



Long range distance sensors Dx100, DL100

DL100-12HA2102



Model Name > **DL100-12HA2102**
Part No. > **1059966**



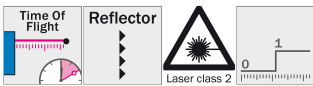
Illustration may differ

At a glance

- Measuring range up to 220 m (dependent on type)
- Numerous fieldbus interfaces
- Pre-failure notification and diagnostic data available
- Display with intuitive menu structure and clearly visible status LEDs
- Small, rugged metal housing
- 3-axis alignment bracket with quick-lock system as accessory available
- Elongated holes for zero point adjustment when replacing devices

Your benefits

- 100,000 hours of laser service life ensures that the sensor will have a long, useful life with maximum reliability
- Versions with integrated heating enable reliable use at ambient temperatures at up to -40°C. The TPCC cooling housing, available as an option, enables use at up to +75°C
- The numerous interfaces offer a high degree of flexibility as well as rapid communication for maximum productivity
- Pre-failure notification and diagnostic data for maximum plant availability
- Small, rugged metal housing with SpeedCon™ compatible connectors ensures smooth handling - even in confined spaces
- Alignment bracket with quick lock system ensures fast alignment and easy device replacement, reducing maintenance and mounting costs



Performance

Measurement range:	0.15 m ... 130 m, On reflective tape "Diamond Grade"
Resolution:	0.1 mm, 0.125 mm, 1 mm, 10 mm, 100 mm
Repeatability ¹⁾ :	2 mm (at dead time 10 ms), 1 mm (at dead time 30 ms)
Accuracy ²⁾ :	± 4 mm
Light source ³⁾ :	Laser, red
Typ. light spot size (distance):	5 mm (+ 2 mm x distance in m)
Internal measurement cycle:	1 ms
Max. movement speed:	30 m/s
Laser class:	2 (EN 60825-1/CDRH)
Output time:	Synchronous to PLC request (dependent on interfaces)

¹⁾ Statistical error 1 σ, environmental conditions constant, depending on operating mode ²⁾ From 150 mm ... 180 mm measuring range the accuracy can reach ± 4 mm

³⁾ Average service life of 100,000 h at T_A = +25 °C

Interfaces

Data interface:	PROFIBUS DP
Output type ¹⁾ :	B (push/pull) MF1, MF2
Multifunctional input (MF) ²⁾ :	1 x MF1

¹⁾ HIGH > V_S - 3 V / LOW < 2 V ²⁾ HIGH > 12 V / LOW < 3 V

Mechanics/electronics

Supply voltage V _s :	DC 18 V ... 30 V, limit values
Ripple ¹⁾ :	5 V _{pp}
Initialization time ²⁾ :	Typ. 1.5 s
Indication:	6 digit 5 x 7 dot matrix display, LEDs
Weight ³⁾ :	Ca. 800 g ... 1,600 g
Output current I _A ⁴⁾ :	≤ 100 mA
Power consumption:	At 24 V DC < 1,000 mA
Connection type:	Male connector, M12, SPEEDCON™ compatible
Housing material:	Aluminum/zinc die-cast
Modulation frequency:	Fix

¹⁾ May not fall short of or exceed V_S tolerances ²⁾ After loss of reflector < 40 ms ³⁾ Without mounting bracket: approx. 800 g, with mounting bracket: approx. 1,600 g

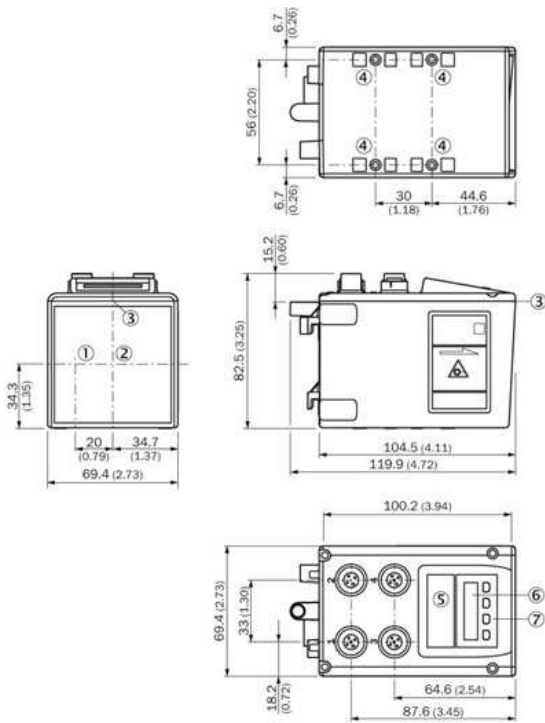
⁴⁾ Short circuit/overload protected. Max. 100 nF/20 mH

