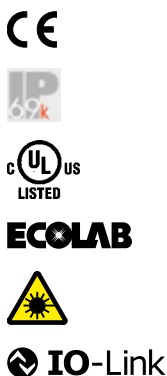


# FT 55-RLHP2 / -RLHP3

Diffuse laser sensor with background suppression – Time-of-flight technology



## PRODUCT HIGHLIGHTS

- For detection tasks with all object surfaces at high scanning distances
- Reliable object detection even with tilted objects and with bright, highly reflective or shiny backgrounds
- Simple teach-in (also external)
- Clearly visible laser light spot (laser class 1) for an easy alignment and full eye safety
- Stable switching performance when mounted in series (Variant RLHP3)

Optical data		Functions	
Scanning distance	0 ... 5 m (see selection table) <sup>1</sup>	Indicator LED 2 green	Operating voltage indicator
Hysteresis	20 mm <sup>1</sup>	Indicator LED 2 yellow <sup>2</sup>	Switching output indicator Q <sub>2</sub>
Black/white shift (6 % / 90 %)	≤ ± 40 mm	Indicator LED 1 yellow	Switching output indicator Q resp. Q <sub>1</sub>
Grey value shift (18 % / 90 %)	≤ ± 40 mm	Scanning distance adjustment	Via Teach-in Button and control input
Type of light	Laser, red 655 nm	Adjustment possibilities	N.O. / N.C. / antivalent <sup>2</sup> via Teach-in Button and control input, wide variety of adjustment possibilities for service and process data via IO-Link
Laser class (IEC 60825-1)	1	Default settings	3 m, N.O., Auto-Detect
Electrical data		Mechanical data	
Operating voltage +U <sub>b</sub>	18 ... 30V DC	Dimensions	50 x 50.1 x 23 mm
No-load current I <sub>0</sub>	≤ 60 mA	Enclosure rating	IP 67 & IP 69K <sup>4</sup>
Output current I <sub>e</sub> Q	≤ 100 mA	Material, housing	ABS
Protection 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	< 500 ms	Ambient temperature: operation	-40 ... +60 °C <sup>5</sup>
Switching output Q	1 x Auto-Detect (PNP/NPN) <sup>3</sup> 2 x Auto-Detect (PNP/NPN) <sup>3</sup>	Ambient temperature: storage	-40 ... +80 °C
Output function	N.O./N.C. / antivalent <sup>2</sup>	Weight (plug device)	42 g
Switching frequency f (ti/tp 1:1) Q	See selection table	Resistance to vibration and impacts	EN 60947-5-2
Response time Q	1 ms	IO-Link	
Temperature drift	< 1 mm / K	Communication mode	COM 2
Warm-up time	20 min.	Min. cycle time	2.3 ms
Control input IN	+U <sub>b</sub> = Teach-in -U <sub>b</sub> = button locked Open = normal operation	SIO mode	compatible
		Process bit length	16 Bit
		Specification	1.1

<sup>1</sup> Reference material 90 % reflectivity

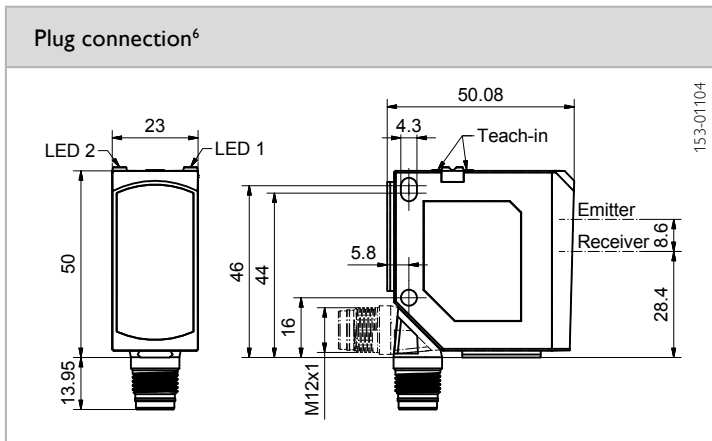
<sup>2</sup> For variant FT 55-RLHP2-2PNLS-L5

<sup>3</sup> Auto-Detect: Automatic selection of PNP or NPN by the sensor; PNP or NPN can be fixed

