

# ZSE18-4AB1G3

Z18 Simple Sense

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
ZSE18-4AB1G3	1095851

Included in delivery: BEF-MU-M18\*1 (2)

Other models and accessories → [www.sick.com/Z18\\_Simple\\_Sense](http://www.sick.com/Z18_Simple_Sense)

Detailed technical data

Features

Functional principle	Through-beam photoelectric sensor
Dimensions (W x H x D)	13.6 mm x 42.9 mm x 33.3 mm
Housing design (light emission)	Hybrid
Thread diameter (housing)	M18
Mounting system type	M18, head/M18, base
Housing color	Blue
Sensing range max.	0 m ... 17 m
Sensing range	0 m ... 15 m
Type of light	Infrared light
Light source	LED
Light spot size (distance)	Ø 20 mm (500 mm)
Wave length	850 nm

Mechanics/electronics

Supply voltage $U_B$	10 V DC ... 30 V DC
Ripple	< 10 %
Current consumption	≤ 15 mA <sup>1)</sup>
Switching output	Push-pull: PNP/NPN
Switching mode	Light switching, Dark switching
Switching output detail	
Switching output Q1	Push-pull: PNP/NPN, Light switching
Switching output Q2	Push-pull: PNP/NPN, Dark switching
Output current $I_{max.}$	100 mA

<sup>1)</sup> Without load.  
<sup>2)</sup> Signal transit time with resistive load.  
<sup>3)</sup> With light/dark ratio 1:1.  
<sup>4)</sup> A =  $V_S$  connections reverse-polarity protected.  
<sup>5)</sup> B = inputs and output reverse-polarity protected.  
<sup>6)</sup> D = outputs overcurrent and short-circuit protected.

<b>Response time</b>	≤ 500 µs <sup>2)</sup>
<b>Switching frequency</b>	1,000 kHz <sup>3)</sup>
<b>Connection type</b>	Cable open end, 4-wire, 2 m
<b>Cable material</b>	Plastic, PVC
<b>Conductor cross section</b>	0.13 mm <sup>2</sup>
<b>Circuit protection</b>	A <sup>4)</sup> B <sup>5)</sup> D <sup>6)</sup>
<b>Protection class</b>	III
<b>Weight</b>	4.54 g
<b>Housing material</b>	Plastic, ABS
<b>Optics material</b>	Plastic, PMMA
<b>Enclosure rating</b>	IP67
<b>Ambient operating temperature</b>	-40 °C ... +55 °C
<b>Ambient temperature, storage</b>	-40 °C ... +70 °C
<b>UL File No.</b>	E189383

<sup>1)</sup> Without load.

<sup>2)</sup> Signal transit time with resistive load.

<sup>3)</sup> With light/dark ratio 1:1.

<sup>4)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>5)</sup> B = inputs and output reverse-polarity protected.

<sup>6)</sup> D = outputs overcurrent and short-circuit protected.

## Connection type/pinouts

<b>Connection type</b>	Cable open end, 4-wire, 2 m
<b>Connection type Detail</b>	
Conductor cross section	0.13 mm <sup>2</sup>
Cable material	Plastic
<b>Pinouts</b> <small>Sender</small>	
BN	+ (L+)
WH	Not connected
BU	- (M)
BK	Test <sub>IN</sub>
<b>Pinouts</b> <small>Receiver</small>	
BN	+ (L+)
WH	Q <sub>2</sub>
BU	- (M)
BK	Q <sub>1</sub>

## Certificates

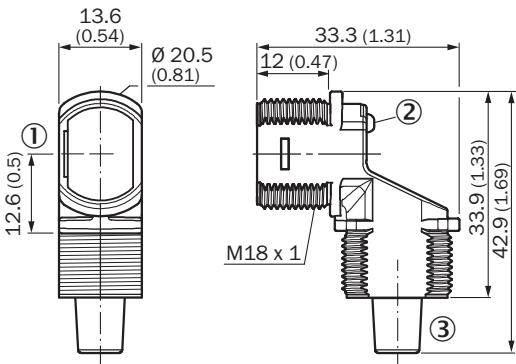
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓

China-RoHS	✓
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Classifications

ECLASS 5.0	27270901
ECLASS 5.1.4	27270901
ECLASS 6.0	27270901
ECLASS 6.2	27270901
ECLASS 7.0	27270901
ECLASS 8.0	27270901
ECLASS 8.1	27270901
ECLASS 9.0	27270901
ECLASS 10.0	27270901
ECLASS 11.0	27270901
ECLASS 12.0	27270901
ETIM 5.0	EC002716
ETIM 6.0	EC002716
ETIM 7.0	EC002716
ETIM 8.0	EC002716
UNSPSC 16.0901	39121528

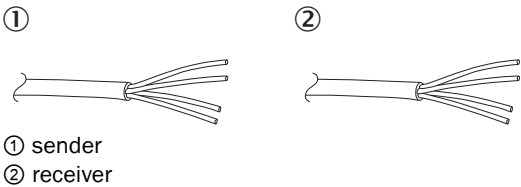
Dimensional drawing



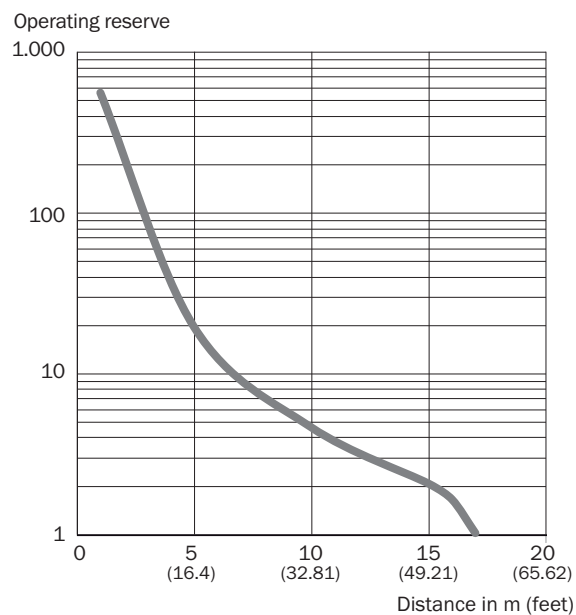
Dimensions in mm (inch)

- ① Optical axis
- ② LED status indicator
- ③ Connection

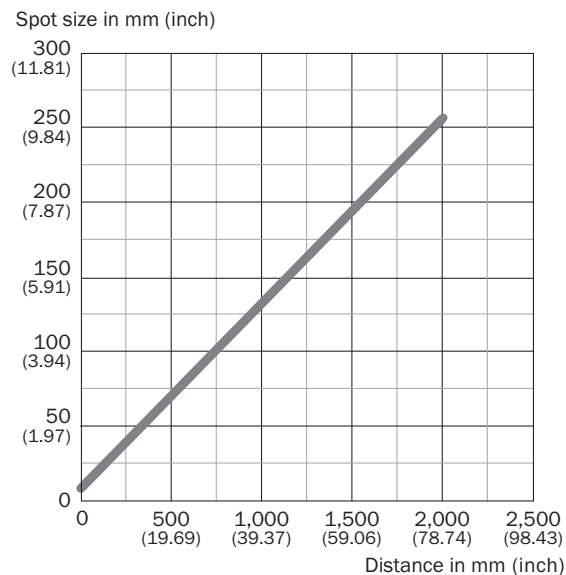
Pinouts, see table Technical data: <b>Connection type/pinouts</b>



## Characteristic curve



## Light spot size



## 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](http://www.sick.com)