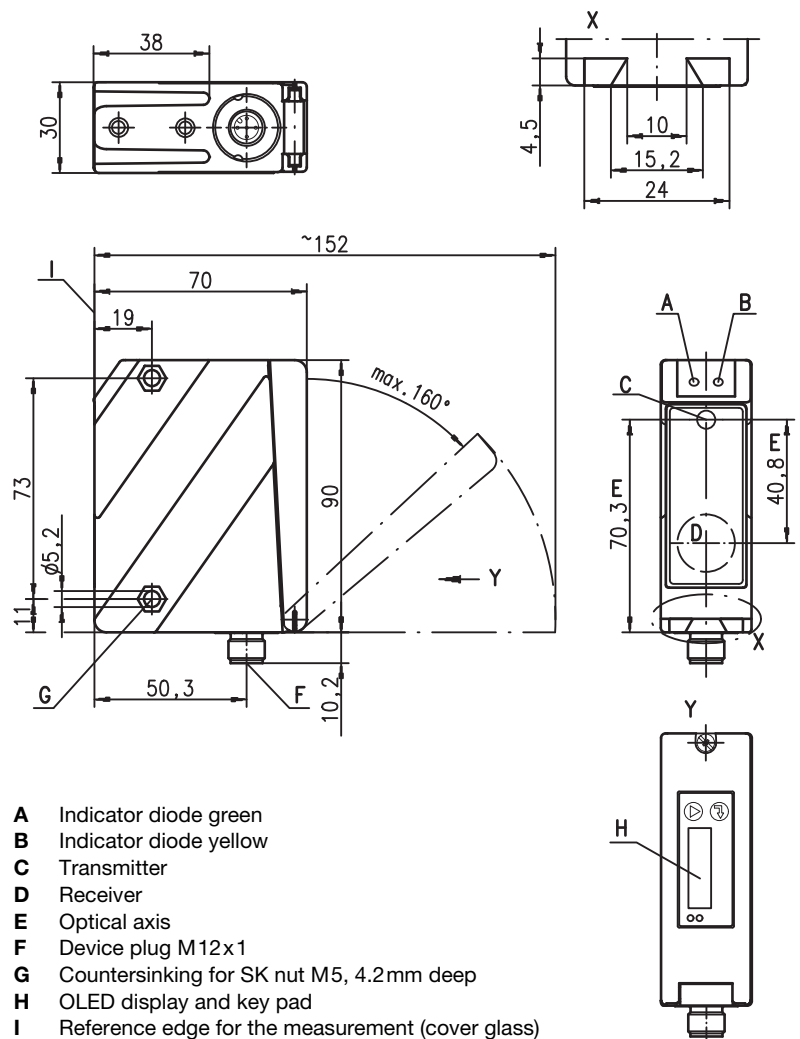


ODSL 96B

Optical laser distance sensors

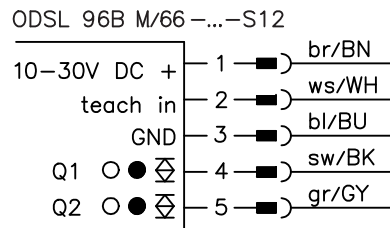


Dimensioned drawing



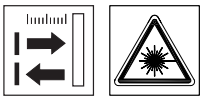
- A Indicator diode green
- B Indicator diode yellow
- C Transmitter
- D Receiver
- E Optical axis
- F Device plug M12x1
- G Countersinking for SK nut M5, 4.2mm deep
- H OLED display and key pad
- I Reference edge for the measurement (cover glass)

Electrical connection



en 02-2012/11 50108383

We reserve the right to make changes • DS_ODSL96BM662000_en_50108383.fm



150 ... 2000mm



- 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 ¹⁾	150 ... 2000mm
Resolution ²⁾	1 ... 3mm
Hysteresis	configurable, factory setting: 10mm
Light source	laser
Wavelength	655nm (visible red light)
Light spot	divergent, 2x6mm ² at 2m
Laser warning notice	see remarks

Error limits (relative to measurement distance)

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

Timing

Measurement time	1 ... 5 ¹⁾ ms
Response time ¹⁾	≤ 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 ⁵⁾ , PNP light switching, NPN dark switching, respectively
Signal voltage high/low	≥ (U_B -2 V)/≤ 2V

Indicators

Green LED	continuous light	teach-in on GND	teach-in on +U_B
	flashing	ready	
	off	fault	teaching procedure
Yellow LED	continuous light	no voltage	
	flashing	object inside teach-in measurement distance	teaching procedure
	off	object outside teach-in measurement distance	

Mechanical data

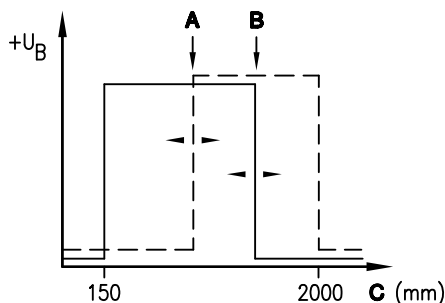
Housing	diecast zinc
Optics cover	glass
Weight	380g
Connection type	M12 connector

Environmental data

Ambient temp. (operation/storage)	-20°C ... +50°C / -30°C ... +70°C
Protective circuit ⁶⁾	1, 2, 3
VDE safety class ⁷⁾	II, all-insulated
Protection class	IP 67, IP 69K ⁸⁾
Laser class	2 (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 ≥ 50x50mm²
- 2) Minimum and maximum value depend on measurement distance
- 3) Same object, identical environmental conditions, measurement object ≥ 50x50mm²
- 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

With M12 connector

2 switching outputs	ODSL 96B M/66-2000-S12	501 06599
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ODSL 96B M/66-2000-S12 - 02

Tables

Diagrams

Remarks

- Measurement time depends on the reflectivity of the measurement object and on the measurement mode.

LASER LIGHT DO NOT STARE INTO BEAM	
Maximum Output:	1.2mW
Pulse duration:	22ms
Wavelength:	655nm
CLASS 2 LASER PRODUCT EN60825-1:2003-10	

LASER LIGHT DO NOT STARE INTO BEAM	
Maximum Output:	1.2mW
Pulse duration:	22ms
Wavelength:	655nm
CLASS 2 LASER PRODUCT IEC 60825-1:1993+A2:2001 Complies with 21 CFR 1040.10	

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