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Product data sheet



ZLD18-BFZ4A8

Z18 Simple Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

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ZLD18-BFZ4A8 | Z18 Simple Sense

HYBRID PHOTOELECTRIC SENSORS



Illustration may differ

Ordering information

Type	Part no.
ZLD18-BFZ4A8	1100593

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

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

Detailed technical data

Features

Functional principle	Photoelectric retro-reflective sensor
Functional principle detail	Dual lens
Dimensions (W x H x D)	13.6 mm x 45.1 mm x 31.7 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]
Switching output	PNP
Switching mode	Dark switching

[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.

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Switching output detail	
Switching output Q1	PNP, Dark 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	Male connector M12, 4-pin
Circuit protection	A [4] B [5] D [6]
Protection class	III
Weight	4.54 g
Polarisation 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.

Classifications

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

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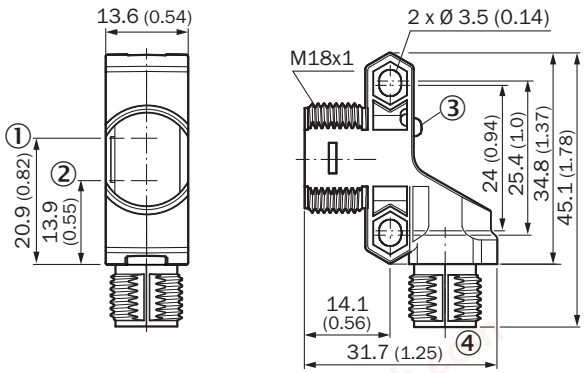
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HYBRID PHOTOELECTRIC SENSORS

Connection/Pin assignment

Connection type		Male connector M12, 4-pin
Pin assignment		
	BN 1	+ (L+)
	WH 2	Not connected
	BU 3	- (M)
	BK 4	Q_1

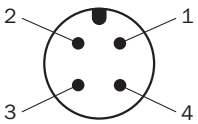
Dimensional drawing (Dimensions in mm (inch))



① Optical axis, sender
② Optical axis, receiver
③ LED status indicator
④ Connection

Connection type

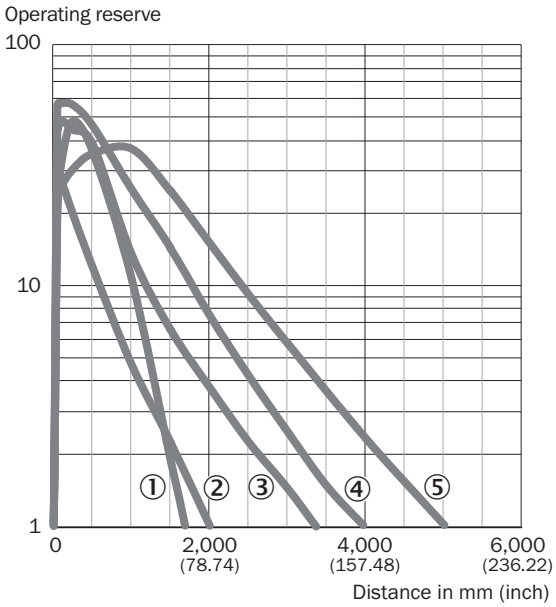
Connection type. see table: Connection/PIN assignment



M12 male connector, 4-pin, A-coding

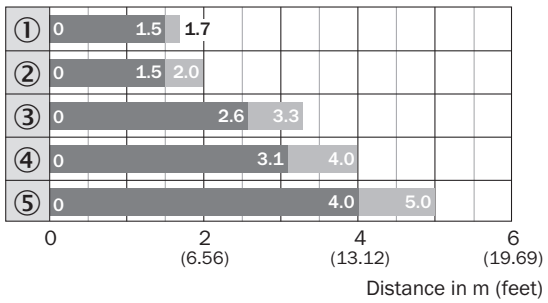
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Characteristic curve



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

Sensing range diagram



Sensing range Sensing range max.

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

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Recommended accessories

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

	Brief description	Type	Part no.
Mounting brackets and plates			
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: male connector, M12, 4-pin, straight Cable: unshielded	STE-1204-G	6009932
Reflectors			
	Rectangular, screw connection, 51 mm x 61 mm, PMMA/ABS, Screw-on, 2 hole mounting	P250	5304812

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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."

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com