ZTB18-9AB5B1D04

Z18 Simple Sense

HYBRID PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.

Illustration may differ
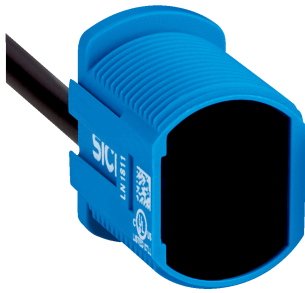
Ordering information

Type	Part no.
ZTB18-9AB5B1D04	1095808

Other models and accessories ➔ 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)	14.4 mm x 20.5 mm x 23 mm
Housing design (light emission)	Hybrid
Thread diameter (housing)	M18
Mounting system type	M18, head/dovetail mounting with base
Housing color	Blue
Sensing range max.	5 mm ... 100 mm [1]
Sensing range	5 mm ... 100 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]
Switching output	Push-pull: PNP/NPN
Switching mode	Light switching, Dark switching
Switching output detail	
Switching output Q1	Push-pull: PNP/NPN, Light 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.

Switching output Q2	Push-pull: PNP/NPN, Dark switching
Output current I$_{max.}$	100 mA
Response time	≤ 1 ms [2]
Switching frequency	500 kHz [3]
Connection type	Cable with male connector M8, 4-pin, snap, 150 mm
Cable material	PVC
Conductor cross section	0.13 mm²
Circuit protection	A [4] B [5] D [6]
Protection class	III
Weight	2.49 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.

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

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

Connection type/pinouts

Connection type	Cable with male connector M8, 4-pin, snap, 150 mm
Connection type Detail	
Conductor cross section	0.13 mm²
Cable material	PVC
Pinouts	
BN 1	+ (L+)
WH 2	Q_2
BU 3	- (M)
BK 4	Q_1

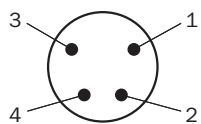## Dimensional drawing (Dimensions in mm (inch))
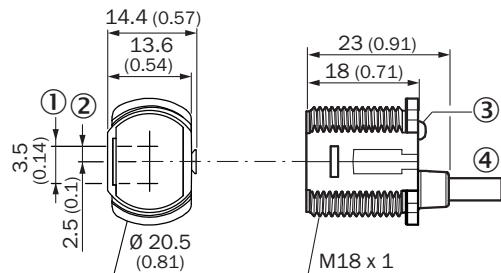
① Optical axis, sender
② Optical axis, receiver
③ LED status indicator
④ Connection

Connection type

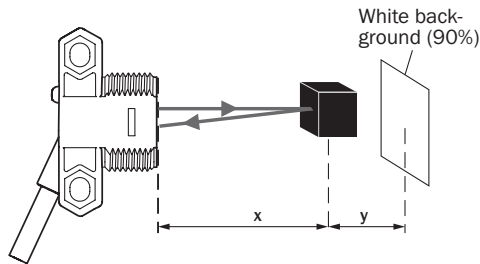Pinouts, see Technical details: **Connection type/pinouts**

Male connector, M8, 4-pin, uncoded

Light spot size

Spot size in mm (inch)

Distance in mm (inch)

Functions

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.
Plug connectors and cables			
	• **Connection type head A:** Male connector, M8, 4-pin, straight • **Description:** Unshielded • **Connection systems:** Screw-type terminals • **Permitted cross-section:** 0.14 mm² ... 0.5 mm²	STE-0804-G	6037323

	Brief description	Type	Part no.
Others			
	• **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:** Zones with chemicals	YF8U14-050VA3XLEAX	2095889

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