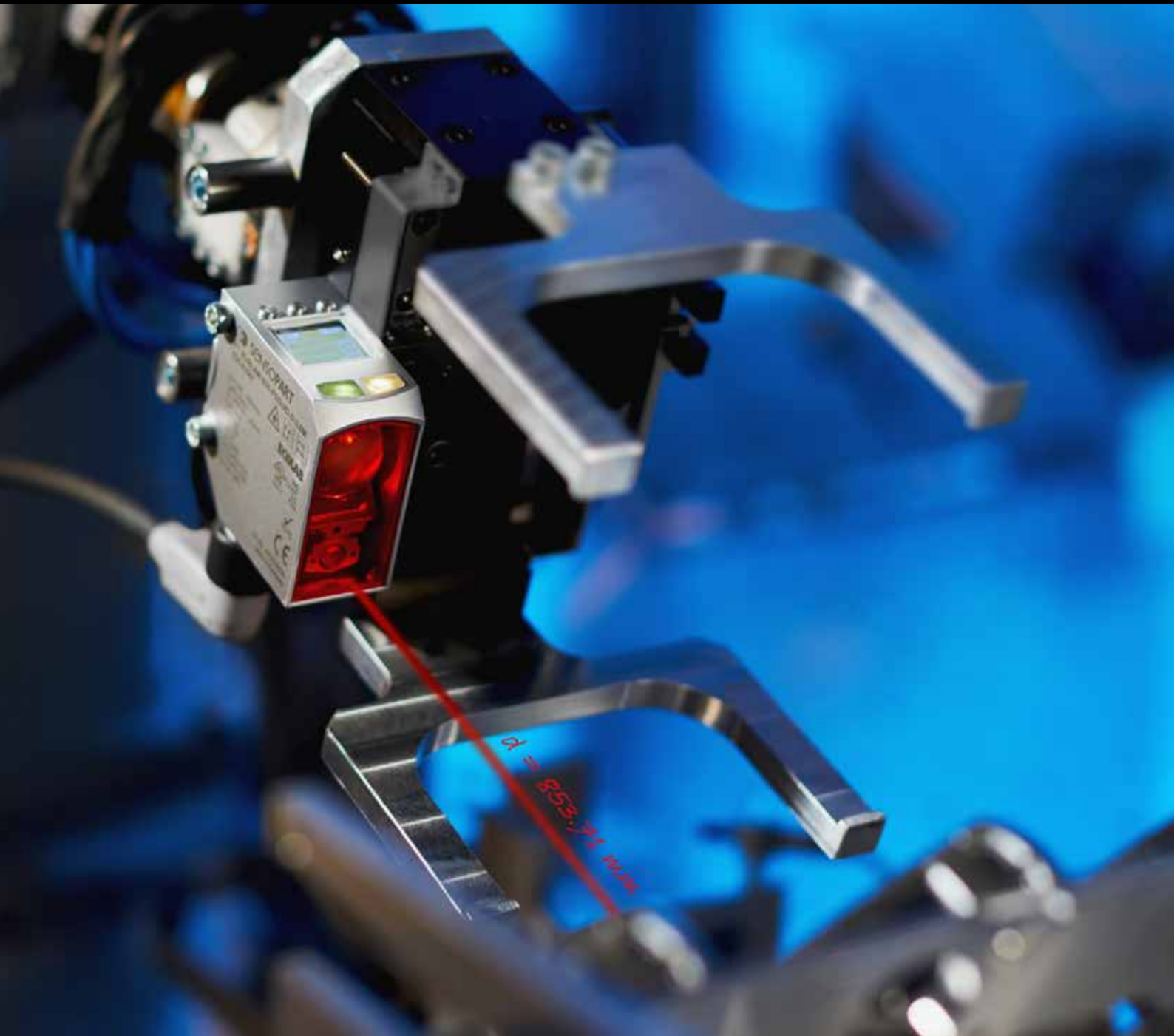


## The allrounder: the latest generation of smart laser distance sensors


FT 55-RLAM – high-performance precision



# FT 55-RLAM – The allrounder for distance measurement

Compact sensors for precision measuring tasks and reliable object detection



 made in Germany

The new FT 55-RLAM compact distance sensor from SensoPart is a true allrounder, reliably detecting surfaces from black to shiny. Offering extensive connectivity, the triangulation sensor is equipped with an analogue output, two switching outputs, an IO-Link interface and optional RS485 interface. The laser class 1 sensor comes with an innovative and user-friendly operating concept including a large LCD display, unusual in this performance category.

