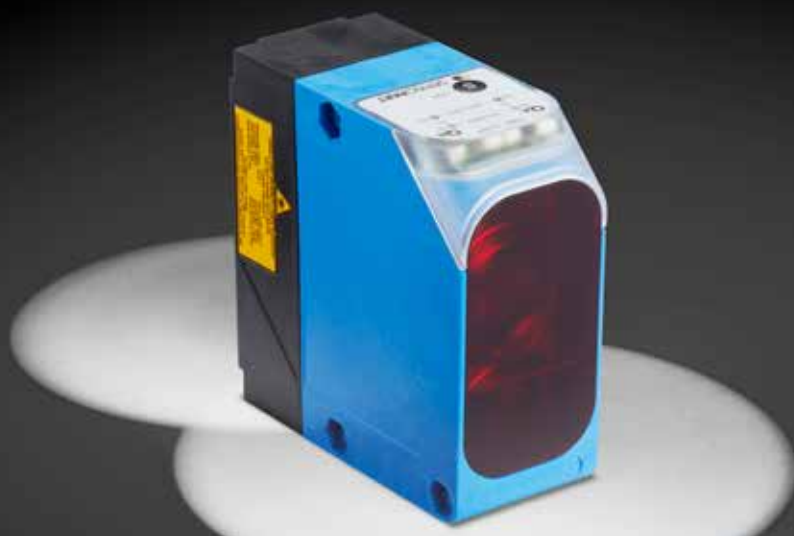



FT 92 - photoelectric diffuse sensor with long scanning distance

The far-sighted sensor with pulse time-of-flight measurement



 made in Germany



TYPICAL FT 92

- Very long range
- Precise background suppression with time-of-flight technology
- User-friendly fine adjustment of sensor with pilot laser
- Rapid and easy adjustment via teach-in
- Safe operation thanks to Laser Class 1
- Robust housing/plug unit
- Well thought-out mounting accessories
- UL-certification

The FT 92 diffuse type has been specially designed for detection tasks with long distances to the process: the sensor, equipped with an infrared laser (Laser Class 1) reaches ranges of up to 6 m. Whereby its measurement principle of infrared pulse time-of-flight technology guarantees particularly precise background suppression, and thus reliable detection even against highly reflective or glossy backgrounds – as well as absolute immunity to ambient light.

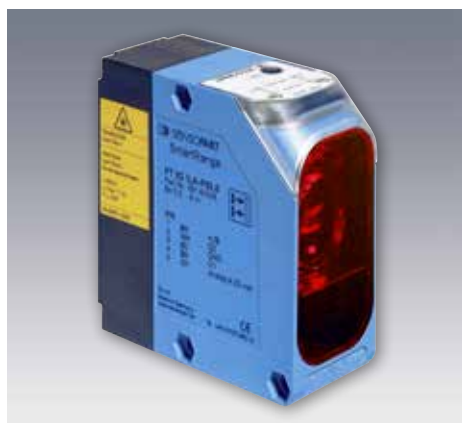
Long distances not only require excellent optical performance, but also helpful functions for installation and commissioning. Thus a pilot laser that can be switched off simplifies fine adjustment of the sensor, and the wide variety of mounting options provides users with rapid and user-friendly installation.

The FT 92 is suitable for numerous applications in industrial automation, e.g. for small-part detection, for checking presence or for positioning tasks. The far-sighted sensor can therefore be found in many sectors: in the automotive industry and in mechanical engineering, in the wood-processing industry, in packaging machines or in the control of gates and doors. Its stable and robust design ensures smooth, trouble-free operation everywhere – as well as satisfied users!

F 92 – Product Overview						
	Type of light	Adjustment	Scanning distance / range	Special features	Page	
Photoelectric diffuse sensor with background suppression						
FT 92 IL	Infrared 	Teach-in 	6 m	Long range	538	

