FT 10-RLH

Diffuse laser sensor with background suppression



PRODUCT HIGHLIGHTS

- Sub-miniature sensor with laser light and adjustable background suppression
- Precise and reliable switching behaviour, even with varying object surfaces and colors
- Reliable operation even with highly reflective machine parts in the background, thanks to SensoPart ASIC technology
- Particularly suitable for detecting the smallest of parts and for installation in extremely confined spaces
- Setting of smart functions via IO-Link

Optical data	
Scanning distance	6 … 70 mm[1]
Adjustment range	10 … 70 mm[1]
Type of light	Laser, red, 655 nm
Light spot size (total detection area)	1 x 3 mm
Laser Class (IEC 60825-1)	1

Functions	
Indicator LED, green	Operating voltage indicator
Indicator LED, yellow	Switching output indicator
Scanning distance adjustment	Via Teach-in button, control input[4] and IO-Link
Adjustment possibilities	N.O./N.C. and Auto-Detect / NPN / PNP via teach-in button, control input[4] and IO-Link Button lock via control input[4] 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	≤ 12 mA
Output current, Ie	≤ 50 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Protection Class	2
Switching output, Q	1x Auto-Detect (PNP/NPN)[3]
Output function	N.O./N.C.
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz
Response time	500 µs
Control input, IN[4]	$+U_B$ = teach-in $-U_B$ = button locked Open = normal operation

Mechanical data	
Dimensions	21.1 x 14.6 x 8 mm
Enclosure rating	IP 67[5]
Material, housing	PUR
Material, front screen	PMMA
Type of connection	See selection table
Ambient temperature: operation	-20 … +50 °C[6]
Ambient temperature: storage	-20 … +80 °C
Weight (plug device)	Approx. 3 g
Weight (cable device)	Approx. 22 g
Weight (pigtail)	Approx. 10 g

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

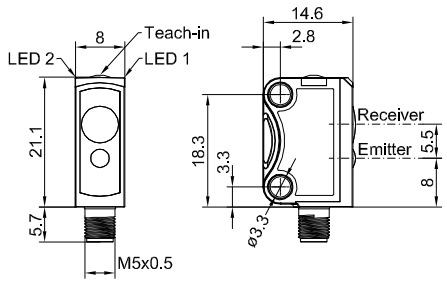
[1] Reference material white, 90 % reflectivity [2] Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz [3] Auto-Detect, automatic PNP/NPN selection by the sensor, PNP or NPN fixed
[4] Only 4-pin design [5] With connected IP 67 plug [6] UL: -20 ... +30 °C

Scanning distance	Switching output	Type of connection	Part number	Article number
6 … 70 mm	Auto-Detect	Plug, M5x0.5, 4-pin, IO-Link	FT 10-RLH-PNSL-E4	600-11163
6 … 70 mm	Auto-Detect	Cable, 2 m, 4-wire, IO-Link	FT 10-RLH-PNSL-K4	600-11164
6 … 70 mm	Auto-Detect	Pigtail, 200 mm with M8 plug, 4-pin, IO-Link	FT 10-RLH-PNSL-KM4	600-11165
6 … 70 mm	Auto-Detect	Pigtail, 200 mm with M8 plug, 3-pin, IO-Link	FT 10-RLH-PNSL-KM3	600-11166

Including dovetail clamp mounting MBD F 10 for all types

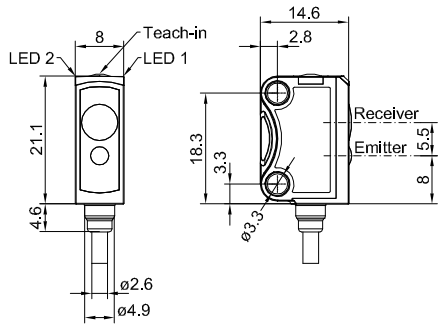
Plug connection

153-00894



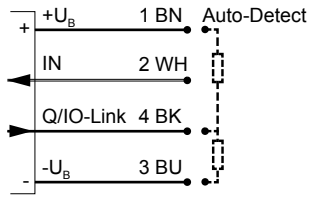
Cable connection

153-00895



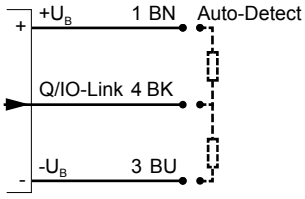
Connection, 4-pin, IO-Link

154-00566



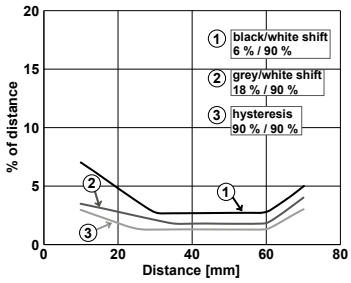
Connection, 3-pin, IO-Link

154-00572



Scanning properties

155-02719



Reference material	Detection range
White (90 %)	6 … 70 mm
Grey (18 %)	7 … 70 mm
Black (6 %)	7 … 70 mm

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