## HIGHLIGHTS FT 55-RLAM

- Stable processes thanks to excellent sensor qualities across the entire operating range
  - Operating range up to 600 mm / 1000 mm
  - Repeatability  $\leq 60 \mu\text{m}$  /  $\leq 100 \mu\text{m}$
  - Linearity  $\leq 0.6 \text{ mm}$  /  $1.5 \text{ mm}$
  - Resolution  $30 \mu\text{m}$  /  $50 \mu\text{m}$  at  $Q_A$
- IO-Link – a future-proof interface that meets the demands of Industry 4.0
- Laser class 1 – for optimum security
- Simple and fast setup using the intuitive LCD display
- Robust metal housing – sensor durability even in challenging processes
- Thickness or parallel differential measurement in master-slave mode

 IO-Link

 ECOLAB



### Well-equipped with FT 55-RLAM

This unique combination of characteristics makes the FT 55-RLAM sensor ideally suited for diverse sectors and applications, for example precise positioning in robotics tasks, measuring coil diameters or monitoring the tension of web materials. Thanks to the master-slave function, the sensor can also be used for width or thickness measurements. One sensor – countless applications!



*Determining the exact position of parts on an assembly line*



*Determining the position of a package so that it can be gripped by a robotic arm*



*Continuous monitoring of a coil, example packaging machine*



*Master-slave mode for measuring material thickness or detecting a double feed*

### Typical sectors:

- Automotive
- Robotic
- Machine construction
- Packaging technology
- Metal processing

# Generation 4.0 sensor technology

Excellent performance made easy.



Easy-to-read LCD display simplifies setup

## Intuitive setup using LCD display

The primary focus was on simple and intuitive use during the development phase of this sensor. To ensure that all functions are readily accessible and easy to use, SensoPart rejected the standard 7-segment display in favour of a large LCD screen with soft keys for enhanced user comfort.


The user receives instant feedback as settings and current values are visible directly on the screen.

## Ready for Industry 4.0 with IO-Link

The FT 55-RLAM distance sensor is a completely new development, designed from the beginning to meet coming industry requirements. The standard version with a 5-pin connector is equipped with an IO-Link interface. This enables direct communication with the sensor for setup purposes and switching between different sensor configurations.

The sensor can be connected directly to a Windows PC via USB using the optional SensoIO parameterisation tool for even greater comfort. An intuitive user interface enables visualisation and editing of IO-Link parameters.

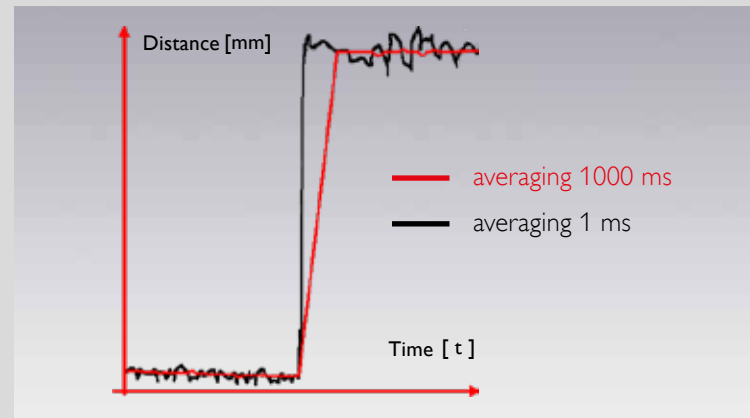


 **IO-Link**

SensoIO – a parameterisation tool for IO-Link sensors with corresponding software interface

### Adjustable mean value filter

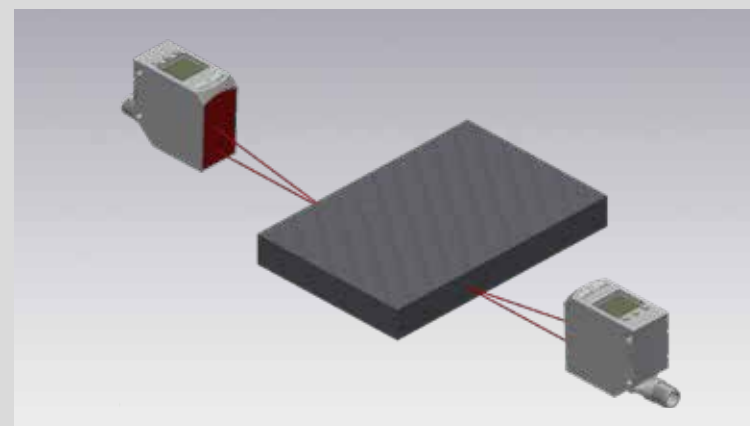
To minimise electronic noise from the sensor, averaging times can be set manually with FT 55-RLAM. This makes it possible to tackle difficult applications with high precision requirements. Averaging times of 1 ms (very fast) to 1000 ms enable maximum precision.



