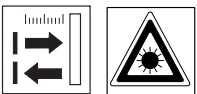


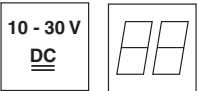


ODS 96

Optical laser distance sensors

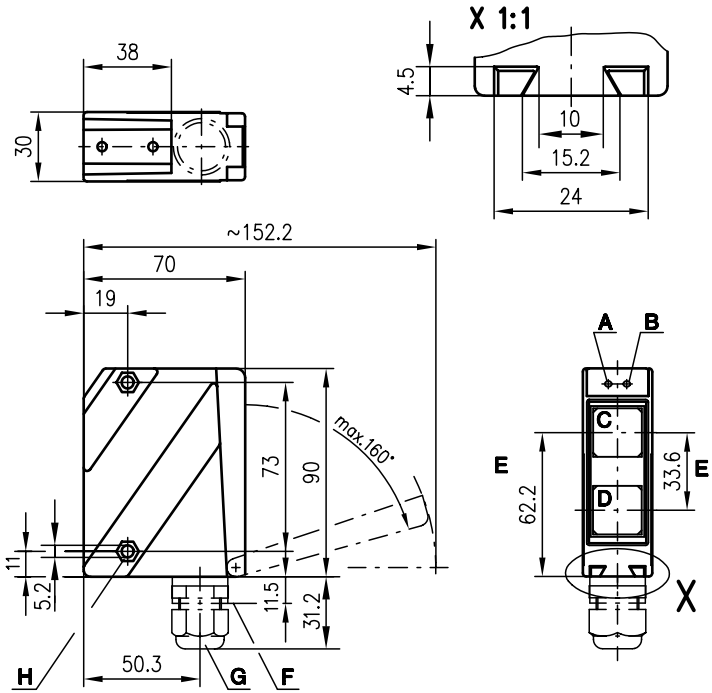


200 ... 2000 mm

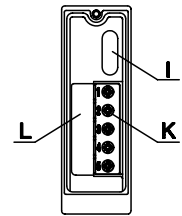


- Reflection-independent distance information
- Highly insensitive to extraneous light
- Measurement range and mode adjustable
- Two teachable switching outputs

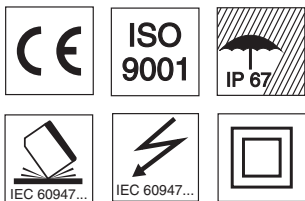
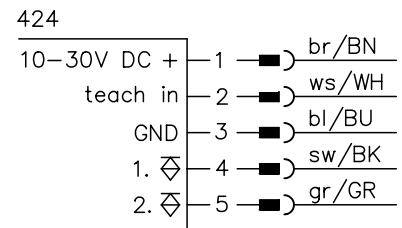
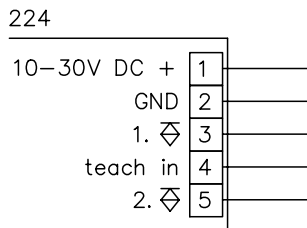
Dimensioned drawing



- 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_05e.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	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U _B
Bias current	≤ 150mA
Switching outputs	2 PNP switching outputs, high-active
Signal voltage high/low	≥ (U _B -2V)/≤ 2V
Output current	max. 100mA per transistor output

Indicators

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

Mechanical data

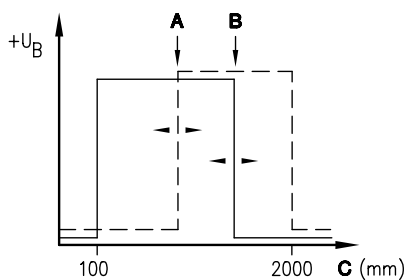
Housing	diecast zinc
Optics cover	glass
Weight	380g
Connection type	terminals or M12 connectors

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

Switching output (example)



A 2nd switching output
B 1st switching output
C Measurement distance

Order guide

Terminals

2 PNP switching outputs

M12 connector

2 PNP switching outputs

Designation

ODS 96M/S-5100-224

ODS 96M/S-5100-424

Part No.

500 30603

500 30604

Tables

Diagrams

Remarks

- Switching frequency depends on the reflectivity of the measured object and on the measurement mode.
- **Teaching procedure:** Position measured object at 1st desired measurement distance. Connect teach input to +U_B for ≥ 2s. Both LEDs are flashing simultaneously. Reconnect teach input to GND, 1st switching output is programmed. Position measured object at 2nd desired measuring distance. Connect teach input to +U_B for ≥ 2s. Both LEDs are flashing alternately. Reconnect teach input to GND, 2nd switching output is programmed. The procedure can be repeated as desired, leave teach input connected to GND in idle mode.

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