



# ZTE18-4FZ3A8

Z18 Simple Sense

PHOTOELECTRIC SENSORS

**SICK**  
Sensor Intelligence.



### Ordering information

| Type         | part no. |
|--------------|----------|
| ZTE18-4FZ3A8 | 1131322  |

**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)

Illustration may differ



### Detailed technical data

#### Features

|  |                                |
|--|--------------------------------|
| <b>Functional principle</b>            | Photoelectric proximity sensor |
| <b>Functional principle detail</b>     | Energetic                      |
| <b>Dimensions (W x H x D)</b>          | 13.6 mm x 40.8 mm x 33.3 mm    |
| <b>Housing design (light emission)</b> | Hybrid                         |
| <b>Mounting system type</b>            | M18, head/M18, base            |
| <b>Housing color</b>                   | Blue                           |
| <b>Sensing range max.</b>              | 0 mm ... 740 mm <sup>1)</sup>  |
| <b>Sensing range</b>                   | 0 mm ... 590 mm <sup>2)</sup>  |
| <b>Type of light</b>                   | Visible red light              |
| <b>Light source</b>                    | LED                            |
| <b>Wave length</b>                     | 625 nm                         |

<sup>1)</sup> Object with 90% remission (based on standard white, DIN 5033).

<sup>2)</sup> Object with 6% remission factor (based on standard black, DIN 5033).

#### 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                   |

<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.

|  |   |
|--|---|
| <b>Switching mode</b>                  | Dark switching  |
| <b>Switching output detail</b>         |   |
| Switching output Q1                    | PNP, Dark switching                                   |
| Switching output Q2                    | Not connected   |
| <b>Output current I<sub>max.</sub></b> | 100 mA  |
| <b>Response time</b>                   | ≤ 1 ms <sup>2)</sup>                                  |
| <b>Switching frequency</b>             | 500 kHz <sup>3)</sup>                                 |
| <b>Connection type</b>                 | Male connector M8, 4-pin                              |
| <b>Circuit protection</b>              | A <sup>4)</sup><br>B <sup>5)</sup><br>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   |

1) Without load.

2) Signal transit time with resistive load.

3) With light/dark ratio 1:1.

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

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

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

### Connection type/pinouts

|                        |      |                          |
|------------------------|------|--------------------------|
| <b>Connection type</b> |      | Male connector M8, 4-pin |
| <b>Pinouts</b>         |      |                          |
|                        | BN 1 | + (L+)                   |
|                        | WH 2 | Not connected            |
|                        | BU 3 | - (M)                    |
|                        | BK 4 | Q <sub>1</sub>           |

### Certificates

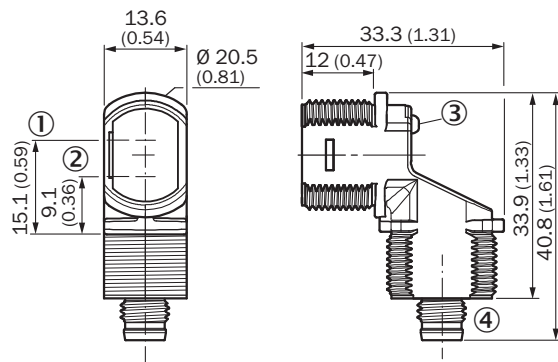
|   |   |
|---|---|
| <b>EU declaration of conformity</b>       | ✓ |
| <b>UK declaration of conformity</b>       | ✓ |
| <b>ACMA declaration of conformity</b>     | ✓ |
| <b>Moroccan declaration of conformity</b> | ✓ |
| <b>China RoHS</b>                         | ✓ |

### Classifications

|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270903 |
| <b>ECLASS 5.1.4</b> | 27270903 |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 6.0</b>     | 27270903 |
| <b>ECLASS 6.2</b>     | 27270903 |
| <b>ECLASS 7.0</b>     | 27270903 |
| <b>ECLASS 8.0</b>     | 27270903 |
| <b>ECLASS 8.1</b>     | 27270903 |
| <b>ECLASS 9.0</b>     | 27270903 |
| <b>ECLASS 10.0</b>    | 27270903 |
| <b>ECLASS 11.0</b>    | 27270903 |
| <b>ECLASS 12.0</b>    | 27270903 |
| <b>ETIM 5.0</b>       | EC002719 |
| <b>ETIM 6.0</b>       | EC002719 |
| <b>ETIM 7.0</b>       | EC002719 |
| <b>ETIM 8.0</b>       | EC002719 |
| <b>UNSPSC 16.0901</b> | 39121528 |

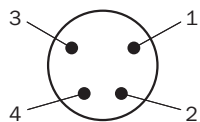
### Dimensional drawing



Dimensions in mm (inch)

