



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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# OD1-B035C15I25

OD Mini

DISPLACEMENT MEASUREMENT SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



### Ordering information

| Type           | Part no. |
|----------------|----------|
| OD1-B035C15I25 | 6050524  |

Other models and accessories → [www.sick.com/OD\\_Mini](http://www.sick.com/OD_Mini)

### Detailed technical data

#### Performance

|  |   |
|--|---|
| <b>Measuring range</b>                 | 20 mm ... 50 mm   |
| <b>Target</b>                          | Natural objects   |
| <b>Repeatability</b>                   | 6 μm <sup>1) 2)</sup>   |
| <b>Linearity</b>                       | ± 30 μm <sup>3)</sup>   |
| <b>Response time</b>                   | ≥ 2 ms <sup>4)</sup>  |
| <b>Measuring frequency</b>             | ≤ 2 kHz   |
| <b>Output time</b>                     | ≥ 0.5 ms  |
| <b>Light source</b>                    | Laser, red  |
| <b>Laser class</b>                     | 1 (IEC 60825-1:2014, EN 60825-1:2014) <sup>5)</sup>   |
| <b>Typ. light spot size (distance)</b> | 800 μm x 450 μm (35 mm)   |
| <b>Additional function</b>             | Averaging 1 ... 512x, automatic or manual sensitivity adjustment, Analog outputs can be taught in, Switching outputs can be taught in, Invertable switching output, switching mode: window (Wnd), switching mode: distance to object (DtO), switching mode: object between sensor and background (ObSB), multifunctional input: laser-off / external teach-in / trigger |

<sup>1)</sup> Averaging function set to: 512.

<sup>2)</sup> Constant ambient conditions.

<sup>3)</sup> Measurement on 90 % remission (ceramic, white).

<sup>4)</sup> With fixed sensitivity adjustment and averaging setting = 1. With automatic sensitivity and measuring rate 500 μs: 2 ... 7.5 ms response time/measuring rate 1,000 μs: 4 ... 15 ms response time.

<sup>5)</sup> Wavelength: 655 nm, max. output: 390 μW (laser class 1) / < 1 mW (laser class 2).

#### Interfaces

|                                 |                              |
|---------------------------------|------------------------------|
| <b>Analog output</b>            | 1 x 4 mA ... 20 mA (≤ 300 Ω) |
| <b>Resolution analog output</b> | 13.4 bit                     |
| <b>Switching output</b>         | 1 x PNP/NPN, selectable      |

<sup>1)</sup> MF can be used as laser-off, trigger, external teach-in or deactivated.

|                                   |                   |
|-----------------------------------|-------------------|
| <b>Multifunctional input (MF)</b> | 1 x <sup>1)</sup> |
|-----------------------------------|-------------------|

<sup>1)</sup> MF can be used as laser-off, trigger, external teach-in or deactivated.

### Mechanics/electronics

|                                     |  |
|-------------------------------------|--|
| <b>Supply voltage V<sub>s</sub></b> | DC 12 V (-5 %) ... DC 24 V (+10 %)                         |
| <b>Power consumption</b>            | ≤ 1.92 W <sup>1)</sup>                                     |
| <b>Warm-up time</b>                 | ≤ 5 min  |
| <b>Housing material</b>             | Aluminum   |
| <b>Window material</b>              | PPSU   |
| <b>Connection type</b>              | Cable with male connector, M12, 5-pin, 30 cm               |
| <b>Indication</b>                   | 4-digit 7-segment display (plus 4 LEDs for status display) |
| <b>Operating elements</b>           | 4 buttons  |
| <b>Weight</b>                       | 40 g   |
| <b>Dimensions</b>                   | 44.4 mm x 31 mm x 17 mm                                    |
| <b>Enclosure rating</b>             | IP67   |
| <b>Protection class</b>             | III  |

<sup>1)</sup> Without load, with current output.

### Ambient data

|  |   |
|--|---|
| <b>Ambient temperature operation</b>       | -10 °C ... +50 °C   |
| <b>Ambient storage temperature</b>         | -20 °C ... +60 °C   |
| <b>Min. rel. humidity (not condensing)</b> | 35 %  |
| <b>Max. rel. humidity (not condensing)</b> | 95 %  |
| <b>Temperature drift</b>                   | ± 0.08 % FS/K (FS = Full Scale = Measuring range of sensor)     |
| <b>Typ. Ambient light immunity</b>         | Artificial light: ≤ 3,000 lx<br>Sunlight: ≤ 10,000 lx           |
| <b>Vibration resistance</b>                | 10 Hz ... 55 Hz (amplitude 1.5 mm, x-, y-, z-axis 2 hours each) |
| <b>Shock resistance</b>                    | 50 G (x, y, z axis 3 times each)                                |

### General notes

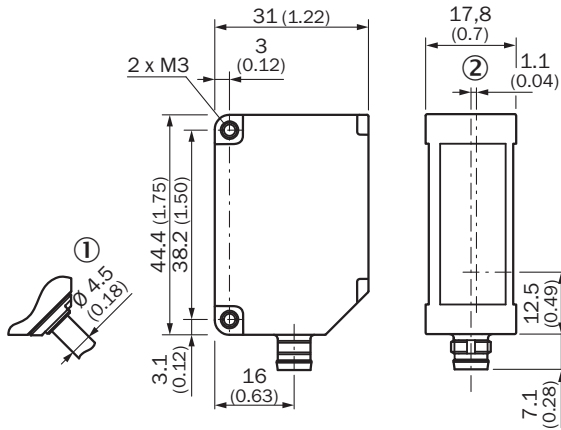
|             |  |
|-------------|--|
| <b>Note</b> | Not free of paint wetting impairment substances. |
|-------------|--|

