

The new standard in industrial sensor technology.

F 55 light barrier range



# Let there be light!

The new F 55 light barrier range will inspire you.

SensoPart has set a new standard in industrial sensor technology with its F 55 series. This product line combines excellent performance data with a robust housing design and numerous user-friendly details.

The new sensors have an outstanding light transmitting capacity: the background suppression version achieves a scanning range of up to 1,200 mm, the through beam has a range of up to 25 m – with optimum small part detection.

The high optical performance enables mounting at greater, safer distances from the process, and facilitates sensor commissioning: the light spot is still clearly visible from a long distance and in broad daylight, which means it can be easily aligned and adjusted by just one person.

The F 55 light barrier range covers all standard proximity switches and light barriers, is available with either red light LED or laser. Whatever the version you choose, we promise: you will be enchanted!



## **One design, two housings:**

The sensors in the F 55 light barrier range are available either in a glass-fibre reinforced plastic housing or in an impermeable stainless steel version for hygiene zones.

## **F 55 – HIGHLIGHTS AT A GLANCE:**

- Bright light spot plainly visible even in daylight, with a clear contour
- Standardised design for all product versions
- Robust, glass-fibre reinforced plastic housing (IP67) with Ecolab accreditation
- Impermeable stainless steel versions (IP69K) with Ecolab accreditation
- Comfortable use of all energetic versions via electronic teach button or cable
- 18 level potentiometer for accurate setting of background suppression
- Versatile mounting possibilities including two integrated dove tail guides
- Permanent, cleaning-resistant laser marking

# Shining examples.

Sensors in the F 55 range show what automation can achieve today.

Each sensor in the new F 55 range is a convincing choice with its exceptional performance and sophisticated details. The FT 55 RH proximity switch with background suppression is a precise example: an incomparably bright light spot, a scanning range of up to 1,200 mm unique on the market and the best background suppression ever achieved in this class. Reliable detection is even guaranteed with objects renowned for being critical due to reflective metallic surfaces or dark surfaces made of plastic, rubber or felt.

## F 55 – THE COMPLETE RANGE

- Proximity switch with background suppression
- Retro-reflective light barrier
- Through beam sensor
- Energetic optical sensor
- All versions either with LED or laser
- Housing either glass-fibre reinforced ABS or stainless steel
- IO link versions in preparation
- Standardised dimensions for all versions: 50 x 50 x 23 mm<sup>3</sup>

**FT 55 RH – Proximity switch with background suppression**



- Scanning range: 1,200 mm
- Reliable background suppression (BGS), resistant to stray light
- Precise, fine adjustment of BGS using 18 level potentiometer
- Type of light: red light LED or laser
- Protection: IP67
- Switching frequency LED/laser: 600 Hz/1,000 Hz
- Laser class 1 and 2

**FT 55 R – Proximity switch**



- Scanning range: 2,000 mm
- All-purpose
- Comfortable use via electronic teach button or cable
- Type of light: red light LED or laser
- Protection: IP67 or IP69K (stainless steel version)
- Switching frequency LED/laser: 600 Hz/1,500 Hz
- Laser class 2

The new sensors not only offer a convincing range of performance data, but also a distinctive family feel: the standardised design, universal assembly and connection technology and a shared operating concept enable quick installation and easy set-up. Automation becomes fun – sensor after sensor!

Stainless steel versions



*F 55 sensors are also available with an impermeable stainless steel housing (IP69K) for use in hygiene zones, e.g. in the food and drink industry.*

**FR 55 R –  
Retro-reflective light barrier**



- Long operating range: 12 m
- Comfortable use via electronic teach button or cable
- Type of light: red light LED or laser
- Protection: IP67 or IP69K (stainless steel version)
- Switching frequency LED/laser: 600 Hz/2,000 Hz
- Laser class 1

**FS/FE 55 R –  
Through-beam sensor**



- Long operating range: 25 m
- Comfortable use via electronic teach button or cable
- Adjustable transmitter and receiver
- Type of light: red light LED or laser
- Protection: IP67 or IP69K (stainless steel version)
- Switching frequency LED/laser: 500 Hz/2,500 Hz
- Laser class 1



SENSOPART

PR 55-408-PS-64

821-0111

10 x 22,5 x 20



10V 40  
20W ET  
10V 10  
40K PIP

RL 30V DC <math>\leq 100mA</math>  
CU-PC-ST08.08

Made in  
Germany



## A bright grey future.

Technical progress is now easily recognisable by its colour.

