FT 25-RHD

Photoelectric proximity sensor with background suppression



PRODUCT HIGHLIGHTS

- Auto-detect photoelectric proximity sensor with real PNP and real NPN functions
- Precisely adjustable background suppression
- Long scanning distance of 400 mm with small and compact housings
- Reliable operation even with highly reflective backgrounds, thanks to SensoPart ASIC technology
- Simple alignment thanks to easily visible light spot
- Robust glass-fibre-reinforced plastic housings

Optical data	
Scanning distance	3 … 400 mm[1]
Adjustment range	30 … 400 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 and control input
Teach-in modes	Mode 1: during running process Mode 2: during standing process
Adjustment possibilities	N.O./N.C. via Teach-in button and control input Button lock via control input Auto-detect / NPN/PNP via Teach-in button and control input (only Auto-detect variants)
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	PNP/NPN / Auto-Detect (PNP/NPN) (see Selection Table)
Output function	N.O./N.C.
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz
Response time	500 µs
Control input, IN	$+U_B$ = teach-in, $-U_B$ = button locked Open = normal operation

Mechanical data	
Dimensions	34 x 20 x 12 mm
Enclosure rating	IP 69K & IP 67[3]
Material, housing	ABS
Material, front screen	PMMA
Type of connection	See Selection Table
Ambient temperature: operation	-20 … +60 °C[4]
Ambient temperature: storage	-20 … +80 °C
Weight (plug device)	10 g
Weight (metal plug device[5])	10 g
Weight (cable device)	40 g
Weight (pigtail)	20 g
Vibration and impact resistance	EN 60947-5-2

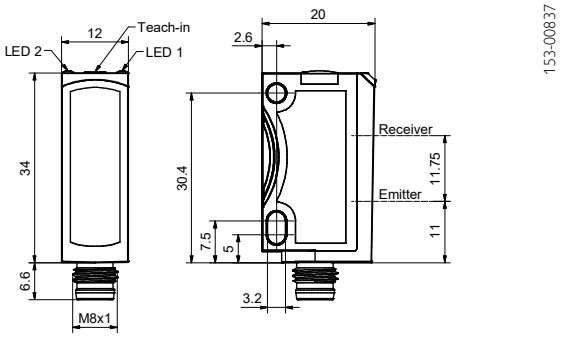
[1] Reference material: white, 90 % reflectivity [2] Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz [3] With connected IP 67 / IP 69K plug [4] UL: -20 ... +50 °C [5] No Ecolab

Scanning distance	Switching output	Type of connection	Part number	Article number
3 … 400 mm	PNP	Plug, M8x1, 4-pin	FT 25-RHD-PS-M4	608-11000
3 … 400 mm	NPN	Plug, M8x1, 4-pin	FT 25-RHD-NS-M4	608-11002
3 … 400 mm	PNP	Plug, M8x1, 3-pin	FT 25-RHD-PS-M3M	608-11029
3 … 400 mm	PNP	Metal plug, M8x1, 4-pin	FT 25-RHD-PS-M4M	608-11016
3 … 400 mm	NPN	Metal plug, M8x1, 4-pin	FT 25-RHD-NS-M4M	608-11017
3 … 400 mm	PNP	Cable, 2 m, 4-wire	FT 25-RHD-PS-K4	608-11001
3 … 400 mm	NPN	Cable, 2 m, 4-wire	FT 25-RHD-NS-K4	608-11003
3 … 400 mm	PNP	Pigtail, 150 mm with plug, M8, 4-pin	FT 25-RHD-PS-KM4	608-11030

Version: 07/2016. Subject to changes; diagrams similar

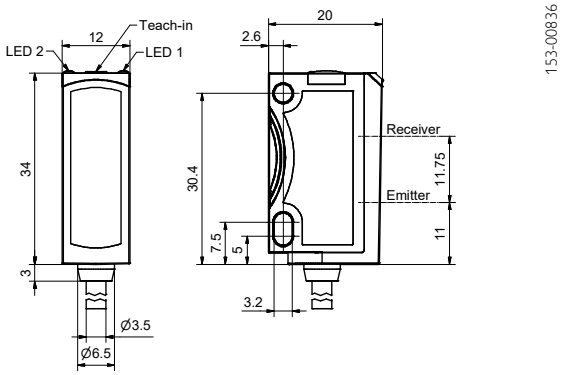
Scanning distance	Switching output	Type of connection	Part number	Article number
3 … 400 mm	NPN	Pigtail, 150 mm with plug, M8, 4-pin	FT 25-RHD-NS-KM4	608-11033
3 … 400 mm	PNP	Pigtail, 150 mm with plug, M12, 4-pin	FT 25-RHD-PS-KL4	608-11010
3 … 400 mm	NPN	Pigtail, 150 mm with plug, M12, 4-pin	FT 25-RHD-NS-KL4	608-11011
3 … 400 mm	Auto-detect	Metal plug, M8x1, 4-pin	FT 25-RHD-PNS-M4M	608-11019

Plug connection



153-00837

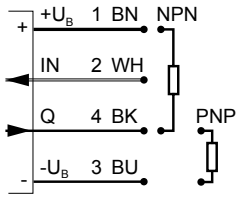
Cable connection



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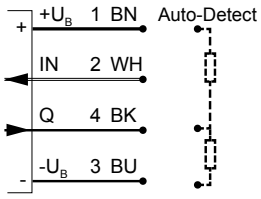
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Connection, 4-pin



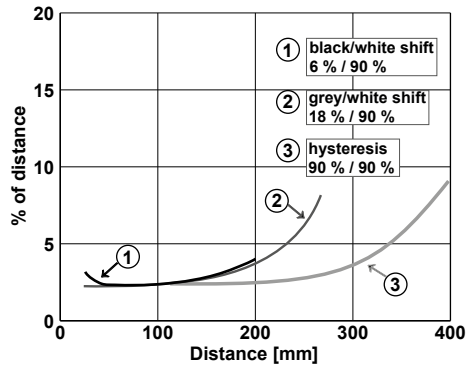
154-00312

Connection, 4-pin, Auto-detect



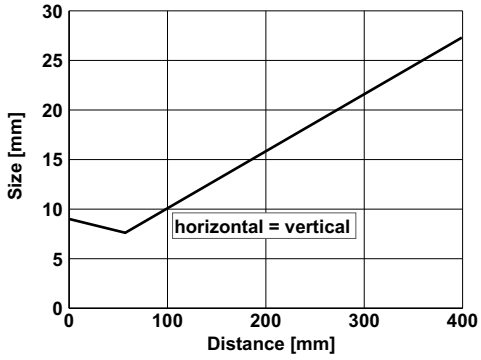
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Scanning properties



155-01382

Light spot size



155-01381

Reference material	Detection range
White (90 %)	3 … 400 mm
Grey (18 %)	6 … 260 mm
Black (6 %)	12 … 200 mm

Accessories	
Connection cables	From Page A-38
Brackets	From Page A-4