

- Reflection-independent distance information
- Highly insensitive to extraneous light
- Analogue current output
- PC/OLED display and key pad for configuration
- Measurement value is indicated in mm on OLED display
- Measurement range and mode adjustable
- Teachable analogue output
- 2 warning outputs

We reserve the right to make changes • DS_ODS96BMC66011400_en_50108381.fm

Dimensioned drawing




## Electrical connection

A Indicator diode green
B Indicator diode yellow
C Transmitter
D Receiver
E Optical axis
F Device plug M12×1
G Countersinking for SK nut M5, 4.2 mm deep
H OLED display and key pad
I Reference edge for the measurement (cover glass)


## Specifications

## Optical data

Measurement range ${ }^{1)}$
Resolution 2)
Light source
Wavelength
Light spot

## Error limits (relative to measurement distance)

Absolute measurement accuracy ${ }^{1)}$
Repeatability ${ }^{3}$ )
b/w detect. thresholds ( $6 . .90 \%$ rem.)
Temperature compensation

## Timing

Measurement time
Response time ${ }^{1)}$
Delay before start-up

## Electrical data

Operating voltage $U_{B}$
Residual ripple
Open-circuit current
Switching output
Signal voltage high/low
Analogue output

## Indicators

Green LED continuous light flashing
off
Yellow LED continuous light flashing off

## Mechanical data

Housing
Optics cover
Weight
Connection type

## Environmental data

Ambient temp. (operation/storage)
Protective circuit 6)
VDE safety class ${ }^{7}$ )
Protection class
LED class
Standards applied

120 ... 1400 mm
$0.1 \ldots 0.5 \mathrm{~mm}$
LED
880nm (infrared light)
approx. $15 \times 15 \mathrm{~mm}^{2}$ at
600 mm
$\pm 1.5 \%$ up to $800 \mathrm{~mm}, \pm 2 \%$ up to 1400 mm
$\pm 0.5 \%$ up to $800 \mathrm{~mm}, \pm 1 \%$ up to 1400 mm
$\leq 1 \%$ up to $800 \mathrm{~mm}, \leq 2 \%$ up to 1400 mm yes ${ }^{4)}$
1...51) ms
$\leq 15 \mathrm{~ms}$
$\leq 300 \mathrm{~ms}$
$18 \ldots 30 \mathrm{VDC}$ (incl. residual ripple)
$\leq 15 \%$ of $U_{B}$
$\leq 150 \mathrm{~mA}$
2 push-pull warning outputs 5),
PNP light switching, NPN dark'switching, respectively
$\geq\left(U_{B}-2 \mathrm{~V}\right) / \leq 2 \mathrm{~V}$
current $4 \ldots 20 \mathrm{~mA}, \mathrm{R}_{\mathrm{L}} \leq 500 \Omega$
teach-in on GND $\quad$ teach-in on $+U_{B}$
ready
fault
no voltage
object inside teach-in measurement distance
teaching procedure
object outside teach-in measurement distance

## Metal housing

diecast zinc
glass
380 g
M12 connector
$-20^{\circ} \mathrm{C} \ldots+50^{\circ} \mathrm{C} /-30^{\circ} \mathrm{C} \ldots+70^{\circ} \mathrm{C}$
1, 2, 3
II, all-insulated
IP 67, IP 69K 8)
1 (acc. to EN 60825-1)
IEC 60947-5-2

1) Luminosity coefficient $6 \% \ldots 90 \%$, complete measurement range, at $20^{\circ} \mathrm{C}$, medium range of $U_{B}$, measurement object $\geq 50 \times 50 \mathrm{~mm}^{2}$
2) Minimum and maximum value depend on measurement distance
3) Same object, identical environmental conditions, measurement object $\geq 50 \times 50 \mathrm{~mm}^{2}$
4) Typ. $\pm 0.02 \% / K$
5) The push-pull switching outputs must not be connected in parallel
6) 1=transient protection, $2=$ polarity reversal protection, $3=$ short circuit protection for all outputs
7) Rating voltage 250VAC, with cover closed
8) IP 69 K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives. Acids and bases are not part of the test.


A Area not defined
B Linearity not defined
C Measurement range
D Object present
E No object detected
F Measurement distance

## Order guide

|  | Designation | Part No. |
| :--- | :--- | :--- |
| With M12 connector <br> Current output | ODS 96B M/C66.01-1400-S12 | 50106727 |

## Tables

## Diagrams

## Remarks

- Measurement time depends on the reflectivity of the measurement object and on the measurement mode.
- Coding of the warning outputs:

| Warning <br> output <br> $\mathbf{1}$ |  | Meaning |
| :---: | :---: | :--- |
| 0 | 0 | Distance measurement is <br> impossible |
| 0 | 1 | Object below measure- <br> ment range <br> (short range) |
| 1 | 0 | Object beyond the mea- <br> surement range <br> (distant range) |
| 1 | 1 | Optimum function |

- Approved purpose: The ODS 96B distance sensors are optical electronic sensors for the optical, contactless measurement of distance to objects.

