZDZZZZZZZZ1 | 1152495  |
| Cable, 4-wire, 2 m                           | WSE12I-1H162100A00ZDZZZZZZZZ1 | 1152496  |
| Male connector M12, 4-pin                    | WSE12I-24162100A00ZDZZZZZZZZ1 | 1149354  |

- **Sensing range min. / max.:** 10 mm / 1,100 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTB12F-34161120A00ZDZZZZZZZZ1 | 1152359  |
| Cable, 4-wire, 2 m                           | WTB12F-1H161120A00ZDZZZZZZZZ1 | 1152360  |

| Connection type           | Type                          | Part no. |
|---------------------------|-------------------------------|----------|
| Male connector M12, 4-pin | WTB12F-24161120A00ZDZzzzzzzz1 | 1150612  |

- **Sensing range min. / max.:** 10 mm / 600 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTB12F-34161220A00ZDZzzzzzzz1 | 1152361  |
| Cable, 4-wire, 2 m                           | WTB12F-1H161220A00ZDZzzzzzzz1 | 1152362  |
| Male connector M12, 4-pin                    | WTB12F-24161220A00ZDZzzzzzzz1 | 1150613  |

- **Sensing range min. / max.:** 10 mm / 1,400 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTB12F-34161A20A00ZDZzzzzzzz1 | 1152365  |
| Cable, 4-wire, 2 m                           | WTB12F-1H161A20A00ZDZzzzzzzz1 | 1152366  |
| Male connector M12, 4-pin                    | WTB12F-24161A20A00ZDZzzzzzzz1 | 1152323  |

- **Sensing range min. / max.:** 10 mm / 750 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression, TwinEye technology
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTS12F-34161120A00ZDZzzzzzzz1 | 1152586  |
| Cable, 4-wire, 2 m                           | WTS12F-1H161120A00ZDZzzzzzzz1 | 1150606  |
| Male connector M12, 4-pin                    | WTS12F-24161120A00ZDZzzzzzzz1 | 1149429  |

- **Sensing range min. / max.:** 10 mm / 650 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTF12F-34162120A00ZDZZZZZZZZ1 | 1152357  |
| Cable, 4-wire, 2 m                           | WTF12F-1H162120A00ZDZZZZZZZZ1 | 1152358  |
| Male connector M12, 4-pin                    | WTF12F-24162120A00ZDZZZZZZZZ1 | 1152324  |

- **Sensing range min. / max.:** 10 mm / 1,100 mm, 0 mm / 650 mm, 10 mm / 1,400 mm, 0 mm / 1,000 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression, Foreground suppression, MultiMode, distance value
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTM12F-34161120A00ZDZZZZZZZZ1 | 1152367  |
| Cable, 4-wire, 2 m                           | WTM12F-1H161120A00ZDZZZZZZZZ1 | 1152368  |
| Male connector M12, 4-pin                    | WTM12F-24161120A00ZDZZZZZZZZ1 | 1152325  |

- **Sensing range min. / max.:** 10 mm / 600 mm, 0 mm / 500 mm, 10 mm / 800 mm, 0 mm / 700 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression, Foreground suppression, MultiMode
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTM12F-34161220A00ZDZZZZZZZZ1 | 1152369  |
| Cable, 4-wire, 2 m                           | WTM12F-1H161220A00ZDZZZZZZZZ1 | 1152371  |
| Male connector M12, 4-pin                    | WTM12F-24161220A00ZDZZZZZZZZ1 | 1152326  |

- **Sensing range min. / max.:** 0 m / 30 m
- **Functional principle:** Through-beam photoelectric sensor
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** PinPoint Pro LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type                          | Part no. |
|--|-------------------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WSE12F-34162100A00ZDZZZZZZZZ1 | 1152493  |
| Cable, 4-wire, 2 m                           | WSE12F-1H162100A00ZDZZZZZZZZ1 | 1152494  |

| Connection type           | Type                          | Part no. |
|---------------------------|-------------------------------|----------|
| Male connector M12, 4-pin | WSE12F-24162100A00ZDZZZZZZZZ1 | 1149355  |

- **Sensing range min. / max.:** 15 mm / 420 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTB12L-34161820A00 | 1129946  |
| Cable, 4-wire, 2 m                           | WTB12L-1H161820A00 | 1129940  |
| Male connector M12, 4-pin                    | WTB12L-24161820A00 | 1126347  |

