LASER
DISTANCE
SENSORS

LAT-52/ LVHT-52
WITH IO-LINK

di-soric

LASER DISTANCE SENSORS
LAT-52 COMPACT WITH IO-LINK

FOR MEASURING APPLICATIONS
3 DIFFERENT MEASURING RANGES IN IDENTICAL DESIGN

For decades, di-soric has been developing distance sensors that set new standards. And now, di-soric is introducing the laser distance sensors with innovative dual operating concept - either via IO-Link or via manual adjustment using an operating panel. With IO-Link, specific settings can be configured, stored in the IO-Link master and reloaded as needed - even with a swapped device.

3 measuring ranges available:

- High resolution: 30 – 80 mm / 0.01 mm resolution*
- Short distance: 50 – 200 mm / 0.01 mm resolution*
- Universal: 50 – 500 mm / 0.1 mm resolution*

Precise, fast and safe

thanks to perfectly coordinated components that make optimal use of the triangulation method and thanks to use of a laser from the hazard-free Laser Class 1 according to EN 60825-1

Universal:

- Analog current and voltage output in one device
- pnp or npn function in one device

Ready-to-run

3 preconfigured sensor modes:
- Standard: for a wide variety of applications
- Power: For dark objects
- Speed: quick measurement

IO-Link

- Digital, loss-free transmission of measured values
- Diagnostic functions
- Identification
- Localization function
- Average and median filter
- IO-Link relative measurement

Robust design

- Metal plug connector
- Powder-coated die-cast zinc housing with IP67

Backwards compatible

with previous di-soric LAT 51 models in terms of design and M12 connection
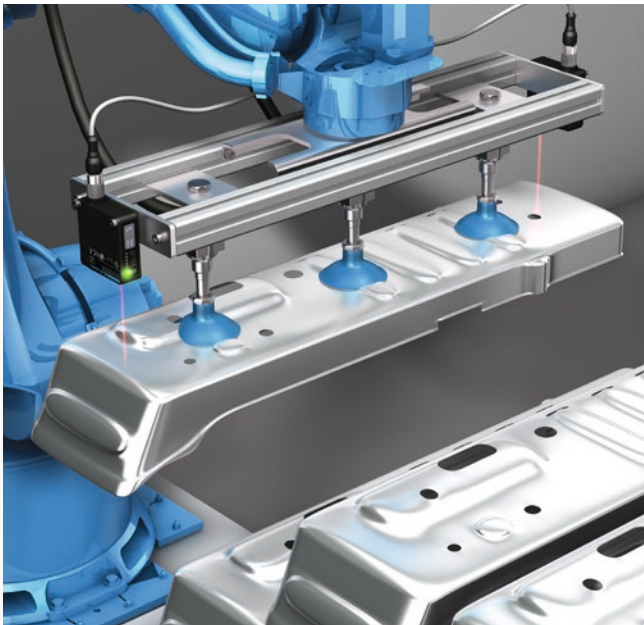
Very easy operation

- Large, easy-to-operate keys
- Important functions can be operated intuitively
- 3 readily visible diagnostic LEDs

- Teach analog output
- Teach switching output
- NO/NC changeover
- Current/voltage switchable
- Selection of sensor mode

