ONLINE DATA SHEET

DT50-P1113

Dx50

MID RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.

Ordering information

Model name	Part no.
DT50-P1113	1044369

Other models and accessories ➜ www.sick.de/Dx50

Detailed technical data

Performance

Measuring range	200 mm ... 10.000 mm, 90 % remision 200 mm ... 6.500 mm, 18 % remission 200 mm ... 4.000 mm, 6 % remission
Resolution	1 mm
Repeatability	5 mm / 2.5 mm [1) 2) 3)]
Accuracy	± 10 mm [4)]
Response time	20 ms / 30 ms [3) 5)]
Output time	≥ 4 ms [6)]
Light source	Laser, red
Laser class	2 (EN 60825-1) [7)]
Typ. light spot size (distance)	15 mm x 15 mm (10 m)
Additional function	Set moving average: fast/slow, switching mode: distance to object (DtO), teach-in, scaling and inversion of switching output, set hysteresis, teach-in, scaling and inversion of analog output, Multifunctional input: laser off / external teach / deactivated, switch-off display, reset to factory default, lock user interface
Laser service life (MTTF at 25 °C)	100.000 h

1) Equivalent to 1 σ.
2) 6 % ... 90 % remission.
3) Dependent on the set average: fast/slow.
4) 90 % remision.
5) Lateral entry of object into measuring range.
6) Continuous change of distance in measuring range.
7) Wavelength: 658 nm; max. output: 180 mW; pulse duration: 5 ns; pulse repetition rate: 1/200.

Interfaces

Analog output	1 x 4 mA ... 20 mA (≤ 300 Ω)

1) Output Q short-circuit protected.
2) PNP: HIGH = V_S - (< 2.5 V) / LOW = 0 V.
3) Response time ≤ 15ms.
4) PNP: HIGH = V_S / LOW = ≤ 2.5 V.

Resolution analog output	16 bit
Switching output	1 x PNP (100 mA) [1) 2)]
Multifunctional input (MF)	1 x [3) 4)]
Hysteresis	10 mm ... 1.000 mm

[1)] Output Q short-circuit protected.
[2)] PNP: HIGH = V_S - (< 2.5 V) / LOW = 0 V.
[3)] Response time ≤ 15ms.
[4)] PNP: HIGH = V_S / LOW = ≤ 2.5 V.

Mechanics/electronics

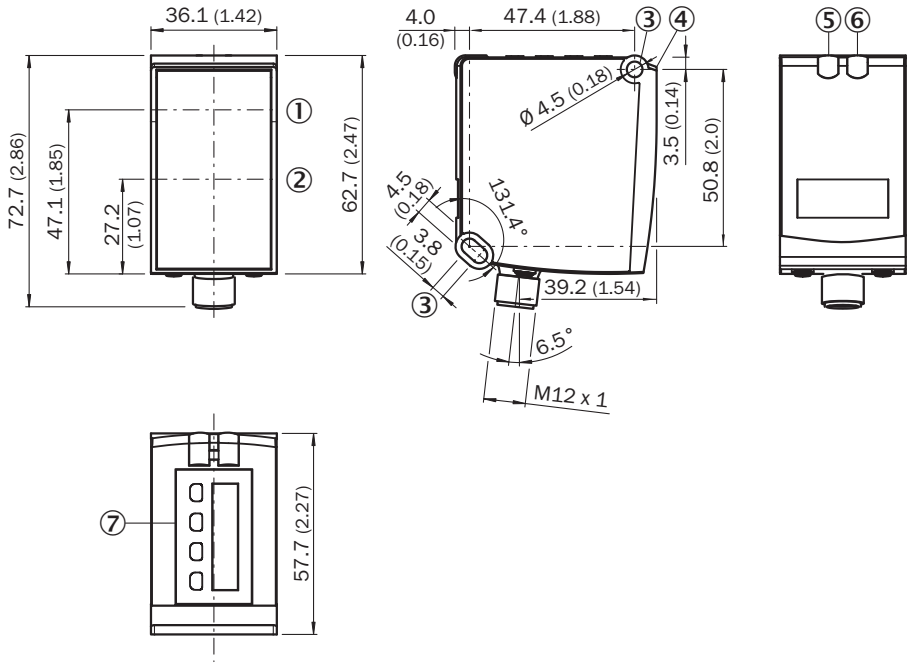
Supply voltage V_s	DC 10 V ... 30 V [1) 2)]
Ripple	≤ 5 V_{pp} [3)]
Power consumption	≤ 2,1 W [4)]
Initialization time	≤ 250 ms
Warm-up time	≤ 15 min
Housing material	Die-cast zinc housing (ZNAL4CU1) Acrylic glass (PMMA)
Connection type	Male connector, M12, 5-pin
Indication	LC display, 2 x LED
Weight	200 g

[1)] Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A.
[2)] For DT50-xxxx4: V_S > 15 V.
[3)] May not fall short of or exceed V_S tolerances.
[4)] Without load.

Ambient data

Enclosure rating	IP 65
Protection class	III
Ambient temperature	Operation: –30 °C ... +65 °C Storage: –40 °C ... +75 °C
Max. rel. humidity (not condensing)	≤ 95 %
Typ. ambient light safety	40 klx
Vibration resistance	EN 60068-2-6 / EN 60068-2-64
Shock resistance	EN 60068-2-27

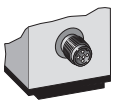
Dimensional drawing (Dimensions in mm (inch))



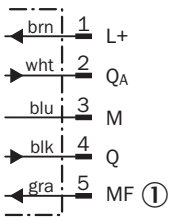
① Optical axis sender
② Optical axis receiver
③ Mounting hole
④ Reference surface = 0 mm
⑤ Status indicator swichting output Q_1 (orange)
⑥ DT50/DT50 Hi/DL50: status indicator power on (green), DS50/DL50 Hi: status indicator switching output Q_2 (orange)
⑦ Operating keys and display

Connection type

Connector M12, 5-pin



Connection diagram



① Multifunctional input (MF)

Recommended accessories

Other models and accessories ➜ www.sick.de/Dx50

	Brief description	Model name	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
	Head A: female connector, M12, 5-pin, angled Head B: Cable Cable: drag chain use, PUR, halogen-free, unshielded, 2 m	DOL-1205-W02MC	6025909
	Head A: female connector, M12, 5-pin, angled, A-coded Head B: Cable Cable: HIPERFACE®, drag chain use, PUR, halogen-free, shielded, 5 m	DOL-1205-W05MAC	6041751

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