- **Sensing range min. / max.:** 15 mm / 350 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 318 mm | WTB12L-34161220A00 | 1126056  |
| Cable, 4-wire, 2 m                           | WTB12L-1H161220A00 | 1126055  |
| Male connector M12, 4-pin                    | WTB12L-24161200A00 | 1149949  |
|  | WTB12L-24161220A00 | 1123860  |

- **Sensing range min. / max.:** 15 mm / 400 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTB12L-34161520A00 | 1126058  |
|  | WTB12L-34161720A00 | 1125926  |
| Cable, 4-wire, 2 m                           | WTB12L-1H161520A00 | 1126057  |
|  | WTB12L-1H161720A00 | 1126059  |
| Male connector M12, 4-pin                    | WTB12L-24161520A00 | 1125933  |
|  | WTB12L-24161720A00 | 1126040  |

- **Sensing range min. / max.:** 80 mm / 850 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTB12L-34161120A00 | 1126068  |
| Cable, 4-wire, 2 m                           | WTB12L-1H161120A00 | 1126069  |
| Male connector M12, 4-pin                    | WTB12L-24161120A00 | 1119743  |

- **Sensing range min. / max.:** 80 mm / 1,200 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTB12L-34161A20A00 | 1129942  |
| Cable, 4-wire, 2 m                           | WTB12L-1H161A20A00 | 1129941  |
| Male connector M12, 4-pin                    | WTB12L-24161A20A00 | 1126340  |

- **Sensing range min. / max.:** 40 mm / 350 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTB12V-34161120A00 | 1125115  |
| Cable, 4-wire, 2 m                           | WTB12V-1H161120A00 | 1126065  |
| Male connector M12, 4-pin                    | WTB12V-24161120A00 | 1125930  |

- **Sensing range min. / max.:** 15 mm / 420 mm, 0 mm / 150 mm, 15 mm / 650 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression, Foreground suppression, MultiMode, distance value
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTM12L-34161820A00 | 1126054  |

| Connection type           | Type               | Part no. |
|---------------------------|--------------------|----------|
| Cable, 4-wire, 2 m        | WTM12L-1H161820A00 | 1126067  |
| Male connector M12, 4-pin | WTM12L-24161820A00 | 1125932  |

- **Sensing range min. / max.:** 80 mm / 850 mm, 0 mm / 350 mm, 80 mm / 1,200 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression, Foreground suppression, MultiMode, distance value
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTM12L-34161120A00 | 1126070  |
| Cable, 4-wire, 2 m                           | WTM12L-1H161120A00 | 1126071  |
| Male connector M12, 4-pin                    | WTM12L-24161120A00 | 1125113  |

- **Sensing range min. / max.:** 20 mm / 150 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTF12L-34162220A00 | 1125927  |
|  | WTF12L-34162820A00 | 1126061  |
| Cable, 4-wire, 2 m                           | WTF12L-1H162220A00 | 1126062  |
|  | WTF12L-1H162820A00 | 1125114  |
| Male connector M12, 4-pin                    | WTF12L-24162220A00 | 1126063  |
|  | WTF12L-24162820A00 | 1126060  |

- **Sensing range min. / max.:** 80 mm / 350 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTF12L-34162120A00 | 1126064  |
| Cable, 4-wire, 2 m                           | WTF12L-1H162120A00 | 1125925  |
| Male connector M12, 4-pin                    | WTF12L-24162120A00 | 1125923  |

- **Sensing range min. / max.:** 0 mm / 140 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WTF12V-34162120A00 | 1126066  |
| Cable, 4-wire, 2 m                           | WTF12V-1H162120A00 | 1125924  |
| Male connector M12, 4-pin                    | WTF12V-24162120A00 | 1125931  |

- **Sensing range min. / max.:** 0 m / 20 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WLA12L-34162130A00 | 1126053  |
| Cable, 4-wire, 2 m                           | WLA12L-1H162130A00 | 1129943  |
| Male connector M12, 4-pin                    | WLA12L-24162100A00 | 1149948  |
|  | WLA12L-24162130A00 | 1126037  |