Ambient data

Enclosure rating:	IP 65
Protection class:	III
Effect of air pressure:	0.3 ppm/hPa
Effect of air temperature:	1 ppm/K
Temperature drift:	Typ. 0.1 mm/K
Ambient temperature ¹⁾ :	Operation with cooling case: -40 ... +75 °C Storage: -40 ... +75 °C Operation with heating: -40 ... +55 °C
Mechanical load:	Noise: EN 600 68-2-64 Shock: EN 600 68-2-27 Sine: EN 600 68-2-6
Electromagnetic compatibility (EMC) ²⁾ :	EN 61000-6-2/EN 61000-6-4

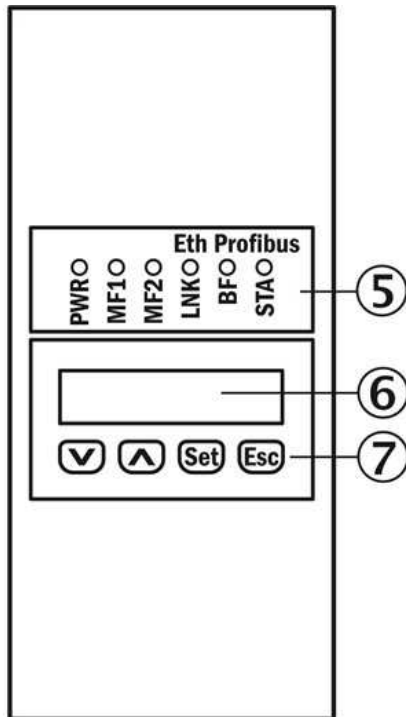
¹⁾ Temperatures < -10 °C require warm-up time of typ. 7 minutes. ²⁾ This is a Class A device. This device can cause radio interference in living quarters.

Dimensional drawing



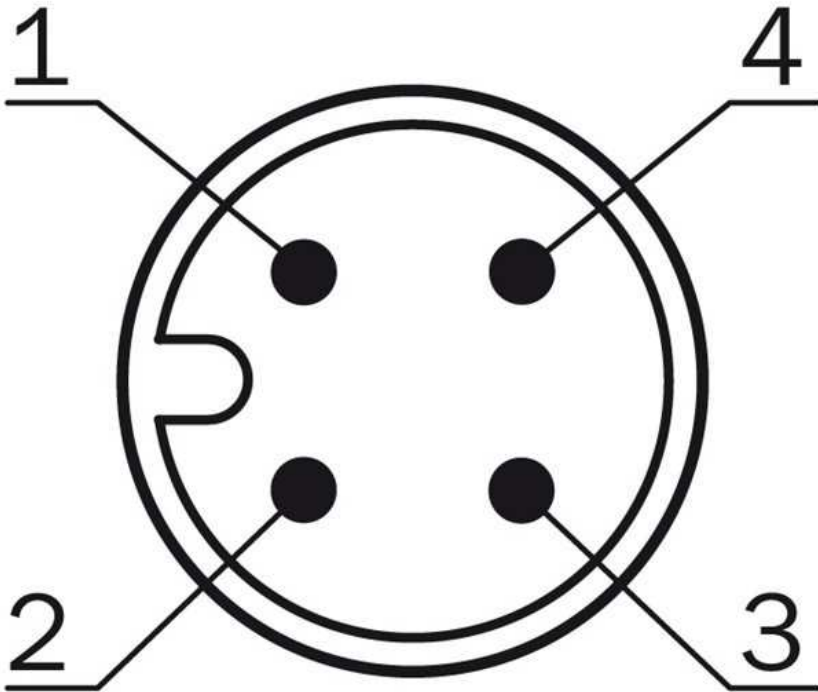
- |1| Optical axis, sender
- |2| Optical axis, receiver
- |3| Zero level
- |4| Threaded mounting hole M5
- |5| Status LED [status]
- |6| Display
- |7| Control elements

