ZTB18-APZ4B1D02

Z18 Simple Sense

PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

ZTB18-APZ4B1D02 | Z18 Simple Sense

PHOTOELECTRIC SENSORS

Ordering information

Type	part no.
ZTB18-APZ4B1D02	1100590

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 proximity sensor
Functional principle detail	Background suppression
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.	5 mm ... 50 mm [1]
Sensing range	5 mm ... 50 mm [1]
Type of light	Infrared light
Light source	PinPoint LED
Light spot size (distance)	Ø 8 mm (100 mm)
Wave length	850 nm

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

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	≤ 1 ms [2]
Switching frequency	500 kHz [3]
Connection type	Cable with M12 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
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.

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Connection type/pinouts

Connection type	Cable with M12 male connector, 4-pin, 150 mm
Connection type Detail	
Conductor cross section	0.13 mm²
Cable material	Plastic
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	27270904
ECLASS 5.1.4	27270904
ECLASS 6.0	27270904
ECLASS 6.2	27270904
ECLASS 7.0	27270904
ECLASS 8.0	27270904
ECLASS 8.1	27270904
ECLASS 9.0	27270904
ECLASS 10.0	27270904
ECLASS 11.0	27270904
ECLASS 12.0	27270903
ETIM 5.0	EC002719
ETIM 6.0	EC002719
ETIM 7.0	EC002719
ETIM 8.0	EC002719
UNSPSC 16.0901	39121528

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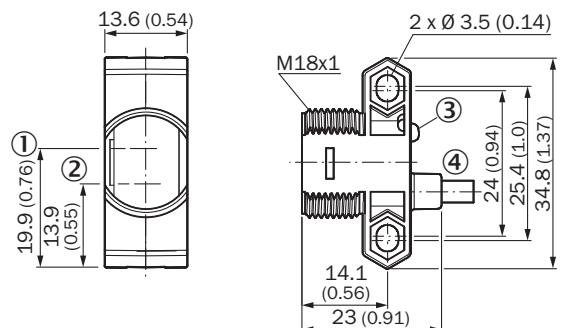
Dimensions in mm (inch)
① optical axis, sender
② optical axis, receiver
③ LED status indicator
④ Connection

## Pinouts, see table Technical data: Connection type/pinouts
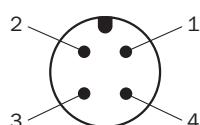
M12 male connector, 4-pin, A-coding

Light spot size

Spot size in mm (inch)
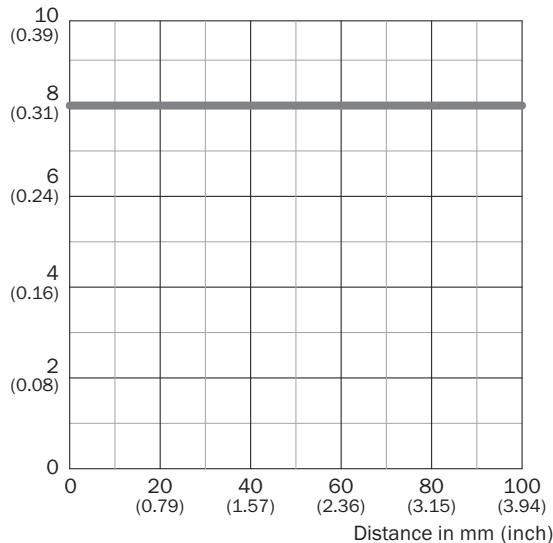
Sensing range on black, 6% remission factor

White background (90%)
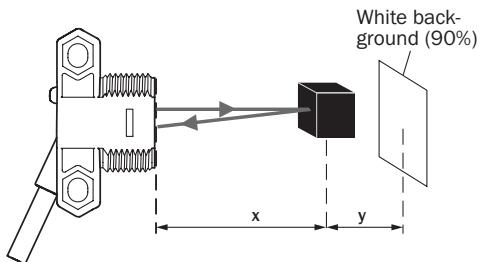
ZTB18-xxxxxx**D02**: x = 47 mm / y = 4 mm
ZTB18-xxxxxx**D04**: x = 93 mm / y = 8 mm
ZTB18-xxxxxx**D06**: x = 139 mm / y = 12 mm

Recommended accessories

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

Brief description	Type	part no.
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, Uncontaminated zones	YF2A14-050VB3XLEAX	2096235
• **Connection type head A:** Male connector, M12, 4-pin, straight, A-coded • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** ≤ 0.75 mm²	STE-1204-G	6009932

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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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