

The allrounder: Smart Laser Distance Sensor

FT 55-RL(2)AM – high-performance precision

NEW:
Extended
operating
ranges



FT 55 RL(2)AM – The allrounder for distance measurement

Precise measurements easily adjustable

Its combination of unique characteristics makes FT 55-RL(2)AM ideally suited for diverse sectors and applications. Whether determining positions in robotics applications, measuring a coil diameter or monitoring web tension. By combining two sensors, width and thickness measurements can be carried out using the differential measurement function. One sensor – countless applications!



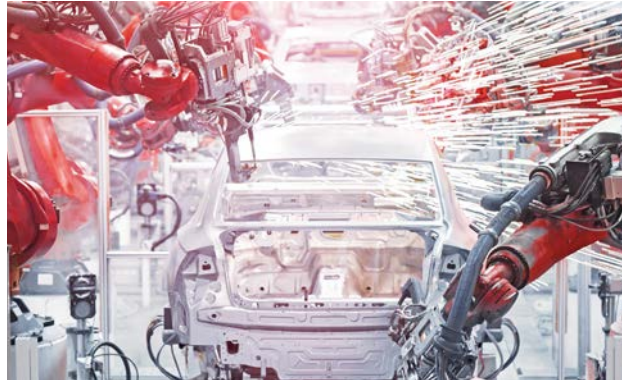
made in Germany

The new compact distance sensor from SensoPart is a true **allrounder**. The **FT 55-RL(2)AM** is reliably detecting surfaces from matt black tyres to highly glossy printed circuit boards. 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 RL(2)AM

- Stable processes thanks to excellent sensor qualities across the entire operating range
 - Operating range from 40 to 1000 mm
 - Repeatability in the micrometer range
 - Linearity ≤ 0.2 mm
 - Resolution 1 μ m via IO-Link
- IO-Link – a future-proof interface that meets the demands of Industry 4.0
- Laser class 1 – for optimum safety and security (Variant with laser class 2 for measurements on very dark objects optional)
- Simple and fast setup using the intuitive LCD display
- Robust metal housing – sensor durability even in challenging processes
- Thickness or parallel differential measurements are easily achieved





Examples of sectors and applications

Automotive industry

- Measurement on dark objects, e.g. Unbalanced tires or brake discs
- Measurement of component positions during assembly, e.g. at manual work stations

Packaging technology

- Continuous monitoring of a coil diameter

Robotic

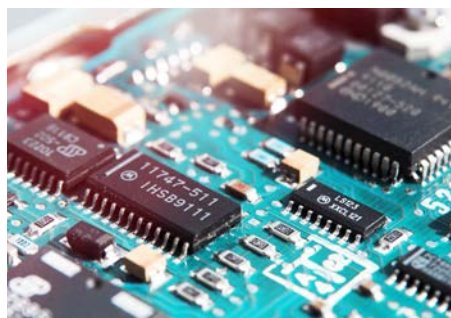
- Determining the exact position of car body parts

Machine construction

- Detecting double layers of sheet metal
- Measuring or checking presence or correct position of metal components, e.g. weld nuts on car body parts

