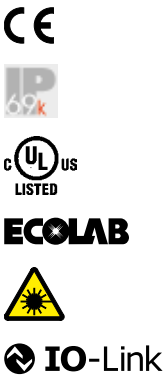


FT 55-RLAP2

Distance sensor with IO-Link measurement value output



PRODUCT HIGHLIGHTS

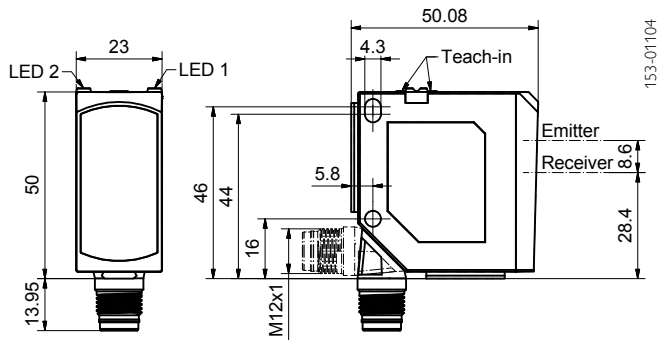
- Measurement value output via IO-Link
- For detection tasks with all object surfaces at high scanning distances
- Reliable object detection even with tilted objects and with bright, highly reflective or shiny backgrounds
- Compact housing for an easy integration
- Simple teach-in
- Clearly visible laser light spot (laser class 1) for an easy alignment and full eye safety

Optical data		Functions	
Scanning distance	0.06 ... 5 m (see selection table) ¹	Indicator LED 2 green	Operating voltage indicator
Type of light	Laser, red 655 nm	Indicator LED 1 yellow	Switching output indicator Q
Laser class (IEC 60825-1)	1	Scanning distance adjustment	Via Teach-in button and IO-Link
Resolution	< 5 mm	Adjustment possibilities	N.O./N.C. and Auto-Detect/NPN/
Hysteresis	20 mm		PNP via teach-in and control line, wide
Linearity	± 15 mm (see diagram) ²	Default settings	variety of adjustment possibilities for
Repeatability	≤ 7 mm (6 σ, see diagram) ^{1,2,3}		service and process data via IO-Link
			3 m, N.O., Auto-Detect
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 ⁵
Output current I _e Q	≤ 100 mA	Material, housing	ABS
Protection circuits	Reverse polarity protection U _B /	Material, front screen	PMMA
	short-circuit protection (Q)	Type of connection	See selection table
Protection class	2	Ambient temperature: operation	-40 ... +60 °C ⁶
Power On Delay	< 500 ms	Ambient temperature: storage	-40 ... +80 °C
Switching output Q	1 x Auto-Detect (PNP/NPN) ⁴	Weight (plug device)	42 g
Output function	N.O./N.C.	Resistance to vibration and impacts	EN 60947-5-2
Switching frequency f (ti/tp 1:1) Q	≤ 250 Hz	IO-Link	
Response time Q	2 ms		
Response time measurement	Min. cycle time IO-Link	Communication mode	COM 2
value output		Min. cycle time	2.7 ms
Temperature drift	< 1 mm/K	SIO mode	Compatible
Warm-up time	20 min.	Process bit length	24 Bit
Control input IN	+U _B = Teach-in	Specification	1.1
	-U _B = button locked		
	Open = normal operation		

¹ Reference material 90 % reflectivity ² 20 ... 90 % ³ 50 Hz ⁴ Auto-Detect: Automatic selection of PNP or NPN by the sensor; PNP or NPN can be fixed
⁵ With connected IP 67/IP 69K plug ⁶ UL: max. +45 °C

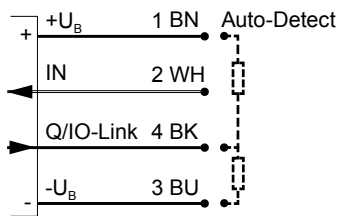
Scanning distance	Switching output	Type of connection	Part Number	Article number
0.06 ... 5 m	1 x Auto-Detect	Plug, M12x1, 4-pin, IO-Link	FT 55-RLAP2-PNSL-L4	623-11035
0.06 ... 5 m	2 x Auto-Detect	Plug, M12x1, 5-pin, IO-Link	FT 55-RLAP2-2PNSL-L5	622-21022

Plug connection⁷



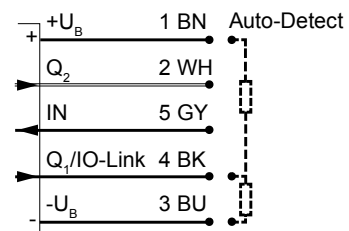
⁷ FT 55-RLAP2...L4 with one button | FT 55-RLAP2...L5 with two buttons

Connection, 4-pin, IO-Link



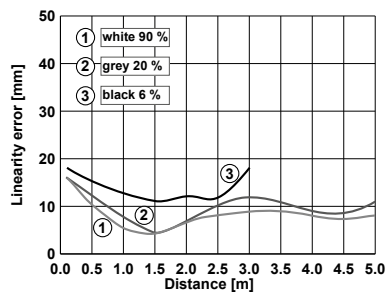
154-00566

Connection, 5-pin, IO-Link



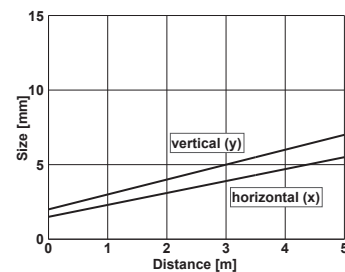
154-00565

Linearity error (typ.)



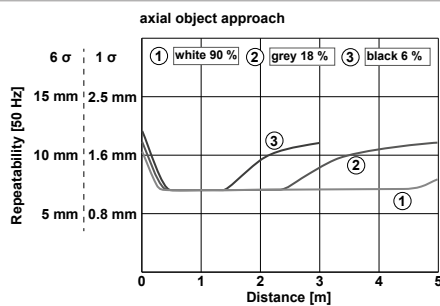
155-03528

Light spot size



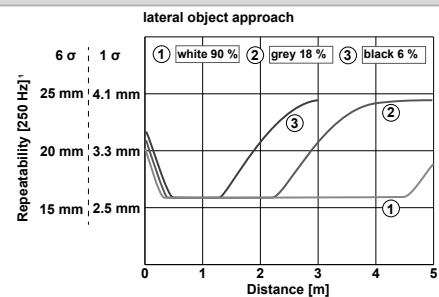
155-01741

Repeatability⁸ (50 Hz)



155-02029

Repeatability⁸ (250 Hz⁹)



155-02030

⁸ At constant ambient conditions ⁹ Automatic adjustment to 50 Hz at constant distance

Reference material	Scanning distance	Accessories
White (90 %)	0.06 ... 5 m	Connection cables
Grey (18 %)	0.06 ... 5 m	Brackets
Black (6 %)	0.06 ... 3 m	

www.sensopart.com/en/accessories