- **Sensing range min. / max.:** 0 m / 11 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** push-pull: PNP/NPN
- **Light source:** laser
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type               | Part no. |
|--|--------------------|----------|
| Cable with M12 male connector, 4-pin, 315 mm | WLA12L-34162230A00 | 1126051  |
|  | WLA12L-34162530A00 | 1126049  |
|  | WLA12L-34162730A00 | 1126002  |
|  | WLA12L-34162830A00 | 1126045  |
| Cable, 4-wire, 2 m                           | WLA12L-1H162230A00 | 1126052  |
|  | WLA12L-1H162530A00 | 1126001  |
|  | WLA12L-1H162730A00 | 1126048  |
|  | WLA12L-1H162830A00 | 1126046  |

| Connection type           | Type               | Part no. |
|---------------------------|--------------------|----------|
| Male connector M12, 4-pin | WLA12L-24162230A00 | 1125936  |
|                           | WLA12L-24162530A00 | 1126050  |
|                           | WLA12L-24162730A00 | 1126047  |
|                           | WLA12L-24162830A00 | 1125938  |

- Sensing range max.:** 40 mm ... 200 mm
- Functional principle:** Photoelectric proximity sensor
- Functional principle detail:** Foreground suppression
- Switching mode:** Light/dark switching
- Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type            | Part no. |
|--------------|-------------------|---------------------------|-------------|-----------------|----------|
| LED          | Visible red light | Male connector M12, 4-pin | Rectangular | WTF12-3P2441S64 | 1061909  |

- Sensing range max.:** 30 mm ... 175 mm
- Functional principle:** Photoelectric proximity sensor
- Functional principle detail:** Foreground suppression
- Switching mode:** Light/dark switching
- Light source:** LED
- Type of light:** visible red light
- Housing:** rectangular

| Switching output | Connection type                  | Type          | Part no. |
|------------------|----------------------------------|---------------|----------|
| NPN              | Cable, 4-wire, 2 m <sup>1)</sup> | WTF12-3N1131  | 1041410  |
|                  | Male connector M12, 4-pin        | WTF12-3N2431  | 1041408  |
|                  |                                  | WTF12-3N2433  | 1041409  |
| PNP              | Cable, 4-wire, 2 m <sup>1)</sup> | WTF12-3P1131  | 1041406  |
|                  | Cable, 4-wire, 5 m <sup>1)</sup> | WTF12-3P1231  | 1125679  |
|                  | Male connector M12, 4-pin        | WTF12-3P2431  | 1041404  |
|                  |                                  | WTF12-3P2433  | 1041405  |
|                  |                                  | WTF12C-3P2433 | 1042001  |

<sup>1)</sup> Do not bend below 0 °C.

- Sensing range max.:** 30 mm ... 500 mm
- Functional principle:** Photoelectric proximity sensor
- Functional principle detail:** Foreground suppression
- Switching mode:** Light/dark switching
- Light source:** LED
- Type of light:** visible red light
- Housing:** rectangular

| Switching output | Connection type           | Type         | Part no. |
|------------------|---------------------------|--------------|----------|
| NPN              | Male connector M12, 4-pin | WTF12-3N2441 | 1041403  |
|                  |                           | WTF12-3N2443 | 1094258  |

<sup>1)</sup> Do not bend below 0 °C.

| Switching output | Connection type                  | Type         | Part no. |
|------------------|----------------------------------|--------------|----------|
| PNP              | Cable, 4-wire, 2 m <sup>1)</sup> | WTF12-3P1141 | 1041402  |
|                  | Male connector M12, 4-pin        | WTF12-3P2441 | 1041400  |
|                  |                                  | WTF12-3P2443 | 1041401  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 20 mm ... 350 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Type of light:** visible red light
- **Housing:** rectangular