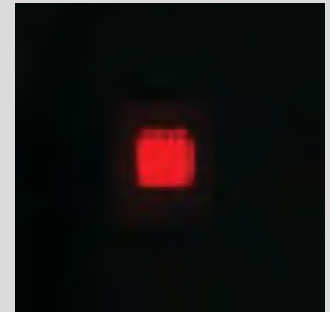


**Double progress:**

*All F 55 sensors – whether in the plastic or stainless steel version – share the same exceptionally powerful optics as well as many sophisticated, user-friendly details.*

Sensors from the F 55 range are visible from afar. The new, elegant bright grey housing stands out against the background. Its colour indicates: the future of sensor technology is already in use here.

We of course did not (just) choose the new colour because we like it so much. The bright grey enables better device identification using laser marking and thus a permanent, easily legible identification on a light background even after years spent in rough ambient conditions. This is just one of the many valuable details we devised to shed more light on your daily automation processes.



*(Fig. top) Easy alignment:*  
F 55 sensors can be easily set up by just one person thanks to the bright light spot which is clearly visible even in broad daylight. This is even valid for the through beam sensor as teach-in can be carried out either on the transmitter or receiver.

*(Fig. left) Comfortable set-up:*  
The sensors are operated via an electronic teach button and two convex LED displays – clearly visible from the side and from a long distance. Flashing LEDs indicate a reliable process set-up. The sensor with BGS shown here also has an 18 level potentiometer for fine adjustment of BGS.



**No identity crisis:**  
All F 55 sensors are identified in the SensoPart production line using the latest laser marking devices. In contrast to standard inscription, laser marking is resistant to abrasion and cleaning, enabling an easy identification of sensors even after years of use.

*(Fig. right) Flexible mounting:*  
There is always a suitable solution for difficult installation spots thanks to a 350° rotatable connector or cable outlet, two dove tail guides and mounting holes along with a large choice of fixing brackets.



## Brilliant heads.

The stainless steel versions of the F 55 range always shine in spotless conditions.

The silver-coloured units in this range were designed specially for applications in hygiene zones, for example in the food and drink industry, pharmaceuticals and medical technology. The resilient stainless steel housing with IP69K protection and Ecolab accreditation can easily resist temperature peaks of up to 100 °C, chemicals and high pressure/steam cleaning. The smooth housing surface has neither gaps nor overlaps thus facilitating cleaning.

Another special feature is the use of a new, flush, metal button which is hermetically sealed in the sensor housing in contrast to customary push buttons. Slight pressure on the button is enough to activate an electrical impulse – a brilliant solution from SensoPart engineers.

### **ECOLAB**

*Ecolab is an established industrial standard in the disinfection and detergent industry which has a standardised test procedure. Both the plastic and stainless steel versions of the F 55 sensors were subjected to appropriate material-resistance tests and were awarded the Ecolab certificate.*





Hygiene is given top priority wherever food and drink are processed or drugs manufactured. Sensors cannot expect any special treatment: they must undergo a multi-stage cleaning process similar to a car wash programme, at least once a day – and over many years, without it affecting the impermeability of the sensor housing. A simple task for the stainless steel version of the F 55 range!