Adjustment possible

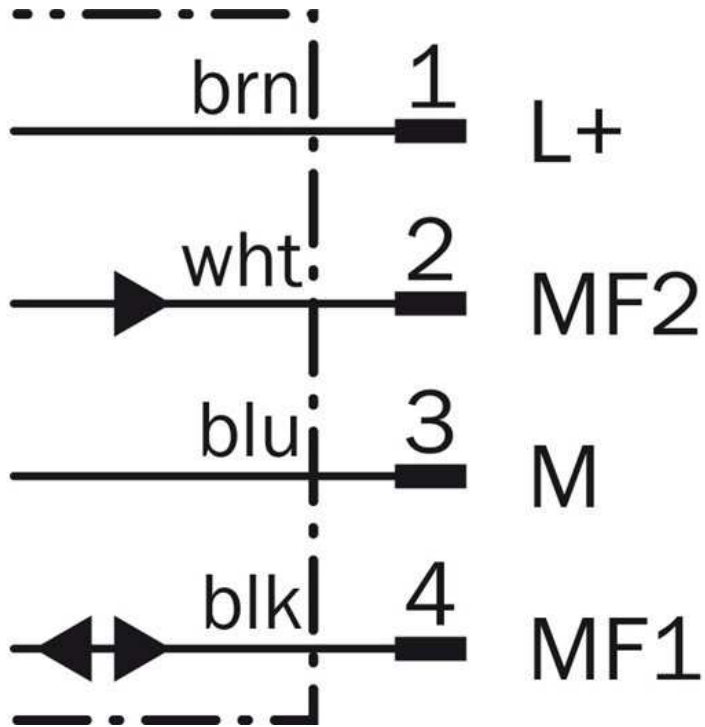


- |5| Status LED [status]
- |6| Display
- |7| Control elements

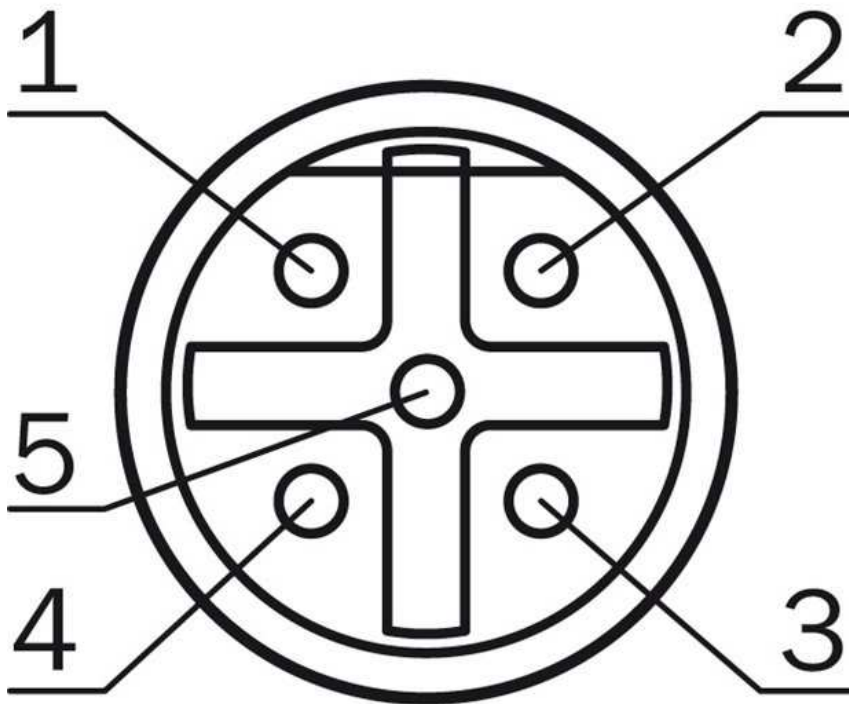
Connection type supply voltage



