FT 10-RLH

Laser photoelectric proximity sensor with background suppression

CE

IP 67

c UL us LISTED

ECOLAB
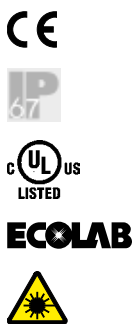
PRODUCT HIGHLIGHTS

- Sub-miniature sensor with laser light and adjustable background suppression
- Precise and reliable switching behaviour, even with varying object surfaces and colours
- 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

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 × 3 mm[2]
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 and control input
Adjustment possibilities	Button lock via control input
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	PNP/NPN (see Selection Table)
Output function	N.O.
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz
Response time	500 µs
Control input, IN (only 4-pin design)	$+U_B$ = teach-in $-U_B$ = button locked Open = normal operation

Mechanical data	
Dimensions	21.1 × 14.6 × 8 mm
Enclosure rating	IP 67[3]
Material, housing	PUR
Material, front screen	PMMA
Type of connection	See Selection Table
Ambient temperature: operation	-20 … +50 °C[4]
Ambient temperature: storage	-20 … +80 °C
Weight (plug device)	Ca. 3 g
Weight (cable device)	Ca. 22 g
Weight (pigtail)	Ca. 10 g

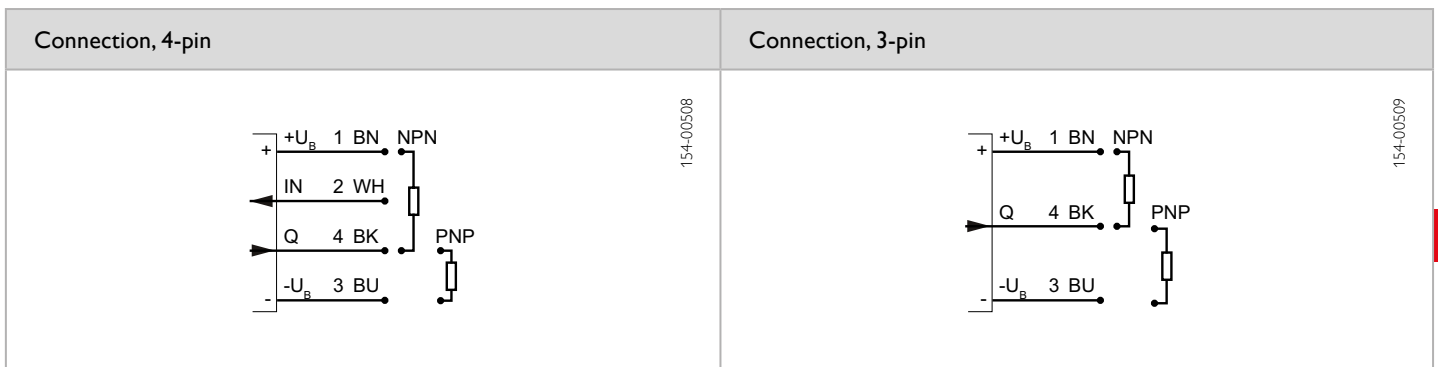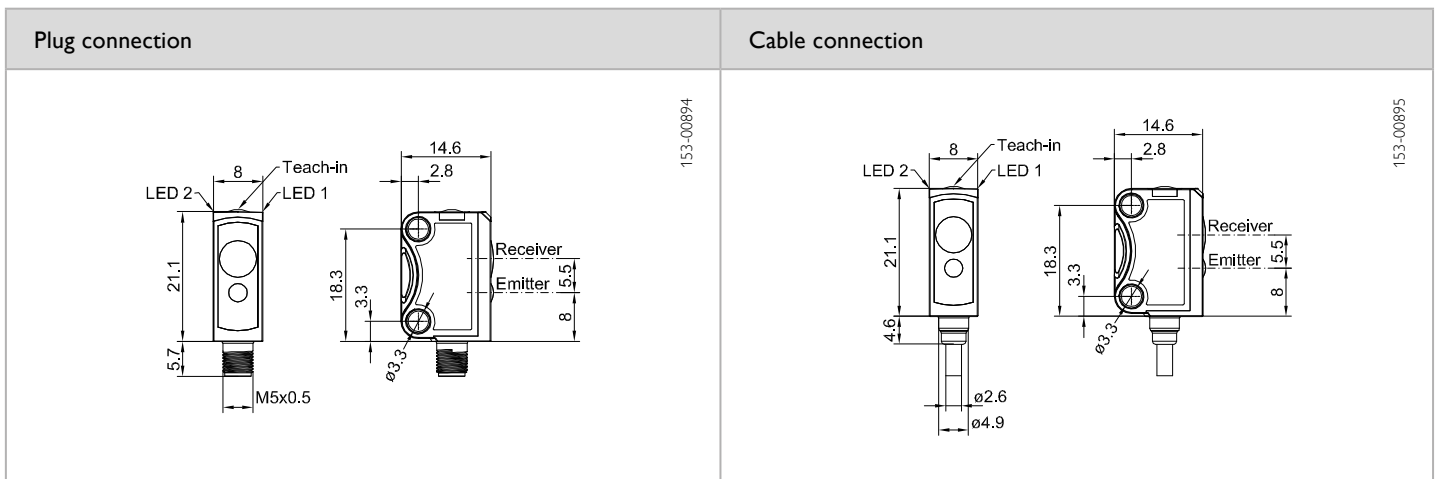[1] Reference material white, 90 % reflectivity   [2] Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz   [3] With connected IP 67 plug   [4] UL: -20 … +30 °C

Scanning distance	Switching output	Type of connection	Part number	Article number
6 … 70 mm	PNP	Plug, M5x0.5, 4-pin	FT 10-RLH-PS-E4	600-11130
6 … 70 mm	NPN	Plug, M5x0.5, 4-pin	FT 10-RLH-NS-E4	600-11131
6 … 70 mm	PNP	Cable, 2 m, 4-wire	FT 10-RLH-PS-K4	600-11132
6 … 70 mm	NPN	Cable, 2 m, 4-wire	FT 10-RLH-NS-K4	600-11133
6 … 70 mm	PNP	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-RLH-PS-KM4	600-11134
6 … 70 mm	NPN	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-RLH-NS-KM4	600-11135
6 … 70 mm	PNP	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-RLH-PS-KM3	600-11146
6 … 70 mm	NPN	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-RLH-NS-KM3	600-11147
6 … 70 mm	PNP	Pigtail, 500 mm with M8 plug, 3-pin	FT 10-RLH-PS-KM3-X07	600-11158

Including dovetail clamp mounting MBD F 10 for all types

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

Plug connection

153-00894

LED 2 — Teach-in
— LED 1
8
21.1
5.7
M5x0.5

14.6
2.8
18.3
3.3
ø3.3
Receiver
Emitter
5.5
8

Cable connection

153-00895

LED 2 — Teach-in
— LED 1
8
21.1
4.6
ø2.6
ø4.9

14.6
2.8
18.3
3.3
ø3.3
Receiver
Emitter
5.5
8

Connection, 4-pin

154-00508

+	+U$_B$	1	BN	NPN
	IN	2	WH	
	Q	4	BK	PNP
-	-U$_B$	3	BU	

Connection, 3-pin

154-00509

+	+U$_B$	1	BN	NPN
	Q	4	BK	PNP
-	-U$_B$	3	BU	

8

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

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