

FT 50 RLHD

Diffuse laser sensor with background suppression



PRODUCT HIGHLIGHTS

- Precise small part detection even at long scanning distances of up to 300 mm
- Very small, easily visible laser light spot
- Precisely adjustable background suppression
- High switching frequency of 2500 Hz

Optical data		Functions	
Scanning distance	50 ... 300 mm ¹	Indicator LED, green	Operating voltage indicator
Type of light	Laser, red, 650 nm	Indicator LED, yellow	Switching output indicator
Light spot size	See table	Indicator LED, red	Contamination indicator
Laser Class (IEC 60825-1)	1	Scanning distance adjustment	Via potentiometer
Hysteresis ²	< 5 %		
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ³	Dimensions	50 x 50 x 17 mm
No-load current, I ₀	≤ 50 mA ⁴	Enclosure rating	IP 67 ⁶
Output current, I _e	≤ 200 mA	Material, housing	ABS
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Material, front screen	PMMA
Protection Class	2	Type of connection	See selection table
Power On Delay	≤ 300 ms	Ambient temperature: operation	-20 ... +45 °C
Switching output, Q	PNP/NPN, antivalent (see selection table)	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C. (see selection table)	Weight (plug device)	40 g
Switching frequency, f (ti/tp 1:1)	≤ 2500 Hz	Weight (cable device)	130 g
Response time	200 µs	Vibration and impact resistance	EN 60947-5-2
Connection, BK	N.O.		
Connection, WH ⁵	N.C.		
Contamination output, WH (optional)	N.O. (see selection table)		

¹ Reference material: grey, 18 % reflectivity ² 18 % / 18 % ³ Max. 10 % ripple, within U_B ⁴ At 24V DC ⁵ Without contamination output ⁶ With connected IP 67 plug

Scanning distance	Switching output	Type of connection	Contamination output	Part number	Article number
50 ... 300 mm	PNP, antivalent	Plug, M12x1, 4-pin	No	FT 50 RLHD-PAL4	572-51062
50 ... 300 mm	NPN, antivalent	Plug, M12x1, 4-pin	No	FT 50 RLHD-NAL4	572-51063
50 ... 300 mm	PNP (N.O.)	Plug, M12x1, 4-pin	Yes	FT 50 RLHD-PSVL4	572-51051
50 ... 300 mm	PNP, antivalent	Cable, 3 m, 4-wire	No	FT 50 RLHD-PAK4	572-51064
50 ... 300 mm	NPN, antivalent	Cable, 3 m, 4-wire	No	FT 50 RLHD-NAK4	572-51065

Plug connection	Cable connection

Connection, 4-pin	Connection, 4-pin with contamination output
2 WH: 4 BK:	2 WH: 4 BK:

Light spot size								
Scanning distance (mm)	50	80	100	150	180	200	250	300
Light spot diameter (mm)	5 × 1.75	4.8 × 1.75	4.5 × 1.5	4 × 1.5	3.8 × 1.5	3.8 × 1.2	3.2 × 1	3 × 1

Accessories	
Connection cables	www.sensopart.com/en/accessories
Brackets	