



# KTS-MBAC241152ZZZZ

## KTS

CONTRAST SENSORS

**SICK**  
Sensor Intelligence.



Illustration may differ



Ordering information

| Type               | part no. |
|--------------------|----------|
| KTS-MBAC241152ZZZZ | 1220204  |

Other models and accessories → [www.sick.com/KTS](http://www.sick.com/KTS)

Detailed technical data

Features

|                            |  |
|----------------------------|--|
| Parameter presets          | None   |
| Special applications       | Active Light Detection   |
| Device type                | Standard   |
| Housing design             | Middle   |
| Dimensions (W x H x D)     | 26 mm x 62 mm x 47.5 mm  |
| Light source               | LED, White <sup>1)</sup>   |
| Light emission             | Long side of housing   |
| Receiving filters          | None   |
| Wave length                | 400 nm ... 750 nm  |
| Working range              | 10 mm ... 80 mm  |
| Sensing distance           | ≤ 25 mm  |
| Sensing distance tolerance | ± 6 mm   |
| Field of view              | 6 mm x 9 mm (at sensing distance 25 mm)<br>34 mm x 32 mm (at sensing distance 80 mm) |
| Teach-in mode              | Active light detection   |
| Output function            | Light/dark switching   |
| Delay time                 | Adjustable   |
| Setting the key lock       | Standard   |
| Delivery status            | 2-point teach-in, active light detection   |
| Safety-related parameters  |  |
| MTTF <sub>D</sub>          | 291 years  |

<sup>1)</sup> Average service life: 100,000 h at T<sub>U</sub> = +25 °C.

## Electronics

|   |   |
|---|---|
| <b>Supply voltage</b>                       | 10.8 V DC ... 28.8 V DC <sup>1)</sup>   |
| <b>Ripple</b>                               | $\leq 5 \text{ V}_{pp}$ <sup>2)</sup>   |
| <b>Current consumption</b>                  | $< 100 \text{ mA}$ <sup>3)</sup>  |
| <b>Switching frequency</b>                  | 1.5 kHz <sup>4)</sup>   |
| <b>Response time</b>                        | 320 $\mu\text{s}$   |
| <b>Jitter</b>                               | 160 $\mu\text{s}$   |
| <b>Switching output</b>                     | Push-pull: PNP/NPN  |
| <b>Switching output (voltage)</b>           | Push-pull: PNP/NPN HIGH = $U_V - 3 \text{ V}$ /LOW $\leq 3 \text{ V}$   |
| <b>Output current <math>I_{max.}</math></b> | 100 mA <sup>5)</sup>  |
| <b>Input, teach-in (ET)</b>                 | Teach: $U = 10 \text{ V} \dots < V_S$   |
| <b>Input, blanking input (AT)</b>           | Blanked: $U = 10 \text{ V} \dots < U_v$   |
| <b>Input, fine/coarse (F/C)</b>             | Coarse: $U = 10 \text{ V} \dots < U_v$  |
| <b>Input, light/dark (L/D)</b>              | Light: $U = 10 \text{ V} \dots < U_v$   |
| <b>Retention time (ET)</b>                  | 25 ms, non-volatile memory  |
| <b>Time delay</b>                           | None  |
| <b>Protection class</b>                     | III   |
| <b>Circuit protection</b>                   | $U_V$ connections, reverse polarity protected<br>Output Q short-circuit protected<br>Interference pulse suppression |
| <b>Connection type</b>                      | Plug, M12, 5-pin  |

<sup>1)</sup> Limit values: DC 12 V (-10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A.

<sup>2)</sup> May not fall below or exceed  $U_v$  tolerances.

<sup>3)</sup> Without load.

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

<sup>5)</sup> Total current of all Outputs.

## Mechanics

|                         |         |
|-------------------------|---------|
| <b>Housing material</b> | VISTAL® |
| <b>Optics material</b>  | COP     |
| <b>Weight</b>           | 68 g    |

## Ambient data

|                                      |  |
|--------------------------------------|--|
| <b>Ambient operating temperature</b> | -20 °C ... +60 °C                        |
| <b>Ambient temperature, storage</b>  | -25 °C ... +75 °C                        |
| <b>Shock load</b>                    | According to IEC 60068-2-27 (30 g/11 ms) |
| <b>Enclosure rating</b>              | IP67                                     |
| <b>UL File No.</b>                   | E181493                                  |

## Classifications

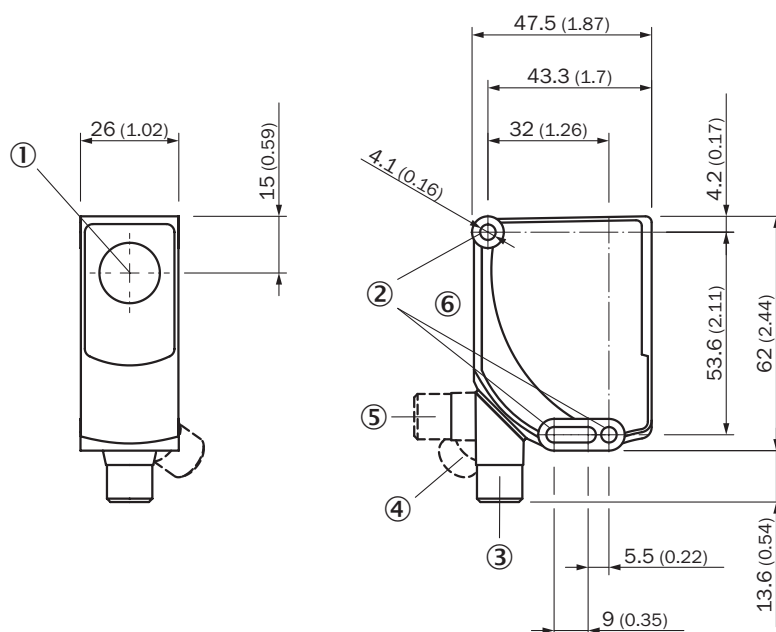
|                     |          |
|---------------------|----------|
| <b>ECLASS 5.0</b>   | 27270906 |
| <b>ECLASS 5.1.4</b> | 27270906 |