Electronics

- Tilt control of printed circuit boards during the assembly process

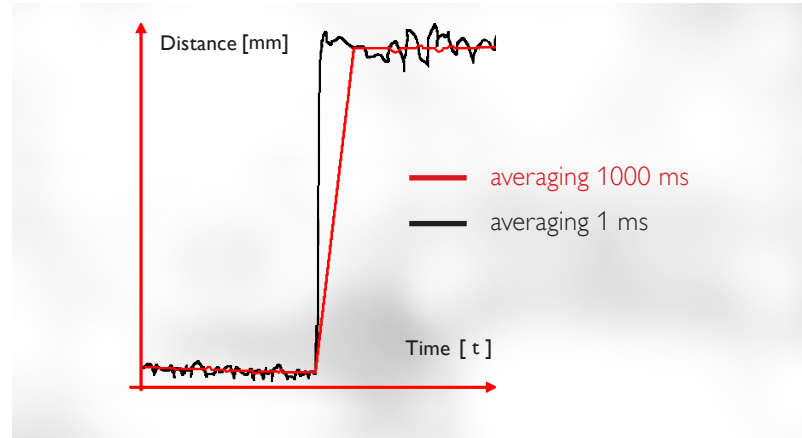


Smart functions for high performance

Precise measurements easily adjustable

Adjustable mean value filter

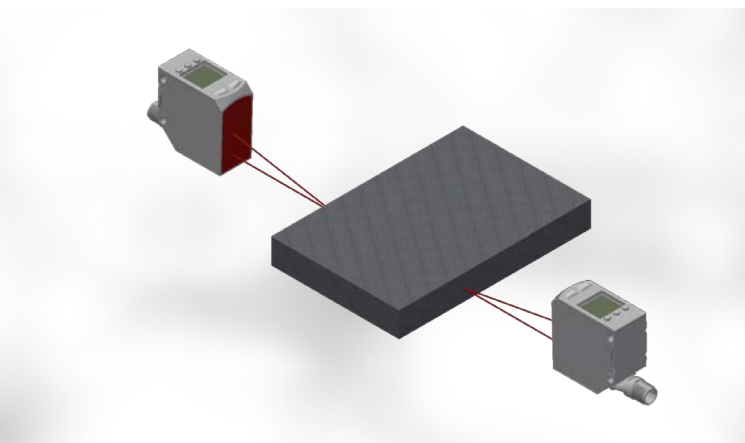
To minimize the noise of the sensor, the FT 55-RL(2)AM allows the averaging time to be set manually. This makes it possible to solve difficult applications that place high demands on precision. The averaging times range from 1 ms (very fast) to 1000 ms for maximum precision.



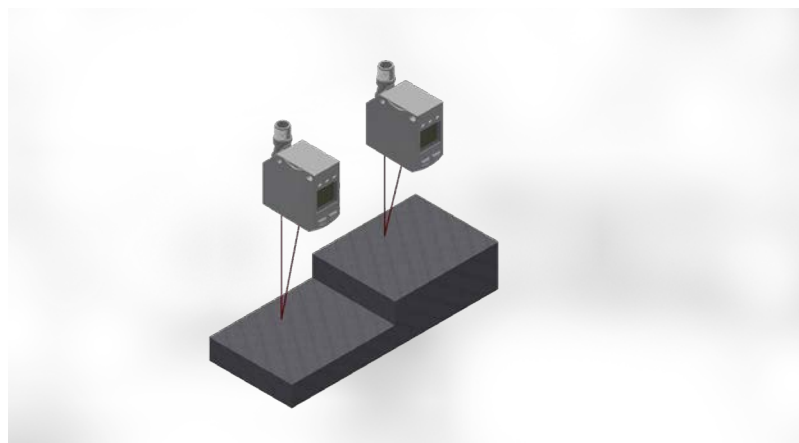
Differential measurement

By connecting two 8-pin sensors, differential measurements can be performed without complex programming. 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.

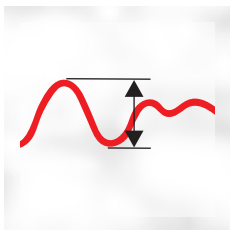
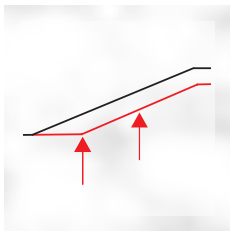
Thickness difference measurement



