



Mid range distance sensors Dx50, DL50 Hi

DL50-P2225



Model Name > [DL50-P2225](#)
Part No. > [1048418](#)

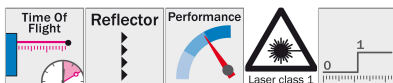


At a glance

- HDDM™ technology provides the best reliability, safety to ambient light and price/performance ratio
- Up to 50 m range on diamond grade reflector
- World's smallest sensor for high precision positioning with SSI or RS-422 interfaces
- Highest repeatability in its class, with 0.5 mm
- Fast output rate - an updated value every 2.5 ms
- Immune to cross talk for use with multiple sensors
- Superior background suppression

Your benefits

- Precise positioning enables greater speed and accuracy, which increases throughput
- Highest performance at reasonable investment costs guarantee a short return on investment
- Immune to any type of ambient light - allows for use in optically challenging environments
- Widest temperature range allows for outdoor use without additional cooling or heating accessories
- SSI or RS-422 interfaces allow a fast and easy integration into any control or positioning application
- Red light and an optional alignment bracket reduces installation time
- Metal housing withstands harsh environments, saving replacement costs
- World's smallest sensor for high precision positioning for use in applications with limited space



CE   **CDRH RS-422**

Performance

Measurement range ¹⁾ :	200 mm ... 50,000 mm, on reflective tape "Diamond Grade"
Resolution:	0.1 mm
Repeatability ²⁾ ; ³⁾ ; ⁴⁾ :	0.5 mm/0.3 mm/0.25 mm
Accuracy ⁵⁾ :	± 3 mm
Response time ⁶⁾ ; ⁷⁾ :	10 ms/40 ms/160 ms
Light source:	Laser, red
Typ. light spot size (distance):	15 mm x 15 mm (10 m)

Additional function:	Switch-off display Unique measurement value Set moving average fast/medium/slow Set hysteresis Set parity check: none; even; odd Crosstalk safety Switching mode: distance to object (DtO) Serial data output: continuous, on request Lock user interface Reset to factory default Set data transmission rate: 19,200, 38,400, 57,600, 115,200 bps Teach-in, scaling and inversion of switching output Multifunctional in- and output: laser off, external teach, switching output 2, inactive
Laser class:	1 (EN 60825-1) ⁸⁾
Laser service life (MTTF at 25 °C):	100,000 h
Output time ^{9), 10)} :	2.5 ms

¹⁾ On reflective tape "Diamond Grade" ²⁾ Equivalent to 1 σ ^{3) 6)} Dependent on the set average: fast/medium/slow ⁴⁾ Typical value ⁵⁾ 200 mm ... 4,000 mm: $\leq \pm 5$ mm ⁷⁾ Lateral entry of object into measuring range ⁸⁾ Wavelength: 658 nm; max. output: 80 mW; pulse duration: 2.5 ns; pulse repetition rate: 1/240 ⁹⁾ For baud rate 115,200 bps ¹⁰⁾ Continuous change of distance in measuring range

Interfaces

Output type ^{1), 2), 3)} :	2 x / 1 x PNP (100 mA)
Hysteresis:	1 mm ... 1,000 mm
Data interface:	RS-422
Multifunctional input (MF) ^{4), 5), 6)} :	- / 1 x

¹⁾ Output Q short-circuit protected ²⁾ PNP: HIGH = V_S - (< 2.5 V) / LOW = 0 V ^{3) 4)} Dependent on the set function MF: switching output 2 / laser off, external teach ⁵⁾
 Response time ≤ 60 ms ⁶⁾ PNP: HIGH = V_S / LOW = ≤ 2.5 V

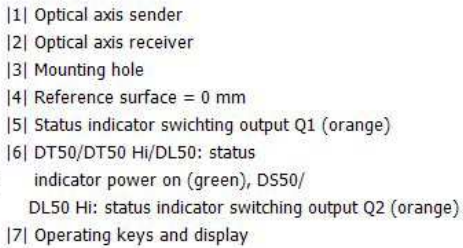
Mechanics/electronics

Supply voltage V_S ¹⁾ :	DC 10 V ... 30 V
Ripple ²⁾ :	≤ 5 Vpp
Power consumption ³⁾ :	≤ 2.1 W
Initialization time:	≤ 250 ms
Warm-up time:	≤ 15 min
Housing material:	Die-cast zinc housing (ZNAL4CU1) acrylic glass (PMMA)
Connection type:	Male connector, M12, 8-pin
Indication:	2 x LED, LC display
Weight:	200 g

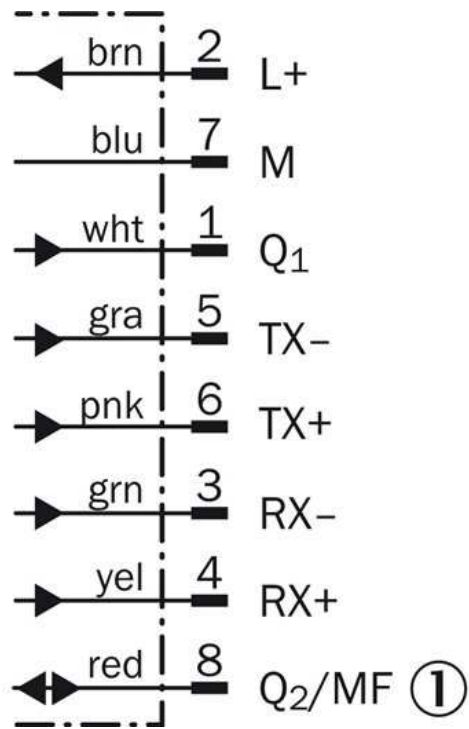
¹⁾ Limit values, reverse-polarity protected, operation in short-circuit protected network: max. 8 A ²⁾ May not fall short of or exceed V_S tolerances ³⁾ Without load

Ambient data

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



Connection diagram



[1] Multifunctional in- and output

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 +972-4-6881000
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 88 65 878
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