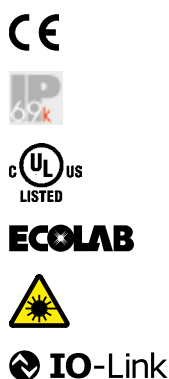


FT 55-RLHP2

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
- Compact housing for an easy integration
- Simple teach-in (also external)
- Clearly visible laser light spot (laser class 1) for an easy alignment and full eye safety

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

¹ Reference material 90 % reflectivity

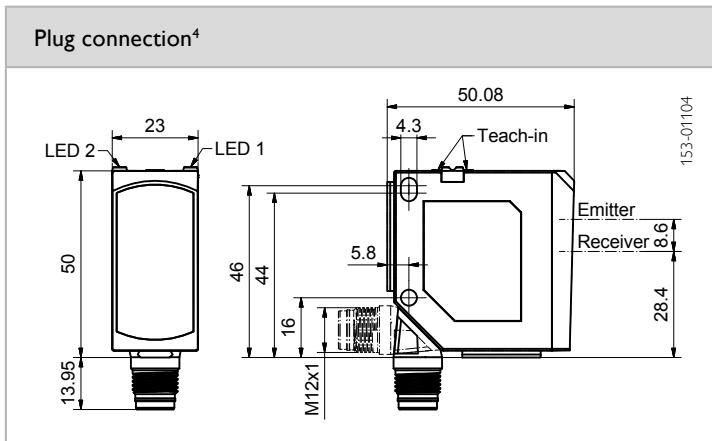
² For variant FT 55-RLHP2-2PNS-L5

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

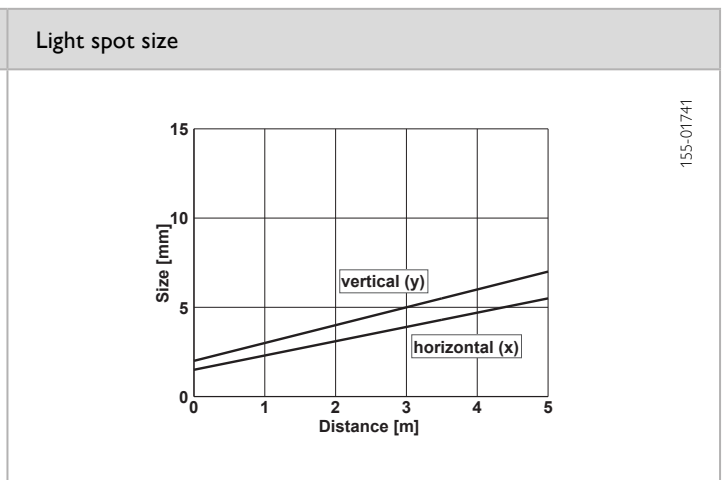
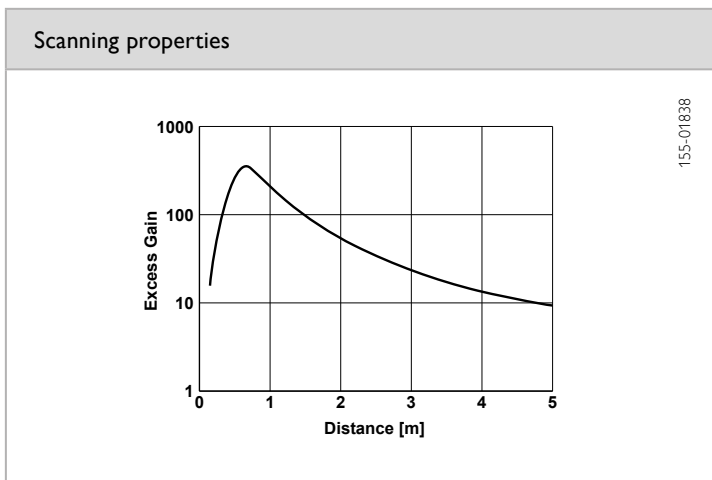
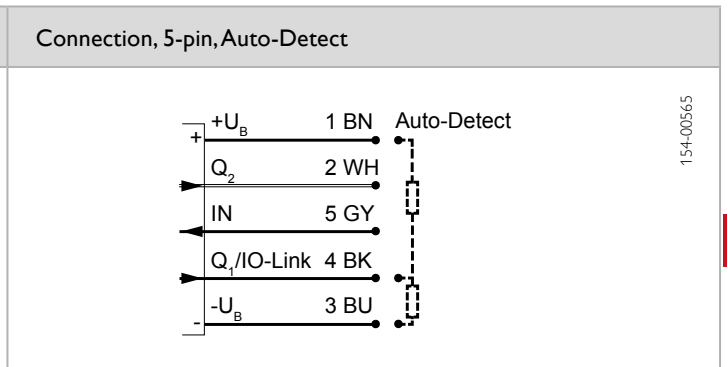
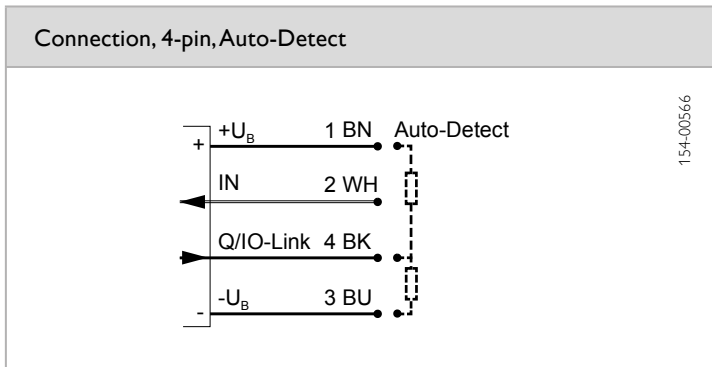
⁴ With connected IP 67 / IP 69K plug

⁵ UL: max. +45 °C

Scanning distance	Switching output	Type of connection	Part Number	Article number
0 ... 5 m	1 x Auto-Detect	Plug, M12x1, 4-pin, IO-Link	FT 55-RLHP2-PNSL-L4	623-11038
0 ... 5 m	2 x Auto-Detect	Plug, M12x1, 5-pin, IO-Link	FT 55-RLHP2-2PNSL-L5	623-11039



⁴ FT 55-RLHP2-PNS-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	From Page A-38
Brackets	From Page A-4