



Part no.: 50115029
ODSL 9/C6.C1-450-S12
Optical distance sensor



Figure can vary

Contents

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- Operation and display
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Technical data

Basic data	
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.
Characteristic parameters	
MTTF	53 years
Optical data	
Beam profile	Divergent
Light source	Laser , Red
Laser light wavelength	655 nm
Laser class	1 , IEC/EN 60825-1:2007
Transmitted-signal shape	Pulsed
Light spot size [at sensor distance]	1 mm \square
Type of light spot geometry	Round
Measurement data	
Measurement range	50 ... 450 mm
Resolution	0.1 mm
Accuracy	1 %
Reference value, accuracy	Measurement distance
Repeatability	0.5 %
Reference value repeatability	Measurement distance
Measurement time	4 ms
Temperature drift, relative	0.02 %/K
Referencing	No
Black/white behavior	0.5 %
Standard measurement object	50 x 50 mm ²
Optical distance measurement principle	Triangulation
Electrical data	
Protective circuit	Polarity reversal protection Short circuit protected Transient protection
Performance data	
Supply voltage U_B	18 ... 30 V , DC
Residual ripple	0 ... 15 % , From U_B
Open-circuit current	0 ... 180 mA
Inputs	
Number of digital switching inputs	1 Piece(s)
Switching inputs	
Voltage type	DC
Digital switching input 1	
Assignment	Connection 1, conductor 2
Function	Programmable

Outputs

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

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 IN 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
Operational controls	Control buttons LC Display PC software

Environmental data

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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 IN 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	IN 1
3	GND
4	OUT 1
5	OUT mA






Operation and display

LEDs


LED	Display	Meaning
1	Green, continuous light	Operational readiness
	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

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, Suited for M4 screws Type of mounting device: Clampable, Adjustable, Turning, 360° Material: Metal

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Note

A list with all available accessories can be found on the Leuze electronic website in the Download tab of the article detailed page.