



# DS30-P1241

Dx30

MID RANGE DISTANCE SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type       | Part no. |
|------------|----------|
| DS30-P1241 | 1040034  |

Other models and accessories → [www.sick.com/Dx30](http://www.sick.com/Dx30)



### Detailed technical data

#### Performance

|   |  |
|---|--|
| <b>Measuring range</b>                    | 200 mm ... 2,000 mm, 6 % remission<br>200 mm ... 2,000 mm, 18 % remission<br>200 mm ... 2,000 mm, 90 % remission |
| <b>Resolution</b>                         | 10 mm, Teach resolution <sup>1)</sup>  |
| <b>Response time</b>                      | 10 ms  |
| <b>Switching frequency</b>                | 50 Hz  |
| <b>Light source</b>                       | Laser, infrared <sup>2)</sup>  |
| <b>Laser class</b>                        | 1 (EN 60825-1)   |
| <b>Typ. light spot size (distance)</b>    | 20 mm x 20 mm (at 2 m)   |
| <b>Laser service life (MTTF at 25 °C)</b> | 100,000 h  |

<sup>1)</sup> 6 % ... 90 % remission.

<sup>2)</sup> Wave length: 850 nm.

#### Interfaces

|                         |                                      |
|-------------------------|--------------------------------------|
| <b>Switching output</b> | 2 x PNP (100 mA) <sup>1) 2) 3)</sup> |
|-------------------------|--------------------------------------|

<sup>1)</sup> Output Q short-circuit protected.

<sup>2)</sup> PNP: HIGH =  $V_S - (< 2 V)$  / LOW = 0 V.

<sup>3)</sup> Complementary switching outputs (Q,  $\bar{Q}$ )

#### Mechanics/electronics

|  |                                |
|--|--------------------------------|
| <b>Supply voltage <math>V_S</math></b> | DC 10 V ... 30 V <sup>1)</sup> |
| <b>Ripple</b>                          | $\leq 5 V_{pp}$ <sup>2)</sup>  |
| <b>Warm-up time</b>                    | $\leq 5$ min                   |
| <b>Connection type</b>                 | Male connector, M12, 4-pin     |
| <b>Indication</b>                      | 2 x LED                        |
| <b>Weight</b>                          | 120 g                          |

<sup>1)</sup> Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.

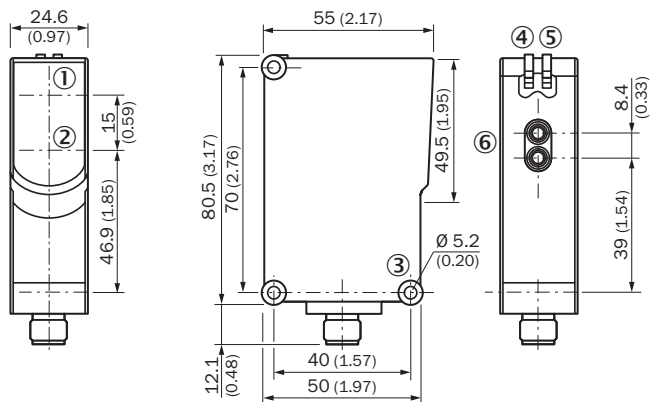
<sup>2)</sup> May not fall short of or exceed  $V_S$  tolerances.

Ambient data

|  |  |
|--|--|
| <b>Enclosure rating</b>                    | IP 65  |
| <b>Protection class</b>                    | II <sup>1)</sup>   |
| <b>Electromagnetic compatibility (EMC)</b> | EN 61000-6-2:2005-08, EN 61000-6-3:2001-10 + A11:2004-07<br>EN 60947-5-2:1998-10 + A1:1999-08 + A2:2004-02 |
| <b>Ambient temperature</b>                 | Operation: -40 °C ... +55 °C<br>Storage: -40 °C ... +75 °C   |

<sup>1)</sup> Reference voltage DC 50 V.

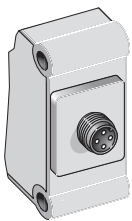
Dimensional drawing (Dimensions in mm (inch))



- ① Optical axis, sender
- ② Optical axis, receiver
- ③ Mounting hole  $\varnothing$  5.2 mm
- ④ LED indicator 1
- ⑤ LED indicator 2
- ⑥ Sensing distance adjustment: teach-in button

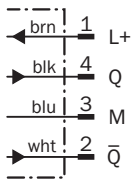
Connection type

DS30-xx241



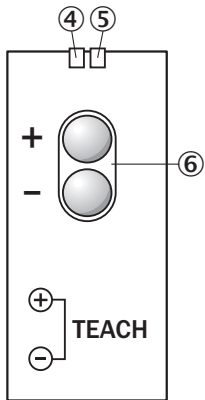
### Connection diagram

DS30-xx241



### Adjustment possible




DS30-xx241



- ④ LED indicator 1
- ⑤ LED indicator 2
- ⑥ Sensing distance adjustment: teach-in button

### Recommended accessories

Other models and accessories → [www.sick.com/Dx30](http://www.sick.com/Dx30)

|   | Brief description  | Type          | Part no. |
|---|--|---------------|----------|
| <b>Mounting brackets and mounting plates</b>  |  |               |          |
|  | Mounting bracket, steel, zinc coated, mounting hardware included                               | BEF-WN-W23    | 2019085  |
|  | Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included               | BEF-WN-W27    | 2009122  |
| <b>Plug connectors and cables</b>   |  |               |          |
|  | Head A: female connector, M12, 5-pin, straight<br>Head B: cable<br>Cable: PVC, unshielded, 2 m | DOL-1205-G02M | 6008899  |
|   | Head A: female connector, M12, 5-pin, straight<br>Head B: cable<br>Cable: PVC, unshielded, 5 m | DOL-1205-G05M | 6009868  |

|   | Brief description   | Type          | Part no. |
|---|---|---------------|----------|
|  | Head A: female connector, M12, 5-pin, straight<br>Head B: cable<br>Cable: PVC, unshielded, 10 m | DOL-1205-G10M | 6010544  |
|   | Head A: female connector, M12, 5-pin, angled<br>Head B: cable<br>Cable: PVC, unshielded, 2 m    | DOL-1205-W02M | 6008900  |
|   | Head A: female connector, M12, 5-pin, angled<br>Head B: cable<br>Cable: PVC, unshielded, 5 m    | DOL-1205-W05M | 6009869  |
|   | Head A: female connector, M12, 5-pin, angled<br>Head B: cable<br>Cable: PVC, unshielded, 10 m   | DOL-1205-W10M | 6010542  |

## 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)