| Switching output | Light source | Connection type                              | Type             | Part no. |
|------------------|--------------|--|------------------|----------|
| NPN              | LED          | Cable, 4-wire, 2 m <sup>1)</sup>             | WTB12-3N1131     | 1041418  |
|                  |              | Cable, 4-wire, 5 m <sup>1)</sup>             | WTB12-3N1231     | 1041419  |
|                  |              | Male connector M12, 4-pin                    | WTB12-3N2431     | 1041416  |
|                  |              |  | WTB12-3N2433     | 1041417  |
| PNP              | LED          | Cable with M12 male connector, 4-pin, 270 mm | WTB12-3P3431     | 1075802  |
|                  |              |  | WTB12-3P3433     | 1112363  |
|                  |              | Cable, 4-wire, 2 m <sup>1)</sup>             | WTB12-3P1131     | 1041413  |
|                  |              | Cable, 4-wire, 5 m <sup>1)</sup>             | WTB12-3P1231     | 1041415  |
|                  |              | Male connector M12, 4-pin                    | WTB12-3F2431     | 1041420  |
|                  |              |  | WTB12-3F2431S65  | 1130742  |
|                  |              |  | WTB12-3P2431     | 1041411  |
|                  |              |  | WTB12-3P2431S60  | 1052578  |
|                  |              |  | WTB12-3P2431T01  | 1041414  |
|                  |              |  | WTB12-3P2433     | 1041412  |
|                  |              |  | WTB12-3P2433T01  | 1048278  |
|                  |              |  | WTB12C-3P2433    | 1042002  |
|                  | PinPoint LED | Male connector M12, 4-pin                    | WTB12C-3P2432A00 | 1067771  |
|                  |              |  | WTB12C-3P2432A70 | 1067772  |
|                  |              |  | WTB12C-3P2432A71 | 1067773  |
|                  |              |  | WTB12C-3P2432A91 | 1060222  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 30 mm ... 175 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type         | Part no. |
|--------------|-------------------|---------------------------|-------------|--------------|----------|
| LED          | Visible red light | Male connector M12, 4-pin | Rectangular | WTB12-3P2441 | 1041421  |

- **Sensing range max.:** 20 mm ... 80 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light  | Connection type           | Housing     | Type            | Part no. |
|--------------|----------------|---------------------------|-------------|-----------------|----------|
| LED          | Infrared light | Male connector M12, 4-pin | Rectangular | WTB12-3P2441S63 | 1059689  |

- **Sensing range max.:** 20 mm ... 600 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Light source:** LED
- **Type of light:** Infrared light
- **Housing:** rectangular

| Switching mode       | Switching output | Connection type                  | Type            | Part no. |
|----------------------|------------------|----------------------------------|-----------------|----------|
| Light switching      | NPN              | –                                | WTB12-3N1011S47 | 1044104  |
| Light/dark switching | NPN              | Cable, 4-wire, 2 m <sup>1)</sup> | WTB12-3N1111    | 1041429  |
|                      |                  | Cable, 4-wire, 3 m <sup>1)</sup> | WTB12-3N1711    | 1041430  |
|                      |                  | Male connector M12, 4-pin        | WTB12-3N2411    | 1041427  |
|                      |                  |                                  | WTB12-3N2413    | 1041428  |
|                      | PNP              | Cable, 4-wire, 2 m <sup>1)</sup> | WTB12-3P1111    | 1041424  |
|                      |                  | Cable, 4-wire, 3 m <sup>1)</sup> | WTB12-3P1711    | 1041426  |
|                      |                  | Male connector M12, 4-pin        | WTB12-3P2411    | 1041422  |
|                      |                  |                                  | WTB12-3P2411T01 | 1041425  |
|                      |                  |                                  | WTB12-3P2413    | 1041423  |
|                      |                  |                                  | WTB12C-3P2413   | 1042003  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 50 mm ... 100 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light switching
- **Switching output:** PNP
- **Light source:** LED
- **Type of light:** visible red light
- **Connection type:** male connector M12, 4-pin
- **Housing:** rectangular

| Type            | Part no. |
|-----------------|----------|
| WTB12-3P2441S50 | 1044106  |
| WTB12-3P2441S59 | 1056725  |

- **Sensing range max.:** 15 mm ... 340 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type                     | Housing     | Type            | Part no. |
|--------------|-------------------|-------------------------------------|-------------|-----------------|----------|
| PinPoint LED | Visible red light | M12 male connector, 4-pin, A-coding | Rectangular | WTB12-3P2460S04 | 1057942  |

- **Sensing range max.:** 50 mm ... 800 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type            | Part no. |
|--------------|-------------------|---------------------------|-------------|-----------------|----------|
| PinPoint LED | Visible red light | Male connector M12, 4-pin | Rectangular | WTB12-3P2461S01 | 1051967  |

