





## Ordering information

Type	Part no.
DS40-N41211	1029822

Other models and accessories → [www.sick.com/DS40](http://www.sick.com/DS40)



## Detailed technical data

### Performance

<b>Measuring range</b>	80 mm ... 5,000 mm, 90 % remission <sup>1)</sup> 80 mm ... 4,000 mm, 18 % remission <sup>1)</sup> 80 mm ... 2,000 mm, 6 % remission <sup>1)</sup>
<b>Response time</b>	10 ms
<b>Switching frequency</b>	50 Hz
<b>Light source</b>	Laser, red
<b>Laser class</b>	2 (EN 60825-1)
<b>Typ. light spot size (distance)</b>	9 mm x 9 mm (at 4.5 m)
<b>Additional function</b>	Invertable switching output
<b>Average laser service life (at 25 °C)</b>	50,000 h

<sup>1)</sup> Teach-in from 200 ... 5,000 mm.

### Interfaces

<b>Switching output</b>	1 x NPN (100 mA) <sup>1)</sup>
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<sup>1)</sup> Output Q short-circuit protected.

### Mechanics/electronics

<b>Supply voltage <math>V_s</math></b>	DC 11 V ... 30 V <sup>1)</sup>
<b>Ripple</b>	$\leq 5 V_{pp}$ <sup>2)</sup>
<b>Power consumption</b>	$< 3 W$ <sup>3)</sup>
<b>Connection type</b>	Male connector, M12, 5-pin
<b>Weight</b>	202 g
<b>Enclosure rating</b>	IP 67
<b>Protection class</b>	III

<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.

<sup>3)</sup> Without load.

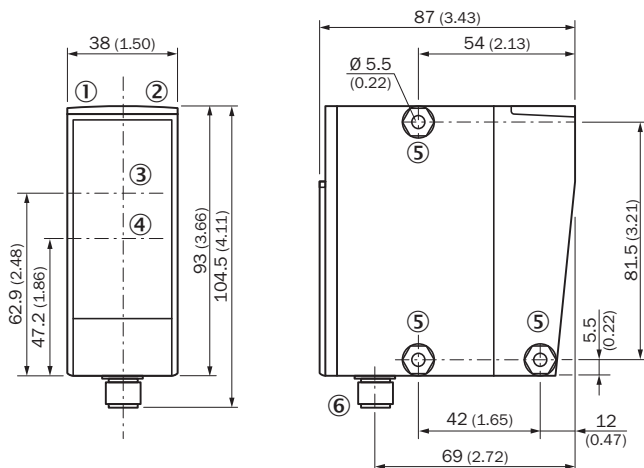
### Ambient data

<b>Electromagnetic compatibility (EMC)</b>	EN 61000-6-2 EN 60947-5-2
<b>Ambient temperature</b>	Operation: -25 °C ... +50 °C Storage: -25 °C ... +75 °C

### Classifications

<b>ECI@ss 5.0</b>	27270801
<b>ECI@ss 5.1.4</b>	27270801
<b>ECI@ss 6.0</b>	27270801
<b>ECI@ss 6.2</b>	27270801
<b>ECI@ss 7.0</b>	27270801
<b>ECI@ss 8.0</b>	27270801
<b>ECI@ss 8.1</b>	27270801
<b>ECI@ss 9.0</b>	27270801
<b>ETIM 5.0</b>	EC001825
<b>ETIM 6.0</b>	EC001825
<b>UNSPSC 16.0901</b>	41111613

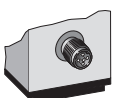
### Dimensional drawing (Dimensions in mm (inch))



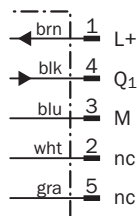
- ① Status indicator switching output (out)
- ② Operating indicator
- ③ Optical axis sender
- ④ Optical axis receiver
- ⑤ Mounting hole,  $\varnothing$  5.2 mm
- ⑥ Male connector M12, 5-pin

### Connection type

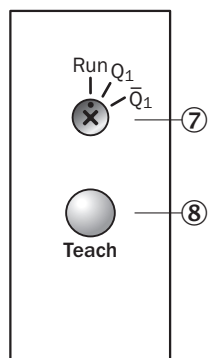
Male connector M12, 5-pin



## Connection diagram



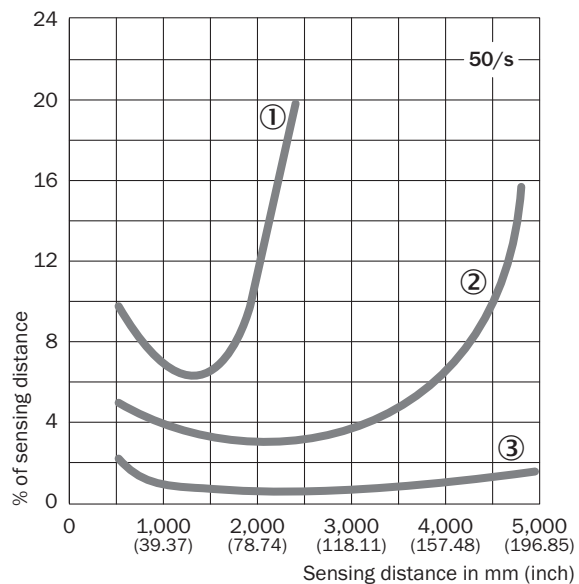
## Adjustment possible



- ⑦ Rotary switch
- ⑧ Control element

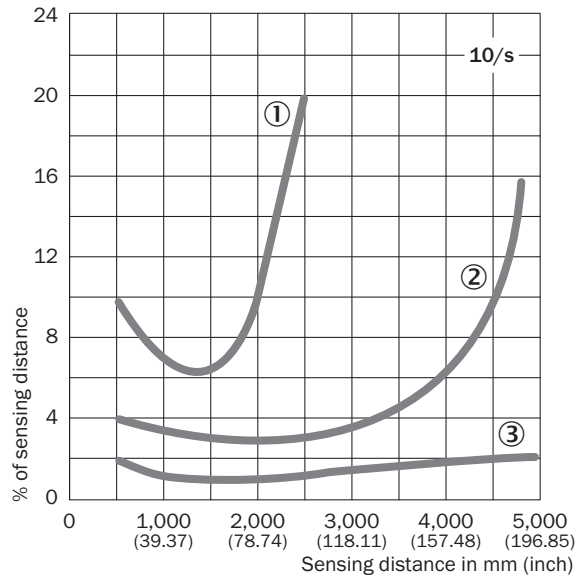
## Scanning range

Characteristic curve: sensing distance 50/s



- ① Distance change from 6 % ... 90 % remission
- ② Distance change from 18 % ... 90 % remission
- ③ Distance change from 90 % ... 90 % remission


Characteristic curve: sensing distance 10/s



- ① Distance change from 6 % ... 90 % remission
- ② Distance change from 18 % ... 90 % remission
- ③ Distance change from 90 % ... 90 % remission

### Recommended accessories

Other models and accessories → [www.sick.com/DS40](http://www.sick.com/DS40)

	Brief description	Type	Part no.
<b>Universal bar clamp systems</b>			
	Plate K for universal clamp bracket, steel, zinc coated, universal clamp and mounting hardware included	BEF-KHS-K01	2022718
<b>Mounting brackets and plates</b>			
	Mounting bracket, steel, zinc coated, without mounting hardware	BEF-WN-DS60	4032937

## 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)