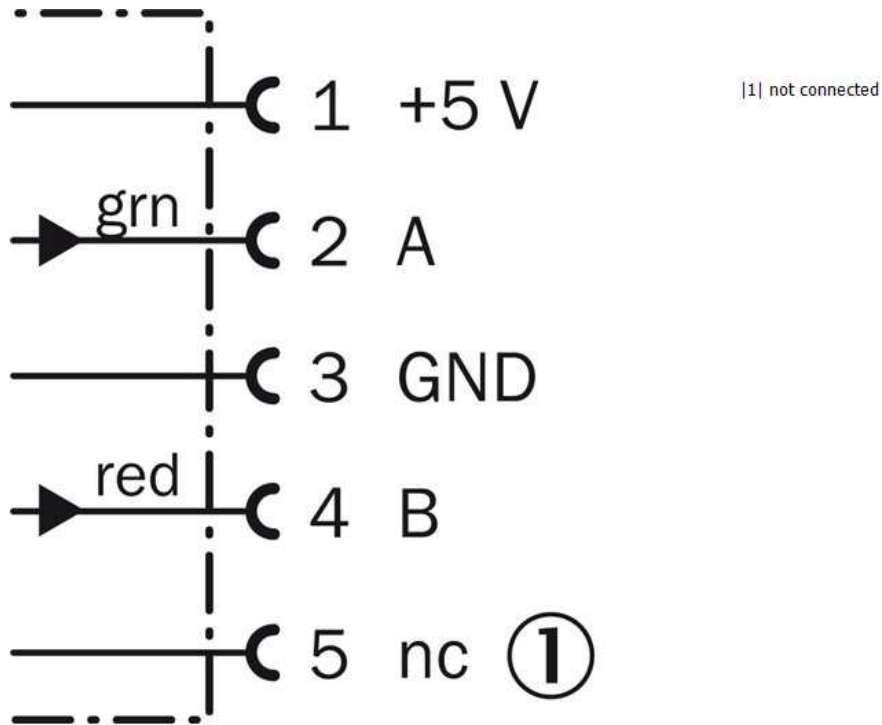
Connection diagram power supply



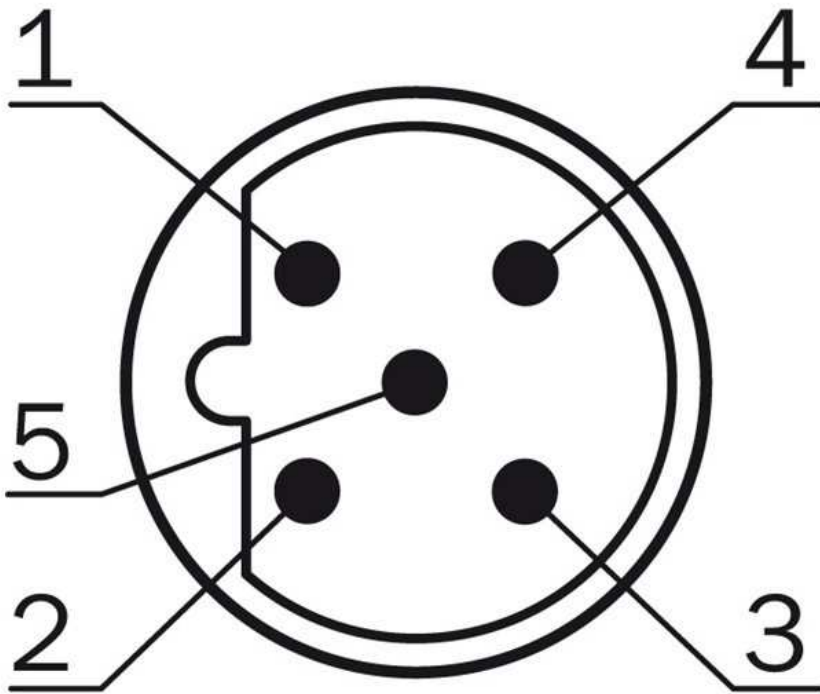
Connection type PROFIBUS OUT



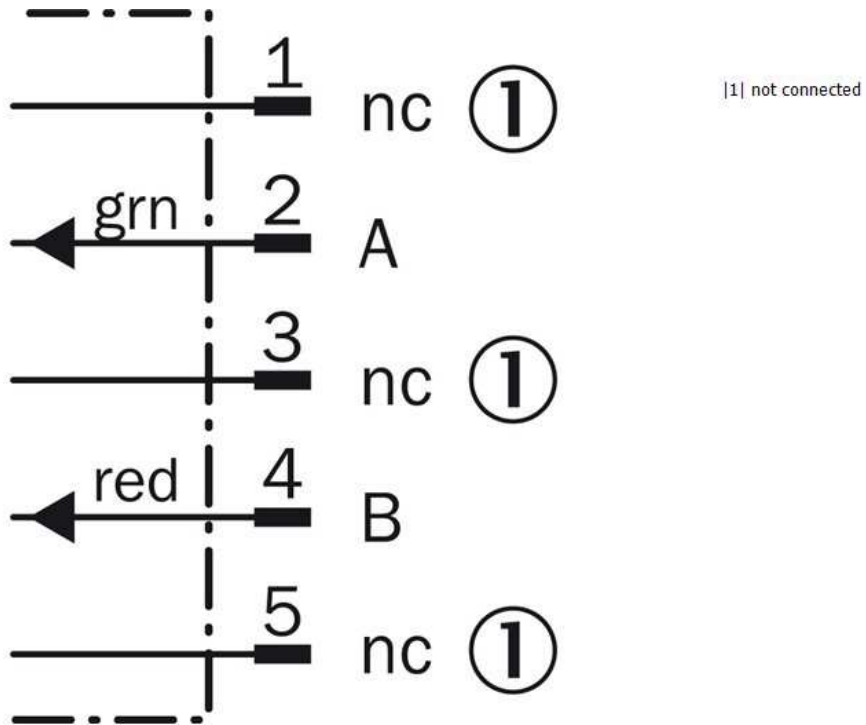
Connection diagram PROFIBUS OUT



