

FT 55-RL

Diffuse laser sensor



PRODUCT HIGHLIGHTS

- Differentiation of even the slightest of grey value differences
- Sensor adjustment via teach-in and control input
- Very small, easily visible laser light spot
- Plug and cable connection rotatable

Optical data		Functions	
Scanning distance	5 ... 1200 mm ¹	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	Sensitivity adjustment	Via Teach-in button and control input
Laser Class (IEC 60825-1)	1	Teach-in modes	Mode 1: during running process
Hysteresis	≤ 15 %	Adjustment possibilities	Mode 2: during standing process
		Default settings	N.O./N.C. via Teach-in button and control input
			Button lock via control input
			Max. scanning distance and N.O.
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ²	Dimensions	50 x 50.1 x 23 mm
No-load current, I ₀	≤ 30 mA	Enclosure rating	IP 69K & IP 67 ³
Output current, I _e	≤ 100 mA	Material, housing	PC-ABS
Protective circuits	Reverse-polarity protection, U _B / 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 ⁴
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)	≤ 600 Hz	Weight (cable device)	125 g
Response time	830 μs	Vibration and impact resistance	EN 60947-5-2
Control input, IN	+U _B = teach-in -U _B = button locked Open = normal operation		

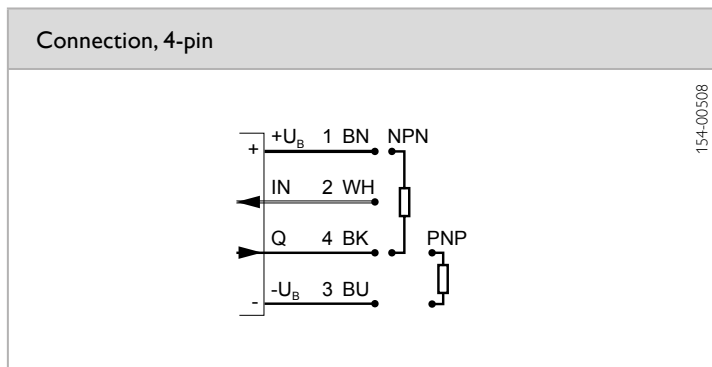
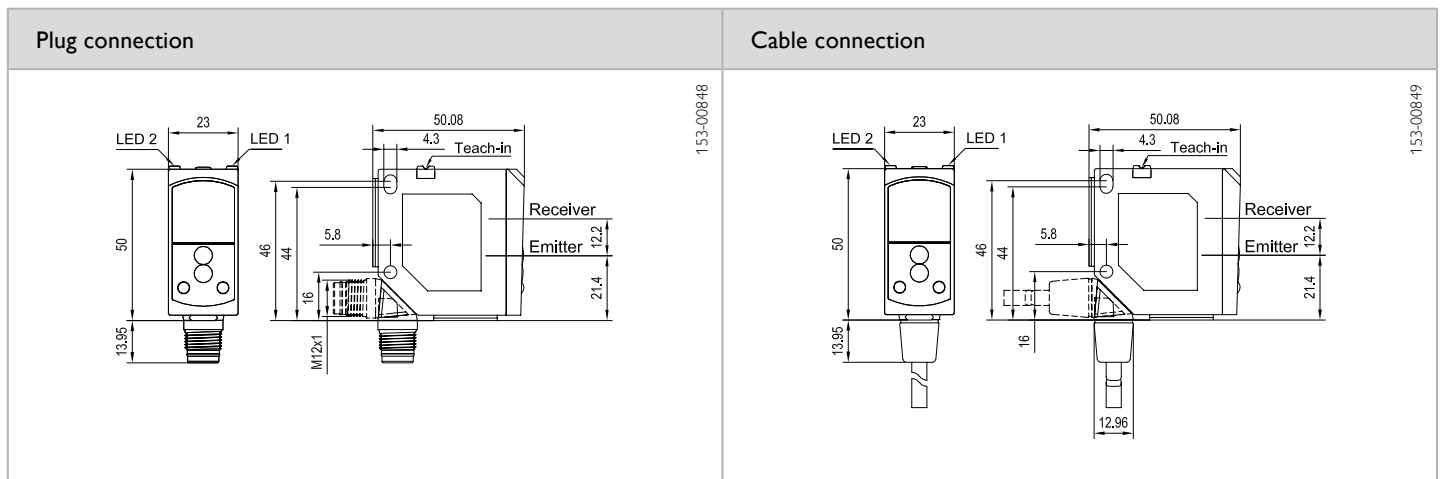
¹ Reference material: white, 90 % reflectivity

² Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz

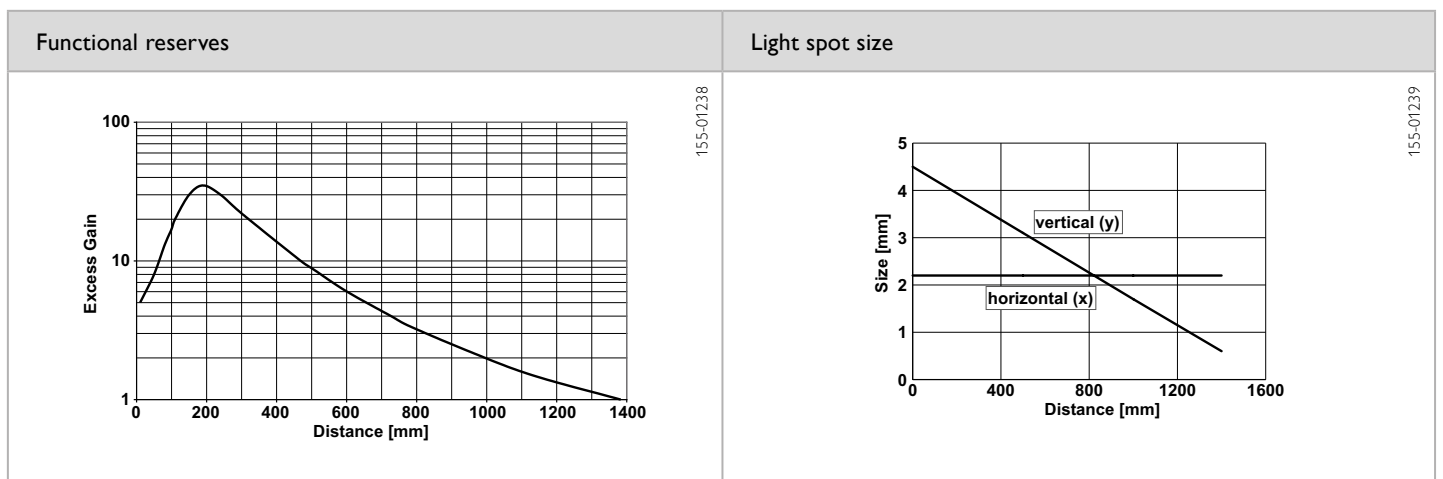
³ With connected IP 67 / IP 69K plug

⁴ UL: max. +45 °C

Scanning distance	Switching output	Type of connection	Part number	Article number
5 ... 1200 mm	PNP	Plug, M12x1, 4-pin	FT 55-RL-PS-L4	622-21006
5 ... 1200 mm	NPN	Plug, M12x1, 4-pin	FT 55-RL-NS-L4	622-21007
5 ... 1200 mm	PNP	Cable, 3 m, 4-wire	FT 55-RL-PS-K4	622-21009
5 ... 1200 mm	NPN	Cable, 3 m, 4-wire	FT 55-RL-NS-K4	622-21010



7



Reference material	Detection range
White (90 %)	5 ... 1200 mm
Grey (18 %)	10 ... 700 mm
Black (6 %)	100 ... 400 mm

Accessories	
Connection cables	www.sensopart.com/en/accessories
Brackets	