

# FT 55-RLH

Diffuse laser sensor with background suppression



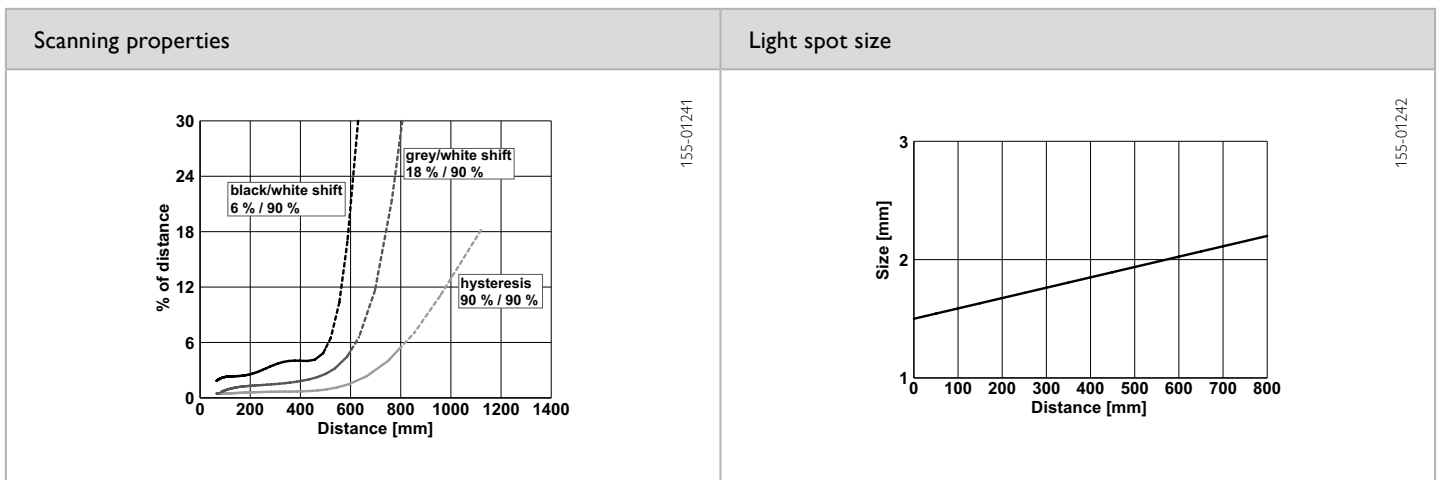
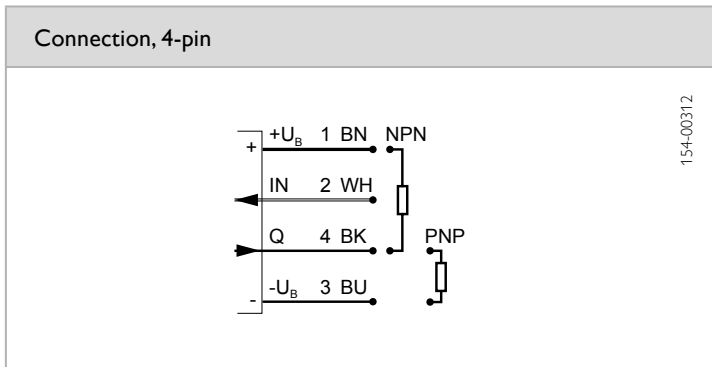
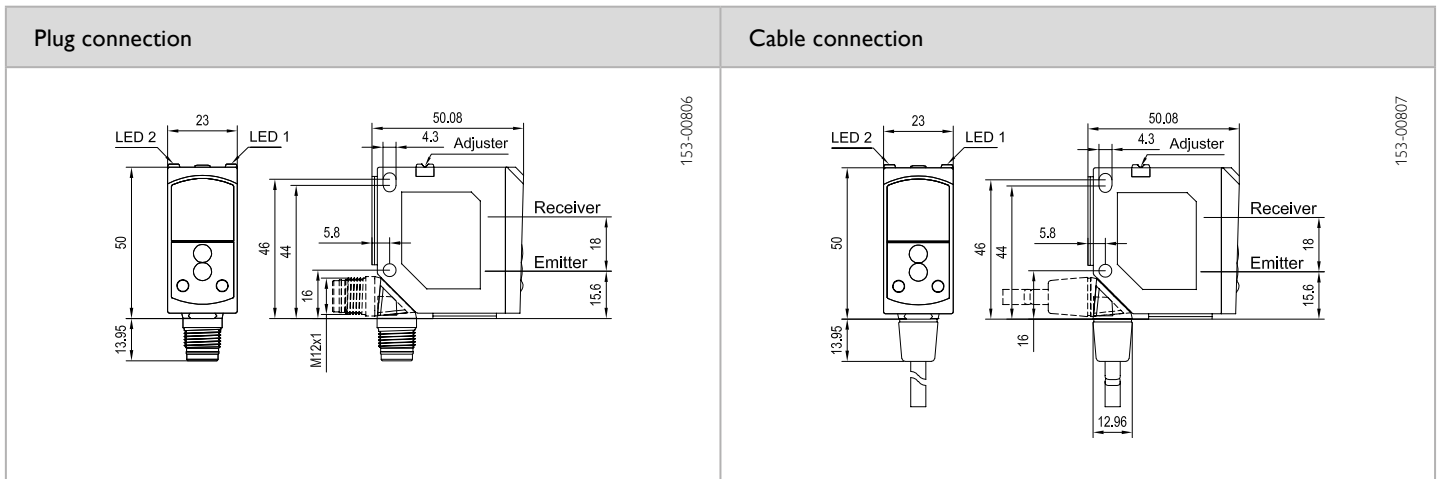
## PRODUCT HIGHLIGHTS