Height difference measurement

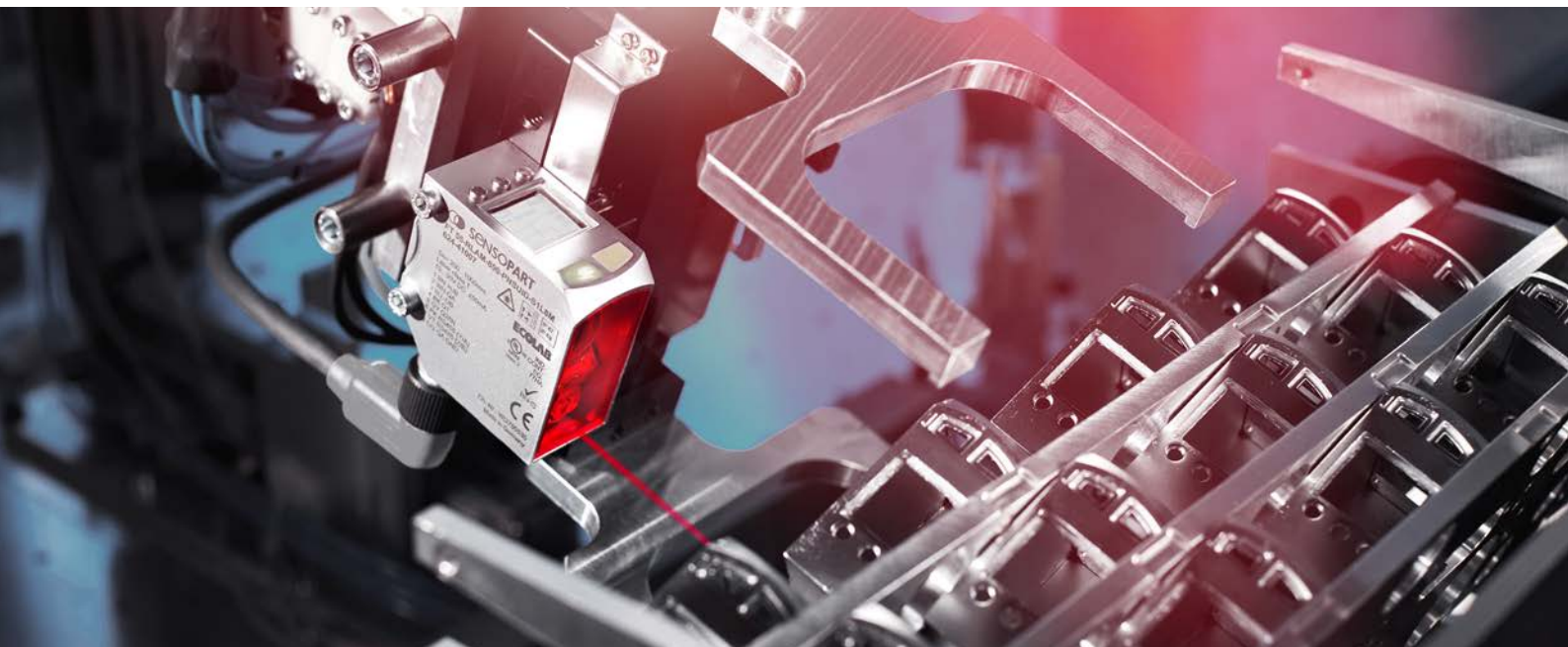


Adjust the sensor easily for each application via the display or IO-Link

Overview of software functions		
	Min-Hold Max-Hold Difference-Hold	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.
	Auto Zero Auto Centre	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.
	Good Target	The signal quality varies with strongly fluctuating surface colors and structures. The plausibility of the distance value can be continuously checked using Good Target.
	Smart Functions	Useful additional functions, such as Delay, Counter, Pulse or Frequency monitoring, complete the package.

The right version for every application

Always a perfect solution



Available with different ranges and interfaces, the RLAM sensor family are well suited to extremely varied applications. All versions are available in laser class 1 for standard type applications, of course we also offer laser class 2 when required for the more complex challenges such as dull or matt surfaces needing to be accurately measured.



