

ZTB18-4PZ4A2D04

Z18 Simple Sense

PHOTOELECTRIC SENSORS



Ordering information

Туре	part no.
ZTB18-4PZ4A2D04	1139919

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 44.2 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).

Mechanics/electronics

Supply voltage U _B	10 V DC 30 V DC
Ripple	< 10 %
Current consumption	\leq 15 mA $^{1)}$

¹⁾ Without load.

 $^{^{2)}}$ Object with 6 % reflectance (referred to standard black, DIN 5033).

 $^{^{2)}}$ 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	\leq 1 ms $^{2)}$
Switching frequency	500 kHz ³⁾
Connection type	Male connector M12, 4-pin
Circuit protection	A ⁴⁾ B ⁵⁾ D ⁶⁾
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.

Connection type/pinouts

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

Certificates

EU declaration of conformity	✓
UK declaration of conformity	1
ACMA declaration of conformity	✓
Moroccan declaration of conformity	✓
China RoHS	✓

Classifications

ECLASS 5.0	27270904
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²⁾ Signal transit time with resistive load.

³⁾ With light/dark ratio 1:1.

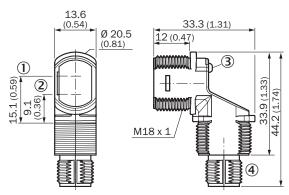
 $^{^{4)}}$ A = V_S connections reverse-polarity protected.

⁵⁾ B = inputs and output reverse-polarity protected.

⁶⁾ D = outputs overcurrent and short-circuit protected.

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

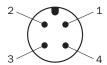
Dimensional drawing



Dimensions in mm (inch)

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

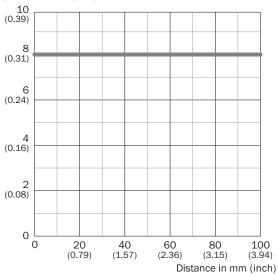
Pinouts, see table Technical data: Connection type/pinouts



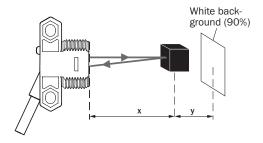
M12 male connector, 4-pin, A-coding

Light spot size





Sensing range on black, 6% remission factor



ZTB18-xxxxxx**D02**: x = 47 mm / y = 4 mm ZTB18-xxxxx**D04**: x = 93 mm / y = 8 mm ZTB18-xxxxx**D06**: x = 139 mm / y = 12 mm

Recommended accessories

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

	Brief description	Туре	part no.
Mounting systems			
40	 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
connectors an	nd 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
	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, PUR, halogen-free Description: Sensor/actuator cable, unshielded Application: Uncontaminated zones, Zones with oils and lubricants, Robot, Drag chain operation	YF2A14-050UB3XLEAX	2095608

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