



DS40-P21211

DS40

TIME-OF-FLIGHT SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	part no.
DS40-P21211	1029819

Other models and accessories → www.sick.com/DS40

Detailed technical data

Features

Measuring range	80 mm ... 5,000 mm, 90% remission factor ¹⁾ 80 mm ... 4,000 mm, 18% reflection factor ¹⁾ 80 mm ... 2,000 mm, 6% remission factor ¹⁾
Target	Natural objects
Response time	10 ms
Switching frequency	50 Hz
Light source	Laser, red
Typ. light spot size (distance)	9 mm x 9 mm (at 4.5 m)
Additional function	Invertable digital output
Average laser service life (at 25 °C)	50,000 h

¹⁾ Teach-in from 200 ... 5,000 mm.

Electronics

Supply voltage U_B	DC 11 V ... 30 V ¹⁾
Power consumption	< 3 W ²⁾
Ripple	≤ 5 V _{pp} ³⁾
Enclosure rating	IP67 (EN 60529)
Protection class	III

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

²⁾ Without load.

³⁾ May not fall short of or exceed V_S tolerances.

Mechanics

Connection type	Male connector, M12, 5-pin
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Ambient data

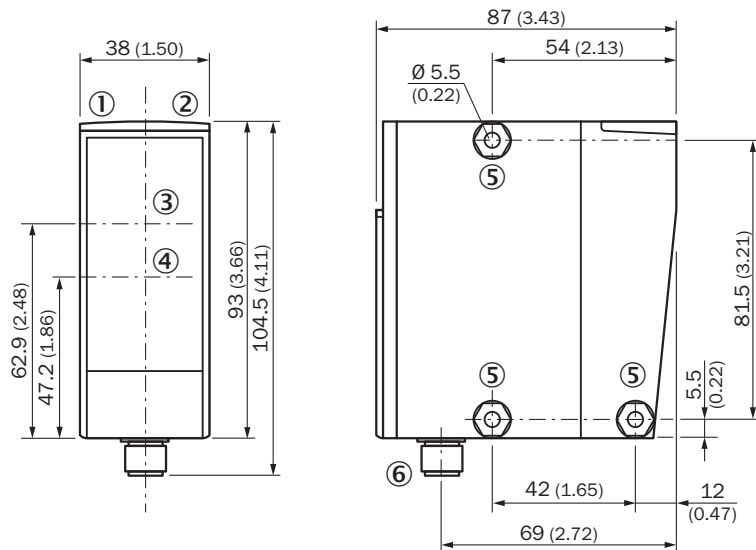
Ambient temperature, operation	-25 °C ... +50 °C
Ambient temperature, storage	-25 °C ... +75 °C
Electromagnetic compatibility (EMC)	EN 61000-6-2

EN 60947-5-2

Classifications

ECLASS 5.0	27270801
ECLASS 5.1.4	27270801
ECLASS 6.0	27270801
ECLASS 6.2	27270801
ECLASS 7.0	27270801
ECLASS 8.0	27270801
ECLASS 8.1	27270801
ECLASS 9.0	27270801
ECLASS 10.0	27270801
ECLASS 11.0	27270801
ECLASS 12.0	27270916
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825
UNSPSC 16.0901	41111613

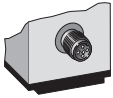
Dimensional drawing



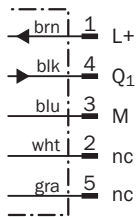
Dimensions in mm (inch)

- ① status indicator digital output (out)
- ② Operating indicator
- ③ optical axis, sender
- ④ optical axis, receiver
- ⑤ Mounting hole, Ø 5.2 mm
- ⑥ Plug, M12, 5-pin

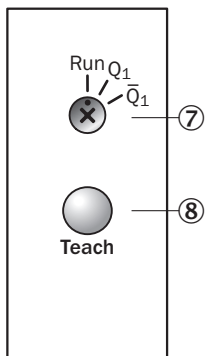
Connection type Plug, M12, 5-pin



Connection diagram

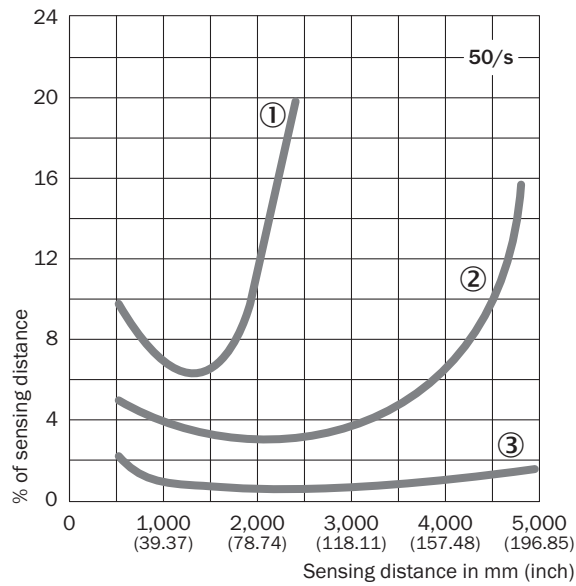


Adjustment possible



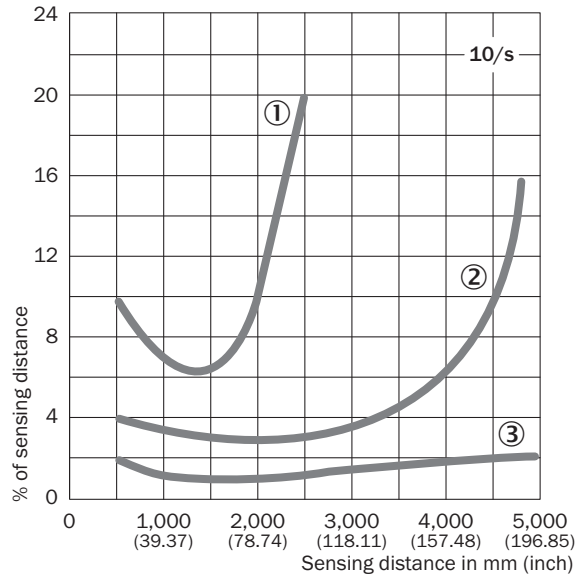
- ⑦ rotary switch
- ⑧ Control element

Characteristic curve: sensing distance 50/s



- ① distance deviation at 6% ... 90% remission factor
- ② distance deviation at 18% ... 90% remission factor
- ③ distance deviation at 90% ... 90% remission factor

Characteristic curve: sensing distance 10/s



- ① distance deviation at 6% ... 90% remission factor
- ② distance deviation at 18% ... 90% remission factor
- ③ distance deviation at 90% ... 90% remission factor

Recommended accessories

Other models and accessories → www.sick.com/DS40

	Brief description	Type	part no.
Mounting systems			
	• Description: Mounting bracket • Material: Steel • Details: Steel, zinc coated • Items supplied: Without mounting hardware	BEF-WN-DS60	4032937
	• Description: Plate K for universal clamp bracket • Material: Steel • Details: Steel, zinc coated • Items supplied: Universal clamp (2022726), mounting hardware • Usable for: W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5	BEF-KHS-K01	2022718

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