LASER CLASS 1

IO-Link

* Resolution IO-Link interface

FAST AND EXTREMELY PRECISE:
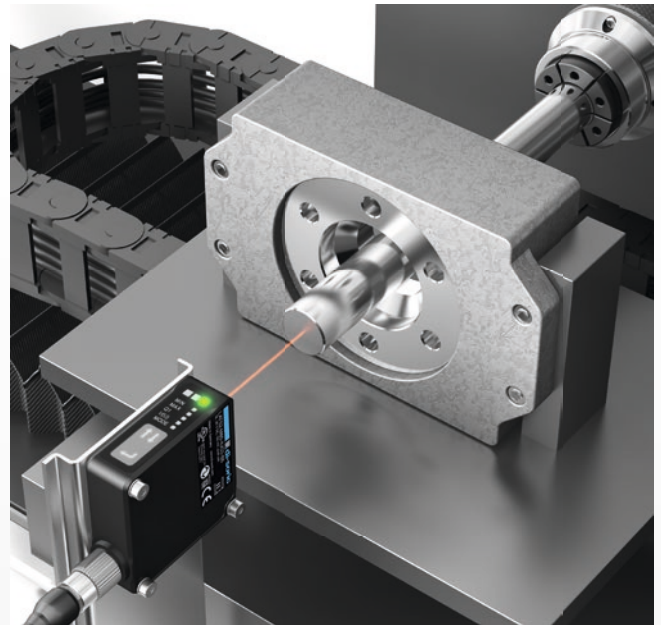# PRECISE MEASUREMENT WITH LAT-52

MORE FLEXIBLE, FASTER, MORE PRECISE, SIMPLER -
3 DIFFERENT MEASURING RANGES WITH SMALL BLIND RANGES

The three measuring ranges in the variants High-resolution, Short distance and Universal allow for implementation of an extremely wide variety of applications. Due to the small blind ranges, the LAT-52 can be integrated into machines with little installation space Three selectable sensor modes and additional filters ensure precise and optimal measurement results.

Sheet transport using robots

The LAT52-M500 units control the suction gripper of the robot The speed is adapted to the working distance with simultaneous collision avoidance, and thus the entire gripping process is time-optimized.

Position tappet

In an assembly process, the impression depth must be determined with high precision. The high-resolution variant LAT52-M80 with a measuring range starting at 30mm ensures space-saving installation.

SAFE FUNCTION IN PERFORMING APPLICATIONS –
LAT-52 WITH IO-LINK.

3 SENSOR MODES AND FILTER FUNCTIONS

Standard
- Standard setting for many applications
- Measuring rate: 500 Hz – 750 Hz – 1000 Hz*

Speed
- Quick measurement with 1200 Hz

Power
- Safe detection of dark objects

Filters
- Average and median filters for optimization of measurement

QUALITATIVE AND QUANTITATIVE DIAGNOSTICS
- Signal quality with diagnostic LED and IO-Link, device status (qualitative)
- Current process values, min/max, teaching, switching point, object reflectivity, operating hours (quantitative)
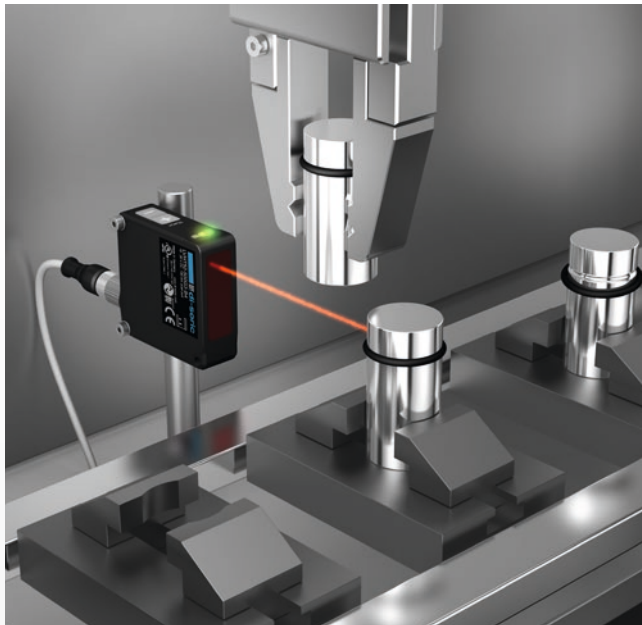
EASY MAINTENANCE
- Device swapping without manual intervention or specialized knowledge thanks to IO-Link 1.1 with data storage in the master
- Smart Sensor Profile – Fully compliant with standards

* Exemplary values LAT52-M500-IUG3-B5 – LAT52-M200-IUG3-B5 – LAT52-M80-IUG3-B5 in factory setting: Sensor mode Standard

THE SWITCHING ALTERNATIVE WITH IO-LINK
PRECISE DETECTION WITH LVHT-52

THE LASER LIGHT BUTTON WITH WINDOW FUNCTION AND A WORKING RANGE OF 50 - 500 MM

The LVHT-52 features a large detection range and a precisely adjustable window mode. This makes it a very efficient solution for applications that are meant to have a high degree of precision in switching but not measuring. Its extremely intuitive adjustment via the plus/minus keys ensures fast commissioning.

