ZLD18-APZ3B8

Z18 Simple Sense

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

ZLD18-APZ3B8 | Z18 Simple Sense

PHOTOELECTRIC SENSORS

Ordering information

Type	part no.
ZLD18-APZ3B8	1096987

Included in delivery: BEF-MU-M18*1 (2)

Other models and accessories ➜ www.sick.com/Z18_Simple_Sense

Illustration may differ

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	With minimum distance to reflector (dual lens system)
Dimensions (W x H x D)	13.6 mm x 34.8 mm x 23 mm
Housing design (light emission)	Hybrid
Thread diameter (housing)	M18
Mounting system type	M18, head/side (24.1 ... 25.4 mm)
Housing color	Transparent
Sensing range max.	0 m ... 5 m [1]
Sensing range	0 m ... 4.2 m [1]
Type of light	Visible red light
Light source	LED
Light spot size (distance)	Ø 125 mm (1,000 mm)
Wave length	625 nm

[1] Reflector PL80A.

Mechanics/electronics

Supply voltage U_B	10 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	≤ 15 mA [1]

[1] Without load.
[2] Signal transit time with resistive load.
[3] With light/dark ratio 1:1.
[4] A = V_S connections reverse-polarity protected.
[5] B = inputs and output reverse-polarity protected.
[6] D = outputs overcurrent and short-circuit protected.

Switching output	PNP
Switching mode	Light switching
Switching output detail	
Switching output Q1	PNP, Light switching
Switching output Q2	Not connected
Output current $I_{max.}$	100 mA
Response time	≤ 500 µs [2]
Switching frequency	1,000 kHz [3]
Connection type	Cable with M8 male connector, 4-pin, 150 mm
Cable material	Plastic, PVC
Conductor cross section	0.13 mm²
Circuit protection	A [4] B [5] D [6]
Protection class	III
Weight	3.63 g
Polarizing filter	✓
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Enclosure rating	IP67
Ambient operating temperature	–40 °C ... +55 °C
Ambient temperature, storage	–40 °C ... +70 °C
UL File No.	E189383

[1] Without load.

[2] Signal transit time with resistive load.

[3] With light/dark ratio 1:1.

[4] A = V_S connections reverse-polarity protected.

[5] B = inputs and output reverse-polarity protected.

[6] D = outputs overcurrent and short-circuit protected.

Connection type/pinouts

Connection type	
	Cable with M8 male connector, 4-pin, 150 mm
Connection type Detail	
Cable material	Plastic
Conductor cross section	0.13 mm²
Pinouts	
BN 1	+ (L+)
WH 2	Not connected
BU 3	- (M)
BK 4	Q_1

Certificates

EU declaration of conformity	✓

UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

ECLASS 5.0	27270902
ECLASS 5.1.4	27270902
ECLASS 6.0	27270902
ECLASS 6.2	27270902
ECLASS 7.0	27270902
ECLASS 8.0	27270902
ECLASS 8.1	27270902
ECLASS 9.0	27270902
ECLASS 10.0	27270902
ECLASS 11.0	27270902
ECLASS 12.0	27270902
ETIM 5.0	EC002717
ETIM 6.0	EC002717
ETIM 7.0	EC002717
ETIM 8.0	EC002717
UNSPSC 16.0901	39121528