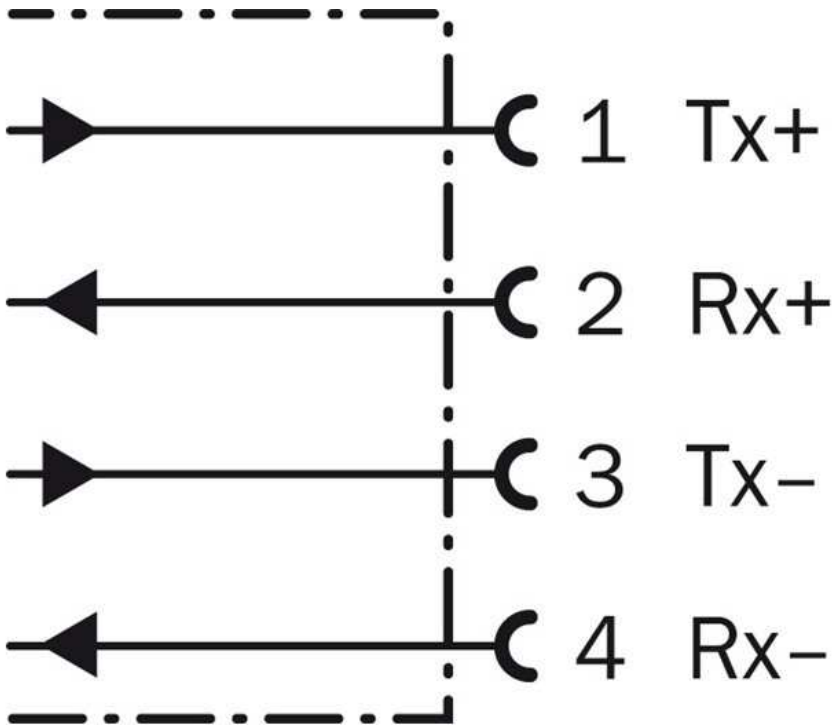
Connection type PROFIBUS IN



Connection diagramm PROFIBUS IN



Connection diagram Ethernet



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