FS/FE 55-RL

Through-beam laser sensor



PRODUCT HIGHLIGHTS

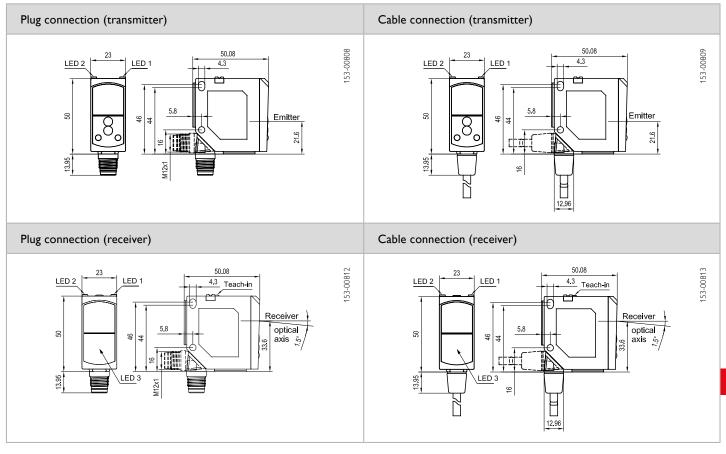
- Long range combined with precise laser light spot for extremely accurate small-part detection
- High switching frequency for the reliable detection of even the most rapid processes
- Sensor adjustment via teach-in and control input
- Plug and cable connection rotatable

Optical data		Functions		
Limit range Operating range Type of light Light spot size Laser Class (IEC 60825-1)	0 30 m 0 25 m Laser, red, 655 nm See diagram 1	Indicator LED, green Indicator LED, yellow Indicator LED, red (receiver) Sensitivity adjustment (receiver) Teach-in modes Adjustment possibilities (receiver) Default settings	Operating voltage indicator Switching output indicator / contamination indicator Alignment indicator Via Teach-in button and control input Mode 1: during running process Mode 2: during standing process N.O./N.C. via Teach-in button and control input Button lock via control input Max. range and N.O.	
Electrical data		Mechanical data		
Operating voltage, +U _B	10 30V DC ¹	Dimensions	50 × 50.1 × 23 mm	
No-load current, I ₀	≤ 30mA	Enclosure rating	IP 69K & IP 67 ²	
Output current, le	≤ 100 mA	Material, housing	PC-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 -20 +60 °C ³	
Power On Delay	< 300 ms	Ambient temperature: operation	-20 +60 °C	
Switching output, Q	PNP/NPN (see selection table)	Ambient temperature: storage Weight (plug device)	-20 +80 °C 35 g	
Output function	N.Q./N.C.	Weight (cable device)	125 g	
Switching frequency, f (ti/tp 1:1)	≤ 3500 Hz	,	TZ5 g FN 60947-5-2	
Response time	140 µs	Vibration and impact resistance	LIN 00747-3-2	
Control input, IN (receiver)	$+U_{B} =$ teach-in $-U_{B} =$ button locked Open = normal operation			
Control input, TEST (transmitter)	+ $U_{_B}$ = Test (transmitter off) - $U_{_B}$ / Open = normal operation			

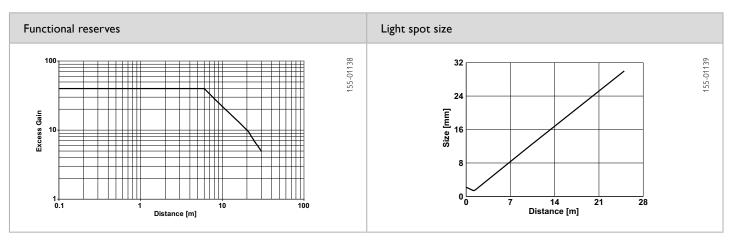
 1 Max. 10 % ripple, within U $_{\rm gr}$ \sim 50 Hz / 100 Hz $^{-2}$ With connected IP 67 / IP 69K plug $^{-3}$ UL: max. +45 °C

Operating range	Switching output	Type of connection	Part number	Article number
0 25 m	PNP	Plug, M12x1, 4-pin	FE 55-RL-PS-L4	620-21006
0 25 m	NPN	Plug, M12x1, 4-pin	FE 55-RL-NS-L4	620-21007
0 25 m	_	Plug, M12x1, 4-pin	FS 55-RL-L4	620-11002
0 25 m	PNP	Cable, 3 m, 4-wire	FE 55-RL-PS-K4	620-21009
0 25 m	NPN	Cable, 3 m, 4-wire	FE 55-RL-NS-K4	620-21010
0 25 m		Cable, 3 m, 4-wire	FS 55-RL-K4	620-11003









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