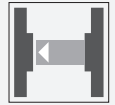


## Thru-beam sensor ML29-2P/25/103/143



- 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



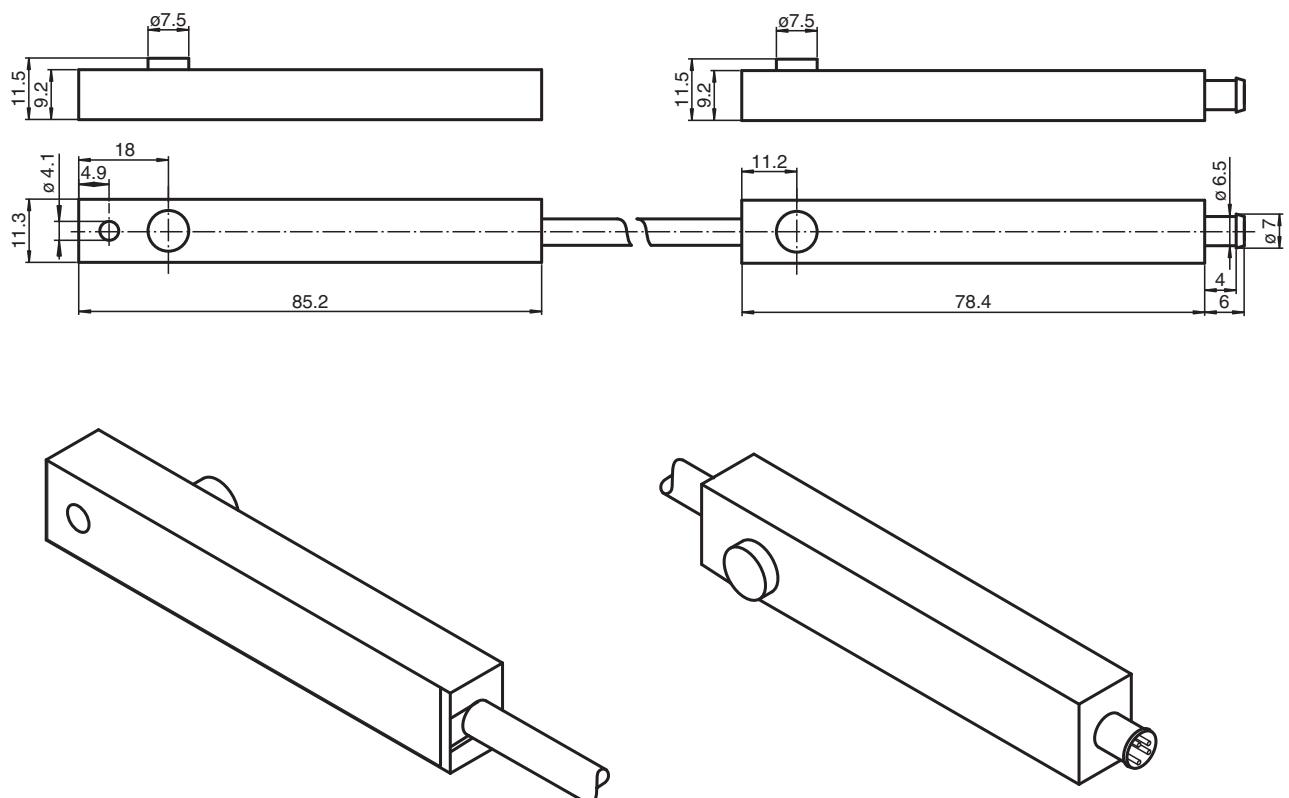
### Function

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

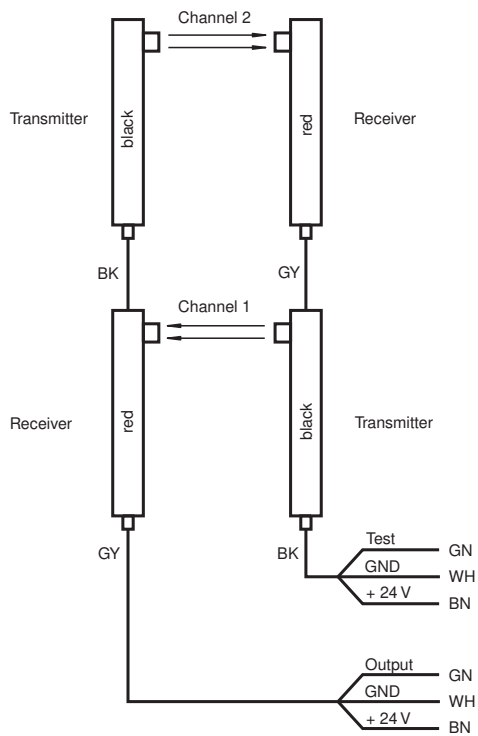


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## Technical Data

General specifications		
Effective detection range		0 ... 5 m
Threshold detection range		7 m
Light source		IRED
Light type		modulated infrared light
Opening angle		+/- 8 °
Optical face		lateral
Ambient light limit		40000 Lux
Functional safety related parameters		
MTTF <sub>d</sub>		880 a
Mission Time (T <sub>M</sub> )		20 a
Diagnostic Coverage (DC)		0 %
Indicators/operating means		
Function indicator		LED red in receiver : lights up when receiving the light beam
Electrical specifications		
Operating voltage	U <sub>B</sub>	11 ... 30 V DC
No-load supply current	I <sub>0</sub>	≤ 35 mA per device
Input		
Test input		Test: emitter deactivation at 0 V
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
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
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.

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