- **Sensing range max.:** 30 mm ... 700 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type            | Part no. |
|--------------|-------------------|---------------------------|-------------|-----------------|----------|
| PinPoint LED | Visible red light | Male connector M12, 4-pin | Rectangular | WTB12-3P2461S02 | 1055582  |

- **Sensing range max.:** 30 mm ... 350 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type  | Housing     | Type            | Part no. |
|--------------|-------------------|------------------|-------------|-----------------|----------|
| LED          | Visible red light | Plug, M12, 5-pin | Rectangular | WTB12-3P2531S46 | 1044103  |

- **Sensing range max.:** 30 mm ... 500 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP
- **Light source:** PinPoint LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                              | Type            | Part no. |
|--|-----------------|----------|
| Cable with M12 male connector, 4-pin, 200 mm | WTB12-3P3461S03 | 1057676  |
| Male connector M12, 4-pin                    | WTB12-3P2461S58 | 1047850  |

- **Sensing range max.:** 20 mm ... 150 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light switching
- **Switching output:** NPN

| Light source | Type of light  | Connection type                                | Housing     | Type            | Part no. |
|--------------|----------------|--|-------------|-----------------|----------|
| LED          | Infrared light | Cable with AMP connector, 320 mm <sup>1)</sup> | Rectangular | WTB12-3N1011S42 | 1044101  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 15 mm ... 310 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Background suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light  | Connection type                     | Housing     | Type            | Part no. |
|--------------|----------------|-------------------------------------|-------------|-----------------|----------|
| LED          | Infrared light | M12 male connector, 4-pin, A-coding | Rectangular | WTB12-3P2470S05 | 1072498  |

- **Sensing range max.:** 0 m ... 7 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Light source:** LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Switching mode | Switching output | Connection type           | Type        | Part no. |
|----------------|------------------|---------------------------|-------------|----------|
| Dark switching | PNP              | Male connector M12, 4-pin | WL12-3V2431 | 1041537  |

<sup>1)</sup> Do not bend below 0 °C.

| Switching mode       | Switching output | Connection type                  | Type           | Part no. |
|----------------------|------------------|----------------------------------|----------------|----------|
| Light/dark switching | NPN              | Cable, 4-wire, 2 m <sup>1)</sup> | WL12-3N1131    | 1041441  |
|                      |                  |                                  | WL12-3N1141    | 1041447  |
|                      |                  | Cable, 4-wire, 3 m <sup>1)</sup> | WL12-3N1731    | 1041442  |
|                      |                  | Cable, 4-wire, 5 m <sup>1)</sup> | WL12-3N1230S33 | 1044110  |
|                      |                  | Male connector M12, 4-pin        | WL12-3N2431    | 1041440  |
|                      |                  |                                  | WL12-3N2431T01 | 1041443  |
|                      |                  |                                  | WL12-3N2441    | 1041446  |
|                      | PNP              | Cable, 4-wire, 2 m <sup>1)</sup> | WL12-3P1131    | 1041437  |
|                      |                  |                                  | WL12-3P1141    | 1041445  |
|                      |                  | Cable, 4-wire, 3 m <sup>1)</sup> | WL12-3P1731    | 1041438  |
|                      |                  | Male connector M12, 4-pin        | WL12-3P2431    | 1041436  |
|                      |                  |                                  | WL12-3P2431S43 | 1044113  |
|                      |                  |                                  | WL12-3P2431T01 | 1041439  |
|                      |                  |                                  | WL12-3P2441    | 1041444  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 0 m ... 2 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Light source:** LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Switching output | Connection type                  | Type            | Part no. |
|------------------|----------------------------------|-----------------|----------|
| NPN              | Cable, 4-wire, 2 m <sup>1)</sup> | WL12-3N1151     | 1041451  |
|                  |                                  | WL12-3N1161     | 1041455  |
|                  | Male connector M12, 4-pin        | WL12-3N2451     | 1041450  |
|                  |                                  | WL12-3N2461     | 1041454  |
| PNP              | Cable, 4-wire, 2 m <sup>1)</sup> | WL12-3P1151     | 1041449  |
|                  |                                  | WL12-3P1161     | 1041453  |
|                  | Male connector M12, 4-pin        | WL12-3P2451     | 1041448  |
|                  |                                  | WL12-3P2451P01  | 1044118  |
|                  |                                  | WL12-3P2461     | 1041452  |
| PNP, NPN         | Plug, M12, 5-pin                 | WL12G-3B2531S37 | 1044111  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 0.15 m ... 10 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** With minimum distance to reflector (dual lens system)
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type           | Part no. |
|--------------|-------------------|---------------------------|-------------|----------------|----------|
| LED          | Visible red light | Male connector M12, 4-pin | Rectangular | WL12-3P2432S01 | 1059691  |