### Classifications

|                       |          |
|-----------------------|----------|
| <b>ECl@ss 5.0</b>     | 27270801 |
| <b>ECl@ss 5.1.4</b>   | 27270801 |
| <b>ECl@ss 6.0</b>     | 27270801 |
| <b>ECl@ss 6.2</b>     | 27270801 |
| <b>ECl@ss 7.0</b>     | 27270801 |
| <b>ECl@ss 8.0</b>     | 27270801 |
| <b>ECl@ss 8.1</b>     | 27270801 |
| <b>ECl@ss 9.0</b>     | 27270801 |
| <b>ETIM 5.0</b>       | EC001825 |
| <b>ETIM 6.0</b>       | EC001825 |
| <b>UNSPSC 16.0901</b> | 41111613 |

**Dimensional drawing** (Dimensions in mm (inch))

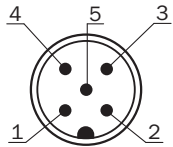
Aluminum housing



- ① Variant with 30 cm cable with M12, 5-pin connector
- ② Optical axis

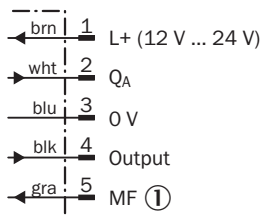
**Connection type**

OD1-BxxxxxI25 OD1-BxxxxxU25 cable with 5-pin, M12 male connector



**Connection diagram**

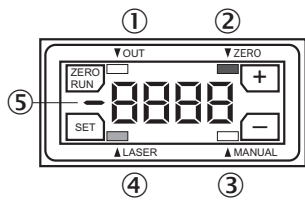
OD1-BxxxxxI25 OD1-BxxxxxU25 cable with 5-pin, M12 male connector



- ① Multifunctional input (MF)

## Adjustment possible

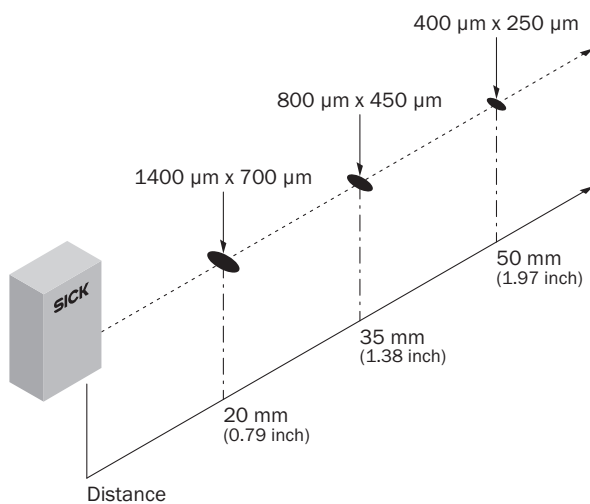
Adjustments



- ① Switching output status indicator
- ② Zero offset status indicator
- ③ Teach mode status indicator
- ④ Laser status indicator
- ⑤ Minus sign for measured value indicator

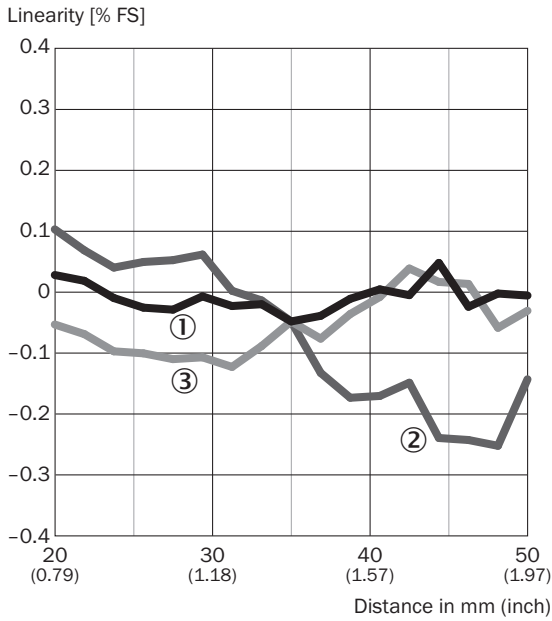
## Light spot size

OD Mini Prime 20 mm ... 50 mm



**Linearity**






OD Mini Prime 20 mm ... 50 mm



- ① White ceramic
- ② Stainless steel
- ③ Black rubber

**Recommended accessories**

Other models and accessories → [www.sick.com/OD\\_Mini](http://www.sick.com/OD_Mini)

|   | <b>Brief description</b>  | <b>Type</b>        | <b>Part no.</b> |
|---|---|--------------------|-----------------|
| <b>Mounting brackets and plates</b>   |   |                    |                 |
|  | Mounting bracket, for wall installation, no alignment bracket, stainless steel  | BEF-OD1-A          | 5328343         |
|  | Mounting bracket, no alignment bracket, stainless steel   | BEF-OD1-B          | 5328344         |
| <b>Plug connectors and cables</b>   |   |                    |                 |
|  | Head A: female connector, M12, 5-pin, straight, A-coded<br>Head B: Flying leads<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m                                 | YF2A15-020UB5XLEAX | 2095617         |
|  | Head A: female connector, M12, 4-pin, straight<br>Head B: male connector, M8, 4-pin<br>Cable: Highly flexible, PUR, 2 m   | DSL-2804-G02MB     | 6059743         |
|  | Head A: female connector, M12, 4-pin, straight, A-coded<br>Head B: male connector, M8, 4-pin, straight, A-coded<br>Cable: Sensor/actuator cable, PUR, halogen-free, unshielded, 2 m | YF2A14-020UA3M8U14 | 2096112         |

## 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)