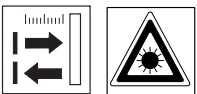


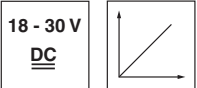


ODS 96

Optical laser distance sensors

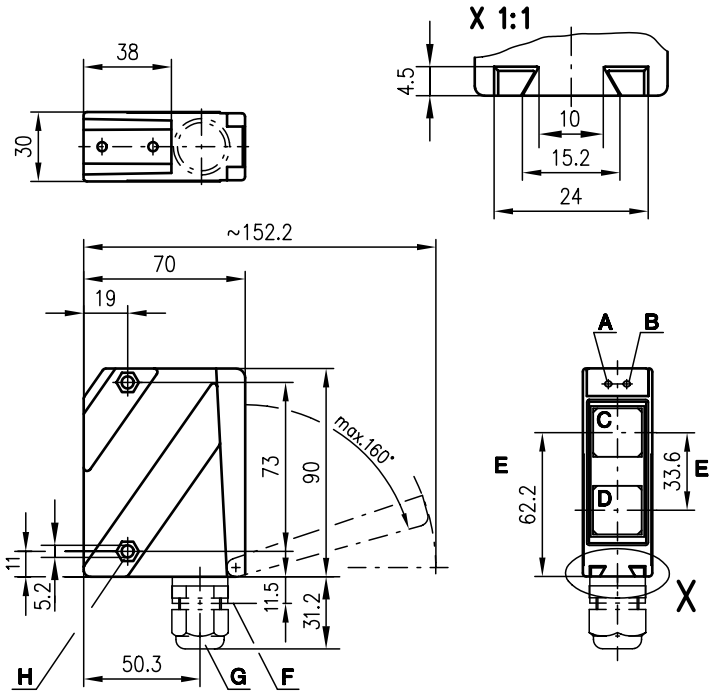


200 ... 2000 mm

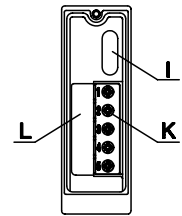


- Reflection-independent distance information
- Highly insensitive to extraneous light
- Analogue current and voltage output
- Measurement range and mode adjustable
- Teachable switching output

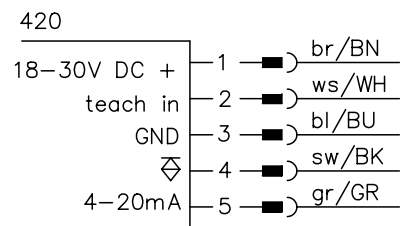
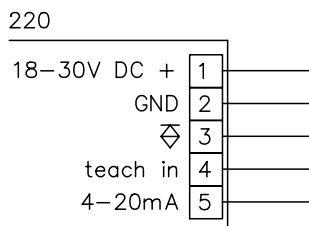
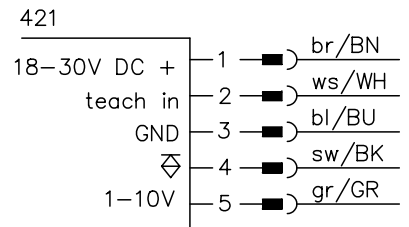
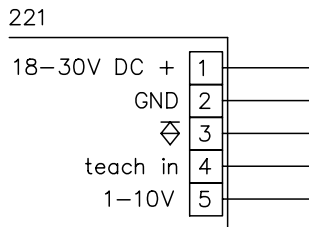
Dimensioned drawing



- A Indicator diode green
- B Indicator diode yellow
- C Transmitter
- D Receiver
- E Optical axis
- F Device plug M12x1
- G Screwed cable gland PG 11 for Ø5 ... 10mm
- H Countersinking for SK nut M5, 4.2mm deep
- I Parameter plug
- K Connection terminals
- L Cable entry



Electrical connection

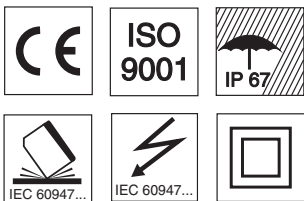


Accessories:

(available separately)

- Mounting systems
- Programming software

We reserve the right to make changes • ods_07e.fm



Specifications

Optical data

Measurement range ¹⁾	200 ... 2000mm
Resolution	≤ 5mm
Light source	laser (modulated light)
Wavelength	660nm (visible red light)
Light spot diameter	divergent, 3x12mm ² at 2m
Laser warning notice	see remarks

Error limits

Absolute measurement accuracy ¹⁾	± 2% (relative to the measurement distance)
Repeatability ²⁾	± 0.5%
b/w detection thresholds (6%/90%)	< 1%

Timing

Switching frequency	10 ... 100Hz
Response time	≤ 100ms
Delay before start-up	≤ 300ms

Electrical data

Operating voltage U _B	18 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U _B
Bias current	≤ 150mA
Switching output	PNP transistor, high-active
Signal voltage high/low	≥ (U _B -2V)/≤ 2V
Analogue output	R _L ≥ 2kΩ (voltage) R _L ≤ 500Ω (current)

Indicators

LED green	continuous light	teach-in on GND	teach-in on +U_B		
	flashing				
	off				
LED yellow	continuous light	ready	error		
	flashing			no voltage	teaching procedure
	off				
	flashing	object inside teach-in measurement distance	teaching procedure		
	off				
	flashing	object outside teach-in measurement distance			
	off				

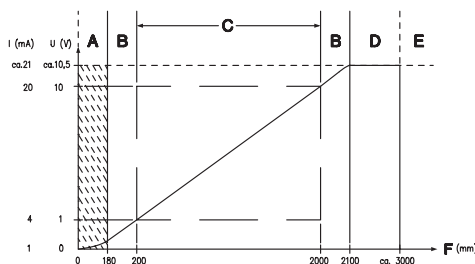
Mechanical data

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

Environmental data

Ambient temp. (operation/storage)	-20°C ... +50°C/-30°C ... +70°C
Protective circuit ³⁾	1, 2, 3
VDE safety class ⁴⁾	II, all-insulated
Protection class	IP 67
Standards applied	IEC 60947-5-2

- 1) Luminosity coefficient 6% ... 90%, over complete temperature range, measured object ≥ 50x50mm²
- 2) Same object, measured object ≥ 50x50mm²
- 3) 1=transient protection, 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 4) Rating voltage 250VAC



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

Order guide

Terminals

Current output	ODS 96M/V-5060-220	500 30595
Voltage output	ODS 96M/V-5070-221	500 30596

M12 connector

Current output	ODS 96M/V-5060-420	500 30597
Voltage output	ODS 96M/V-5070-421	500 30598

Tables

Diagrams

Remarks

- Switching frequency depends on the reflectivity of the measured object and on the measurement mode.
- **Teaching procedure:** Position measured object at desired measurement distance. Connect teach input to +U_B for ≥ 2s. Reconnect teach input to GND, switching output is programmed.

LASERSTRAHLUNG / LASER LIGHT
NICHT IN DEN STRAHL BLICKEN
DO NOT STARE INTO BEAM
LASERKLASSE 2
CLASS 2 LASER PRODUCT
IEC 60825-1-am2 (2001-01)

ODS 96
Pulse duration ≤ 32ms
Quiescent period ≥ 5ms
P_{max} ≤ 1mW
λ = 670nm