



DATA SHEET

ZTB18-4JZ3A2D04

Z18 Simple Sense
Photoelectric sensors

SICK

Sensor Intelligence



Illustration may differ

PHOTOELECTRIC SENSORS

ZTB18-4JZ3A2D04

ORDERING INFORMATION

Type	part no.
ZTB18-4JZ3A2D04	1140196

Further device versions and accessories at www.sick.com/Z18_Simple_Sense



DETAILED TECHNICAL DATA

FEATURES

Functional principle	Photoelectric proximity sensor
Functional principle detail	Background suppression
Dimensions (W x H x D)	13.6 mm x 40.8 mm x 33.3 mm
Housing design (light emission)	Hybrid
Mounting system type	M18, head/M18, base
Housing color	Blue
Sensing range max.	5 mm ... 100 mm ¹⁾
Sensing range	5 mm ... 100 mm ²⁾
Type of light	Visible red light
Light source	PinPoint LED
Light spot size (distance)	Ø 8 mm (100 mm)
Wave length	625 nm

¹⁾ Object with 90% remission (based on standard white, DIN 5033).

²⁾ Object with 6% remission factor (based on standard black, DIN 5033).

MECHANICS/ELECTRONICS

Supply voltage U _B	10 V DC ... 30 V DC
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³⁾ Without load.

²⁾ Open Collector.

³⁾ Signal transit time with resistive load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ A = V_s connections reverse-polarity protected.

⁶⁾ B = inputs and output reverse-polarity protected.

⁷⁾ D = outputs overcurrent and short-circuit protected.

Ripple	< 10 %
Current consumption	≤ 15 mA ¹⁾
Switching output	NPN
Switching mode	Dark switching
Switching output detail	Switching output Q1 Switching output Q2
	NPN, Dark switching ²⁾
	Not connected
Output current I _{max}	100 mA
Response time	≤ 1 ms ³⁾
Switching frequency	500 Hz ⁴⁾
Connection type	Male connector M8, 4-pin
Circuit protection	A ⁵⁾ B ⁶⁾ D ⁷⁾
Protection class	III
Weight	4.54 g
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⁾ Open Collector.³⁾ Signal transit time with resistive load.⁴⁾ With light/dark ratio 1:1.⁵⁾ A = V_s connections reverse-polarity protected.⁶⁾ B = inputs and output reverse-polarity protected.⁷⁾ D = outputs overcurrent and short-circuit protected.

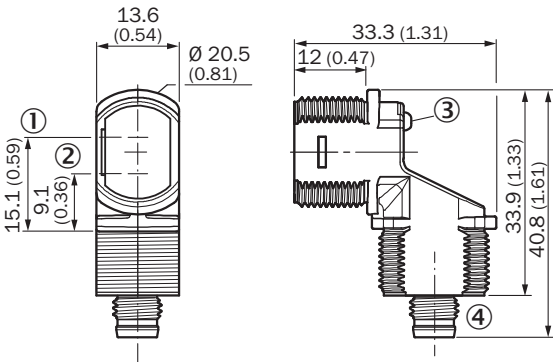
CONNECTION TYPE/PINOUTS

Connection type	Male connector M8, 4-pin
Pinouts	BN 1 + (L+) WH 2 Not connected BU 3 - (M) BK 4 Q₁

CERTIFICATES

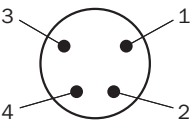
EU declaration of conformity	✓
UK declaration of conformity	✓
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓
China Compulsory Product Certification (CCC) exempt	✓

DIMENSIONAL DRAWING



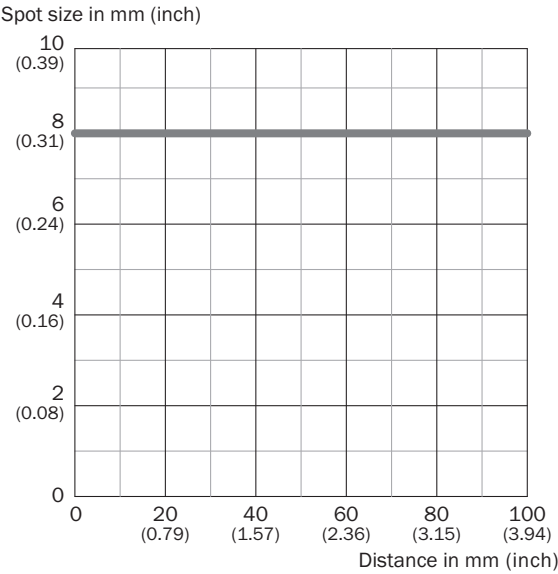
- Dimensions in mm (inch)
- ① optical axis, sender
 - ② optical axis, receiver
 - ③ LED status indicator
 - ④ Connection

PINOUTS, SEE TABLE TECHNICAL DATA: CONNECTION TYPE/PINOUTS

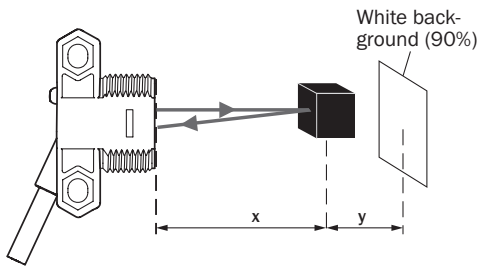


Male connector, M8, 4-pin, uncoded

LIGHT SPOT SIZE



SENSING RANGE ON BLACK, 6% REMISSION FACTOR



ZTB18-xxxxxD02: $x = 47 \text{ mm}$ / $y = 4 \text{ mm}$
 ZTB18-xxxxxD04: $x = 93 \text{ mm}$ / $y = 8 \text{ mm}$
 ZTB18-xxxxxD06: $x = 139 \text{ mm}$ / $y = 12 \text{ mm}$

Further information as well as suitable accessories, example applications and downloads such as CAD dimensional models, operating instructions and software can be found at www.sick.com/1140196



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SICK AT A GLANCE

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SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnerships with our customers are more than just a promise: Together, we optimize productivity, improve quality, protect health and safety, and help build a sustainable future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions

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