



Thru-beam sensor ML29-2P/25/103/143



- Single-beam monitoring with extremely narrow sensor
- Integrated circuit
- Test
- Simple installation - Plug & Play
- Ideal for installation in door profiles or frames
- Dual-beam version master/slave for dual-beam protection of closing edges

Single-beam miniature sensor, ideal for installing in frames or door profiles



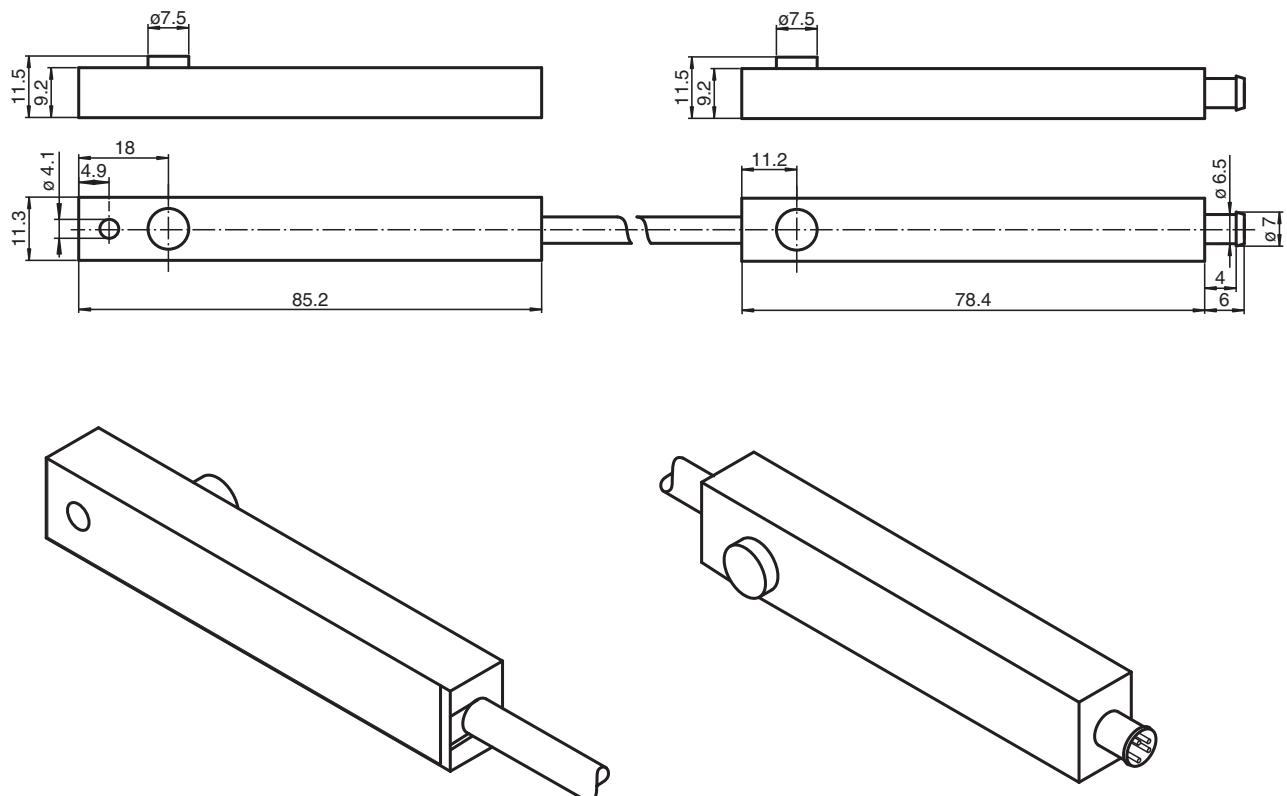
Function

The narrow miniature thru-beam sensors are a small and cost-effective solution, fitting in virtually any door frame. The ML29 and ML30 series offer fast, reliable detection at a distance of up to 8.5 m. The sensors are easy to mount on the profile, either using adhesive strips or a screw. A large opening angle ensures problem-free alignment. Several sensors can be mounted in a cross formation to offer multi-beam protection.

Application

- Person detection for automatic doors and gates
- Closing edge protection on sliding and revolving doors
- Threshold monitoring for elevator doors
- Step monitoring for doors on public transport vehicles
- Trigger function for restarting escalators

Dimensions



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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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Technical Data

General specifications

Effective detection range	0 ... 5 m
Threshold detection range	7 m
Light source	IREL
Light type	modulated infrared light
Opening angle	+/- 8 °
Optical face	lateral
Ambient light limit	40000 Lux

Functional safety related parameters

MTTF _d	880 a
Mission Time (T _M)	20 a
Diagnostic Coverage (DC)	0 %

Indicators/operating means

Function indicator	LED red in receiver : lights up when receiving the light beam
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Electrical specifications

Operating voltage	U _B	11 ... 30 V DC
No-load supply current	I ₀	≤ 35 mA per device

Input

Test input	Test: emitter deactivation at 0 V
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Output

Switching type		light-on
Signal output		1 PNP output, short-circuit protected, reverse polarity protected, open collector
Switching voltage		max. 30 V DC
Switching current		max. 0.1 A
Switching frequency	f	50 Hz
Response time		10 ms

Conformity

Product standard	EN 60947-5-2
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Compliance with standards and directives

Standard conformity	
Standards	EN 61000-6-2, EN 61000-6-3

Approvals and certificates

CCC approval	CCC approval / marking not required for products rated ≤36 V
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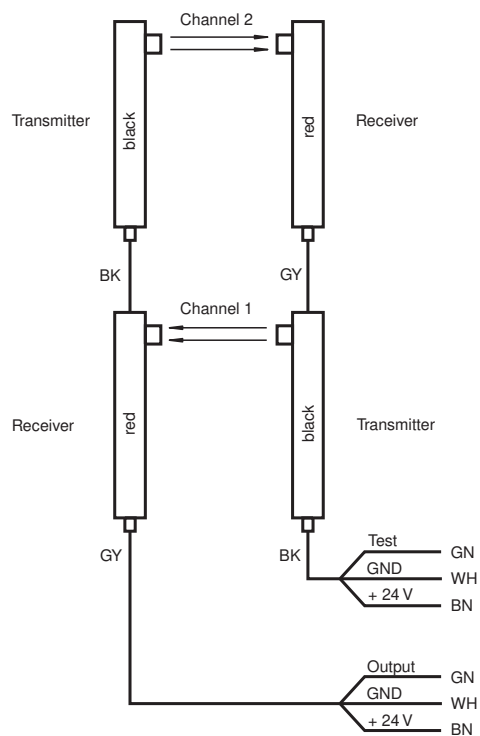
Ambient conditions

Ambient temperature	-20 ... 60 °C (-4 ... 140 °F)
Storage temperature	-20 ... 75 °C (-4 ... 167 °F)
Relative humidity	90 % , noncondensing

Mechanical specifications

Degree of protection	IP65
Connection	4-pin plastic connector, 6.5 mm diameter
Material	
Housing	Transmitter: PMMA black / Receiver: red PMMA
Optical face	Plastic pane
Mass	555 g

Connection



Function Principle

The thru-beam sensor requires a pair of devices for operation, comprising a light transmitter and a light receiver. The emitter and receiver must be arranged in optical alignment with each other. The infrared light from the emitter is detected by the receiver and evaluated.