Precise and safe

- Perfectly coordinated components
- Safe thanks to laser class 1

Very easy operation

- Large, easy-to-operate keys
- Important functions can be operated intuitively
- 3 diagnostic LEDs
- Teach object detection
- Teach windows
- Adaptation of switching point
- NO/NC changeover

Presence check for O-ring

The LVHT-52 is versatile thanks its large detection range and safely detects the presence of an O-ring via the switching point precisely taught with the plus/minus keys.

Robust design

- Metal plug connector
- Powder-coated die-cast zinc housing with IP67
- Compatible with LVHT-51 and standard fastening options

Push-pull output

pnp or npn function in one device

IO-Link

- Switching point and hysteresis can be set down to the millimeter
- Diagnostic functions
- Identification
- Localization function

LVHT52-500G3-B4
18...30 V DC, 100 mA, push_pull
Made in Germany
www.di-soric.com
di-soric

IO-Link

LASER CLASS 1

c UL us LISTED

TECHNICAL DATA
LAT-52/ LVHT-52 WITH IO-LINK

	High resolution: LAT52- M80-IUG3-B5	Short distance: LAT52- M200-IUG3-B5	Universal: LAT52- M500-IUG3-B5	Universal: LVHT52- 500G3-B4
Housing dimensions H / W / D	51 / 51 / 17 mm	51 / 51 / 17 mm	51 / 51 / 17 mm	51 / 51 / 17 mm
Range	30 to 80 mm	50 to 200 mm	50 to 500 mm	50 to 500 mm
Resolution IO-Link	0.01 mm	0.01 mm	0.1 mm	0.1 mm
Resolution[1]	0.01 mm	0.02 mm (50 to 100 mm) 0.05 mm (100 to 200 mm)	0.3 mm (50 to 300 mm) 0.5 mm (300 to 500 mm)	0.3 mm (50 to 300 mm) 0.5 mm (300 to 500 mm)
Reproducibility[1]	0.02 mm	0.05 mm (50 to 100 mm) 0.1 mm (100 to 200 mm)	0.5 mm (50 to 300 mm) 1 mm (300 to 500 mm)	0.5 mm (50 to 300 mm) 1 mm (300 to 500 mm)
Linearity error[1]	± 0.05 mm	± 0.1 mm (50 to 100 mm) ± 0.2 mm (100 to 200 mm)	± 1 mm (50 to 300 mm) ± 2 mm (300 to 500 mm)	–
Measuring frequency	1000 Hz (max. 1200 Hz)[2]	750 Hz (max. 1200 Hz)[2]	500 Hz (max. 1200 Hz)[2]	
Switching frequency				100 Hz (max. 600 Hz)[2]
Switching output	Push-pull/pnp/npn adjustable via IO-Link, 100 mA, NO/NC (switchable via operating panel or IO-Link)			
Analog output	Current/voltage			–
Interface	IO-Link V1.1, COM 2 | Smart Sensor Profile			
Adjustment Scanning range	Using an operating panel or IO-Link			using ➕ ➖ -keys or via IO-Link
Sensor modes	**Standard:** General applications **Speed:** Quick measurement (measuring rate 1200 Hz) **Power:** For dark objects			
Filters	**Average, median** – For optimization of measurement			
Laser class	Laser class 1 according to EN60825-1			
Protection type/class	IP67 / III			
Plug connector	M12, 5-pin			M12, 4-pin

[1]Sensor mode: Standard, average 16
[2]In sensor mode Speed without filter

SOLUTIONS. CLEVER. PRACTICAL.

di-soric Headquarters

Germany: di-soric GmbH & Co. KG | Steinbeisstrasse 6 | 73660 Urbach
Phone +49 71 81 98 79-0 | Fax +49 71 81 98 79-179 | info@di-soric.com

di-soric Subsidiaries

Austria: di-soric Austria GmbH & Co. KG | Phone +43 7228 72 366 | info.at@di-soric.com
France: di-soric SAS | Phone +33 476 61 65 90 | info.fr@di-soric.com
Netherlands: di-soric B. V. | Phone +31 413 33 13 91 | info.nl@di-soric.com
Switzerland: di-soric SNT AG | Phone +41 44 817 29 22 | info.ch@di-soric.com
Singapore: di-soric Pte. Ltd. | Phone +65 6634 38436 | info.sg@di-soric.com

Further information: www.di-soric.com/international   **www.di-soric.com**