

# ZLD18-FHZAE2P51

Z18 Simple Sense

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.

Illustration may differ

### Ordering information

Type	part no.
ZLD18-FHZAE2P51	1127068

**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

<b>Functional principle</b>	Photoelectric retro-reflective sensor
<b>Functional principle detail</b>	With minimum distance to reflector (dual lens system)
<b>Dimensions (W x H x D)</b>	14.4 mm x 18 mm x 23 mm
<b>Housing design (light emission)</b>	Hybrid
<b>Mounting system type</b>	M18, head/dovetail mounting
<b>Housing color</b>	Transparent
<b>Sensing range max.</b>	0 m ... 7.8 m <sup>1)</sup>
<b>Sensing range</b>	0 m ... 6.8 m <sup>1)</sup>
<b>Type of light</b>	Visible red light
<b>Light source</b>	PinPoint LED
<b>Light spot size (distance)</b>	Ø 25 mm (1,000 mm)
<b>Wave length</b>	625 nm
<b>Special features</b>	Special mounting: pre-mounted on customer-specific sensor bracket

<sup>1)</sup> Reflector PL80A.

#### Mechanics/electronics

<b>Supply voltage U<sub>B</sub></b>	10 V DC ... 30 V DC
<b>Ripple</b>	< 10 %
<b>Current consumption</b>	≤ 15 mA <sup>1)</sup>
<b>Switching output</b>	PNP
<b>Switching mode</b>	Light switching
<b>Switching output detail</b>	

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

<sup>2)</sup> Open Collector.

<sup>3)</sup> Signal transit time with resistive load.

<sup>4)</sup> With light/dark ratio 1:1.

<sup>5)</sup> A = V<sub>S</sub> connections reverse-polarity protected.

<sup>6)</sup> B = inputs and output reverse-polarity protected.

<sup>7)</sup> D = outputs overcurrent and short-circuit protected.

Switching output Q1	PNP, Light switching <sup>2)</sup>
Switching output Q2	Not connected
<b>Output current I<sub>max</sub></b>	100 mA
<b>Response time</b>	≤ 500 μs <sup>3)</sup>
<b>Switching frequency</b>	1,000 kHz <sup>4)</sup>
<b>Connection type</b>	Cable with connector RJ11, 6-pin, 1 m
<b>Cable material</b>	Plastic, PVC
<b>Conductor cross section</b>	0.13 mm <sup>2</sup>
<b>Circuit protection</b>	A <sup>5)</sup> B <sup>6)</sup> D <sup>7)</sup>
<b>Protection class</b>	III
<b>Weight</b>	3.6 g
<b>Polarizing filter</b>	✓
<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

1) Without load.

2) Open Collector.

3) Signal transit time with resistive load.

4) With light/dark ratio 1:1.

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

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

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

### Connection type/pinouts

<b>Connection type</b>	Cable with connector RJ11, 6-pin, 1 m
<b>Connection type Detail</b>	
Cable material	Plastic
Conductor cross section	0.13 mm <sup>2</sup>
<b>Pinouts</b>	
BN 2	+ (L+)
BK 3	Q <sub>1</sub>
WH 4	Not connected
BU 5	- (M)

### Certificates

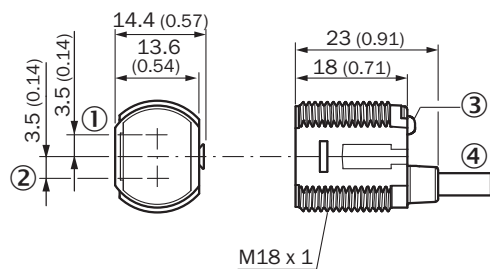
<b>EU declaration of conformity</b>	✓
<b>UK declaration of conformity</b>	✓
<b>ACMA declaration of conformity</b>	✓
<b>Moroccan declaration of conformity</b>	✓

<b>China RoHS</b>	✓
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### Classifications

