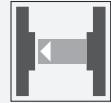




## Thru-beam sensor ML29-2P/25/103/143



- 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



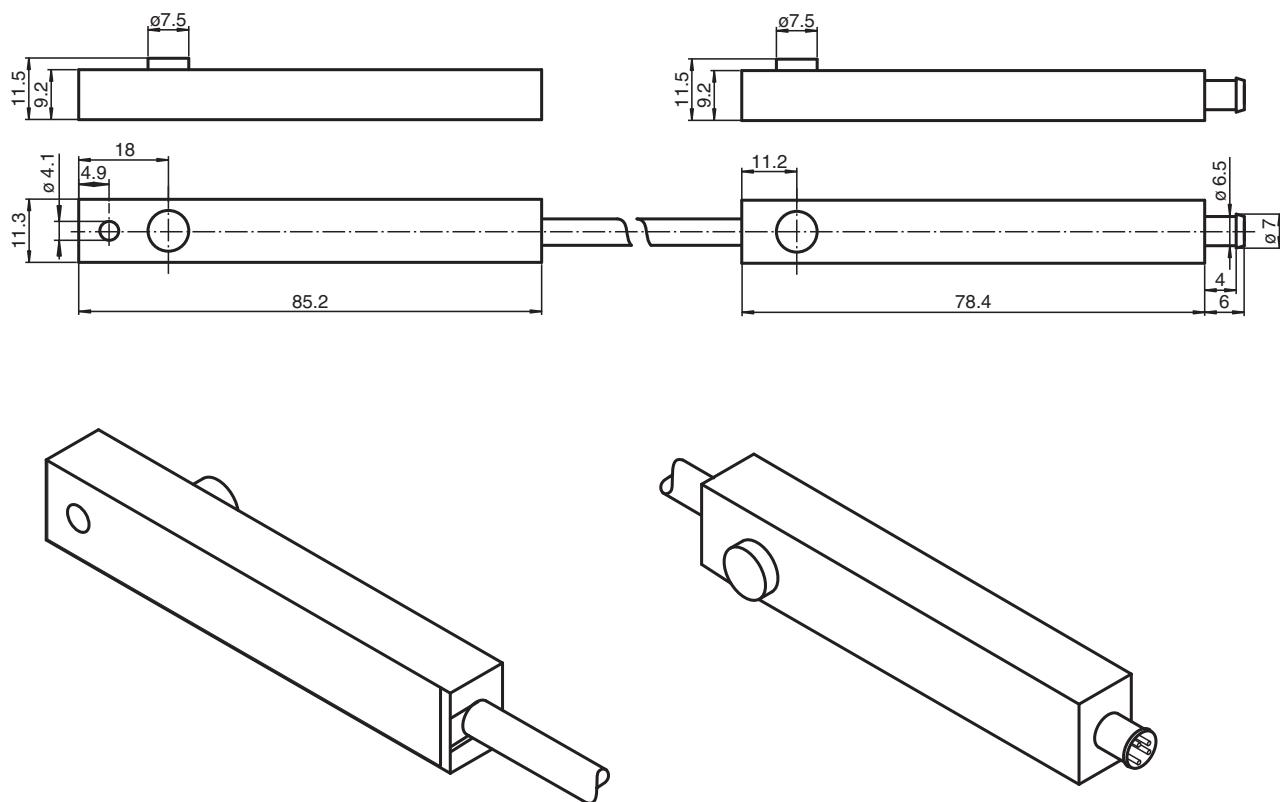
### Function

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

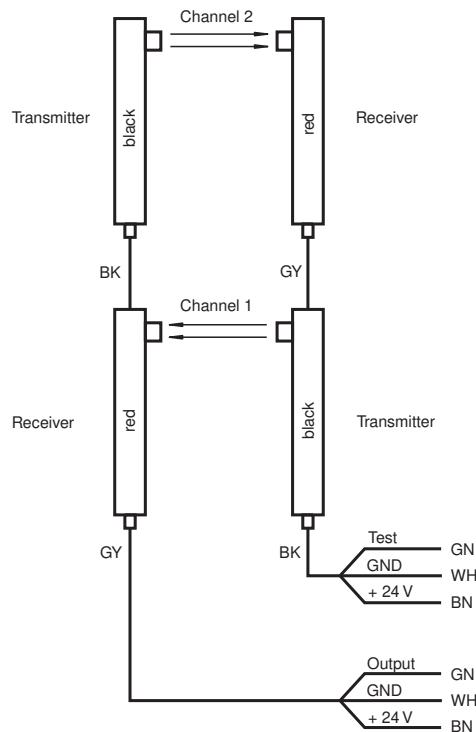
### Dimensions



## 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.