|                       |          |
|-----------------------|----------|
| <b>ECLASS 6.0</b>     | 27270906 |
| <b>ECLASS 6.2</b>     | 27270906 |
| <b>ECLASS 7.0</b>     | 27270906 |
| <b>ECLASS 8.0</b>     | 27270906 |
| <b>ECLASS 8.1</b>     | 27270906 |
| <b>ECLASS 9.0</b>     | 27270906 |
| <b>ECLASS 10.0</b>    | 27270906 |
| <b>ECLASS 11.0</b>    | 27270906 |
| <b>ECLASS 12.0</b>    | 27270906 |
| <b>ETIM 5.0</b>       | EC001820 |
| <b>ETIM 6.0</b>       | EC001820 |
| <b>ETIM 7.0</b>       | EC001820 |
| <b>ETIM 8.0</b>       | EC001820 |
| <b>UNSPSC 16.0901</b> | 39121528 |

### 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>                            | ✓ |
| <b>cULus certificate</b>                     | ✓ |
| <b>Photobiological safety (IEC EN 62471)</b> | ✓ |

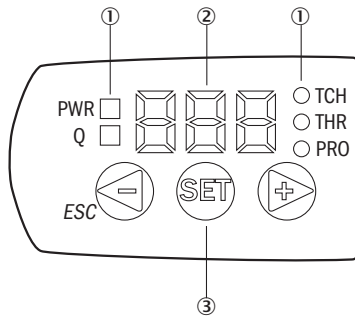
### Dimensional drawing



Dimensions in mm (inch)

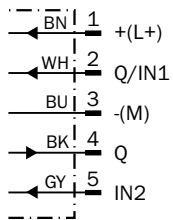
- ① Optical axis
- ② fixing hole
- ③ M12 male connector, delivery state
- ④ M12 male connector, end stop right
- ⑤ M12 male connector, end stop left
- ⑥ display and adjustment elements

### display and adjustment elements



- ① LED status indicator
- ② Display
- ③ Navigation buttons

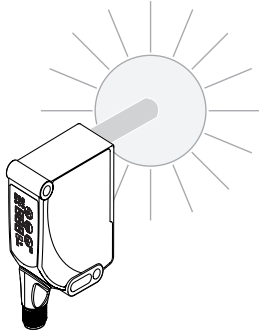
### Connection diagram Cd-382



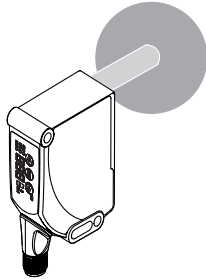
### ALD - setting the switching threshold (2-point teach-in)

Suitable for manual positioning of the active light to be detected, e.g. active light and inactive light.

#### 1. Position active light source    2. Position inactive light source






When setting the light to be detected, "1st" flashes. Press set button.



When setting the light to be detected, "2nd" flashes. Press set button. The Quality of Teach is displayed.

### Recommended accessories

Other models and accessories → [www.sick.com/KTS](http://www.sick.com/KTS)

|   | Brief description   | Type               | part no. |
|---|---|--------------------|----------|
| Mounting systems  |   |                    |          |
|  | <ul style="list-style-type: none"> <li><b>Description:</b> Plate K for universal clamp bracket</li> <li><b>Material:</b> Steel</li> <li><b>Details:</b> Steel, zinc coated</li> <li><b>Items supplied:</b> Universal clamp (2022726), mounting hardware</li> <li><b>Usable for:</b> W11-2, W12-3, W14-2, W18-3, W23-2, W24-2, W27-3, W30, W32, W34, W36, PL50A, PL80A, P250, UC12, LUT3, KT2, KT5-2, KT8, CS8, DT2, DS30, DS40, W12-2 Laser, W16, W26, KT5</li> </ul> | BEF-KHS-K01        | 2022718  |
| connectors and cables   |   |                    |          |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-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, 5-wire, PVC</li> <li><b>Description:</b> Sensor/actuator cable, unshielded</li> <li><b>Application:</b> Zones with chemicals, Uncontaminated zones</li> </ul>   | YF2A15-050VB5XLEAX | 2096240  |
|  | <ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li> <li><b>Description:</b> Unshielded</li> <li><b>Connection systems:</b> Screw-type terminals</li> <li><b>Permitted cross-section:</b> ≤ 0.75 mm²</li> <li><b>Note:</b> For field bus technology</li> </ul>  | STE-1205-G         | 6022083  |

## 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)