ONLINE DATA SHEET



DT50-P1113

Dx50

MID RANGE DISTANCE SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	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 % remission 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 % remission.
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

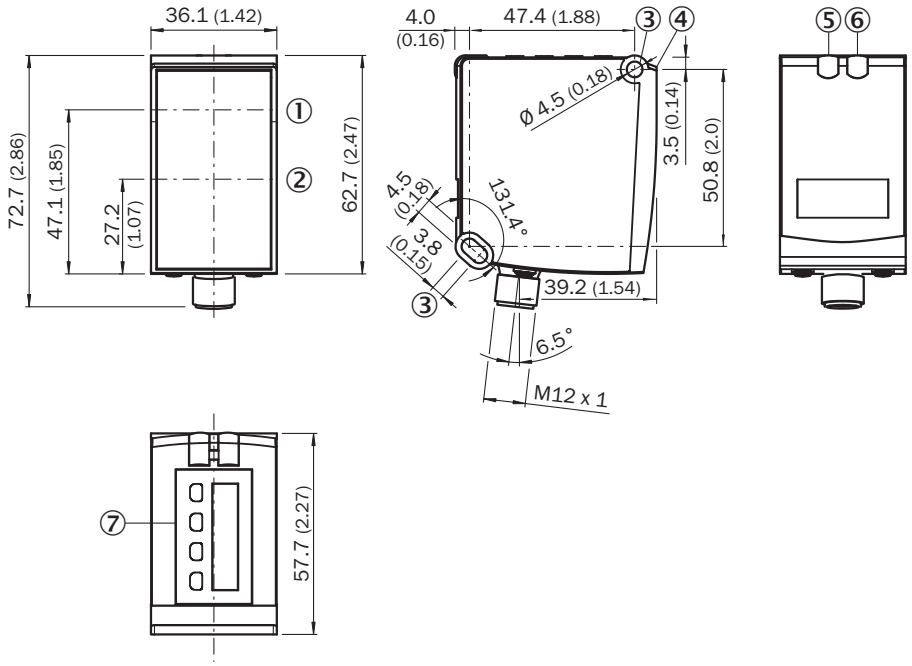
Supply voltage V_s	DC 10 V ... 30 V [1) 2)]
Ripple	≤ 5 V_{pp} [3)]
Power consumption	≤ 2.1 W [4)]
Initialization time	≤ 250 ms
Warm-up time	≤ 15 min
Housing material	Die-cast zinc housing (ZNAL4CU1) Acrylic glass (PMMA)
Connection type	Male connector, M12, 5-pin
Indication	LC display, 2 x LED
Weight	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 immunity	40 klx
Vibration resistance	EN 60068-2-6 / EN 60068-2-64
Shock resistance	EN 60068-2-27

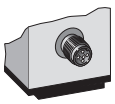
Dimensional drawing (dimensions in mm (inch))



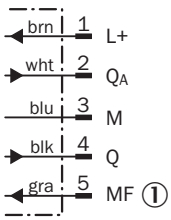
① Optical axis sender
② Optical axis receiver
③ Mounting hole
④ Reference surface = 0 mm
⑤ Status indicator swichting output Q_1 (orange)
⑥ DT50/DT50 Hi/DL50: status indicator power on (green), DS50/DL50 Hi: status indicator switching output Q_2 (orange)
⑦ Operating keys and display

Connection type

Connector M12, 5-pin



Connection diagram



① Multifunctional input (MF)

Recommended accessories

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

	Brief description	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
	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

USmod 4c int43

Australia
Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg
Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil
Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada
Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika
Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China
Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark
Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland
Phone +49 211 5301-301
E-Mail info@sick.de

España
Phone +34 93 480 31 00
E-Mail info@sick.es

France
Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain
Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India
Phone +91–22–4033 8333
E-Mail info@sick-india.com

Israel
Phone +972-4-6801000
E-Mail info@sick-sensors.com

Italia
Phone +39 02 27 43 41
E-Mail info@sick.it

Japan
Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország
Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland
Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge
Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich
Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska
Phone +48 22 837 40 50
E-Mail info@sick.pl

România
Phone +40 356 171 120
E-Mail office@sick.ro

Russia
Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz
Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore
Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija
Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa
Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea
Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi
Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige
Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan
Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Türkiye
Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates
Phone +971 (0) 4 8865 878
E-Mail info@sick.ae

USA/México
Phone +1(952) 941-6780
1 800-325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at **www.sick.com**

SICK
Sensor Intelligence.