- **Sensing range max.:** 0 m ... 5 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** PNP
- **Light source:** PinPoint LED
- **Type of light:** visible red light
- **Connection type:** male connector M12, 4-pin
- **Housing:** rectangular

| Type            | Part no. |
|-----------------|----------|
| WL12C-3P2432A00 | 1067774  |
| WL12C-3P2432A70 | 1067775  |
| WL12C-3P2432A71 | 1067776  |
| WL12C-3P2432A91 | 1067777  |

- **Sensing range max.:** 0 m ... 20 m
- **Functional principle:** Through-beam photoelectric sensor
- **Housing:** rectangular

| Switching mode | Switching output | Light source | Type of light     | Connection type                  | Type            | Part no. |
|----------------|------------------|--------------|-------------------|----------------------------------|-----------------|----------|
| Dark switching | PNP              | LED          | Infrared light    | Cable, 4-wire, 2 m <sup>1)</sup> | WSE12-3V1111S01 | 1058190  |
|                |                  |              |                   |                                  | WSE12-3V1111S04 | 1064466  |
|                |                  |              | Visible red light | Cable, 4-wire, 2 m <sup>1)</sup> | WSE12-3P1131S03 | 1064450  |
|                |                  |              |                   |                                  | WSE12-3V1131S02 | 1058191  |

<sup>1)</sup> Do not bend below 0 °C.

| Switching mode       | Switching output | Light source      | Type of light             | Connection type                  | Type             | Part no. |
|----------------------|------------------|-------------------|---------------------------|----------------------------------|------------------|----------|
| Light/dark switching | NPN              | LED               | Visible red light         | Cable, 4-wire, 2 m <sup>1)</sup> | WSE12-3N1131     | 1041463  |
|                      |                  |                   |                           | Male connector M12, 4-pin        | WSE12-3N2431     | 1041462  |
|                      | PNP              | LED               | Infrared light            | Cable, 4-wire, 2 m <sup>1)</sup> | WSE12-3P1111     | 1041464  |
|                      |                  |                   |                           | Male connector M12, 4-pin        | WSE12-3P2411T01  | 1041465  |
|                      |                  |                   | Visible red light         | Cable, 4-wire, 2 m <sup>1)</sup> | WSE12-3P1131     | 1041460  |
|                      |                  |                   |                           | Male connector M12, 4-pin        | WSE12-3P2431     | 1041459  |
|                      |                  |                   |                           |                                  | WSE12-3P2431T01  | 1041461  |
|                      | PinPoint LED     | Visible red light | Male connector M12, 4-pin |                                  | WSE12C-3P2430A00 | 1067780  |
|                      |                  |                   |                           |                                  | WSE12C-3P2430A71 | 1067782  |
|                      |                  |                   |                           |                                  | WSE12C-3P2430A72 | 1098510  |
|                      |                  |                   |                           |                                  | WSE12C-3P2430A91 | 1067783  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 0 m ... 1.7 m
- **Functional principle:** Through-beam photoelectric sensor
- **Switching mode:** Light/dark switching
- **Switching output:** PNP
- **Light source:** LED
- **Type of light:** visible red light
- **Housing:** rectangular

| Connection type                  | Type            | Part no. |
|----------------------------------|-----------------|----------|
| Cable, 4-wire, 2 m <sup>1)</sup> | WSE12-3P1131S18 | 1044119  |
| Male connector M12, 4-pin        | WSE12-3P2431S40 | 1044121  |

<sup>1)</sup> Do not bend below 0 °C.