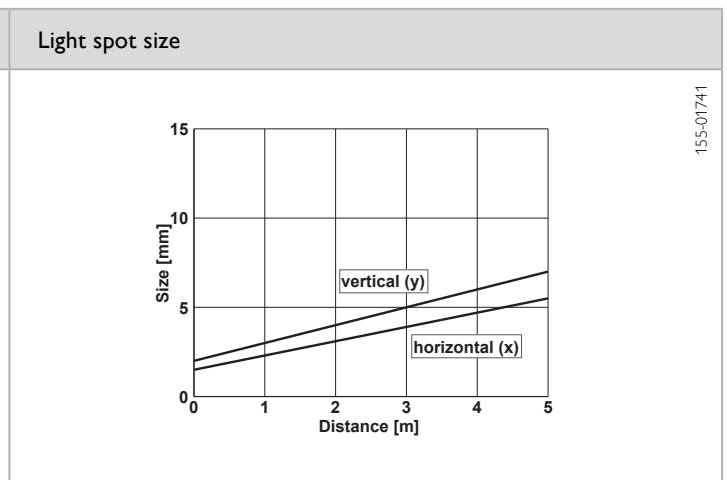
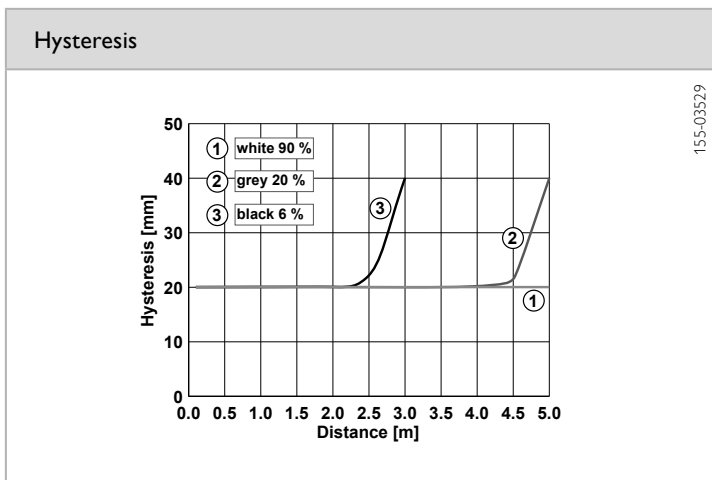
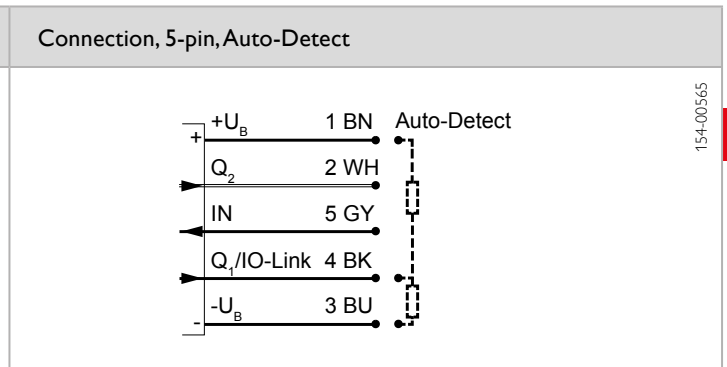
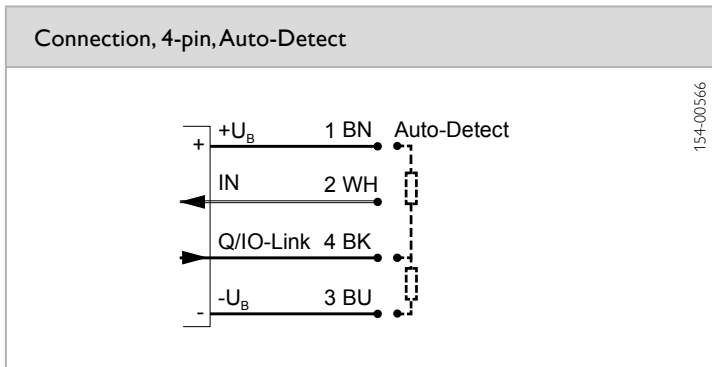
<sup>4</sup> With connected IP 67 / IP 69K plug

<sup>5</sup> UL: max. +45 °C

Switching frequency, f (ti/tp 1:1)	Scanning distance	Switching output	Type of connection	Part Number	Article number
≤ 500 Hz	0 ... 5 m	1 x Auto-Detect	Plug, M12x1, 4-pin, IO-Link	FT 55-RLHP2-PNSL-L4	623-11038
≤ 500 Hz	0 ... 5 m	2 x Auto-Detect	Plug, M12x1, 5-pin, IO-Link	FT 55-RLHP2-2PNLS-L5	623-11039
≤ 250 Hz (Variant for mounting in series)	0 ... 5 m	1 x Auto-Detect	Plug, M12x1, 4-pin, IO-Link	FT 55-RLHP3-PNSL-L4	623-11040



<sup>6</sup> FT 55-RLHP2-PNSL-L4 with a teach-in button



Reference material	Scanning distance
White (90 %)	0 ... 5 m
Grey (18 %)	0 ... 5 m
Black (6 %)	0.05... 3 m

**Accessories**

Connection cables	<a href="http://www.sensopart.com/en/accessories">www.sensopart.com/en/accessories</a>
Brackets	

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