Pinouts, see table Technical data: Connection type/pinouts
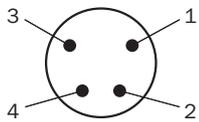
Male connector, M8, 4-pin, uncoded
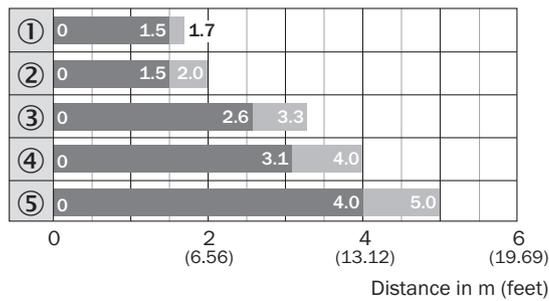
Connection diagram Cd-243
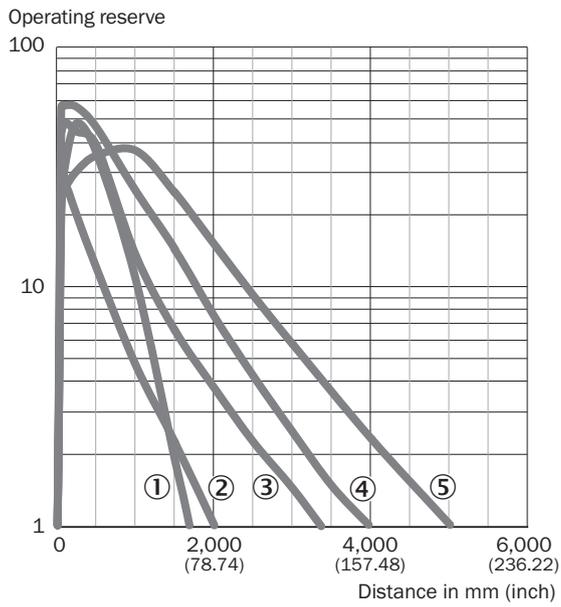
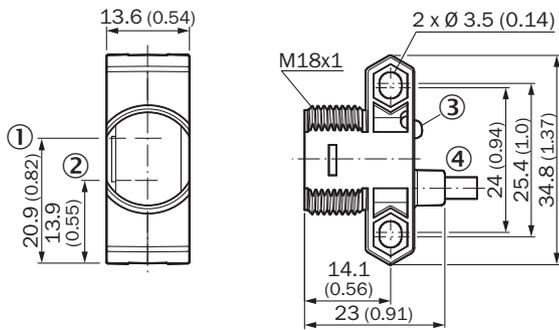| Pin	Wire	Signal
1	BN	+ (L+)
2	WH	Q_2
3	BU	- (M)
4	BK	Q_1

Characteristic curve

Operating reserve

① Reflector PL23 FT
② Reflector PL20A
③ Reflector PL250
④ Reflector PL40A
⑤ Reflector PL80A

Sensing range diagram

Distance in m (feet)

■ Sensing range   ■ Sensing range max.

① Reflector PL23 FT
② Reflector PL20A
③ Reflector PL250
④ Reflector PL40A
⑤ Reflector PL80A

Dimensional drawing

13.6 (0.54)

2 x Ø 3.5 (0.14)

M18x1

① optical axis, sender
② optical axis, receiver

20.9 (0.82)
13.9 (0.55)

③
④

24 (0.94)
25.4 (1.0)
34.8 (1.37)

14.1 (0.56)
23 (0.91)

Dimensions in mm (inch)
① optical axis, sender
② optical axis, receiver
③ LED status indicator
④ Connection

Recommended accessories

Other models and accessories ➜ www.sick.com/Z18_Simple_Sense

	Brief description	Type	part no.
Mounting systems			
	• **Description:** Universal mounting bracket for reflectors • **Dimensions (W x H x L):** 85 mm x 90 mm x 35 mm • **Material:** Steel • **Details:** Steel, zinc coated • **Suitable for:** C110A, P250, PL20, PL30A, PL40A, PL80A	BEF-WN-REFX	2064574
	• **Description:** Mounting bracket for M18 sensors • **Material:** Steel • **Details:** Steel, zinc coated • **Items supplied:** Without mounting hardware • **Suitable for:** GR18, V180-2, V18, W15, Z1, Z2	BEF-WN-M18	5308446
	• **Description:** Plate N11N for universal clamp bracket • **Material:** Stainless steel • **Details:** Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp) • **Items supplied:** Universal clamp (5322627), mounting hardware • **Usable for:** DeltaPac, Glare, WTD20E	BEF-KHS-N11N	2071081
reflectors and optics			
	• **Description:** Rectangular, screw connection • **Dimensions:** 51 mm 61 mm • **Ambient operating temperature:** −30 °C … +65 °C	P250	5304812

Brief description	Type	part no.
connectors and cables		
• **Connection type head A:** Female connector, M8, 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:** Uncontaminated zones, Zones with chemicals	YF8U14-050VA3XLEAX	2095889
• **Connection type head A:** Male connector, M8, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323
• **Connection type head A:** Female connector, M8, 4-pin, straight, A-coded • **Connection type head B:** Flying leads • **Signal type:** Sensor/actuator cable • **Cable:** 5 m, 4-wire, PUR, halogen-free • **Description:** Sensor/actuator cable, unshielded • **Application:** Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation	YF8U14-050UA3XLEAX	2094792

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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