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	
Scanning distance	1 … 60 mm[1] / 1 … 80 mm[1]
Type of light	LED, red, 632 nm
Light spot size	See diagram
Hysteresis	~ 5 %[2]

Functions	
Indicator LED, green	Operating voltage indicator
Indicator LED, yellow	Switching output indicator
Adjustment possibilities	N.O./N.C. via control input and IO-Link

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[3]
No-load current, I_0	≤ 30 mA
Output current, Ie	≤ 100 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Protection Class	2
Power On Delay	< 300 ms
Switching output, Q	1x Auto-Detect (PNP/NPN)[4]
Output function	N.O./N.C.
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz
Response time	500 µs
Control input, IN	$+U_B$ = N.C. $-U_B$ / Open = N.O.

Mechanical data	
Dimensions	34 x 20 x 12 mm
Enclosure rating	IP 69 & IP 67[5]
Material, housing	ABS
Material, front screen	PMMA
Type of connection	See selection table
Ambient temperature: operation	-20 … +60 °C[6]
Ambient temperature: storage	-20 … +80 °C
Weight (plug device)	10 g
Weight (metal plug device[7])	10 g
Weight (cable device)	40 g
Vibration and impact resistance	EN IEC 60947-5-2

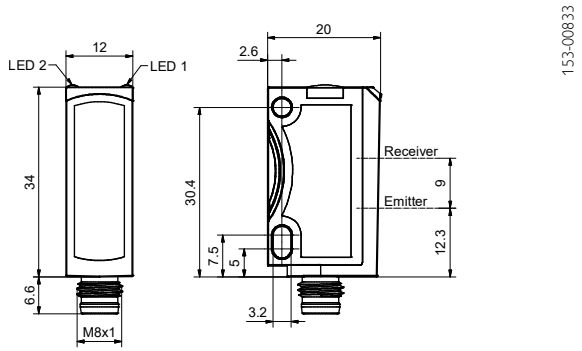
IO-Link	
Communication mode	COM 2
Min. cycletime	2.3 ms
SIO mode	Compatible
Length process data	16 Bit
Specification	1.1

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

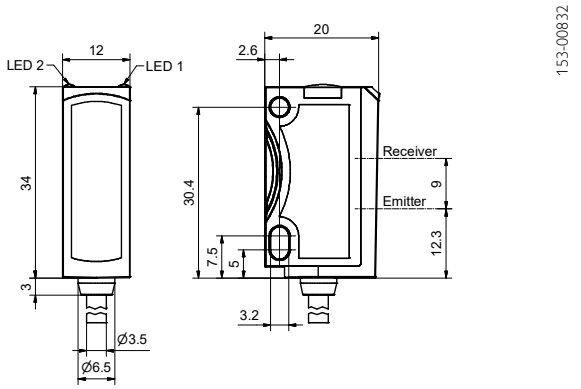
Scanning distance	Switching output	Type of connection	Part number	Article number
1 … 60 mm	Auto-Detect	Plug, M8x1, 4-pin, IO-Link	FT 25-RF1-PNSL-M4	608-11058
1 … 60 mm	Auto-Detect	Metal plug, M8x1, 4-pin, IO-Link	FT 25-RF1-PNSL-M4M	608-11062
1 … 60 mm	Auto-Detect	Cable, 2 m, 4-wire, IO-Link	FT 25-RF1-PNSL-K4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

Version: 07/2022. Subject to changes; diagrams similar

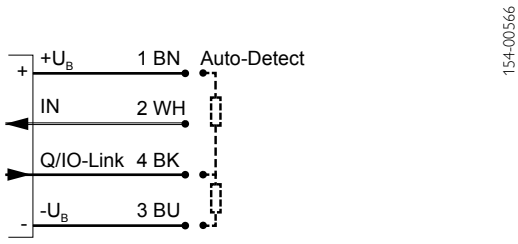
Plug connection



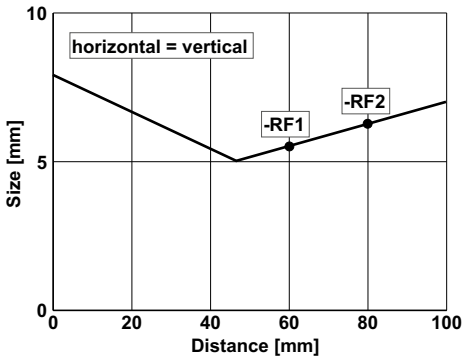
Cable connection



Connection, 4-pin, IO-Link



Light spot size



Reference material	Detection range	Accessories	
White (90 %)	1 … 60 mm / 80 mm	Connection cables	www.sensopart.com/en/accessories
Grey (18 %)	2 … 60 mm / 80 mm	Brackets	
Black (6 %)	4 … 60 mm / 80 mm	SensoIO (901-01001)	