

## Single-beam Photoelectric Safety Switches L4000, L41

L41E-21MA1A, L41S-21MA1A



**Receiver**

Model Name	L41E-21MA1A
Part Number	6034867



**Sender**

Model Name	L41S-21MA1A
Part Number	6034866



The L41 single-beam photoelectric safety switch comprises a sender and a receiver. The correct function of the L41 can be checked with the aid of the test input on the sender.

In connection with a suitable evaluation unit, e.g. Flexi Classic or DeviceNet Safety products, performance levels up to PL e in accordance with EN ISO 13849-1 can be achieved.

Colour LEDs provide in-situ information on operational status.

The variety of scanning ranges to suit your needs, the device's suitability for outdoor applications, and the use of deflector mirrors enable more complex protection tasks to be realised.

Compatible with safety controllers such as Flexi Classic, DeviceNet Safety products

Inputs/outputs compliant with EN 61131

Large scanning ranges

Small design (M30/M18)

Metal and plastic version

Radial optics (90° deflector mirror)

Simple diagnostics and service



**Applications**

Access protection (vertical): ✓

### Technical Data-Receiver

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Scanning range: 0 ... 10 m  
Number of beams: 1  
Optical axis: axial  
Light beam diameter: 12 mm  
Aperture angle/receive angle:  $\pm 2,5^\circ / \pm 2,5^\circ$   
Protection class: III  
Enclosure rating: IP 67  
Type: Type 4 (IEC 61496), only in conjunction with suitable testing device e.g. Flexi Classic, DeviceNet Safety  
Safety integrity level: SIL3 (IEC 61508)  
SILCL3 (IEC 62061) only in conjunction with suitable testing device e.g. Flexi Classic, DeviceNet Safety  
Category: Category 4 (EN ISO 13849), only in conjunction with suitable testing device e.g. Flexi Classic, DeviceNet Safety  
Performance Level: PL e (EN ISO 13849), only in conjunction with suitable testing device e.g. Flexi Classic, DeviceNet Safety  
PFHd:  $8,1 \cdot 10^{-10}$ , only in conjunction with suitable testing device e.g. Flexi Classic, DeviceNet Safety  
TM (Mission Time): 20 a  
Supply voltage typical, from, to: 19,2 V DC, 24 V DC, 28,8 V DC  
Switching outputs: PNP, Q, short-circuit protected  
Maximum response time: 200  $\mu$ s  
Maximum switching current: 70 mA  
Maximum power consumption: 30 mA  
Design: cylindrical  
Dimensions (diameter x length): M18 x 97,7 mm  
Connection type: Plug M12 x 4, straight  
Housing material: Brass nickel-plated  
Lens material: Glass  
Ambient operating temperature from ... to: -40 ... 55 °C  
Storage temperature from ... to: -40 ... 55 °C  
Air humidity from ... to: non-condensing 15 ... 95 %  
Vibration resistance (checked to): 5 g (IEC 60068-2-6)  
Oscillation frequency from ... to: 10 ... 55 Hz  
Shock resistance: 10 g, 16 ms, IEC 60068-2-29  
Weight: 67 g

### Technical Data-Sender

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Scanning range: 0 ... 10 m  
Number of beams: 1  
Optical axis: axial  
Light beam diameter: 12 mm  
Aperture angle/receive angle:  $\pm 2,5^\circ / \pm 2,5^\circ$   
Light sender/type of light: LED/Visible red light  
Wave length: 660 nm  
Protection class: III  
Enclosure rating: IP 67  
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