

FR 25-RF

Photoelectric retro-reflective sensor, fixed focus



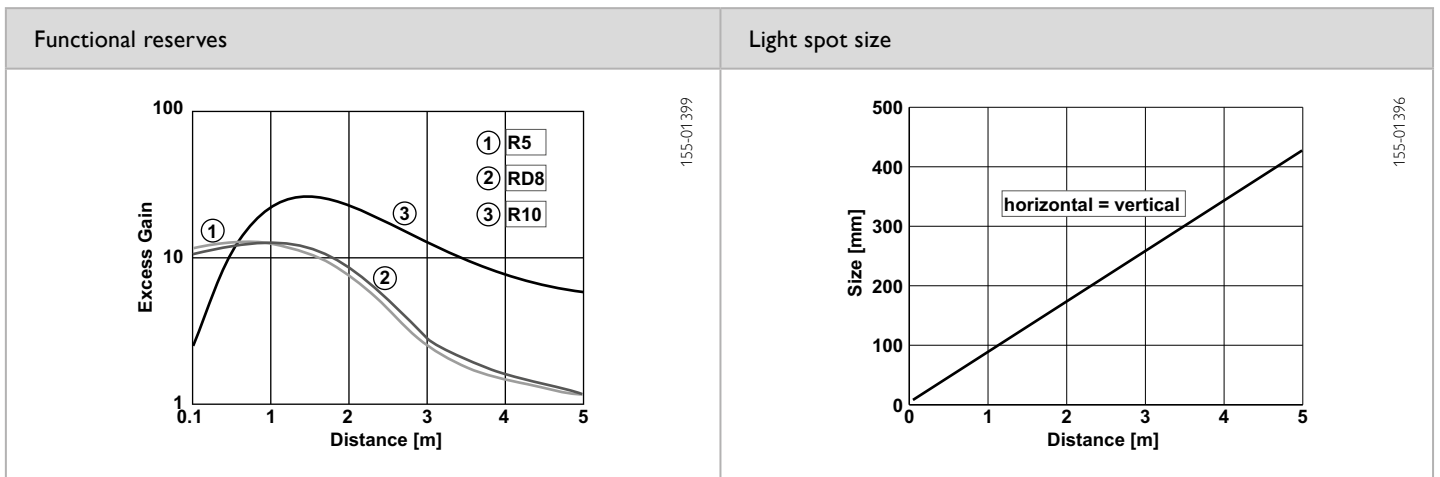
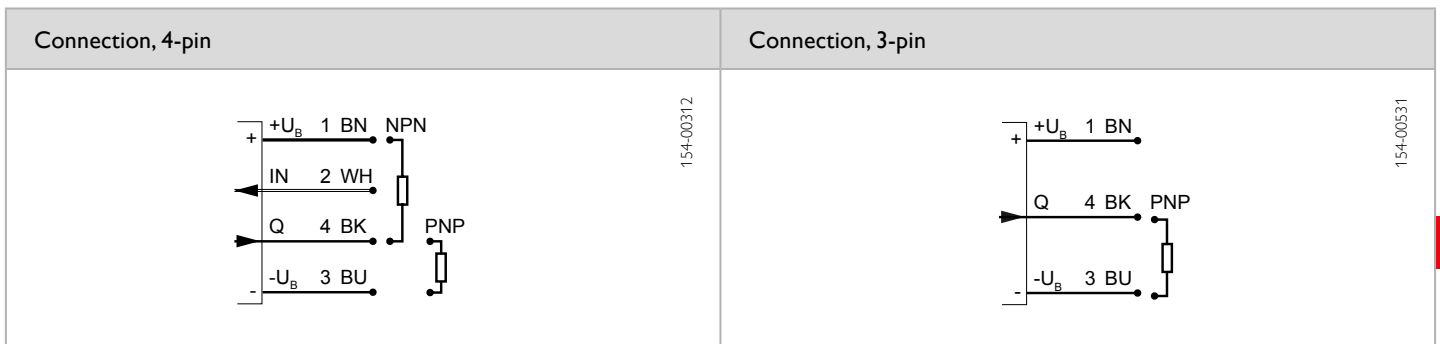
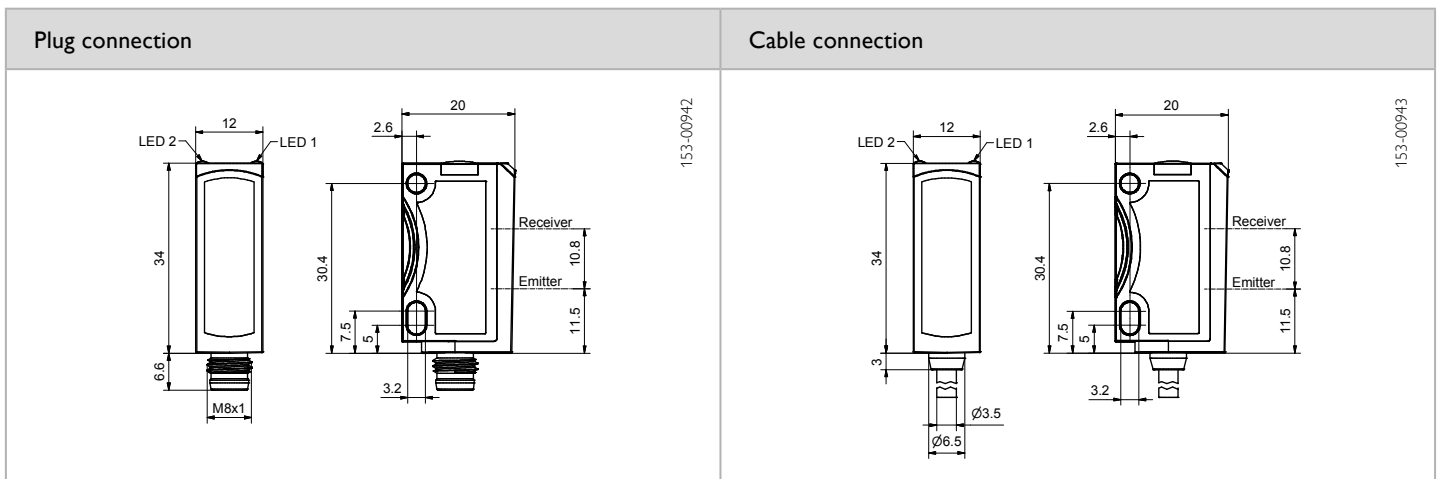
PRODUCT HIGHLIGHTS