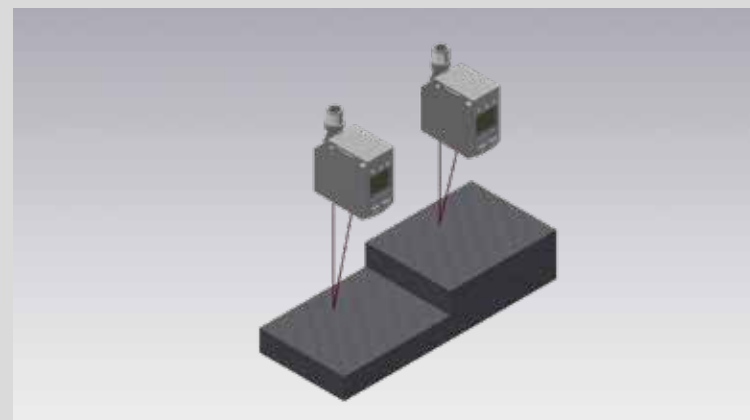
### Differential master-slave mode

With the master-slave function, two 8-pin sensors are interconnected.

Difference measurement ensures a reliable result even with heavily vibrating processes. Differences in height or thickness can be effortlessly detected with the aid of this function, e.g. to determine the width of wooden boards or to identify double layers of sheet metal.



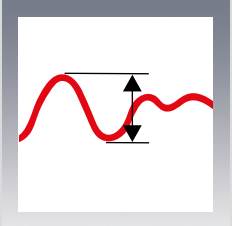
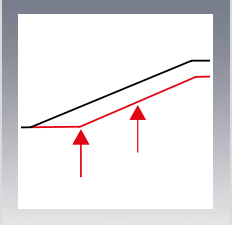

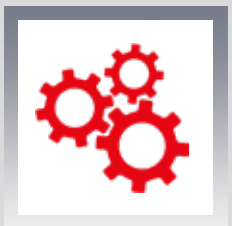
Thickness difference measurement



Height difference measurement

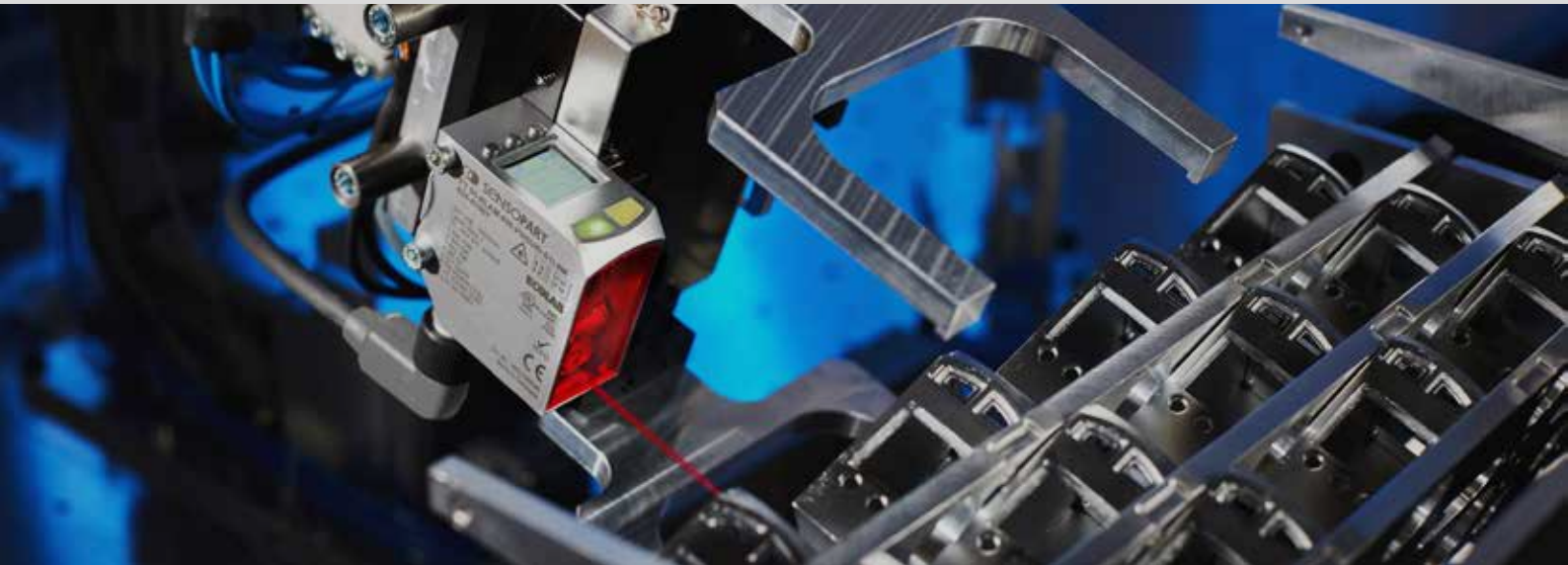
# It's not just the hardware that makes the difference.