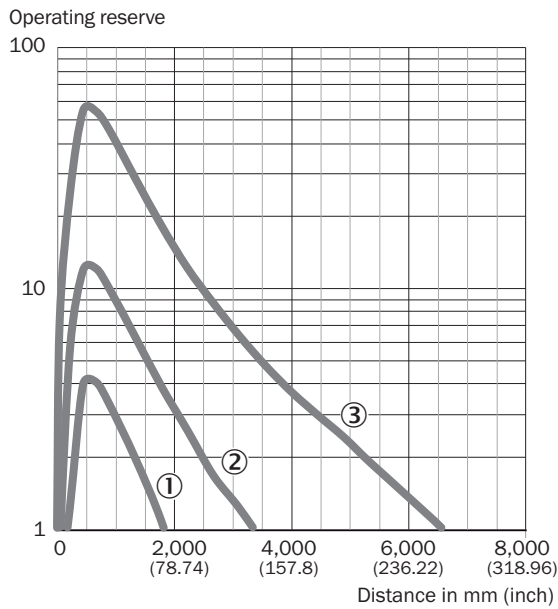
- ① optical axis, sender
- ② optical axis, receiver
- ③ LED status indicator
- ④ Connection

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



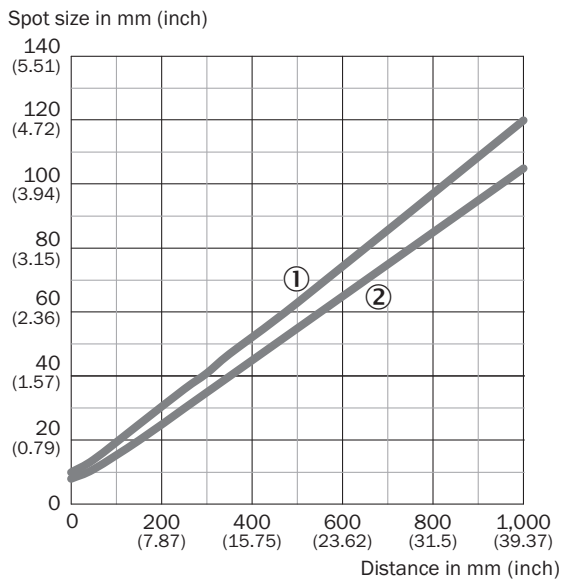
Male connector, M8, 4-pin, uncoded

### Characteristic curve



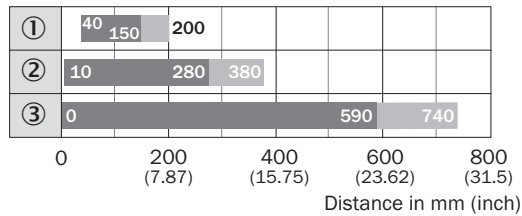
- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

### Light spot size



- ① Light spot vertical
- ② Light spot horizontal

### Sensing range diagram








■ Sensing range      ■ Sensing range max.

- ① Sensing range on black, 6% remission factor
- ② Sensing range on gray, 18% remission factor
- ③ Sensing range on white, 90% remission factor

### Recommended accessories

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

|   | Brief description   | Type               | part no. |
|---|---|--------------------|----------|
| <b>Mounting systems</b>   |   |                    |          |
|   | <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  |
|  | <ul style="list-style-type: none"> <li>• <b>Description:</b> Plate N11N for universal clamp bracket</li> <li>• <b>Material:</b> Stainless steel</li> <li>• <b>Details:</b> Stainless steel 1.4571 (sheet), Stainless steel 1.4408 (clamp)</li> <li>• <b>Items supplied:</b> Universal clamp (5322627), mounting hardware</li> <li>• <b>Usable for:</b> DeltaPac, Glare, WTD20E</li> </ul>   | BEF-KHS-N11N       | 2071081  |
| <b>connectors and cables</b>  |   |                    |          |
|  | <ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PVC</li> <li>• <b>Application:</b> Untaminated zones, Zones with chemicals</li> </ul>   | YF8U14-050VA3XLEAX | 2095889  |
|  | <ul style="list-style-type: none"> <li>• <b>Description:</b> Unshielded</li> <li>• <b>Connection type head A:</b> Male connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection systems:</b> Screw-type terminals</li> <li>• <b>Permitted cross-section:</b> 0.14 mm<sup>2</sup> ... 0.5 mm<sup>2</sup></li> </ul>  | STE-0804-G         | 6037323  |
|  | <ul style="list-style-type: none"> <li>• <b>Description:</b> Sensor/actuator cable, unshielded</li> <li>• <b>Connection type head A:</b> Female connector, M8, 4-pin, straight, A-coded</li> <li>• <b>Connection type head B:</b> Flying leads</li> <li>• <b>Signal type:</b> Sensor/actuator cable</li> <li>• <b>Cable:</b> 5 m, 4-wire, PUR, halogen-free</li> <li>• <b>Application:</b> Drag chain operation, Zones with oils and lubricants, Robot, Drag chain operation</li> </ul> | YF8U14-050UA3XLEAX | 2094792  |

## 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)