- **Sensing range max.:** 0 m ... 5 m
- **Functional principle:** Through-beam photoelectric sensor
- **Switching mode:** Light/dark switching
- **Light source:** LED
- **Type of light:** Infrared light
- **Connection type:** male connector M12, 4-pin
- **Housing:** rectangular

| Switching output | Type            | Part no. |
|------------------|-----------------|----------|
| NPN              | WSE12-3N2411S37 | 1045357  |
| PNP              | WSE12-3P2411S36 | 1044120  |

- **Sensing range max.:** 0 m ... 80 m
- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** laser
- **Type of light:** visible red light
- **Connection type:** male connector M12, 4-pin
- **Housing:** rectangular

| Switching mode                  | Switching output | Type              | Part no. |
|---------------------------------|------------------|-------------------|----------|
| -                               | NPN              | WS/WE12L-2N430    | 1018255  |
|                                 |                  | WS/WE12L-2N430A01 | 1018478  |
|                                 | PNP              | WS/WE12L-2P410A03 | 1023059  |
|                                 |                  | WS/WE12L-2P410S02 | 1028481  |
|                                 |                  | WS/WE12L-2P430    | 1018254  |
|                                 |                  | WS/WE12L-2P430A01 | 1018476  |
|                                 |                  | WS/WE12L-2P430P01 | 1065516  |
|                                 |                  | WS/WE12L-2P431    | 1047960  |
| Light switching, Dark switching | NPN              | WS/WE12L-2N410A04 | 1023060  |

- **Sensing range max.:** 0 m ... 10 m
- **Functional principle:** Through-beam photoelectric sensor
- **Light source:** laser
- **Type of light:** visible red light
- **Connection type:** male connector M12, 4-pin
- **Housing:** rectangular

| Switching mode       | Switching output   | Type           | Part no. |
|----------------------|--------------------|----------------|----------|
| -                    | NPN                | WS/WE12L-2N410 | 1018257  |
| Light/dark switching | Push-pull: PNP/NPN | WS/WE12L-2P410 | 1018256  |

- **Sensing range max.:** 0 m ... 25 m
- **Functional principle:** Through-beam photoelectric sensor

| Switching output | Light source | Type of light     | Connection type           | Housing     | Type              | Part no. |
|------------------|--------------|-------------------|---------------------------|-------------|-------------------|----------|
| PNP              | Laser        | Visible red light | Male connector M12, 4-pin | Rectangular | WS/WE12L-2P430S01 | 1025709  |

- **Sensing range max.:** 0 m ... 4 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Housing:** rectangular

| Switching mode  | Switching output | Light source | Type of light     | Connection type                                    | Type            | Part no. |
|-----------------|------------------|--------------|-------------------|--|-----------------|----------|
| Dark switching  | PNP              | LED          | Visible red light | Male connector M12, 4-pin                          | WL12G-302431S47 | 1044114  |
|                 |                  | PinPoint LED | Visible red light | Cable with connector MOLEX MINI-FIT, 3-pin, 250 mm | WL12G-3F3072S06 | 1053543  |
| Light switching | PNP              | LED          | Infrared light    | Plug, M12, 5-pin                                   | WL12G-3P2582P01 | 1053549  |
|                 |                  |              |                   |  | WL12G-3P2582S10 | 1053544  |

| Switching mode                     | Switching output | Light source | Type of light     | Connection type              | Type             | Part no. |
|------------------------------------|------------------|--------------|-------------------|------------------------------|------------------|----------|
| Light switching,<br>Dark switching | PNP, NPN         | LED          | Visible red light | Plug, M12,<br>5-pin          | WL12G-3B2531     | 1041456  |
|                                    |                  |              |                   |                              | WL12G-3B2531T01  | 1041458  |
| Light/dark<br>switching            | NPN              | PinPoint LED | Visible red light | Plug, M12,<br>5-pin          | WL12G-3N2572     | 1053530  |
|                                    |                  |              |                   |                              | WL12G-3W2572     | 1053538  |
|                                    | PNP              | LED          | Infrared light    | Plug, M12,<br>5-pin          | WL12G-3P2582     | 1053536  |
|                                    |                  |              | Visible red light | Male connector<br>M12, 4-pin | WL12G-302431     | 1041457  |
|                                    |                  | PinPoint LED | Visible red light | Plug, M12,<br>5-pin          | WL12G-302431S51  | 1043879  |
|                                    |                  |              |                   |                              | WL12G-3K2572     | 1053542  |
|                                    |                  |              |                   |                              | WL12G-3P2572     | 1053535  |
|                                    |                  |              |                   |                              | WL12G-3P2572T01  | 1053546  |
|                                    |                  |              |                   |                              | WL12G-3V2572     | 1053537  |
|                                    |                  |              |                   | Male connector<br>M12, 4-pin | WL12G-3V2572S01  | 1053540  |
|                                    |                  |              |                   |                              | WL12G-3V2572S02  | 1053541  |
|                                    |                  |              |                   |                              | WL12GC-3P2472A00 | 1054087  |
|                                    |                  |              |                   |                              | WL12GC-3P2472A70 | 1067778  |
|                                    |                  |              |                   |                              | WL12GC-3P2472A71 | 1067779  |
|                                    |                  |              |                   |                              | WL12GC-3P2472A91 | 1061063  |
|                                    |                  |              |                   |                              | WL12GC-3P2472B01 | 1070335  |

