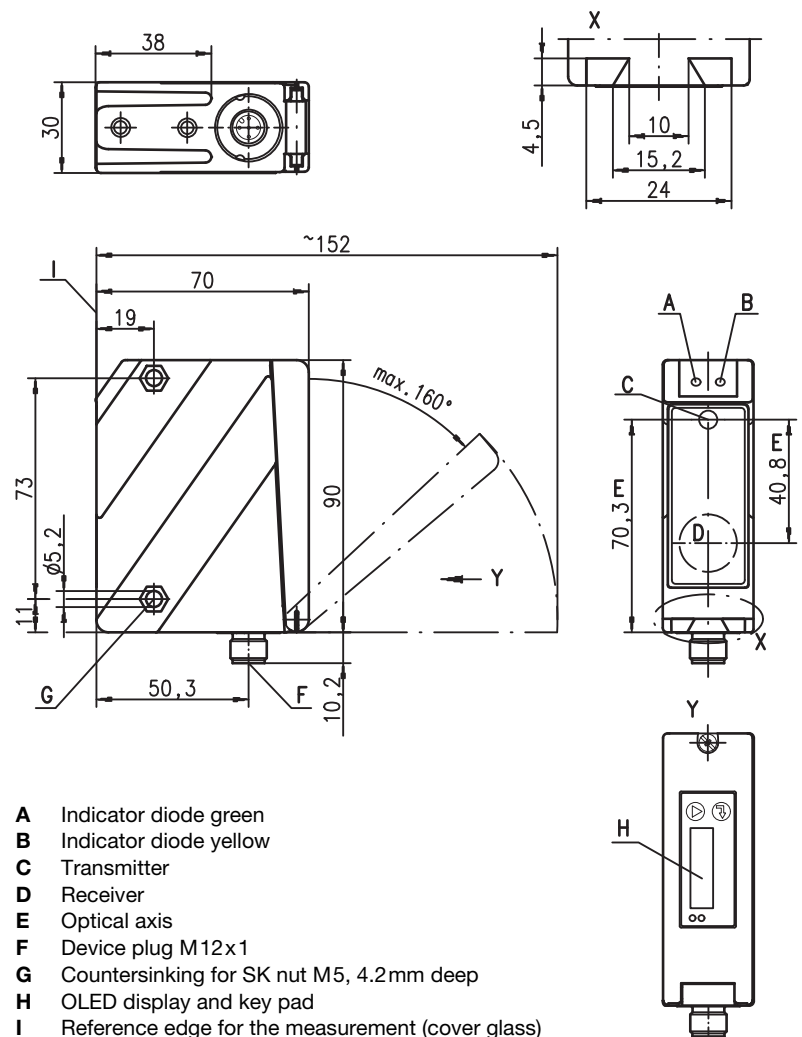


ODSL 96B

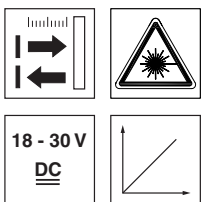
Optical distance sensors



Dimensioned drawing



150 ... 1200 mm



- Wide rectangular-shaped light spot for measurements on objects with openings
- 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



Accessories:

(available separately)

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

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

Specifications

Optical data

Measurement range ¹⁾	150 ... 1200mm
Resolution ²⁾	0.1 ... 1.5mm
Light source	laser
Wavelength	655nm (red light)
Light spot	divergent, approx. 15 x 4mm ² at 800mm

Error limits (relative to measurement distance)

Absolute measurement accuracy ¹⁾	± 1.5 % up to 800mm, ± 2 % up to 1200mm
Repeatability ³⁾	± 0.5 % up to 800mm, ± 1 % up to 1200mm
b/w detect. thresholds (6 ... 90% rem.)	≤ 1 % up to 800mm, ≤ 1.5 % up to 1200mm
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	18 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15 % of U _B
Open-circuit current	≤ 150mA
Switching output	push-pull switching output ⁵⁾ , PNP light switching, NPN dark switching
Signal voltage high/low	≥ (U _B -2 V)/≤ 2V
Analogue output	voltage 1 ... 10V, R _L ≥ 2kΩ current 4 ... 20mA, R _L ≤ 500Ω

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

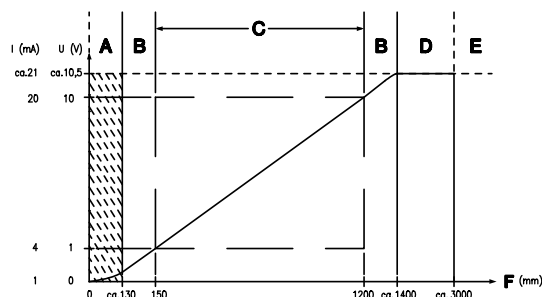
Housing	diecast zinc
Optics cover	glass
Weight	380g
Connection type	M12 connector

Metal housing

Environmental data

Ambient temp. (operation/storage)	-20°C ... +50°C / -30°C ... +70°C
Protective circuit 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.



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

Order guide

With M12 connector

Designation	Part No.
Current output	ODSL 96B M/C6.XL-1200-S12 501 06736
Voltage output	ODSL 96B M/V6.XL-1200-S12 501 06737

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.

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	