

FT 20 RL

Diffuse laser photoelectric proximity sensor



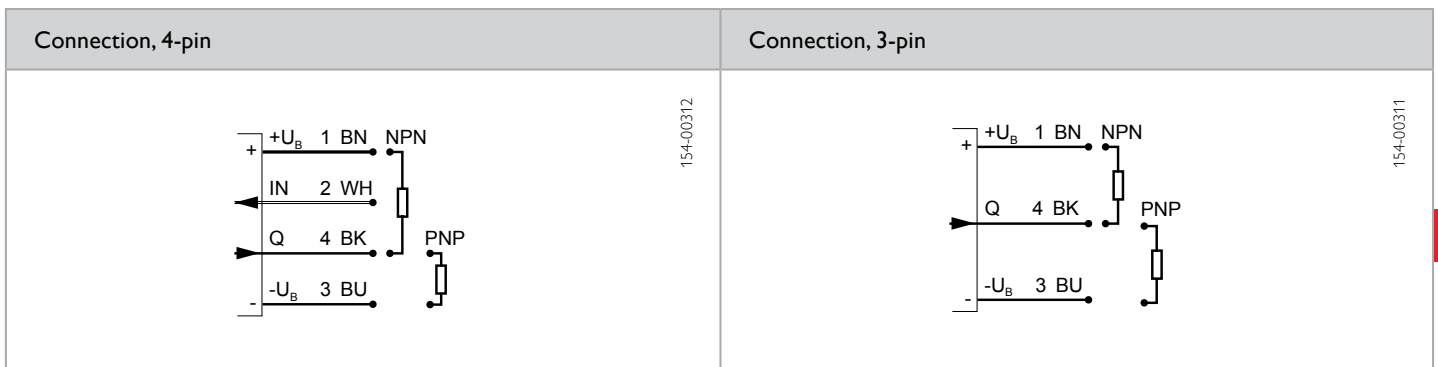
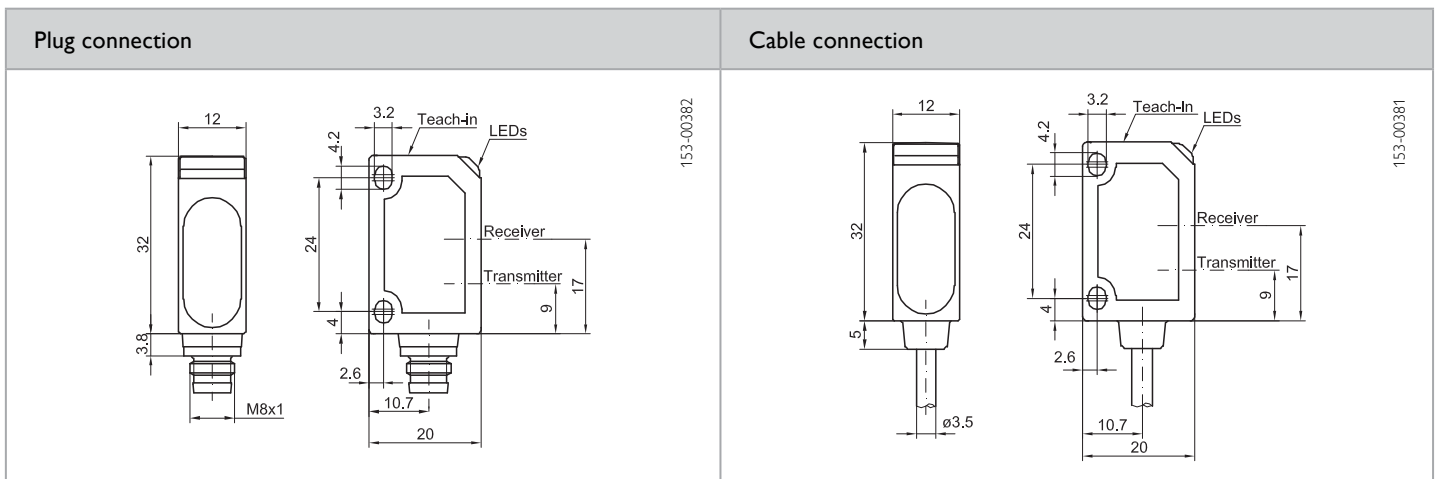
PRODUCT HIGHLIGHTS

- High switching frequency of 4000 Hz
- Very small, easily visible laser light spot
- Sensor adjustment via teach-in and control input
- Compact miniature housing

Optical data		Functions	
Scanning distance	40 ... 150 mm ¹	Indicator LED, green	Operating voltage indicator / contamination indicator
Type of light	Laser, red, 650 nm	Indicator LED, yellow	Switching output indicator / contamination indicator
Light spot size	See table	Sensitivity adjustment	Via Teach-in button and control input
Laser Class (IEC 60825-1)	2	Teach-in modes	Mode 1: during running operation Mode 2: during standing process
		Adjustment possibilities	N.O./N.C. via Teach-in button and control input Button lock via control input
		Default settings	Max. scanning distance and N.O.
Electrical data		Mechanical data	
Operating voltage, +U _b	10 ... 30V DC	Dimensions	32 x 20 x 12 mm
No-load current, I ₀	≤ 25 mA	Enclosure rating	IP 67 ³
Output current, I _e	≤ 100 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 ... +60 °C
Switching output, Q	PNP/NPN (see Selection Table)	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (metal plug device)	10 g
Switching frequency, f (ti/tp 1:1)	≤ 4000 Hz	Weight (cable device)	40 g
Response time	125 μs	Vibration and impact resistance	EN 60947-5-2
Control input, IN ²	+U _b = teach-in -U _b = button locked Open = normal operation		

¹ Reference material: white, 90 % reflectivity ² Only 4-pin design ³ With connected IP 67 plug

Scanning distance	Switching output	Type of connection	Part number	Article number
40 ... 150 mm	PNP	Metal plug, M8x1, 3-pin	FT 20 RL-PSM3	551-21022
40 ... 150 mm	PNP	Metal plug, M8x1, 4-pin	FT 20 RL-PSM4	551-21007
40 ... 150 mm	NPN	Metal plug, M8x1, 4-pin	FT 20 RL-NSM4	551-21009
40 ... 150 mm	PNP	Cable, 2 m, 4-wire	FT 20 RL-PSK4	551-21008
40 ... 150 mm	NPN	Cable, 2 m, 4-wire	FT 20 RL-NSK4	551-21010



Light spot size				
Scanning distance (mm)	40	80	120	150
Light spot diameter (mm)	2	0.4	1.5	3

Accessories	
Connection cables	From Page A-34
Brackets	From Page A-4