- Economical solution for numerous applications
- Tamper-proof sensor design – no misalignment possible
- Suitable for a wide variety of different reflectors
- Simple alignment thanks to easily visible light spot
- Robust glass-fibre-reinforced plastic housings

Optical data		Functions	
Limit range	0.1 ... 5 m ¹	Indicator LED, green	Operating voltage indicator
Operating range	0.1 ... 3 m ¹	Indicator LED, yellow	Switching output indicator
Type of light	LED, red, 632 nm	Adjustment possibilities	N.O./N.C. via control input
Light spot size	See diagram		
Polarising filter	Yes		
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ²	Dimensions	34 x 20 x 12 mm
No-load current, I ₀	≤ 30 mA	Enclosure rating	IP 69K & 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 ⁴
Switching output, Q	PNP/NPN (see selection table)	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (plug device)	10 g
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Weight (cable device)	40 g
Response time	500 μs	Weight (pigtail)	20 g
Control input, I _N	+U _B = N.C. -U _B / Open = N.O.	Vibration and impact resistance	EN 60947-5-2

¹ Reference material: R10 reflector ² Max. 10 % ripple, within U_B, ~ 50 Hz / 100 Hz ³ With connected IP 67 / IP 69K plug ⁴ UL: -20 ... +50 °C

Operating range	Switching output	Type of connection	Part number	Article number
0.1 ... 3 m	PNP	Plug, M8x1, 3-pin	FR 25-RF-PS-M3	606-11038
0.1 ... 3 m	PNP	Plug, M8x1, 4-pin	FR 25-RF-PS-M4	606-11012
0.1 ... 3 m	NPN	Plug, M8x1, 4-pin	FR 25-RF-NS-M4	606-11013
0.1 ... 3 m	PNP	Cable, 2 m, 4-wire	FR 25-RF-PS-K4	606-11014
0.1 ... 3 m	NPN	Cable, 2 m, 4-wire	FR 25-RF-NS-K4	606-11015
0.1 ... 3 m	NPN	Pigtail, 150 mm with plug, M8, 4-pin	FR 25-RF-NS-KM4	606-11059



Reflector	Operating range
R10	0.1 ... 3 m
RD8	0.1 ... 3 m
R5	0.1 ... 3 m

Accessories	
Reflectors	From Page A-18
Connection cables	From Page A-38
Brackets	From Page A-4