

# FT 25-RF

Photoelectric diffuse sensor with background suppression, fixed focus



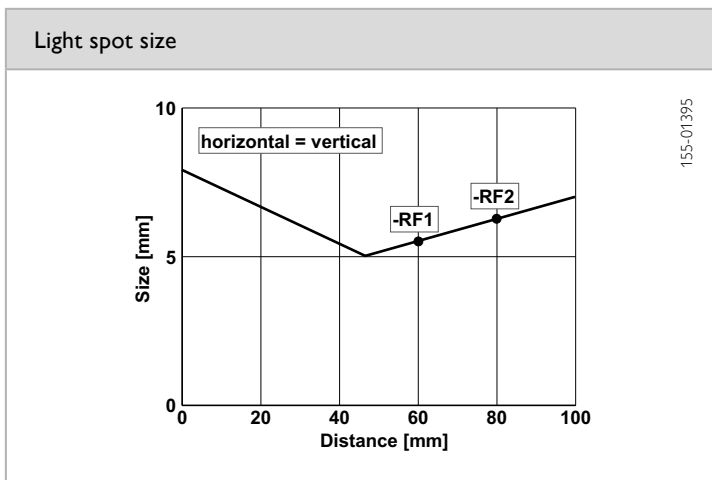
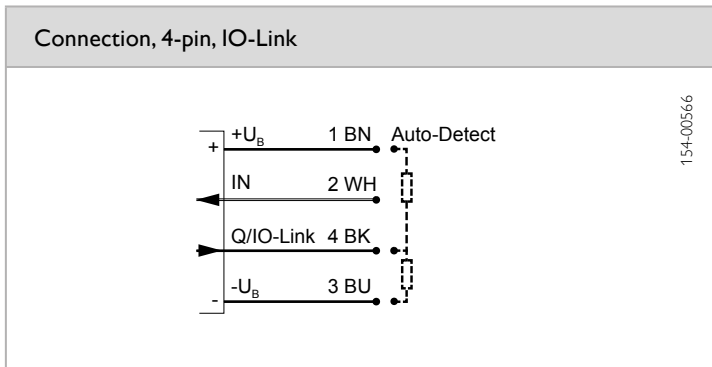
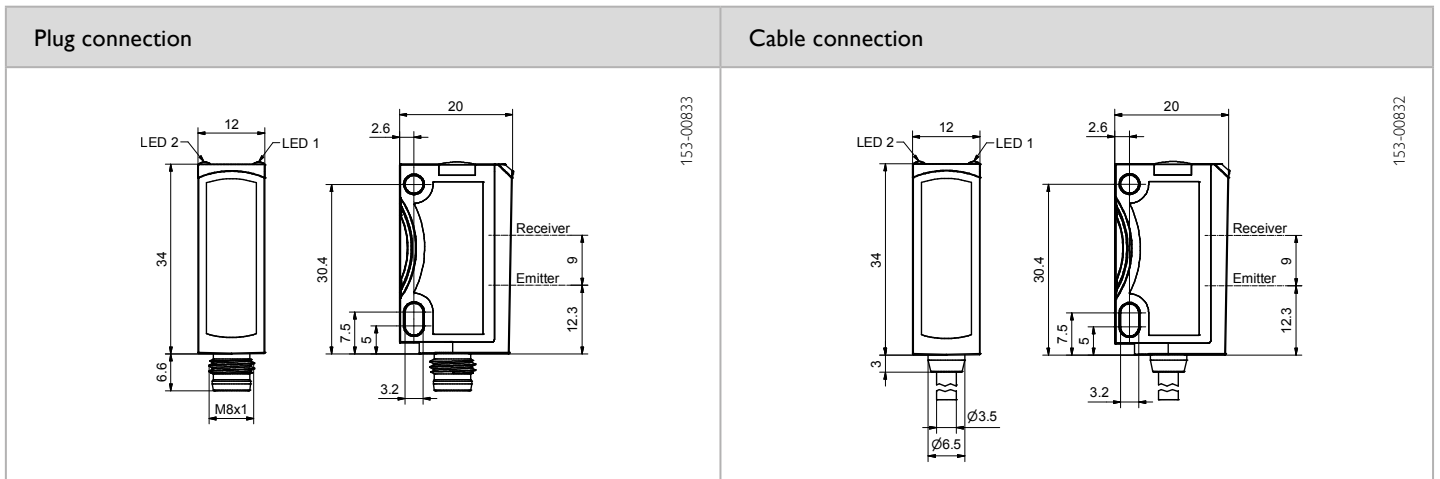
## PRODUCT HIGHLIGHTS

