

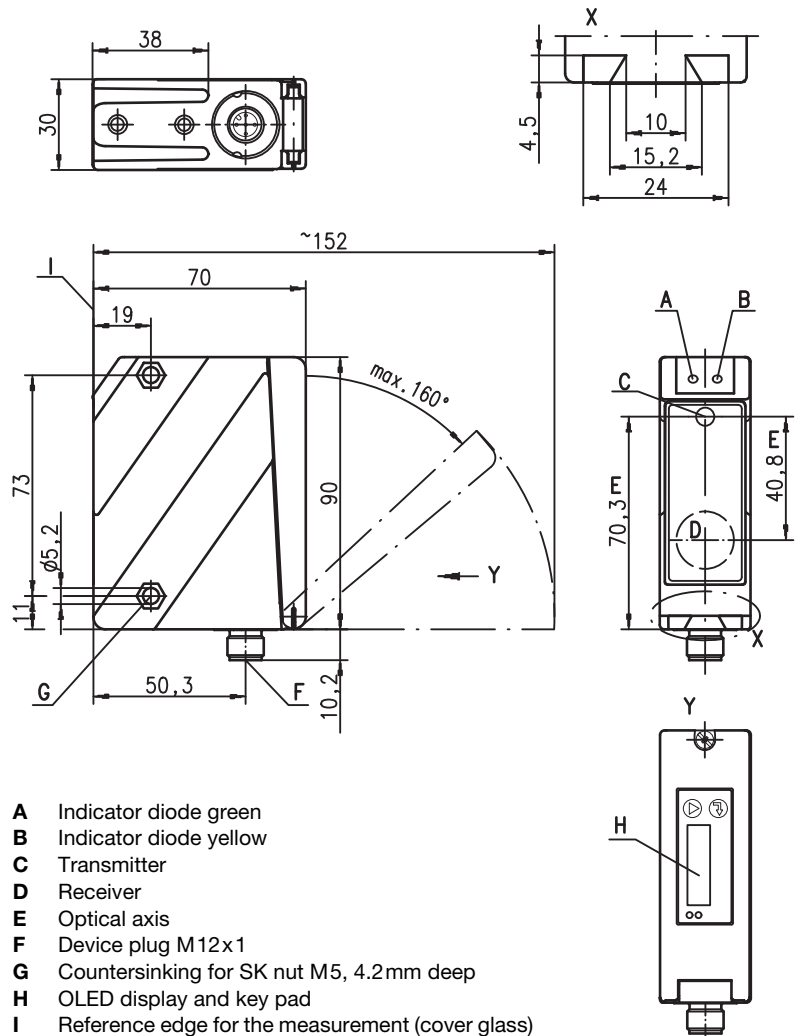
**ODSL 96B**

**Optical laser distance sensors**

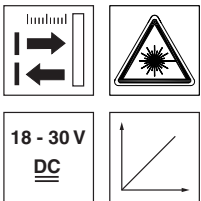
en 04-2012/11 50107948



**Dimensioned drawing**



**150 ... 2000mm**

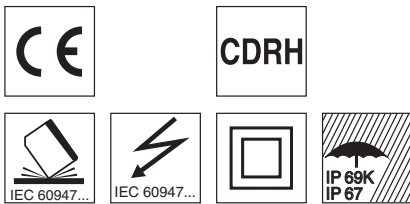


- Reflection-independent distance information
- Highly insensitive to extraneous light
- Analogue current or voltage output
- PC/OLED display and key pad for configuration
- Measurement value is indicated in mm on OLED display
- Measurement range and mode adjustable
- Teachable switching output and analogue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

**Electrical connection**

ODSL 96B M/V6-...-S12	
18-30V DC +	1 — br/BN
teach in	2 — ws/WH
GND	3 — bl/BU
○ ● ⊗	4 — sw/BK
1-10V	5 — gr/GY

ODSL 96B M/C6-...-S12	
18-30V DC +	1 — br/BN
teach in	2 — ws/WH
GND	3 — bl/BU
○ ● ⊗	4 — sw/BK
4-20mA	5 — gr/GY



**Accessories:**

(available separately)

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

We reserve the right to make changes • DS\_ODSL96BMCV62000\_en\_50107948.fm

## Specifications

### Optical data

Measurement range <sup>1)</sup>	150 ... 2000mm
Resolution <sup>2)</sup>	1 ... 3mm
Light source	laser
Wavelength	655nm (visible red light)
Light spot	divergent, 2x6mm <sup>2</sup> at 2m
Laser warning notice	see remarks

### 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 <sub>B</sub>	18 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U <sub>B</sub>
Bias current	≤ 150mA
Switching output	push-pull switching output <sup>5)</sup> , PNP light switching, NPN dark switching
Signal voltage high/low	≥ (U <sub>B</sub> -2 V)/≤ 2V
Analogue output	voltage 1 ... 10V, R <sub>L</sub> ≥ 2kΩ current 4 ... 20mA, R <sub>L</sub> ≤ 500Ω

### Indicators

LED green	continuous light	<b>teach-in on GND</b>	<b>teach-in on +U<sub>B</sub></b>
	flashing	ready	
	off	fault	teaching procedure
LED yellow	continuous light	no voltage	
	flashing	object inside teach-in measurement distance	teaching procedure
	off	object outside teach-in measurement distance	

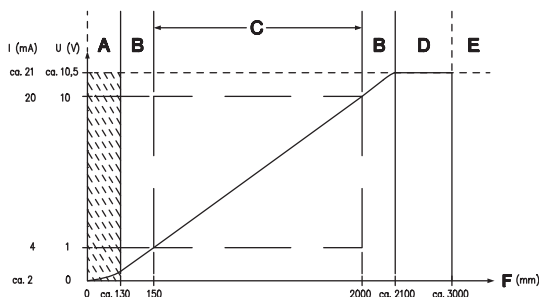
### Mechanical data

Housing	<b>metal housing</b>
Optics cover	diecast zinc
Weight	glass
Connection type	380g
	M12 connector

### 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>
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<sub>B</sub>, 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.



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

## 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	

## Order guide

	Designation	Part No.
<b>With M12 connector</b>		
Current output	ODSL 96B M/C6-2000-S12	501 06593
Voltage output	ODSL 96B M/V6-2000-S12	501 06594

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