

# FS/FE 25-RL

Laser through-beam photoelectric sensor



## PRODUCT HIGHLIGHTS

- Long range with small and compact housings
- Test input for checking sensor pair function
- Very small, easily visible laser light spot
- Sensor settings via teach-in and control input
- Robust glass-fibre-reinforced plastic housings

Optical data		Functions	
Limit range	0 ... 20 m	Indicator LED, green	Operating voltage indicator
Operating range	0 ... 18 m	Indicator LED, yellow	Switching output indicator
Type of light	Laser, red, 650 nm	Sensitivity adjustment (receiver)	Via Teach-in button and control input
Light spot size	See diagram	Teach-in modes	Mode 1: during running process Mode 2: during standing process
Laser Class (IEC 60825-1)	1	Adjustment possibilities (receiver)	N.O./N.C. via Teach-in button and control input Button lock via control input
		Default settings	Max. range and N.O.
Electrical data		Mechanical data	
Operating voltage, +U <sub>B</sub>	10 ... 30V DC <sup>1</sup>	Dimensions	34 x 20 x 12 mm
No-load current, I <sub>0</sub>	≤ 30 mA	Enclosure rating	IP 69K & IP 67 <sup>2</sup>
Output current, I <sub>e</sub>	≤ 100 mA	Material, housing	ABS
Protective circuits	Reverse-polarity protection, U <sub>B</sub> / 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 <sup>3</sup>
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)	≤ 2000 Hz	Weight (metal plug device <sup>4</sup> )	10 g
Response time	250 μs	Weight (cable device)	40 g
Control input, IN (receiver)	+U <sub>B</sub> = teach-in -U <sub>B</sub> = button locked Open = normal operation	Vibration and impact resistance	EN 60947-5-2
Control input, Test (transmitter)	+U <sub>B</sub> = Test (transmitter off) -U <sub>B</sub> / Open = normal operation		

<sup>1</sup> Max. 10 % ripple, within U<sub>B</sub>, ~ 50 Hz / 100 Hz    <sup>2</sup> With connected IP 67 / IP 69K plug    <sup>3</sup> UL: -20 ... +50 °C    <sup>4</sup> No Ecolab

Operating range	Switching output	Type of connection	Part number	Article number
0 ... 18 m	PNP	Metal plug, M8x1, 4-pin	FE 25-RL-PS-M4M	605-21014
0 ... 18 m	NPN	Metal plug, M8x1, 4-pin	FE 25-RL-NS-M4M	605-21015
0 ... 18 m	–	Metal plug, M8x1, 4-pin	FS 25-RL-M4M	605-11007
0 ... 18 m	PNP	Cable, 2 m, 4-wire	FE 25-RL-PS-K4	605-21004
0 ... 18 m	NPN	Cable, 2 m, 4-wire	FE 25-RL-NS-K4	605-21007
0 ... 18 m	–	Cable, 2 m, 4-wire	FS 25-RL-K4	605-11002

<p><b>Plug connection (transmitter)</b></p>	<p><b>Cable connection (transmitter)</b></p>
<p><b>Plug connection (receiver)</b></p>	<p><b>Cable connection (receiver)</b></p>

<p><b>Connection, transmitter, 4-pin</b></p>	<p><b>Connection, receiver, 4-pin</b></p>
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<p><b>Functional reserves</b></p>	<p><b>Light spot size</b></p>
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Accessories			
Connection cables	From Page A-38	Brackets	From Page A-4