- Precisely adjustable background suppression – reliable operation even with highly reflective and glossy backgrounds
- Particularly suitable for the detection of the smallest of objects
- Very small, easily visible laser light spot
- Precise scanning distance adjustment by means of potentiometer
- Plug and cable connection rotatable

Optical data		Functions	
Scanning distance	5 ... 800 mm <sup>1</sup>	Indicator LED, green	Operating voltage indicator
Type of light	Laser, red, 655 nm	Indicator LED, yellow	Switching output indicator / contamination indicator
Light spot size	See diagram	Scanning distance adjustment	Via potentiometer
Laser Class (IEC 60825-1)	1	Adjustment possibilities	N.O./N.C. via control input
		Default settings	Max. scanning distance (6 %)
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	12 ... 30V DC <sup>2</sup>	Dimensions	50 × 50,1 × 23 mm
No-load current, I <sub>0</sub>	≤ 30 mA	Enclosure rating	IP 69K & IP 67 <sup>3</sup>
Output current, I <sub>e</sub>	≤ 100 mA	Material, housing	PC-ABS
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / short-circuit protection (Q)	Material, front screen	PMMA
Protection Class	2	Type of connection	See selection table
Power On Delay	< 300 ms	Ambient temperature: operation	-20 ... +60 °C <sup>4</sup>
Switching output, Q	PNP/NPN (see selection table)	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (plug device)	35 g
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Weight (cable device)	125 g
Response time	500 μs	Vibration and impact resistance	EN 60947-5-2
Control input, IN	+U <sub>B</sub> = N.C. -U <sub>B</sub> / Open = N.O.		

<sup>1</sup> Reference material: white, 90 % reflectivity    <sup>2</sup> Max. 10 % ripple, within U<sub>B</sub>, ~ 50 Hz / 100 Hz    <sup>3</sup> With connected IP 67 / IP 69K plug    <sup>4</sup> UL: max. +45 °C

Scanning distance	Switching output	Type of connection	Part number	Article number
5 ... 800 mm	PNP	Plug, M12x1, 4-pin	FT 55-RLH-PS-L4	623-11018
5 ... 800 mm	NPN	Plug, M12x1, 4-pin	FT 55-RLH-NS-L4	623-11019
5 ... 800 mm	PNP	Cable, 3 m, 4-wire	FT 55-RLH-PS-K4	623-11021
5 ... 800 mm	NPN	Cable, 3 m, 4-wire	FT 55-RLH-NS-K4	623-11022



Reference material	Detection range
White (90 %)	5 ... 800 mm
Grey (18 %)	10 ... 600 mm
Black (6 %)	30 ... 500 mm

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