FT 55-RL(2)AM-160



FT 55-RL(2)AM-320



FT 55-RL(2)AM-480

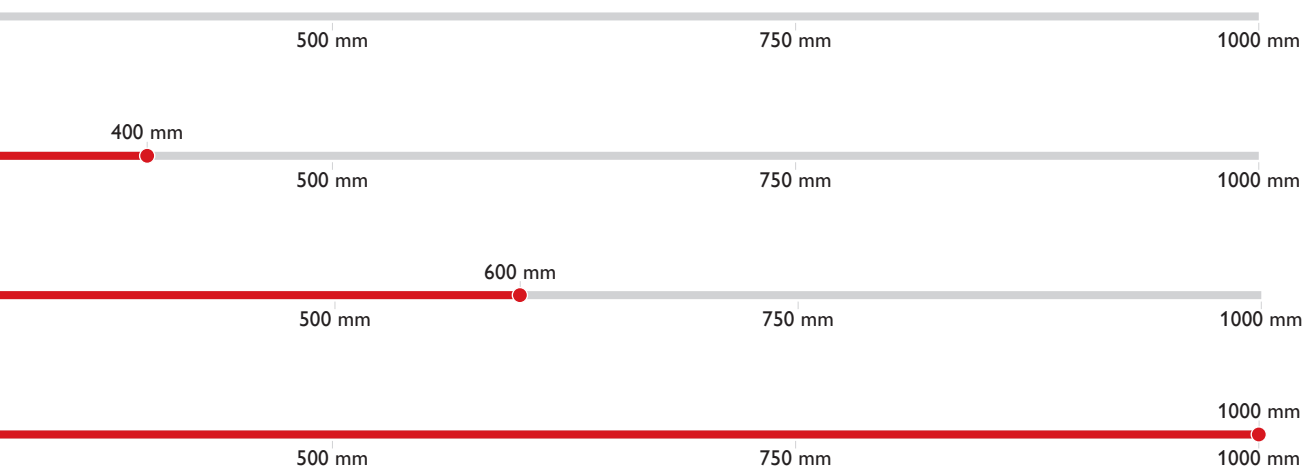


FT 55-RL(2)AM-800



Order reference	Range	Resolution QA (14 Bit)	Repeatability*	Linearity (typical)	Interface	Laser- class	Article no.
FT 55-RLAM-160-PNSUIDL-L5M	40 to 200 mm	≤ 10 µm	1 to 45 µm	≤ 0.2 mm	5-pin with IO-Link	1	624-41000
FT 55-RL2AM-160-PNSUIDL-L5M	40 to 200 mm	≤ 10 µm	1 to 45 µm	≤ 0.2 mm	5-pin with IO-Link	2	624-41011
FT 55-RLAM-160-PNSUID-S1L8M	40 to 200 mm	≤ 10 µm	1 to 45 µm	≤ 0.2 mm	8-pin with RS485	1	624-41001
FT 55-RLAM-320-PNSUIDL-L5M	80 to 400 mm	≤ 20 µm	≤ 6 to 100 µm	≤ 0.4 mm	5-pin with IO-Link	1	624-41002
FT 55-RL2AM-320-PNSUIDL-L5M	80 to 400 mm	≤ 20 µm	≤ 6 to 100 µm	≤ 0.4 mm	5-pin with IO-Link	2	624-41012
FT 55-RLAM-320-PNSUID-S1L8M	80 to 400 mm	≤ 20 µm	≤ 6 to 100 µm	≤ 0.4 mm	8-pin with RS485	1	624-41003
FT 55-RLAM-480-PNSUIDL-L5M	120 to 600 mm	≤ 30 µm	≤ 20 to 200 µm	≤ 0.6 mm	5-pin with IO-Link	1	624-41004
FT 55-RL2AM-480-PNSUIDL-L5M	120 to 600 mm	≤ 30 µm	≤ 20 to 200 µm	≤ 0.6 mm	5-pin with IO-Link	2	624-41008
FT 55-RLAM-480-PNSUID-S1L8M	120 to 600 mm	≤ 30 µm	≤ 20 to 200 µm	≤ 0.6 mm	8-pin with RS485	1	624-41005
FT 55-RLAM-800-PNSUIDL-L5M	200 to 1000 mm	≤ 50 µm	≤ 40 to 820 µm	≤ 1.5mm	5-pin with IO-Link	1	624-41006
FT 55-RL2AM-800-PNSUIDL-L5M	200 to 1000 mm	≤ 50 µm	≤ 40 to 820 µm	≤ 1.5mm	5-pin with IO-Link	2	624-41009
FT 55-RLAM-800-PNSUID-S1L8M	200 to 1000 mm	≤ 50 µm	≤ 40 to 820 µm	≤ 1.5mm	8-pin with RS485	1	624-41007

*6σ, max. averaging, stationary and uniform object 6-90%



QR code for further info

SensoPart is one of the leading manufacturers of photoelectric sensors and image processing vision sensors for factory automation. We also offer inductive and ultrasonic sensors, thereby covering a wide spectrum of industrial automation tasks. Our products are used in countless applications and sectors today – from automotive construction and mechanical engineering to electronics manufacturing and the solar industry, as well as the food sector and pharmaceutical industry.



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