FS/FE 25-R

Through-beam photoelectric sensor



PRODUCT HIGHLIGHTS

- Test input for checking sensor pair function
- Sensor settings via teach-in and control input
- Simple alignment thanks to easily visible light spot
- Robust glass-fibre-reinforced plastic housings
- Durable laser printing

Optical data	
Limit range	0 … 15 m
Operating range	0 … 13 m
Type of light	LED, red, 632 nm
Light spot size	See diagram

Functions	
Indicator LED, green	Operating voltage indicator
Indicator LED, yellow	Switching output indicator
Sensitivity adjustment (receiver)	Via Teach-in button and control input
Teach-in modes	Mode 1: during running process Mode 2: during standing process
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.

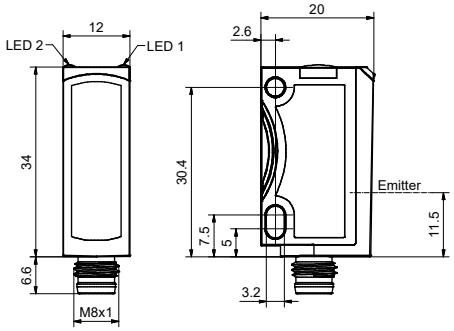
Electrical data	
Operating voltage, $+U_B$	10 … 30 V DC[1]
No-load current, I_0	≤ 30 mA
Output current, Ie	≤ 100 mA
Protective circuits	Reverse-polarity protection, U_B / short-circuit protection (Q)
Protection Class	2
Power On Delay	< 300 ms
Switching output, Q	PNP/NPN (see Selection Table)
Output function	N.O./N.C.
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz
Response time	500 µs
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

Mechanical data	
Dimensions	34 x 20 x 12 mm
Enclosure rating	IP 69K & IP 67[2]
Material, housing	ABS
Material, front screen	PMMA
Type of connection	See Selection Table
Ambient temperature: operation	-20 … +60 °C[3]
Ambient temperature: storage	-20 … +80 °C
Weight (plug device)	10 g
Weight (metal plug device[4])	10 g
Weight (cable device)	40 g
Vibration and impact resistance	EN 60947-5-2

[1] Max 10 % ripple, within U_B, ~ 50 Hz / 100 Hz [2] With connected IP 67 / IP 69K plug [3] UL: -20 ... +50 °C [4] No Ecolab

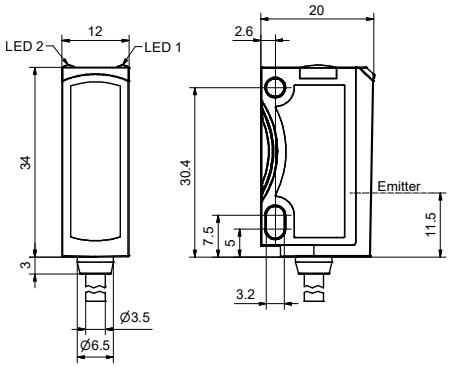
Operating range	Switching output	Type of connection	Part number	Article number
0 … 13 m	PNP	Metal plug, M8x1, 4-pin	FE 25-R-PS-M4M	605-21012
0 … 13 m	NPN	Metal plug, M8x1, 4-pin	FE 25-R-NS-M4M	605-21013
0 … 13 m	–	Metal plug, M8x1, 4-pin	FS 25-R-M4M	605-11006
0 … 13 m	PNP	Cable, 2 m, 4-wire	FE 25-R-PS-K4	605-21001
0 … 13 m	NPN	Cable, 2 m, 4-wire	FE 25-R-NS-K4	605-21003
0 … 13 m	–	Cable, 2 m, 4-wire	FS 25-R-K4	605-11001

Plug connection (transmitter)



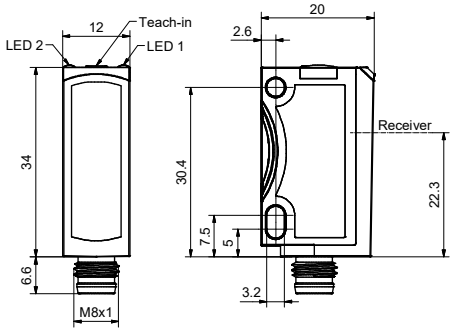
153-00852

Cable connection (transmitter)



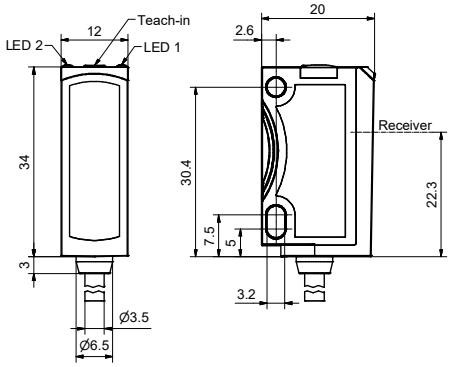
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Plug connection (receiver)



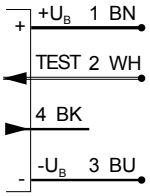
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Cable connection (receiver)



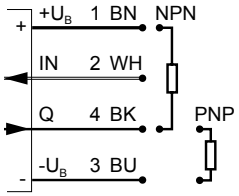
153-00853

Connection, transmitter, 4-pin



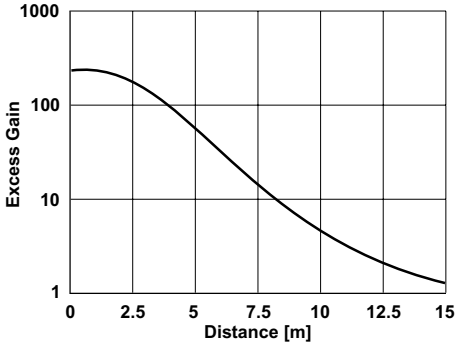
154-00315

Connection, receiver, 4-pin



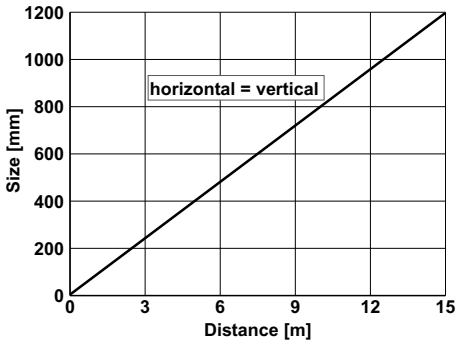
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Functional reserves



155-01370

Light spot size



155-01371

Accessories

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