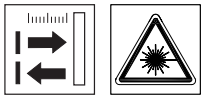
ODSL 96B — Optical laser distance sensors

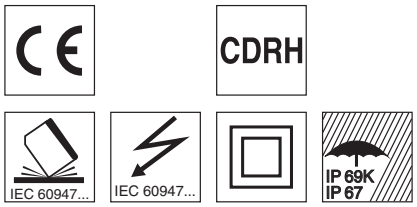
en 02-2012/11 50108383



150 … 2000 mm

10 - 30 V DC

- 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

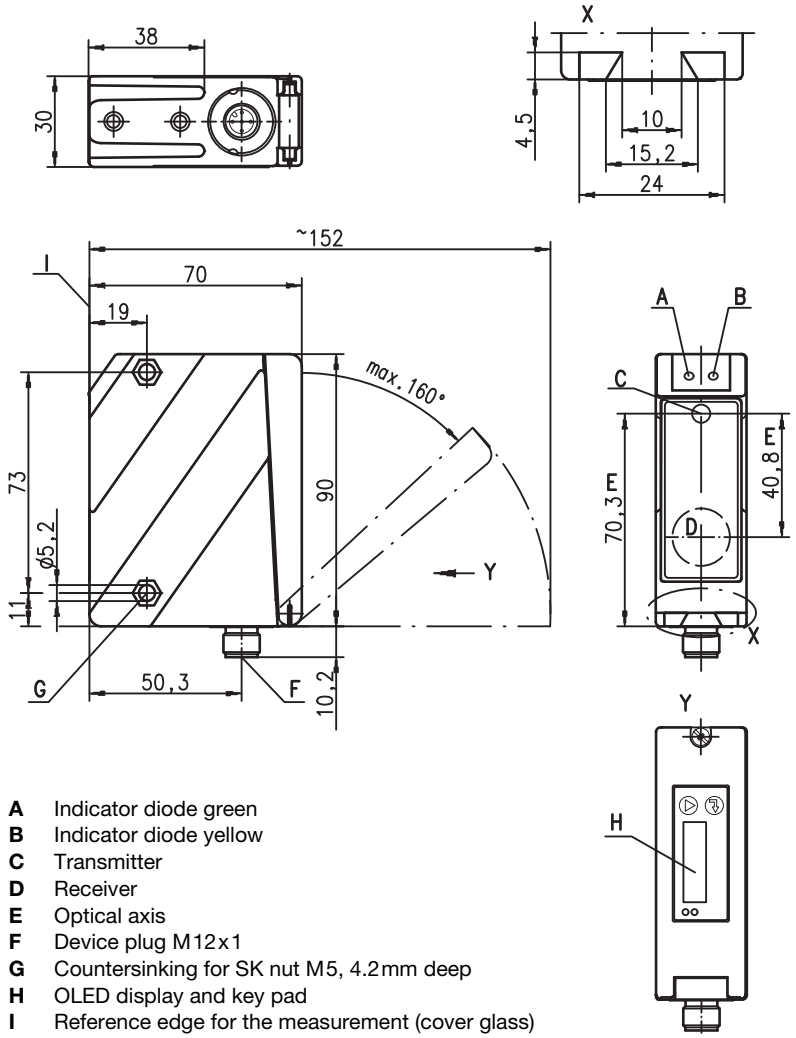


Accessories:

(available separately)

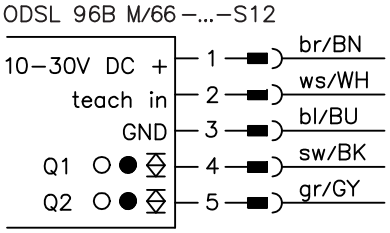
- Mounting systems
- Cable with M12 connector (K-D …)
- Configuration software

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



We reserve the right to make changes • DS_ODSL96BM662000_en_50108383.fm

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, 2x6mm² 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		**teach-in on GND**	**teach-in on +U_B**
Green LED	continuous light	ready	
	flashing	fault	teaching procedure
	off	no voltage	
Yellow LED	continuous light	object inside teach-in measurement distance	
	flashing		teaching procedure
	off	object outside teach-in measurement distance	

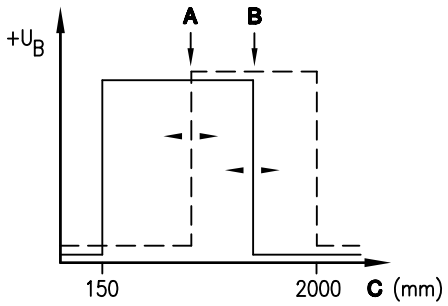
Mechanical data	**Metal housing**
Housing	diecast zinc
Optics cover	glass
Weight	380g
Connection type	M12 connector

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

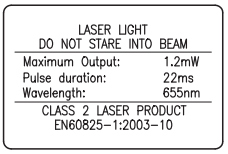
	Designation	**Part No.**
With M12 connector		
2 switching outputs	ODSL 96B M/66-2000-S12	501 06599

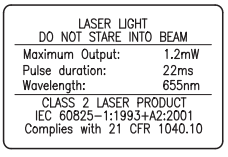
Tables

Diagrams

Remarks

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





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