**Always spotless:**

*Foam baths of aggressive chemicals and high-pressure rinses with water or vapour can do no harm to the impermeable stainless steel housing of F 55 sensors. Thanks to a completely flat surface with flush operating elements, no residues are left after cleaning.*



The daily cleaning cycle in the food industry:

- Pre-rinse, loosen coarse dirt
- Cleaning with an alkaline substance
- Rinse lye
- Remove lime scale deposits with acid detergent
- Rinse acid
- Disinfection
- Rinse disinfectant
- Final rinse with super clean water



IP69K protection was developed for high pressure cleaning at high temperatures. A water or vapour jet with a pressure of 100 bars and a temperature of 80 °C must not cause any damage whatever the angle it hits the sensor.

## A wide range.

F 55 sensors are always ideal for the job.





The F 55 light barrier range enables you to cover every standard application in industrial automation: whether in the automotive industry, machine construction, assembly and handling technology, packing industry or in storage and conveying technology – the F 55 product range has the right sensor for your automation task.

Sensors from the F 55 series do not merely fulfil their respective task to utmost satisfaction, they make life easier for the user. Thanks to elaborate mounting and connection details and the bright light spot, which is clearly visible even in broad daylight, sensor set-up and modifications are made quick and simple. Saving time – saving money.



Once installed, the light barriers and proximity switches from the F 55 range not only provide an excellent performance, but also prove to be robust marathon runners. They reliably fulfil their task day in, day out, even in harsh ambient conditions. Whether you opt for through beam sensors, retro-reflective light barriers, energetic optical sensors or proximity switches with background suppression, in a LED or laser version – you will have many enjoyable years with your new F 55 sensors!

**Top performance in continuous operation:**

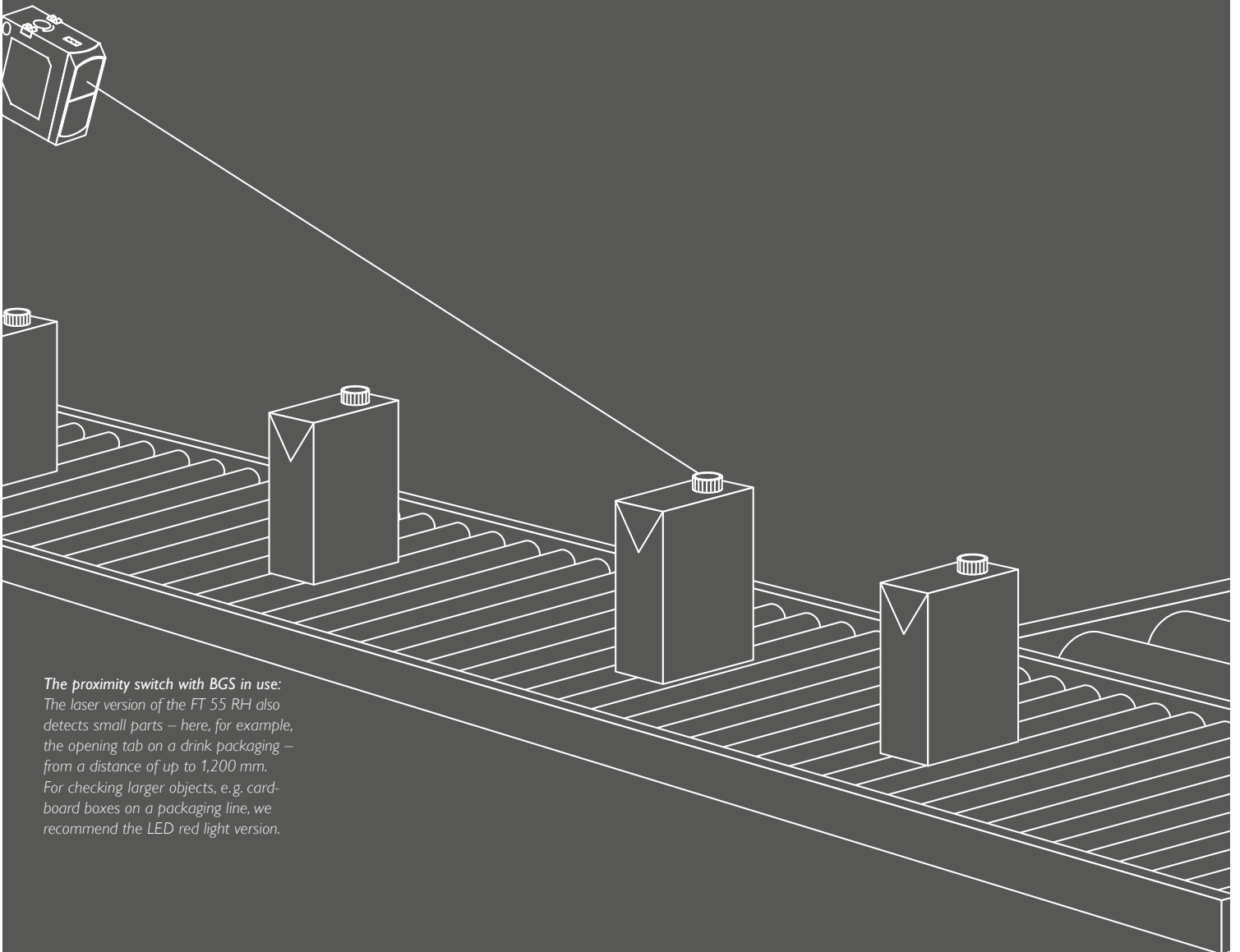
*F 55 sensors are the number one choice for a large range of automation applications. Thanks to outstanding performance data and their robust design, they have proven themselves in the automotive industry, in machine construction, in the wood and paper industry as well as in filling plants and packaging lines.*

