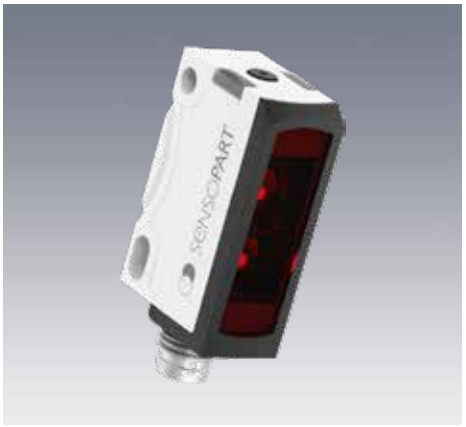
FT 25-RH

Photoelectric diffuse sensor with background suppression



PRODUCT HIGHLIGHTS

- Precisely adjustable background suppression
- Reliable switching despite varying object colors and surfaces
- Reliable operation even with highly reflective backgrounds, thanks to SensoPart ASIC technology
- Simple alignment thanks to easily visible light spot
- Sensor setting via teach-in and control input
- Robust glass-fibre-reinforced plastic housings

Optical data	
Scanning distance	1 … 200 mm[1]
Adjustment range	10 … 200 mm[1]
Type of light	LED, red, 632 nm
Light spot size	See diagram

Functions	
Indicator LED, green	Operating voltage indicator
Indicator LED, yellow	Switching output indicator
Scanning distance adjustment	Via Teach-in button, control input[3] and IO-Link
Teach-in modes	Mode 1: during running process Mode 2: during standing process
Adjustment possibilities	N.O./N.C. and Auto-Detect / NPN / PNP via teach-in button, control input[3] and IO-Link Button lock via control input[3] and IO-Link Wide variety of adjustment possibilities via IO-Link
Default settings	Max. scanning distance and N.O.

Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[2]
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[3]	$+U_B$ = teach-in $-U_B$ = button locked Open = normal operation

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
Weight (pigtail)	20 g
Vibration and impact resistance	EN IEC 60947-5-2

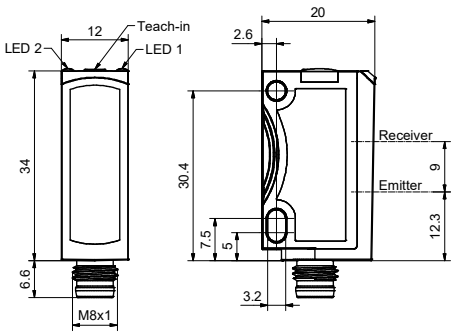
IO-Link	
Communication mode	COM 2
Min. cycletime	2.3 ms
SIO mode	Compatible
Length process data	16 Bit
Specification	1.1

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

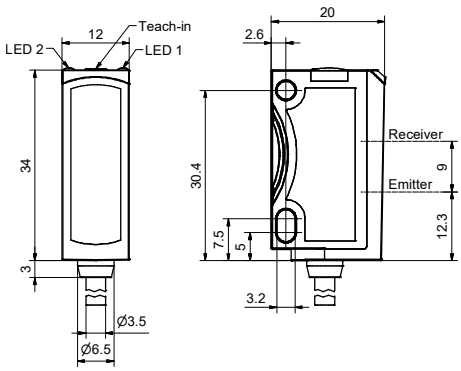
Version: 07/2023. Subject to changes; diagrams similar

Scanning distance	Switching output	Type of connection	Part number	Article number
1 … 200 mm	Auto-Detect	Plug, M8x1, 3-pin, IO-Link	FT 25-RH-PNSL-M3	608-11054
1 … 200 mm	Auto-Detect	Metal plug, M8x1, 3-pin, IO-Link	FT 25-RH-PNSL-M3M	608-11055
1 … 200 mm	Auto-Detect	Plug, M8x1, 4-pin, IO-Link	FT 25-RH-PNSL-M4	608-11051
1 … 200 mm	Auto-Detect	Metal plug, M8x1, 4-pin, IO-Link	FT 25-RH-PNSL-M4M	608-11053
1 … 200 mm	Auto-Detect	Cable, 2 m, 4-wire, IO-Link	FT 25-RH-PNSL-K4	608-11052
1 … 200 mm	Auto-Detect	Pigtail, 150 mm with plug, M8, 4-pin, IO-Link	FT 25-RH-PNSL-KM4	608-11057
1 … 200 mm	Auto-Detect	Pigtail, 150 mm with plug, M12 4-pin, IO-Link	FT 25-RH-PNSL-KL4	608-11056

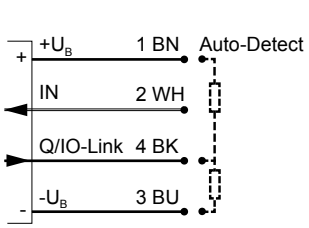
Plug connection



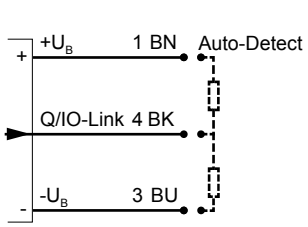
Cable connection



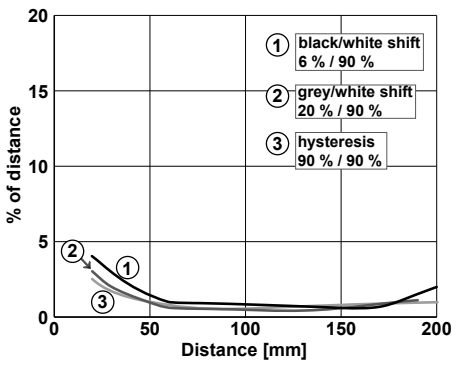
Connection, 4-pin, IO-Link



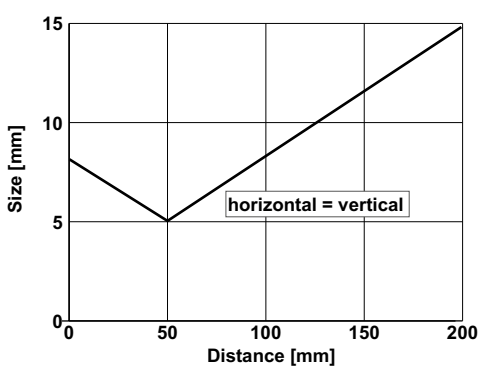
Connection, 3-pin, IO-Link



Scanning properties



Light spot size



Reference material
White (90 %)
Grey (18 %)
Black (6 %)

Detection range
1 … 200 mm
4 … 200 mm
6 … 190 mm

Accessories	
Connection cables	www.sensopart.com/en/accessories
Brackets	
SensoIO (901-01001)	