<b>ECLASS 5.0</b>	27270902
<b>ECLASS 5.1.4</b>	27270902
<b>ECLASS 6.0</b>	27270902
<b>ECLASS 6.2</b>	27270902
<b>ECLASS 7.0</b>	27270902
<b>ECLASS 8.0</b>	27270902
<b>ECLASS 8.1</b>	27270902
<b>ECLASS 9.0</b>	27270902
<b>ECLASS 10.0</b>	27270902
<b>ECLASS 11.0</b>	27270902
<b>ECLASS 12.0</b>	27270902
<b>ETIM 5.0</b>	EC002717
<b>ETIM 6.0</b>	EC002717
<b>ETIM 7.0</b>	EC002717
<b>ETIM 8.0</b>	EC002717
<b>UNSPSC 16.0901</b>	39121528

### Dimensional drawing



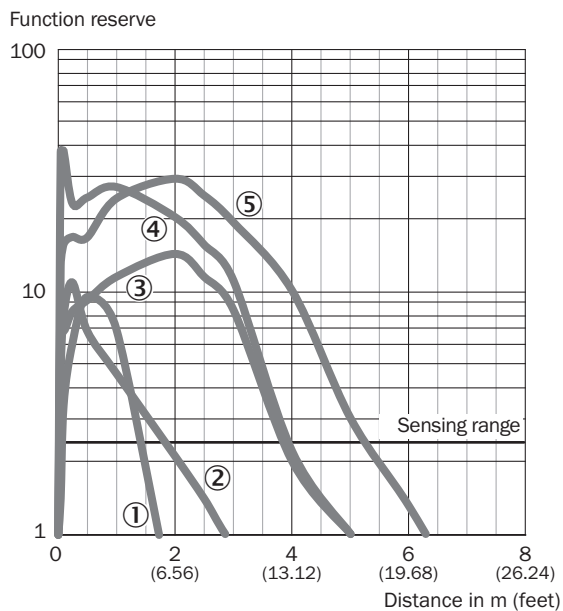
Dimensions in mm (inch)

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

Pinouts, see table [Technical data: Connection type/pinouts](#)

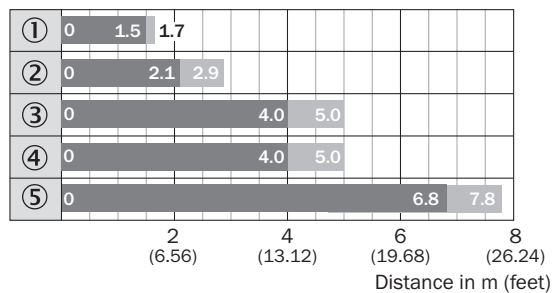


Characteristic curve



- ① Reflector PL23 FT
- ② Reflector PL20A
- ③ Reflector P250
- ④ Reflector PL40A
- ⑤ Reflector PL80A




Sensing range diagram



- Sensing range
- Sensing range typ. max.
- ① Reflector PL23 FT
- ② Reflector PL20A
- ③ Reflector P250
- ④ Reflector PL40A
- ⑤ Reflector PL80A

### Recommended accessories

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

	Brief description	Type	part no.
Mounting systems			
	<ul style="list-style-type: none"> <li><b>Description:</b> Universal mounting bracket for reflectors</li> <li><b>Dimensions (W x H x L):</b> 85 mm x 90 mm x 35 mm</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Suitable for:</b> C110A, P250, PL20, PL30A, PL40A, PL80A</li> </ul>	BEF-WN-REFX	2064574
	<ul style="list-style-type: none"> <li><b>Description:</b> Mounting bracket for M18 sensors</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Items supplied:</b> Without mounting hardware</li> <li><b>Suitable for:</b> GR18, V180-2, V18, W15, Z1, Z2</li> </ul>	BEF-WN-M18	5308446
reflectors and optics			
	<ul style="list-style-type: none"> <li><b>Description:</b> Rectangular, screw connection</li> <li><b>Dimensions:</b> 51 mm 61 mm</li> <li><b>Ambient operating temperature:</b> -30 °C ... +65 °C</li> </ul>	P250	5304812

## 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)