- Precise fixed background suppression
- Economical solution for numerous applications
- Tamper-proof sensor design – no misalignment possible
- Simple alignment thanks to easily visible light spot
- Robust glass-fibre-reinforced plastic housings

Optical data		Functions	
Scanning distance	1 ... 60 mm <sup>1</sup> / 1 ... 80 mm <sup>1</sup>	Indicator LED, green	Operating voltage indicator
Type of light	LED, red, 632 nm	Indicator LED, yellow	Switching output indicator
Light spot size	See diagram	Adjustment possibilities	N.O./N.C. via control input and IO-Link
Hysteresis	~ 5 % <sup>2</sup>		
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	10 ... 30V DC <sup>3</sup>	Dimensions	34 x 20 x 12 mm
No-load current, I <sub>0</sub>	≤ 30 mA	Enclosure rating	IP 69 & IP 67 <sup>5</sup>
Output current, I <sub>e</sub>	≤ 100 mA	Material, housing	ABS
Protective 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	< 300 ms	Ambient temperature: operation	-20 ... +60 °C <sup>6</sup>
Switching output, Q	1x Auto-Detect (PNP/NPN) <sup>4</sup>	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (plug device)	10 g
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Weight (metal plug device <sup>7</sup> )	10 g
Response time	500 μs	Weight (cable device)	40 g
Control input, IN	+U <sub>B</sub> = N.C. -U <sub>B</sub> / Open = N.O.	Vibration and impact resistance	EN 60947-5-2
IO-Link			
Communication mode	COM 2		
Min. cycletime	2.3 ms		
SIO mode	Compatible		
Length process data	16 Bit		
Specification	1.1		

<sup>1</sup> Reference material: white, 90 % reflectivity    <sup>2</sup> Based on scanning distance    <sup>3</sup> Max. 10 % ripple, within U<sub>B</sub>, ~ 50 Hz / 100 Hz    <sup>4</sup> Auto-Detect, automatic PNP/NPN selection by the sensor, PNP or NPN fixed via IO-Link    <sup>5</sup> With connected IP 67 / IP 69 plug    <sup>6</sup> UL: -20 ... +50 °C    <sup>7</sup> No Ecolab

Scanning distance	Switching output	Type of connection	Part number	Article number
1 ... 60 mm	Auto-Detect	Plug, M8x1, 4-pin, IO-Link	FT 25-RF1-PNSL-M4	608-11058
1 ... 60 mm	Auto-Detect	Metal plug, M8x1, 4-pin, IO-Link	FT 25-RF1-PNSL-M4M	608-11062
1 ... 60 mm	Auto-Detect	Cable, 2 m, 4-wire, IO-Link	FT 25-RF1-PNSL-K4	608-11059
1 ... 80 mm	Auto-Detect	Plug, M8x1, 4-pin, IO-Link	FT 25-RF2-PNSL-M4	608-11060
1 ... 80 mm	Auto-Detect	Cable, 2 m, 4-wire, IO-Link	FT 25-RF2-PNSL-K4	608-11061



Reference material	Detection range
White (90 %)	1 ... 60 mm / 80 mm
Grey (18 %)	2 ... 60 mm / 80 mm
Black (6 %)	4 ... 60 mm / 80 mm

**Accessories**

Connection cables	From Page A-38
Brackets	From Page A-4
SensoIO (901-01000)	From Page A-56