

FT 55-RLHP2

Laser photoelectric proximity 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 Q2
Black/white shift (6%/90%)	≤ ± 40 mm	Indicator LED 1 yellow	Switching output indicator Q resp. Q1
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	Key lock via control input
			3 m, N.O.
Electrical data		Mechanical data	
Operating voltage +U _b	18 ... 30V DC	Dimensions	50 × 50,1 × 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 × Auto-Detect (PNP/NPN) ³ 2 × 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		
Temperature drift	< 2 mm / K		
Warm-up time	20 min.		
Control input IN	+U _b = Teach-in -U _b = Button locked Open = normal operation		

¹ Reference material 90 % reflectivity

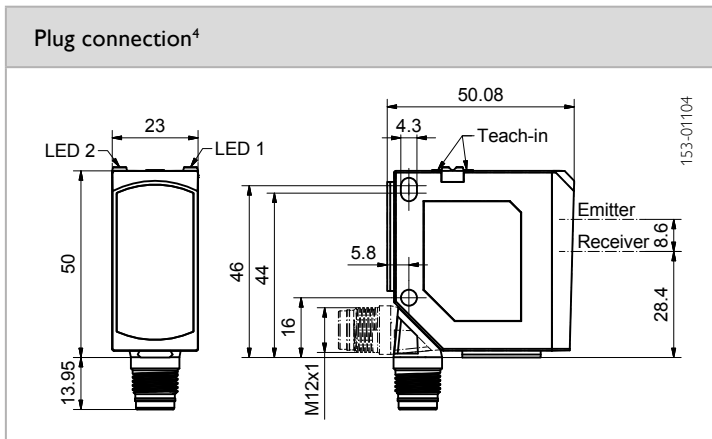
² For variant FT 55-RLHP2-2PNS-L5

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

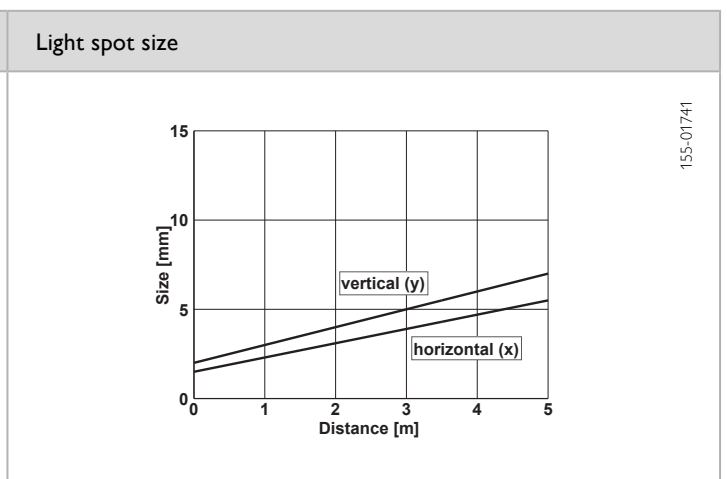
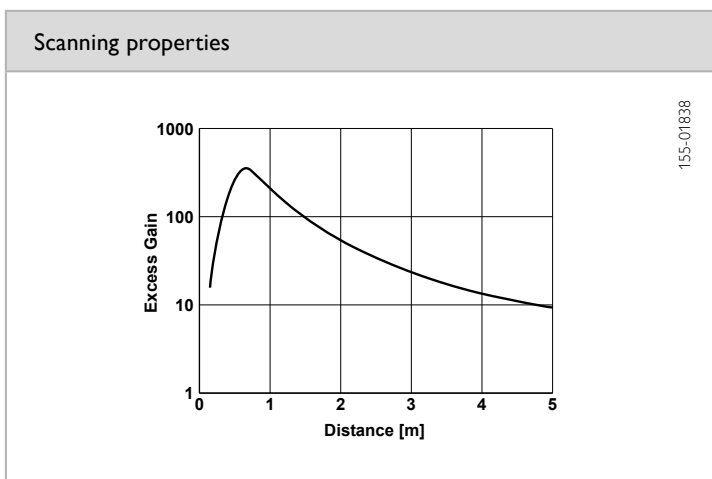
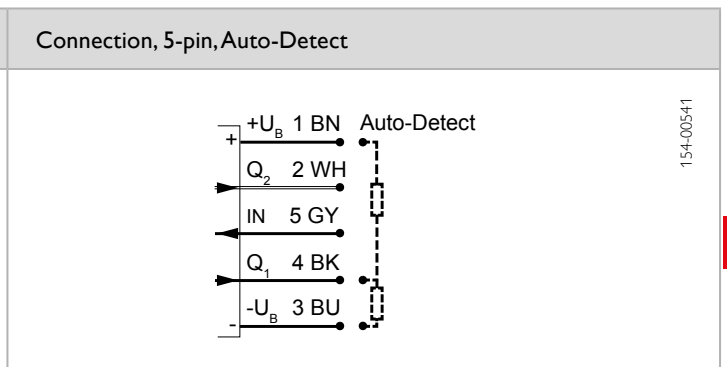
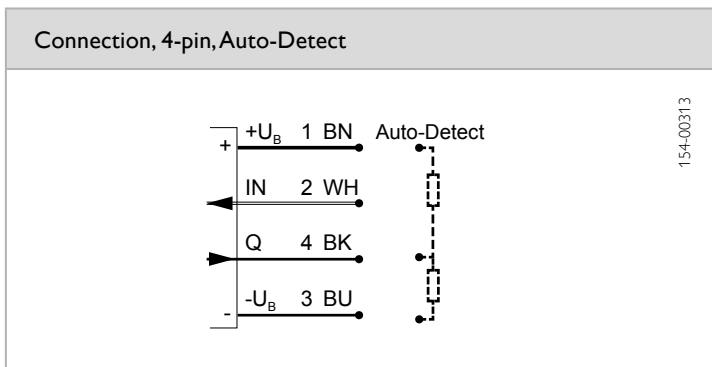
⁴ With connected IP 67 / IP 69K plug

⁵ UL: max. +45 °C

Scanning distance	Switching output	Type of connection	Part Number	Article number
0 ... 5 m	1 × Auto-Detect	Plug, M12x1, 4-pin	FT 55-RLHP2-PNS-L4	623-11031
0 ... 5 m	2 × Auto-Detect	Plug, M12x1, 5-pin	FT 55-RLHP2-2PNS-L5	623-11034



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