



Single-beam photoelectric safety switch L21

L21E-21MA1A, L21S-21MA1A



receiver

Model Name [> L21E-21MA1A](#)
Part No. [> 6034875](#)



sender

Model Name [> L21S-21MA1A](#)
Part No. [> 6034874](#)

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 ... 16 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):	M18 x 97.7 mm
Connection type:	connector M12, 4-pin M18
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

Scanning range:	0 m ... 16 m
Number of beams:	1
Optical axis:	axial
Aperture angle/receiving angle:	according to type 2 (IEC 61496-2)
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
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):	M18 x 97.7 mm
Connection type:	connector M12, 4-pin M18
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. 8) Short-circuit protected

Australia

Phone +61 3 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Belgium/Luxembourg

Phone +32 (0)2 466 55 66
E-Mail info@sick.be

Brasil

Phone +55 11 3215-4900
E-Mail marketing@sick.com.br

Canada

Phone +1 905 771 14 44
E-Mail information@sick.com

Česká republika

Phone +420 2 57 91 18 50
E-Mail sick@sick.cz

China

Phone +86 4000 121 000
E-Mail info.china@sick.net.cn
Phone +852-2153 6300
E-Mail ghk@sick.com.hk

Danmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Deutschland

Phone +49 211 5301-301
E-Mail info@sick.de

España

Phone +34 93 480 31 00
E-Mail info@sick.es

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Great Britain

Phone +44 (0)1727 831121
E-Mail info@sick.co.uk

India

Phone +91-22-4033 8333
E-Mail info@sick-india.com

Israel

Phone +972-4-6881000
E-Mail info@sick-sensors.com

Italia

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 (0)3 5309 2112
E-Mail support@sick.jp

Magyarország

Phone +36 1 371 2680
E-Mail office@sick.hu

Nederland

Phone +31 (0)30 229 25 44
E-Mail info@sick.nl

Norge

Phone +47 67 81 50 00
E-Mail sick@sick.no

Österreich

Phone +43 (0)22 36 62 28 8-0
E-Mail office@sick.at

Polska

Phone +48 22 837 40 50
E-Mail info@sick.pl

România

Phone +40 356 171 120
E-Mail office@sick.ro

Russia

Phone +7-495-775-05-30
E-Mail info@sick.ru

Schweiz

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovenija

Phone +386 (0)1-47 69 990
E-Mail office@sick.si

South Africa

Phone +27 11 472 3733
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail info@sickkorea.net

Suomi

Phone +358-9-25 15 800
E-Mail sick@sick.fi

Sverige

Phone +46 10 110 10 00
E-Mail info@sick.se

Taiwan

Phone +886 2 2375-6288
E-Mail sales@sick.com.tw

Türkiye

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail info@sick.ae

USA/México

Phone +1(952) 941-6780
1 (800) 325-7425 – tollfree
E-Mail info@sickusa.com

More representatives and agencies
at www.sick.com