



L28E-3P2431

L28

SAFETY SINGLE-BEAM SENSORS

SICK
Sensor Intelligence.



Ordering information

Scanning range	Housing material	System part	Type	Part no.
18 m	ABS (plastic)	Receiver	L28E-3P2431	2044516

Other models and accessories → www.sick.com/L28

Detailed technical data

Features

Scanning range	18 m
Number of beams	1
Response time	0.68 ms
Response time	0.68 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
Display elements	LED

Electrical data

Protection class	II (IEC 61140)
Supply voltage V _S	24 V DC (16.8 V DC ... 28.8 V DC)
Power consumption	≤ 25 mA
Switching outputs	PNP, Q and Q not ¹⁾

¹⁾ Short-circuit protected.

Current loading	≤ 100 mA
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¹⁾ Short-circuit protected.

Mechanical data

Design	Rectangular
Dimensions (W x H x D)	17.6 mm x 87.5 mm x 33.5 mm
Housing material	ABS (plastic)
Weight	Approx. 40 g

Ambient data

Enclosure rating	IP67 (EN 60529)
Ambient operating temperature	−40 °C ... +60 °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)

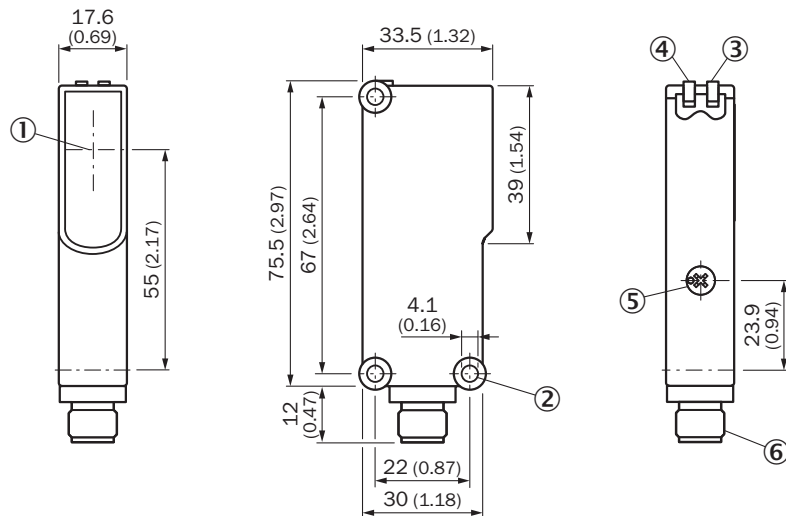
Other information

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

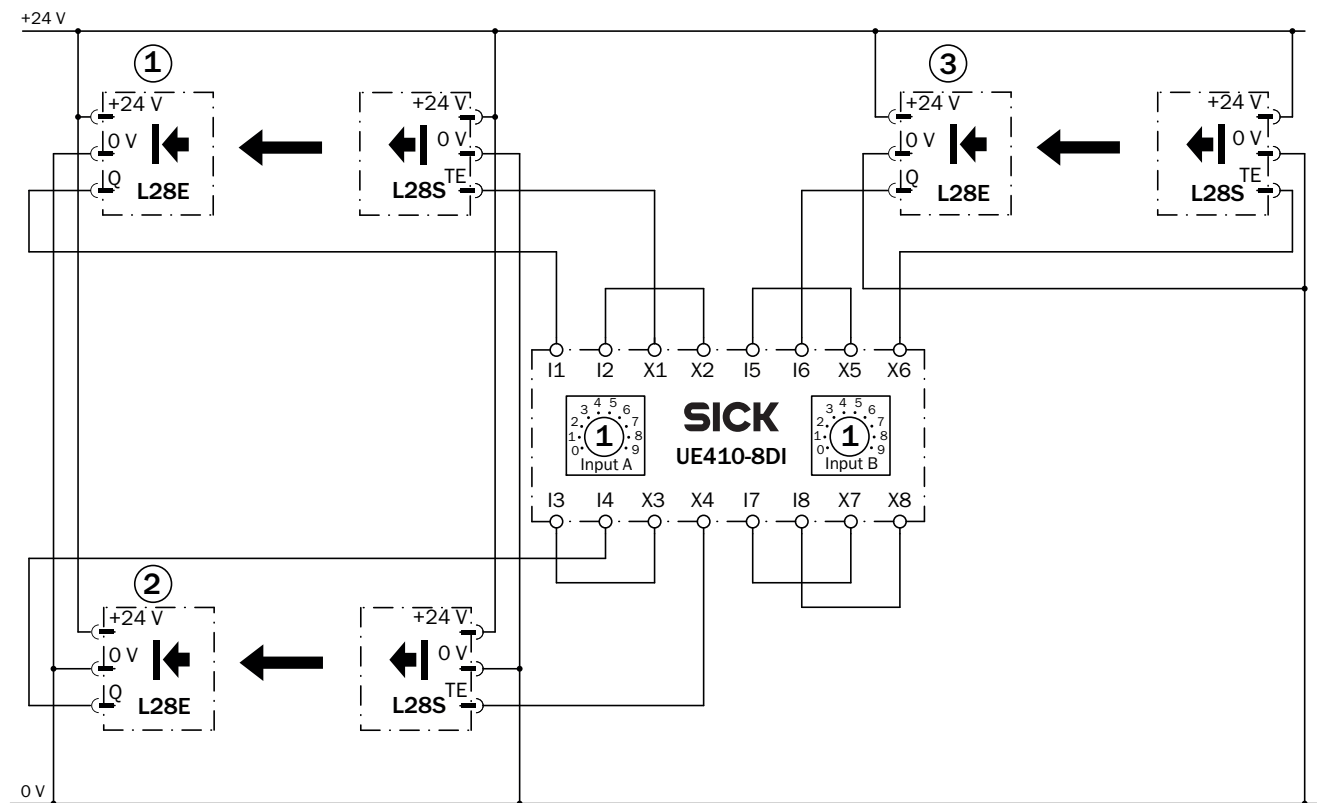
ECLASS 5.0	27272701
ECLASS 5.1.4	27272701
ECLASS 6.0	27272701
ECLASS 6.2	27272701
ECLASS 7.0	27272701
ECLASS 8.0	27272701
ECLASS 8.1	27272701
ECLASS 9.0	27272701
ECLASS 10.0	27272701
ECLASS 11.0	27272701
ECLASS 12.0	27272701
ETIM 5.0	EC001831
ETIM 6.0	EC001831
ETIM 7.0	EC001831
ETIM 8.0	EC001831
UNSPSC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

Dimensional drawing (Dimensions in mm (inch))



Connection diagram






3 x L28 with a Flexi Classic UE410-8DI input expansion unit



E117084/00/2014-06-02

Recommended accessories

Other models and accessories → www.sick.com/L28

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket with hinged arm, steel, zinc coated, mounting hardware included	BEF-WN-W18	2009317
Plug connectors and cables			
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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
	<ul style="list-style-type: none"> • 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

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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com