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Product data sheet



L21E-11MA1A

L21

SAFETY SINGLE-BEAM SENSORS

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L21E-11MA1A | L21

SAFETY SINGLE-BEAM SENSORS



Ordering information

Scanning range	Model	Housing material	System part	Type	Part no.
7 m	M18 radial	Nickel-plated brass	Receiver	L21E-11MA1A	6034877

Other models and accessories ➜ www.sick.com/L21

Detailed technical data

Features

Scanning range	7 m
Number of beams	1
Optical axis	Radial
Response time	0.2 ms
Response time	0.2 ms + Test device response time

Safety-related parameters

Type	Type 2 (IEC 61496-1) [1]
Safety integrity level	SIL 1 (IEC 61508) [1]
Category	Category 2 (EN ISO 13849) [1]
Test rate (external test)	100 /s (EN ISO 13849) [2]
Maximum demand rate	≤ 60 min^{-1} (EN ISO 13849) [3]
Performance level	PL c (EN ISO 13849) [1]
PFH_D (mean probability of a dangerous failure per hour)	1.0 x 10^{-6} (EN ISO 13849) [1]
T_M (mission time)	20 years (EN ISO 13849)

[1] Only in combination with an appropriate test device, e.g., Flexi Classic or Flexi Soft.

[2] The test rate shall not be exceeded.

[3] Between two requirements on a safety-related response of the device, at least 100 internal or external tests must be carried out.

Interfaces

Connection type	Male connector M12, 4-pin, straight

Electrical data

Protection class	III (IEC 61140)
Supply voltage V_S	24 V DC (19.2 V DC ... 28.8 V DC)
Power consumption	≤ 30 mA

[1] Short-circuit protected.

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Switching outputs	PNP, Q [1]
Current loading	≤ 70 mA

[1] Short-circuit protected.

Mechanical data

Design	Cylindrical
Dimensions (diameter x length)	M18 x 107.7 mm
Housing material	Nickel-plated brass
Lens material	Glass
Weight	67 g

Ambient data

Enclosure rating	IP67 (EN 60529)
Ambient operating temperature	–40 °C ... +55 °C
Storage temperature	–40 °C ... +75 °C
Air humidity	15 % ... 95 %, Non-condensing
Vibration resistance	5 g, 10 Hz ... 55 Hz (IEC 60068-2-6)
Shock resistance	10 g, 16 ms (IEC 60068-2-29)

Other information

Aperture angle/receiving angle	± 5° / ± 5°

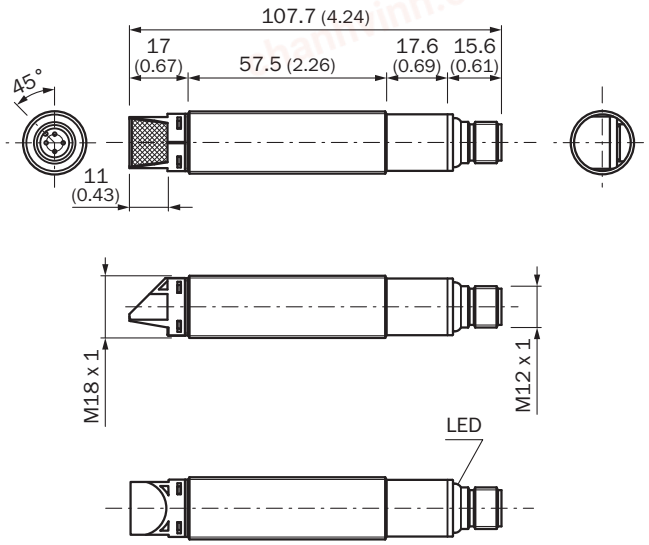
Classifications

ECLASS 5.0	27272701
ECLASS 5.1.4	27272701
ECLASS 6.0	27272701
ECLASS 6.2	27272701
ECLASS 7.0	27272701
ECLASS 8.0	27272701
ECLASS 8.1	27272701
ECLASS 9.0	27272701
ECLASS 10.0	27272701
ECLASS 11.0	27272701
ECLASS 12.0	27272701
ETIM 5.0	EC001831
ETIM 6.0	EC001831
ETIM 7.0	EC001831
ETIM 8.0	EC001831
UNSPSC 16.0901	46171620

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Dimensional drawing (Dimensions in mm (inch))

M18, radial, straight



Recommended accessories

Other models and accessories ➜ www.sick.com/L21

	Brief description	Type	Part no.
Plug connectors and cables			
	• **Connection type head A:** Female connector, M12, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YF2A14-050VB3XLEAX	2096235
	• **Connection type head A:** Female connector, M12, 4-pin, angled, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PVC • **Description:** Sensor/actuator cable, unshielded • **Application:** Zones with chemicals	YG2A14-050VB3XLEAX	2095897
	• **Connection type head A:** Female connector, M12, 4-pin, straight • **Description:** Unshielded, Head A: female connector, M12, 4-pin, straight, unshielded, for power supply, for cable diameter 4 mm ... 6 mm Head B: - • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1204-G	6007302
	• **Connection type head A:** Female connector, M12, 4-pin, angled • **Description:** Unshielded, Head A: female connector, M12, 4-pin, angled, unshielded, for power supply, for cable diameter 3 mm ... 6.5 mm Head B: - • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	DOS-1204-W	6007303

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SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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