Adjust the sensor easily for each application via the display or IO-Link.

Overview of software functions		
	<b>Min-Hold Max-Hold Difference-Hold</b>	The minimum and maximum measuring values can be reliably detected thanks to the integrated Max-, Min- or Difference-Hold function and emitted via the analogue output or IO-Link. This is particularly useful with fast moving objects and supplies reliable measuring values to the control system.
	<b>Auto Zero Auto Centre</b>	The reference value requires exact definition for precise object measurement. Auto Zero or Auto Centre can be used to simply reset the analogue characteristic curve, guaranteeing a precise measurement.
	<b>Good Target</b>	The signal quality varies with strongly fluctuating surface colors and structures. The plausibility of the distance value can be continuously checked using Good Target.
	<b>Smart Functions</b>	Useful additional functions, such as Delay, Counter, Pulse or Frequency monitoring, complete the package.

# The right version for every application

We always have the optimum solution



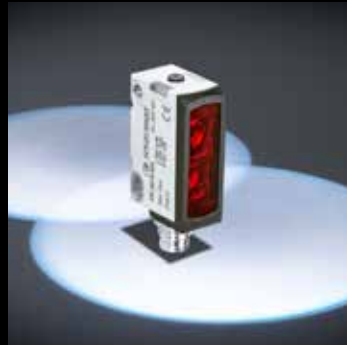
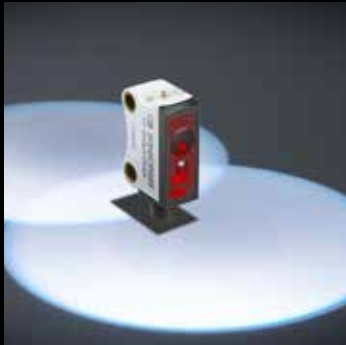
The new generation of distance sensors includes a total of four versions, covering the widest possible spectrum of applications. Not only do they come with different ranges and sensor characteristics, such as repeatability, linearity and resolution, they also

come with different connections. In addition to the analogue and signal output, the 5-pin version is equipped with an IO-Link and the 8-pin version has an RS485 interface. All versions are laser class 1 sensors and are safe to use.

Order reference	Range	Resolution QA (14 Bit)	Repeatability*	Linearity (typical)	Interface	Master/ Slave	Article no.
FT 55-RLAM-800-PNSUIDL-L5M	200 to 1000 mm	50 µm	≤ 100 µm	1.5 mm	5-pin with IO-Link	–	624-41006
FT 55-RLAM-800-PNSUID-S1L8M	200 to 1000 mm	50 µm	≤ 100 µm	1.5 mm	8-pin with RS485	✓	624-41007
FT 55-RLAM-480-PNSUIDL-L5M	120 to 600 mm	30 µm	≤ 60 µm	0.6 mm	5-pin with IO-Link	–	624-41004
FT 55-RLAM-480-PNSUID-S1L8M	120 to 600 mm	30 µm	≤ 60 µm	0.6 mm	8-pin with RS485	✓	624-41005

\* $6\sigma$ , max. averaging, stationary and uniform object 6-90%

Accessories	
SensoIO	901-01000
SensoClip MBD F 55ST2	579-50012



“We gauge ourselves not by what is possible today, but by our vision of what can be achieved” – this has been our motto since the foundation of SensoPart in 1994. Our goal is to always be a step ahead and to be able to offer our customers the most innovative sensor for industrial automation.

True to this motto, we offer easy-to-integrate VISOR® vision sensors and compact laser sensors with outstanding background suppression made in Germany.

We still also have plenty of ideas for the future - watch this space.

## SENSOR TECHNOLOGY

- Light barriers
- Diffuse sensors
- Laser sensors
- Miniature sensors
- Distance sensors
- Color sensors
- Contrast sensors
- Anti-collision sensors
- Slot sensors
- Fiber-optic sensors
- Inductive sensors
- Ultrasonic sensors
- Vision sensors
- Smart cameras
- Vision systems
- Object detection
- Object measurement
- Color detection
- Code reading
- Lighting
- Lenses

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