



**Part no.: 50111171**  
**ODSL 9/C66-100-S12**  
**Optical distance sensor**



Figure can vary

## Contents

- Technical data
- Electrical connection
- Operation and display
- Accessories

## Technical data

<b>Basic data</b>	
Series	9
Type of scanning system	Against object
Order guide	Attention! Article in the discontinuation phase. If spare parts are required, please note the necessary connection cable.
<b>Characteristic parameters</b>	
MTTF	53 years
<b>Optical data</b>	
Beam profile	Divergent
Light source	Laser , Red
Laser light wavelength	655 nm
Laser class	2 , IEC/EN 60825-1:2007
Transmitted-signal shape	Pulsed
Light-spot size [at sensor distance]	1 mm □
Type of light-spot geometry	Round
<b>Measurement data</b>	
Measurement range	50 ... 100 mm
Resolution	0.01 mm
Accuracy	0.5 %
Reference value, accuracy	Measurement distance
Repeatability	0.25 %
Reference value repeatability	Measurement distance
Measurement time	2 ms
Temperature drift, relative	0.02 %/K
Referencing	No
Black/white behavior	0.5 %
Standard measurement object	50 x 50 mm <sup>2</sup>
Optical distance measurement principle	Triangulation
<b>Electrical data</b>	
Protective circuit	Polarity reversal protection Short circuit protected Transient protection
<b>Performance data</b>	
Supply voltage U <sub>B</sub>	18 ... 30 V , DC
Residual ripple	0 ... 15 % , From U <sub>B</sub>
Open-circuit current	0 ... 180 mA

**Outputs**

Number of analog outputs	1 Piece(s)
Number of digital switching outputs	2 Piece(s)

**Analog outputs**
**Analog output 1**

Type	Current
Assignment	Connection 1, pin 5

**Switching outputs**

Voltage type	DC
Switching voltage	High: $\geq(U_B-2V)$

**Switching output 1**

Assignment	Connection 1, pin 4
Switching element	Transistor , Push-pull
Switching principle	Light switching (PNP)/dark switching (NPN)

**Switching output 2**

Assignment	Connection 1, pin 2
Switching element	Transistor , Push-pull
Switching principle	Light switching (PNP)/dark switching (NPN)

**Timing**

Readiness delay	300 ms
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**Connection**

Number of connections	1 Piece(s)
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**Connection 1**

Type of connection	Connector , Turning, 90°
Function	Signal OUT Voltage supply
Thread size	M12
Type	Male
Material	Plastic
No. of pins	5 -pin
Encoding	A-coded

**Mechanical data**

Design	Cubic
Dimension (W x H x L)	21 mm x 50 mm x 50 mm
Housing material	Plastic , PC
Lens cover material	Glass
Net weight	50 g
Housing color	Red
Type of fastening	Through-hole mounting Via optional mounting device

**Operation and display**

Type of display	LC Display LED
Number of LEDs	2 Piece(s)
Type of configuration	Software

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Operational controls	Control buttons LC Display PC software
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### Environmental data

Ambient temperature, operation	-20 ... 50 °C
Ambient temperature, storage	-30 ... 70 °C

### Certifications

Degree of protection	IP 67
Protection class	II
Certifications	c UL US
Standards applied	IEC 60947-5-2

### Classification

Customs tariff number	90318020
eCl@ss 8.0	27270801
eCl@ss 9.0	27270801
ETIM 5.0	EC001825
ETIM 6.0	EC001825

## Electrical connection

Connection 1	
Type of connection	Connector
Function	Signal OUT Voltage supply
Thread size	M12
Type	Male
Material	Plastic
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment
1	V+
2	OUT 2
3	GND
4	OUT 1
5	OUT mA

## Operation and display

### LEDs





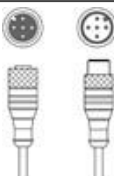
LED	Display	Meaning
1	Green, continuous light	Operational readiness

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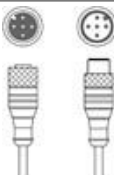
LED	Display	Meaning
	Green, flashing	Fault
	Off	No supply voltage
2	Yellow, continuous light	Object in the measurement range
	Off	No object in the measurement range

## Accessories

### Connection technology - Connection cables

	Part no.	Designation	Article	Description
	50132077	KD U-M12-5A-V1-020	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	50132079	KD U-M12-5A-V1-050	Connection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50133842	KD U-M12-5W-V1-020	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 2,000 mm Sheathing material: PVC
	50133802	KD U-M12-5W-V1-050	Connection cable	Connection 1: Connector, M12, Angled, Female, A-coded, 5 -pin Connection 2: Open end Shielded: No Cable length: 5,000 mm Sheathing material: PVC
	50140174	KDS U-M12-5A-M12-5A-P1-003-25X	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: No Cable, crossed: Connection 1, pin 2 <-> connection 2, pin 5 Cable length: 300 mm Sheathing material: PUR


### Connection technology - Interconnection cables

	Part no.	Designation	Article	Description
	50140174 *	KDS U-M12-5A-M12-5A-P1-003-25X	Interconnection cable	Connection 1: Connector, M12, Axial, Female, A-coded, 5 -pin Connection 2: Connector, M12, Axial, Male, A-coded, 5 -pin Shielded: No Cable, crossed: Connection 1, pin 2 <-> connection 2, pin 5 Cable length: 300 mm Sheathing material: PUR


\* Necessary accessories, please order separately

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## Mounting technology - Mounting brackets

	Part no.	Designation	Article	Description
	50036195	BT 8	Mounting device	Design of mounting device: Angle, L-shape Fastening, at system: Through-hole mounting Mounting bracket, at device: Screw type Type of mounting device: Rigid Material: Metal

## Mounting technology - Rod mounts

	Part no.	Designation	Article	Description
	50117252	BTU 300M-D12	Mounting system	Contains: 2x M4 x 25 screw, 2x M4 x 20 screw, 4x position washers Design of mounting device: Mounting system Fastening, at system: For 12 mm rod, Sheet-metal mounting Mounting bracket, at device: Screw type Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal