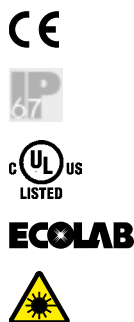


FT 10-B-RLF

Diffuse laser sensor with background suppression, fixed focus



PRODUCT HIGHLIGHTS

- Sub-miniature sensor with laser light and precise fixed background suppression
- Reliable switching behaviour even with varying object surfaces and colors
- Particularly suitable for detecting the smallest of parts and for installation in extremely confined spaces
- Tamper-proof sensor design – no misalignment possible
- Robust, glass-fibre-reinforced plastic housings

Optical data		Functions	
Scanning distance	6 ... 15 mm ¹ 6 ... 30 mm ¹	Indicator LED, green	Operating voltage indicator
Type of light	Laser, red, 655 nm	Indicator LED, yellow	Switching output indicator
Light spot size (total detection area)	1 x 3 mm	Adjustment possibilities	N.O. / N.C. via control input
Laser Class (IEC 60825-1)	1		
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ²	Dimensions	21.1 x 14.6 x 8 mm
No-load current, I ₀	≤ 12 mA	Enclosure rating	IP 67 ³
Output current, I _e	≤ 50 mA	Material, housing	PUR
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Material, front screen	PMMA
Protection Class	2	Type of connection	See selection table
Switching output, Q	PNP/NPN (see selection table)	Ambient temperature: operation	-20 ... +50 °C ⁴
Output function	N.O./N.C.	Ambient temperature: storage	-20 ... +80 °C
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Weight (plug device)	Approx. 3 g
Response time	500 μs	Weight (cable device)	Approx. 22 g
Control input, I _N (only 4-pin design)	+U _B = N.C. -U _B / Open = N.O.	Weight (pigtail)	Approx. 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

Operating range	Switching output	Type of connection	Part number	Article number
6 ... 15 mm	PNP	Plug, M5x0.5, 4-pin	FT 10-B-RLF1-PS-E4	600-11100
6 ... 15 mm	NPN	Plug, M5x0.5, 4-pin	FT 10-B-RLF1-NS-E4	600-11101
6 ... 30 mm	PNP	Plug, M5x0.5, 4-pin	FT 10-B-RLF2-PS-E4	600-11106
6 ... 30 mm	NPN	Plug, M5x0.5, 4-pin	FT 10-B-RLF2-NS-E4	600-11107
6 ... 15 mm	PNP	Cable, 2 m, 4-wire	FT 10-B-RLF1-PS-K4	600-11102
6 ... 15 mm	NPN	Cable, 2 m, 4-wire	FT 10-B-RLF1-NS-K4	600-11103
6 ... 30 mm	PNP	Cable, 2 m, 4-wire	FT 10-B-RLF2-PS-K4	600-11108
6 ... 30 mm	NPN	Cable, 2 m, 4-wire	FT 10-B-RLF2-NS-K4	600-11109
6 ... 15 mm	PNP	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-B-RLF1-PS-KM4	600-11104
6 ... 15 mm	NPN	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-B-RLF1-NS-KM4	600-11105
6 ... 30 mm	PNP	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-B-RLF2-PS-KM4	600-11110
6 ... 30 mm	NPN	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-B-RLF2-NS-KM4	600-11111

Operating range	Switching output	Type of connection	Part number	Article number
6 ... 15 mm	PNP	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-B-RLF1-PS-KM3	600-11142
6 ... 15 mm	NPN	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-B-RLF1-NS-KM3	600-11143
6 ... 30 mm	PNP	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-B-RLF2-PS-KM3	600-11144
6 ... 30 mm	NPN	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-B-RLF2-NS-KM3	600-11145

Including dovetail clamp mounting MBD F 10 for all types

Plug connection	Cable connection
<p>153-00909</p>	<p>153-00910</p>

8

Connection, 4-pin	Connection, 3-pin
<p>154-00508</p>	<p>154-00509</p>

Reference material	Detection range
White (90 %)	6 ... 15 mm / 30 mm
Grey (18 %)	7 ... 15 mm / 30 mm
Black (6 %)	7 ... 15 mm / 30 mm

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