



DS50-P1112

Dx50

MID RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
DS50-P1112	1047402

Other models and accessories → www.sick.com/Dx50



Detailed technical data

Performance

Measuring range	200 mm ... 10,000 mm, 90 % remission 200 mm ... 6,000 mm, 18 % remission 200 mm ... 4,000 mm, 6 % remission
Resolution	1 mm ¹⁾
Repeatability	5 mm / 2.5 mm ^{2) 3) 4)}
Accuracy	± 10 mm ^{1) 5)}
Response time	10 ms / 50 ms ⁴⁾
Switching frequency	50 Hz / 10 Hz ⁴⁾
Light source	Laser, red
Laser class	2 (EN 60825-1) ⁶⁾
Typ. light spot size (distance)	15 mm x 15 mm (10 m)
Additional function	Set moving average: fast/slow, Set switching mode: Distance to object (DtO) / switching window (Wnd) / Object Between Sensor and Background (ObSB), teach-in, scaling and inversion of switching output, set hysteresis, Multifunctional input: laser off / external teach / deactivated, Unique measurement value, crosstalk safety, switch-off display, reset to factory default, lock user interface
Laser service life (MTTF at 25 °C)	100,000 h

¹⁾ Related to distance value on the display.

²⁾ Equivalent to 1 σ .

³⁾ 6 % ... 90 % remission.

⁴⁾ Dependent on the averaging setting: fast/slow.

⁵⁾ 90 % remission.

⁶⁾ Wavelength: 658 nm; max. output: 180 mW; pulse duration: 5 ns; duty cycle: 1/200.

Interfaces

Switching output	2 x PNP (100 mA) ^{1) 2)}
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¹⁾ Output Q short-circuit protected.

²⁾ PNP: HIGH = V_S - (< 2.5 V) / LOW = 0 V.

³⁾ Response time ≤ 60 ms.

⁴⁾ PNP: HIGH = V_S / LOW = ≤ 2.5 V.

Multifunctional input (MF)	1 x ^{3) 4)}
Hysteresis	1 mm ... 9,999 mm

- 1) Output Q short-circuit protected.
 2) PNP: HIGH = $V_S - (< 2.5 \text{ V})$ / LOW = 0 V.
 3) Response time $\leq 60 \text{ ms}$.
 4) PNP: HIGH = V_S / LOW = $\leq 2.5 \text{ V}$.

Mechanics/electronics

Supply voltage V_S	DC 10 V ... 30 V ¹⁾
Ripple	$\leq 5 \text{ V}_{pp}$ ²⁾
Power consumption	$\leq 1.85 \text{ W}$ ³⁾
Initialization time	$\leq 350 \text{ ms}$
Warm-up time	$\leq 15 \text{ min}$
Housing material	Housing zinc die cast (ZNAL4CU1) Acrylic glass (PMMA)
Connection type	Male connector, M12, 5-pin
Indication	LC display, 2 x LED
Weight	200 g

- 1) Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
 2) May not fall short of or exceed V_S tolerances.
 3) Without load.

Ambient data

Enclosure rating	IP 65
Protection class	III
Ambient temperature	Operation: $-30 \text{ }^\circ\text{C} \dots +65 \text{ }^\circ\text{C}$ Storage: $-40 \text{ }^\circ\text{C} \dots +75 \text{ }^\circ\text{C}$
Max. rel. humidity (not condensing)	$\leq 95 \%$
Typ. Ambient light immunity	40 klx
Vibration resistance	EN 60068-2-6 / EN 60068-2-64
Shock resistance	EN 60068-2-27

[illegible]

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A diagram of a five-strand braid. The strands are numbered 1 to 5 from top to bottom. Strand 1 is brown and labeled L+. Strand 2 is white and labeled Q₂. Strand 3 is blue and labeled M. Strand 4 is black and labeled Q₁. Strand 5 is gray and labeled MF ①. The braid consists of several crossings between these strands.

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Subject to change without notice

Recommended accessories

Other models and accessories → www.sick.com/Dx50

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: PVC, unshielded, 2 m	DOL-1205-G02M	6008899
	Head A: female connector, M12, 5-pin, straight Head B: cable Cable: drag chain use, PUR, halogen-free, unshielded, 2 m	DOL-1205-G02MC	6025906
	Head A: female connector, M12, 5-pin, angled Head B: cable Cable: PVC, unshielded, 2 m	DOL-1205-W02M	6008900

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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:

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