



Single-beam photoelectric safety switch L21

L21E-33MA2A, L21S-33MA2A



receiver

Model Name [> L21E-33MA2A](#)
Part No. [> 6034871](#)



sender

Model Name [> L21S-33MA2A](#)
Part No. [> 6034870](#)



At a glance

- Type 2 (IEC 61496), PL c (EN ISO 13849), only in conjunction suitable testing device, e.g., Flexi Classic or Flexi Soft
- Small M18 sensors with ranges up to 10 m
- Compact M30 sensors with ranges up to 60 m
- Enclosure rating IP 67
- Temperature range from -40 °C ... 55 °C
- Metal and plastic version
- Radial optics (90° deflector mirror)
- Straightforward diagnostics and service

Your benefits

- Easy integration due to small, compact versions with maximum range
- Directly connect to a safety controller - without a separate evaluation unit, reducing costs
- Flexible device integration makes it possible to set up individual protective fields
- Well suited to withstand extreme ambient conditions such as heat, cold or moisture



Applications

Access protection (vertical): 1

Technical Data-Sender

Scanning range:	0 m ... 60 m
Number of beams:	1
Optical axis:	axial
Aperture angle/receiving angle:	according to type 2 (IEC 61496-2)
Light sender/type of light:	LED/visible red light
Wave length:	660 nm

Protection class:	III (EN 50178)
Enclosure rating:	IP 67 (IEC 60529)
Type:	Type 2 (EN 61496) ¹⁾
Safety integrity level:	SIL1 (IEC 61508) SILCL1 IEC 62061 ²⁾
Category:	category 2 (EN ISO 13849) ³⁾
Test rate (external test):	100 /s (EN ISO 13849) ⁴⁾
Maximum demand rate:	60 /min (EN ISO 13849) ⁵⁾
Performance level:	PL c (EN ISO 13849) ⁶⁾
PFHd:	10 * 1E-06
TM (mission time):	20 a
Supply voltage typical, from, to:	24 V DC, 19.2 V DC, 28.8 V DC
Maximum power consumption:	≤ 20 mA
Design:	cylindrical
Dimensions (diameter x length):	M30 x 100 mm
Connection type:	connector M12, 4-pin M30
Housing material:	nickel-plated brass
Vibration resistance (checked to):	5 g (IEC 60068-2-6)
Oscillation frequency from ... to:	10 Hz ... 55 Hz
Shock resistance:	10 g, 16 ms (IEC 60068-2-29)
Weight:	67 g
Ambient operating temperature:	-40 °C ... 55 °C
Storage temperature:	-40 °C ... 75 °C
Air humidity:	non-condensing 15 ... 95 %

1) 2) 3) 6) 7) Only in conjunction with suitable testing device, e.g., Flexi Classic, DeviceNet Safety ⁴⁾ The test rate shall not be exceeded ⁵⁾ Between two demands on a safety-related response of the device, at least 100 internal or external tests must be carried out.

Technical Data-Receiver

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Maximum demand rate:	60 /min (EN ISO 13849) ⁵⁾
Performance level:	PL c (EN ISO 13849) ⁶⁾
PFHd:	10 * 1E-06
TM (mission time):	20 a
Supply voltage typical, from, to:	24 V DC, 19.2 V DC, 28.8 V DC
Switching outputs:	PNP, Q ⁸⁾
Maximum response time:	200 µs
Maximum switching current:	70 mA
Maximum power consumption:	≤ 30 mA
Design:	cylindrical

Dimensions (diameter x length):	M30 x 100 mm
Connection type:	connector M12, 4-pin M30
Housing material:	nickel-plated brass
Vibration resistance (checked to):	5 g (IEC 60068-2-6)
Oscillation frequency from ... to:	10 Hz ... 55 Hz
Shock resistance:	10 g, 16 ms (IEC 60068-2-29)
Weight:	67 g
Ambient operating temperature:	-40 °C ... 55 °C
Storage temperature:	-40 °C ... 75 °C
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1) 2) 3) 6) 7) Only in conjunction with suitable testing device, e.g., Flexi Classic, DeviceNet Safety 4) The test rate shall not be exceeded 5) Between two demands on a safety-related response of the device, at least 100 internal or external tests must be carried out. 8) Short-circuit protected

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