FT 92 IL

Diffuse infrared laser sensor with background suppression



PRODUCT HIGHLIGHTS

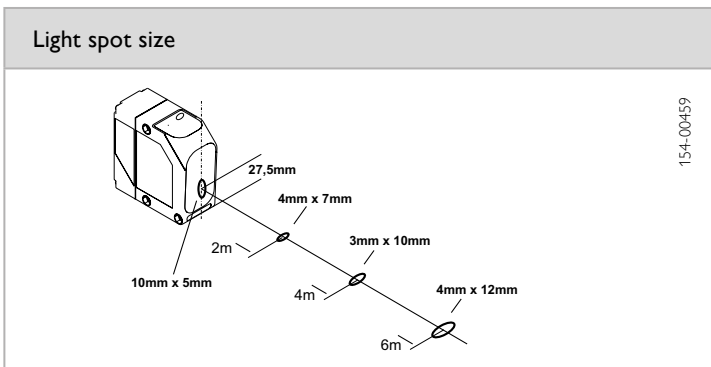
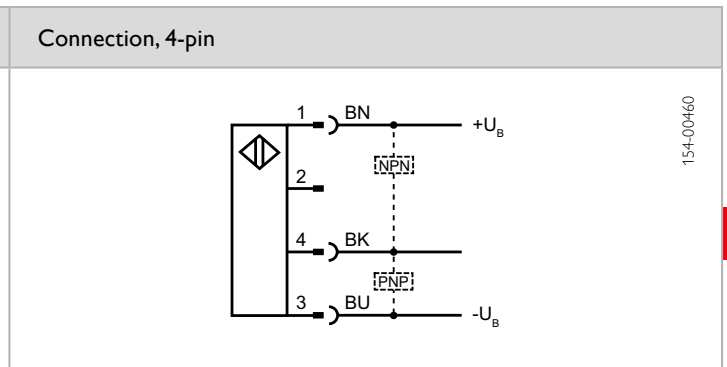
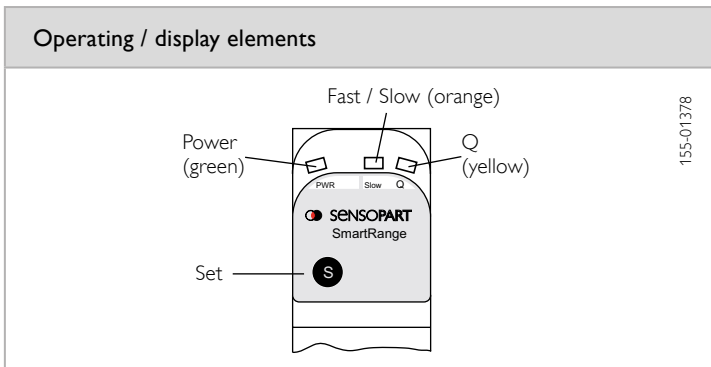
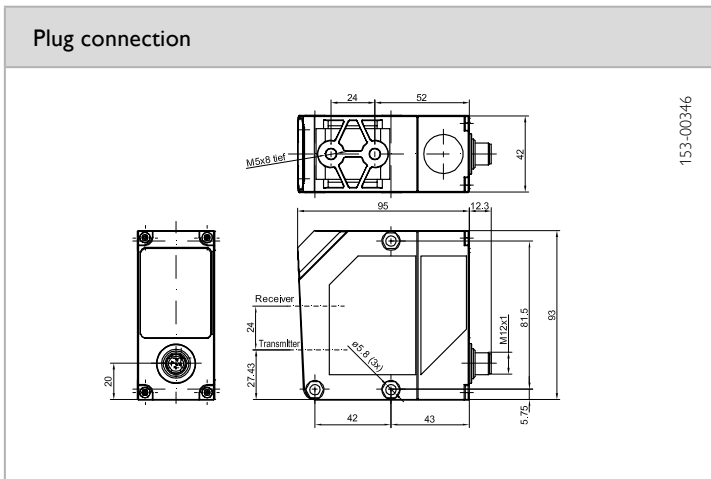
- Long range of 6 m
- Precise background suppression through time-of-flight technology
- Reliable operation even with highly reflective and glossy backgrounds
- Simple alignment via integrated pilot laser

Optical data		Functions	
Scanning distance	0.2 ... 6 m ¹	Indicator LED, green	Operating voltage indicator
Type of light, measurement laser	Infrared, 905 nm	Indicator LED, yellow	Switching output indicator
Laser Class, measurement laser (IEC 60825-1)	1	Indicator LED, orange	Operating mode indicator (Fast / Slow)
Type of light, pilot laser	Laser, red, 650 nm	Scanning distance adjustment	Via Teach-in button
Laser Class, pilot laser (IEC 60825-1)	1	Adjustment possibilities	Switching point set via Teach-in button
Repeatability, Fast / Slow	≤ ± 15 mm / 10 mm	Default settings	Switching window set via Teach-in button
			Slow / Fast mode via Teach-in button
			N.O./N.C. via Teach-in button
			Pilot laser via Teach-in button
			Sn = 5.8 m and N.O.
Electrical data		Mechanical data	
Operating voltage, +U _B	18 ... 30V DC ²	Dimensions	95 × 93 × 42 mm
No-load current, I ₀	≤ 125 mA	Enclosure rating	IP 67 ³
Output current, I _e	100 mA	Material, housing	ABS
Voltage drop, U _D	≤ 2.4 V	Material, front screen	PMMA
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Type of connection	See selection table
Protection Class	2	Ambient temperature: operation	-20 ... +50 °C
Power On Delay	< 300 ms	Ambient temperature: storage	-40 ... +80 °C
Switching output, Q	PNP/NPN (see selection table)	Weight	200 g
Output function	N.O./N.C.	Vibration and impact resistance	EN 60947-5-2
Response time, Fast / Slow	13 / 80 ms		

¹ Reference material, white, 90 % reflectivity ² Max. 10 % ripple, within U_B ³ With connected IP 67 plug

Scanning distance	Switching output	Type of connection	Part number	Article number
0.2 ... 6 m	PNP	Plug, M12x1, 4-pin	FT 92 IL-PSL4	591-91007
0.2 ... 6 m	NPN	Plug, M12x1, 4-pin	FT 92 IL-NSL4	591-91009

Accessories	
Connection cables	From Page A-38
Brackets	From Page A-4



Smallest detectable part	Reference material	Detection range
<p>155-00207</p>	White (90 %)	0.2 ... 6 m
	Grey (18 %)	0.2 ... 6 m
	Black (6 %)	0.2 ... 2.5 m