

FS/FE 25-RL

Through-beam laser 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
- Setting of smart functions via IO-Link

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, control input and IO-Link
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. and Auto-Detect / NPN / PNP via teach-in button, control input and IO-Link; Button lock via control input and IO-Link; Wide variety of adjustment possibilities via IO-Link
		Default settings	Max. range and N.O.
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ¹	Dimensions	34 × 20 × 12 mm
No-load current, I ₀	≤ 30 mA	Enclosure rating	IP 69 & 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	1x Auto-Detect (PNP/NPN) ²	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (metal plug device ⁵)	10 g
Switching frequency, f (ti/tp 1:1)	≤ 2000 Hz	Weight (cable device)	40 g
Response time	250 μs	Vibration and impact resistance	EN 60947-5-2
Control input, IN (receiver)	+U _B = teach-in -U _B = button locked Open = normal operation	IO-Link	
Control input, Test (transmitter)	+U _B = Test (transmitter off) -U _B / Open = normal operation	Communication mode	COM 2
		Min. cycle time	2.3 ms
		SIO mode	compatible
		Process bit length	16 Bit
		Specification	1.1

¹ Max. 10 % ripple, within U_B ~ 50 Hz / 100 Hz ² Auto-Detect, automatic PNP/NPN selection by the sensor; PNP or NPN fixed ³ With connected IP 67 / IP 69 plug

⁴ UL: -20 ... +50 °C ⁵ No Ecolab

Operating range	Switching output	Type of connection	Part number	Article number
0 ... 18 m	Auto-Detect	Metal plug, M8x1, 4-pin, IO-Link	FE 25-RL-PNSL-M4M	605-21022
0 ... 18 m	–	Metal plug, M8x1, 4-pin, IO-Link	FS 25-RL-L-M4M	605-11013
0 ... 18 m	Auto-Detect	Cable, 2 m, 4-wire, IO-Link	FE 25-RL-PNSL-K4	605-21021
0 ... 18 m	–	Cable, 2 m, 4-wire, IO-Link	FS 25-RL-L-K4	605-11012

<p>Plug connection (transmitter)</p> <p>153-00940</p>	<p>Cable connection (transmitter)</p> <p>153-00939</p>
<p>Plug connection (receiver)</p> <p>153-00854</p>	<p>Cable connection (receiver)</p> <p>153-00853</p>

<p>Connection, transmitter, 4-pin, IO-Link</p> <p>154-00381</p>	<p>Connection, receiver, 4-pin, IO-Link</p> <p>154-00566</p>
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<p>Functional reserves</p> <p>155-01388</p>	<p>Light spot size</p> <p>155-01389</p>
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Accessories			
Connection cables	From Page A-38	Sensolo (901-01000)	From Page A-56
Brackets	From Page A-4		