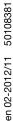
ODS 96B

Optical distance sensors







120 ... 1400 mm





- 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









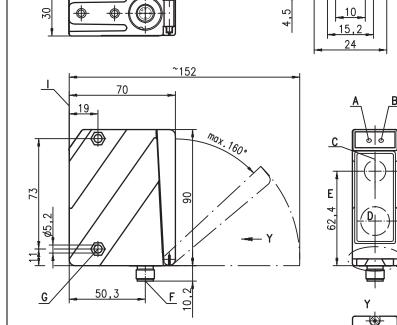


Accessories:

(available separately)

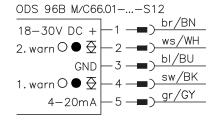
- Mounting systems
- Cable with M12 connector (K-D ...)
- Configuration software

Dimensioned drawing



- A Indicator diode green
- B Indicator diode yellow
- **C** Transmitter
- **D** Receiver
- E Optical axis
- F Device plug M12x1
- G Countersinking for SK nut M5, 4.2mm deep
- H OLED display and key pad
- I Reference edge for the measurement (cover glass)

Electrical connection



D 3

Н

ODS 96B

Specifications

Optical data

Measurement range 1) 120 ... 1400mm 0.1 ... 0.5mm LED Resolution 2) Light source 880nm (infrared light) Wavelength approx. 15 x 15 mm² at Light spot

Error limits (relative to measurement distance)

 \pm 1.5% up to 800mm, \pm 2% up to 1400mm \pm 0.5% up to 800mm, \pm 1% up to 1400mm \leq 1% up to 800mm, \leq 2% up to 1400mm Absolute measurement accuracy 1) Repeatability 3) b/w detect. thresholds (6 ... 90% rem.)
Temperature compensation

600 mm

Timing

1 ... 5¹⁾ms ≤ 15ms Measurement time Response time 1) Delay before start-up ≤ 300ms

Electrical data

18 ... 30VDC (incl. residual ripple) \leq 15% of $U_B \leq$ 150mA Operating voltage U_B Residual ripple Open-circuit current Switching output push-pull warning outputs 5),

PNP light switching, NPN dark switching, respectively \geq (U_B-2 V)/ \leq 2V current 4 ... 20mA, R_L \leq 500 Ω Signal voltage high/low

Analogue output

Indicators

teach-in on GND teach-in on +UR continuous light ready flashing fault teaching procedure off no voltage object inside teach-in measurement distance

Yellow LED continuous light teaching procedure object outside teach-in measurement distance flashing

Mechanical data

Housing diecast zinc glass 380g Optics cover Weight Connection type M12 connector

Environmental data

Ambient temp. (operation/storage) Protective circuit 6) -20°C ... +50°C / -30°C ... +70°C 1, 2, 3 VDE safety class 7) II, all-insulated IP 67, IP 69K 8) Protection class 1 (acc. to EN 60825-1) LED class IEC 60947-5-2

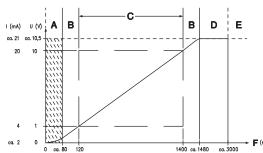
Standards applied

1) Luminosity coefficient 6 % ... 90 %, complete measurement range, at 20 °C, medium range of U_B, measurement object $\geq 50 \times 50 \text{ m/m}^2$

Metal housing

- Minimum and maximum value depend on measurement distance
- Same object, identical environmental conditions, measurement object $\geq 50 \times 50 \, \text{mm}^2$
- Typ. ± 0.02 %/K
- The push-pull switching outputs must not be connected in parallel
- 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs
- Rating voltage 250VAC, with cover closed

 IP 69K 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.



- Area not defined Α
- В Linearity not defined
- С Measurement range
- D Object present

ODS 96B M/C66.01-1400-S12

- Ε No object detected
- Measurement distance

501 06727

Order guide

Current output

Designation Part No. With M12 connector

Tables

Diagrams

Remarks

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

Warning output		Meaning
1	2	
0	0	Distance measurement is impossible
0	1	Object below measure- ment range (short range)
1	0	Object beyond the mea- surement range (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.