# Innovation through optics.

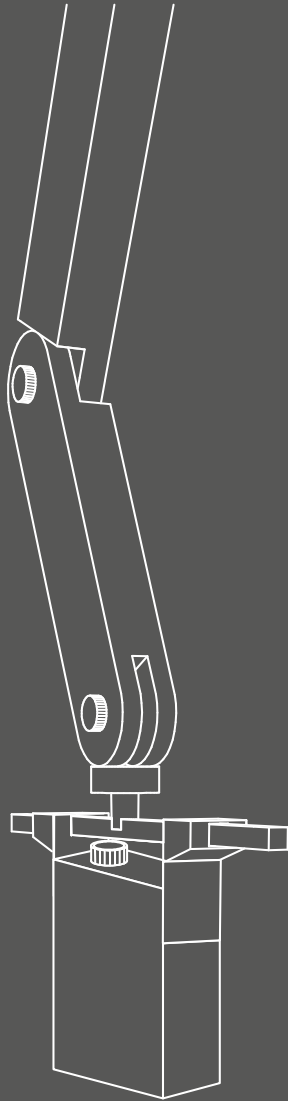
F 55 sensors remain undefeated, where other sensors have to pass.

Sensors from the F 55 series are often far from their limits even in challenging automation tasks – thanks to their outstanding optical performance and user-friendly design, they offer decisive resources when it gets tight or difficult. The FT 55 RH proximity switch with background suppression, in particular, is the sole leader at scanning distances beyond 500 mm – where many other sensors have already reached their performance limit.

The optical superiority of F 55 sensors can prove to be useful in many respects: their large operating or scanning range enables greater mounting distances at a safe distance from the process whilst detection of small parts and objects with critical surfaces (e.g. shiny metallic, dark colours in front of a light background) is considerably improved. Test it yourself – an F 55 beats any comparison!



**The proximity switch with BGS in use:**  
The laser version of the FT 55 RH also detects small parts – here, for example, the opening tab on a drink packaging – from a distance of up to 1,200 mm.  
For checking larger objects, e.g. cardboard boxes on a packaging line, we recommend the LED red light version.



*Optically superior: Sensors from the F 55 series are the leaders in their performance class.*

