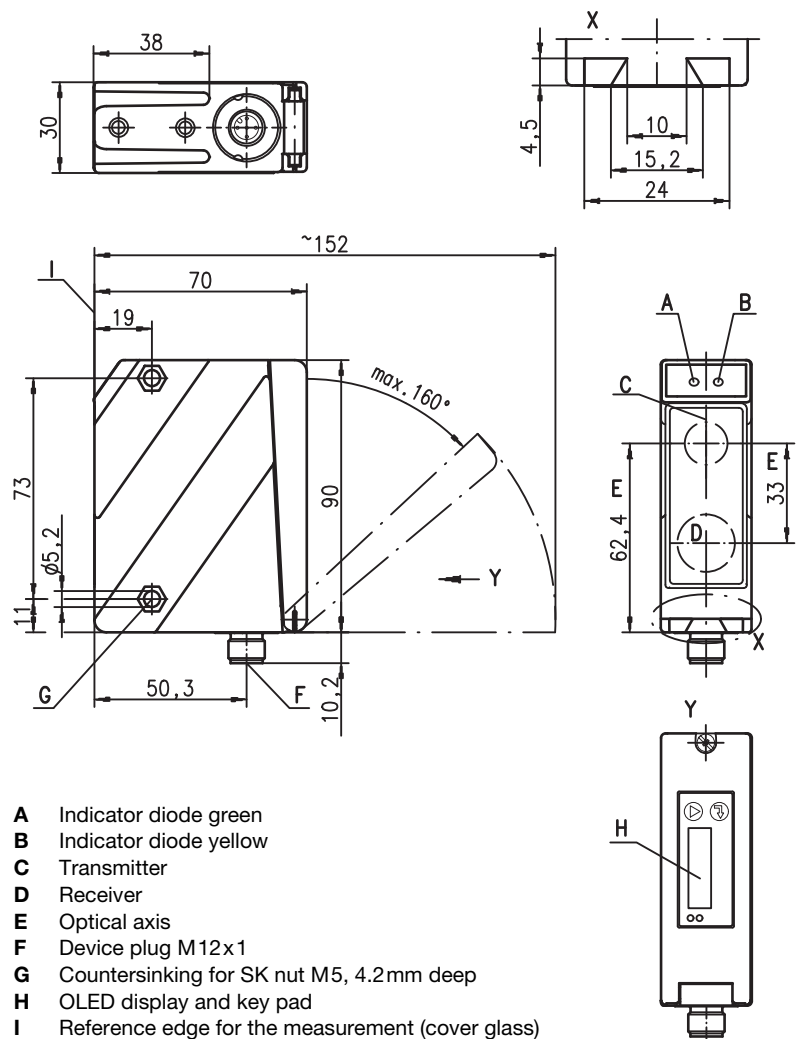


# ODS 96B

## Optical distance sensors



### 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

ODSL 96B M/66 ---S12

10-30V DC +	1	br/BN
teach in	2	ws/WH
GND	3	bl/BU
Q1	4	sw/BK
Q2	5	gr/GY

100 ... 600mm



- Reflection-independent distance information
- Highly insensitive to extraneous light
- 2 teachable switching outputs
- PC/OLED display and key pad for configuration
- Measurement value is indicated in mm on OLED display
- Measurement mode configurable



### Accessories:

(available separately)

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

## Specifications

### Optical data

Measurement range <sup>1)</sup>	100 ... 600mm
Resolution <sup>2)</sup>	0.1 ... 0.5mm
Hysteresis	configurable, factory setting: 1mm
Light source	LED
Wavelength	880nm (infrared light)
Light spot	approx. 15 x 15mm <sup>2</sup> at 600mm

### Error limits (relative to measurement distance)

Absolute measurement accuracy <sup>1)</sup>	± 1.5 %
Repeatability <sup>3)</sup>	± 0.5 %
b/w detect. thresholds (6 ... 90% rem.)	≤ 1 %
Temperature compensation	yes <sup>4)</sup>

### Timing

Measurement time	1 ... 5 <sup>1)</sup> ms
Response time <sup>1)</sup>	≤ 15ms
Delay before start-up	≤ 300ms

### Electrical data

Operating voltage $U_B$	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of $U_B$
Open-circuit current	≤ 150mA
Switching output	2 push-pull switching outputs <sup>5)</sup> , PNP light switching, NPN dark switching, respectively
Signal voltage high/low	≥ ( $U_B - 2$ V) / ≤ 2V

### Indicators

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

### teach-in on GND

ready	
fault	teaching procedure
no voltage	
object inside teach-in measurement distance	teaching procedure
object outside teach-in measurement distance	

### teach-in on + $U_B$

### Mechanical data

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

### Metal housing

### Environmental data

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

1) Luminosity coefficient 6% ... 90%, complete measurement range, at 20°C, medium range of  $U_B$ , measurement object ≥ 50x50mm<sup>2</sup>

2) Minimum and maximum value depend on measurement distance

3) Same object, identical environmental conditions, measurement object ≥ 50x50mm<sup>2</sup>

4) Typ. ± 0.02 %/K

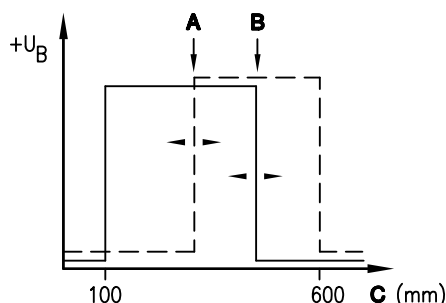
5) The push-pull switching outputs must not be connected in parallel

6) 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs

7) Rating voltage 250VAC, with cover closed

8) IP 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.

## Switching output (example)



- A 2nd switching output
- B 1st switching output
- C Measurement distance

## Order guide

	Designation	Part No.
<b>With M12 connector</b>		
2 switching outputs	ODS 96B M/66-600-S12	501 06724

## Tables

## Diagrams

## Remarks

- Measurement time depends on the reflectivity of the measurement object and on the measurement mode.
- **Approved purpose:** The ODS 96B distance sensors are optical electronic sensors for the optical, contactless measurement of distance to objects.