- **Sensing range max.:** 0 m ... 0.8 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type            | Part no. |
|--------------|-------------------|---------------------------|-------------|-----------------|----------|
| LED          | Visible red light | Male connector M12, 4-pin | Rectangular | WL12G-3P2472S03 | 1057556  |

- **Sensing range max.:** 0 mm ... 500 mm
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** PNP, NPN

| Light source | Type of light     | Connection type  | Housing     | Type            | Part no. |
|--------------|-------------------|------------------|-------------|-----------------|----------|
| LED          | Visible red light | Plug, M12, 5-pin | Rectangular | WL12G-3B2531S52 | 1044116  |

- **Sensing range max.:** 0 m ... 500 mm
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type  | Housing     | Type            | Part no. |
|--------------|-------------------|------------------|-------------|-----------------|----------|
| PinPoint LED | Visible red light | Plug, M12, 5-pin | Rectangular | WL12G-3P3572S12 | 1053545  |

- **Sensing range max.:** 0 m ... 3 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light switching
- **Switching output:** PNP

| Light source | Type of light  | Connection type  | Housing     | Type            | Part no. |
|--------------|----------------|------------------|-------------|-----------------|----------|
| LED          | Infrared light | Plug, M12, 5-pin | Rectangular | WL12G-3P2582P04 | 1059645  |

- **Sensing range max.:** 0 m ... 4 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Switching mode:** Light switching
- **Switching output:** PNP

| Light source | Type of light  | Connection type  | Housing     | Type            | Part no. |
|--------------|----------------|------------------|-------------|-----------------|----------|
| LED          | Infrared light | Plug, M12, 5-pin | Rectangular | WL12G-3P2582S04 | 1059644  |

- **Sensing range max.:** 0 m ... 1.5 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light switching
- **Switching output:** PNP
- **Light source:** PinPoint LED
- **Type of light:** visible red light
- **Connection type:** Plug, M12, 5-pin
- **Housing:** rectangular

| Type            | Part no. |
|-----------------|----------|
| WL12G-3V2572S05 | 1069340  |
| WL12G-3V2572S07 | 1069341  |

- **Sensing range max.:** 0 mm ... 3 m
- **Functional principle:** Photoelectric retro-reflective sensor
- **Functional principle detail:** Without reflector minimum distance (autocollimation/coaxial optics)
- **Switching mode:** Light/dark switching
- **Switching output:** NPN

| Light source | Type of light     | Connection type  | Housing     | Type            | Part no. |
|--------------|-------------------|------------------|-------------|-----------------|----------|
| PinPoint LED | Visible red light | Plug, M12, 5-pin | Rectangular | WL12G-3N2502S08 | 1061751  |

- **Sensing range max.:** 30 mm ... 150 mm
- **Functional principle:** Photoelectric proximity sensor
- **Functional principle detail:** Foreground suppression
- **Switching mode:** Light/dark switching
- **Switching output:** PNP

| Light source | Type of light     | Connection type           | Housing     | Type            | Part no. |
|--------------|-------------------|---------------------------|-------------|-----------------|----------|
| LED          | Visible red light | Male connector M12, 4-pin | Rectangular | WTF12-3P2431T01 | 1041407  |

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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.

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