



the sensor people





Part no.: 50134401 DDLS 508i 200.3 H **Optical data transmission** 



Ethernet



Figure can vary

# **Contents**

- Technical data
- · Dimensioned drawings
- Electrical connection
- · Operation and display
- Suitable receivers
- · Part number code
- Notes
- Accessories



### **Technical data**

Basic data	DD1 0 700
Series	DDLS 500
Special design	
Special design	Heating Not influenced by reflective surfaces Operation of parallel light axes Remote maintenance via web server
Optical data	
Working range	100 200,000 mm
Light source	Laser
Usable opening angle transmitter	1°
Electrical data	
Performance data	40 20 V DC
Supply voltage U <sub>B</sub>	18 30 V , DC
Inputs	
Number of digital switching inputs	1 Piece(s)
Outputs	
Number of digital switching outputs	1 Piece(s)
Interface	
Туре	Ethernet
Ethernet	
Transmission speed	100 Mbit/s
Connection	
Number of connections	2 Piece(s)
Connection 1	
Type of connection	Connector
Designation on device	POWER
Thread size	M12
Туре	Male
No. of pins	5 -pin
Encoding	A-coded
Connection 2	
Type of connection	Connector
Designation on device	BUS
Thread size	M12
Туре	Female
No. of pins	4 -pin
Encoding	D-coded
Mechanical data	
Dimension (W x H x L)	100 mm x 156 mm x 99.5 mm
Housing material	Metal
Net weight	1,185 g

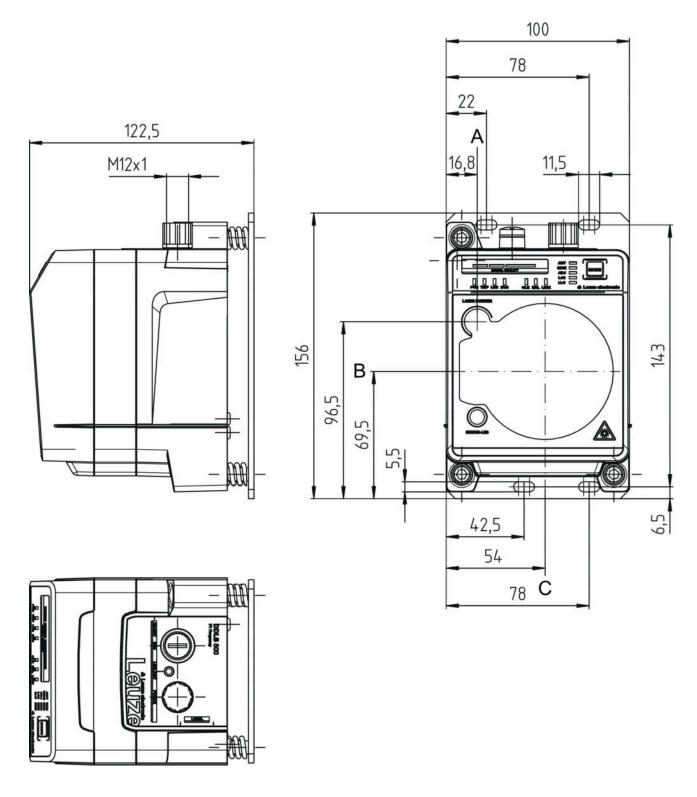


Operation and display			
Type of display	Bar graph LED		
Type of configuration	Software Via web browser		
Environmental data			
Ambient temperature, operation	-35 50 °C		
Ambient temperature, storage	-35 70 °C		
Certifications			
Degree of protection	IP 65		
Test procedure for EMC in accordance with standard	EN 1000-6-4 EN 61000-6-2		
Test procedure for noise in accordance with standard	EN 60068-2-64		
Test procedure for oscillation in accordance with standard	EN 60068-2-6		
Test procedure for shock in accordance with standard	EN 60068-2-27		
Classification			
Customs tariff number	85365019		
eCl@ss 8.0	19179090		
eCl@ss 9.0	19179090		
ETIM 5.0	EC000515		
ETIM 6.0	EC000515		

### **Dimensioned drawings**

All dimensions in millimeters





A Middleaxis Transmitter

B Center axis of transmitter and receiver

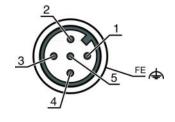
C Center axis of receiver



#### **Electrical connection**

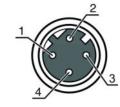
Connection 1	POWER
Function	Signal IN Signal OUT Voltage supply
Type of connection	Connector
Thread size	M12
Туре	Male
Material	Metal
No. of pins	5 -pin
Encoding	A-coded

Pin	Pin assignment	
1	VIN	
2	101	
3	GND	
4	102	
5	FE/SHIELD	



Connection 2	BUS
Function	BUS IN
Type of connection	Connector
Thread size	M12
Туре	Female
Material	Metal
No. of pins	4 -pin
Encoding	D-coded

Pin	Pin assignment	
1	TD+	
2	RD+	
3	TD-	
4	RD-	



### **Operation and display**

#### **LEDs**

LI	ED	Display	Meaning
1	AUT	Off	Operating mode not active
		Green, continuous light	Operating mode 'Automatic'
2	2 MAN Off Operating mode not active		Operating mode not active
		Green, continuous light	Operating mode 'Manual'
3	ADJ	Off	Operating mode not active
		Green, continuous light	Operating mode 'Adjust'
4 LAS Off Operating mode not active		Operating mode not active	
		Green, continuous light	Operating mode 'Alignment-laser mounting support'



L	ED	Display	Meaning	
5	LLC	Off	Operating mode not active	
		Green, continuous light	LLC without interruption	
		Red, continuous light	LLC interrupted at least once	
6	PWR	Off	No supply voltage	
		Green, flashing	Device ok, initialization phase	
		Green, continuous light	Data transmission active	
		Red, flashing	Data transmission interrupted	
		Red, continuous light	Device error	
7	TMP	Off	Operating temperature OK	
		Orange, continuous light	Operating temperature critical	
		Red, continuous light	Operating temperature exceeded or not met	
8	LSR	Off	With function reserve	
		Orange, continuous light	Device OK, warning set	
9	BUS	Off	not active for the DDLS 508i	
10	OLK	Off	Fault	
		Green, continuous light	No data transmission	
		Orange, continuous light	Data transmission active	
11	ERL	Off	Link OK	
		Orange, continuous light	Missing link (Ethernet cable connection) on the second device	
		Red, continuous light	No cable-connected link to the connected device	
12	LINK	Off	No cable-connected link to the connected device	
		Green, continuous light	Link OK	
		Orange, continuous light	Data transmission active	
13 SIGNAL QUALITY 2 red, 2 orange and 4 green Received signal level		Received signal level		

#### Suitable receivers

Part no.	Designation	Article	Description
50134402	DDLS 508i 200.4 H	Optical data transmission	Working range: 100 200,000 mm Interface: Ethernet Connection: Connector, M12 Special design: Heating, Operation of parallel light axes, Not influenced by reflective surfaces, Remote maintenance via web server

#### Part number code

Part designation: DDLS 5XXX YYY.Z A B CC

DDLS	Optical transceiver for digital data transmission	
5XXX	Series: 508i: without integrated web server for remote diagnostics 508i: with integrated web server for remote diagnostics 538: without integrated web server for remote diagnostics (EtherCAT) 548i: with integrated web server for remote diagnostics	
YYY	Range for data transmission in m	
Z	Frequency of the transmitter:  0: Frequency F0 1: Frequency F1 2: Frequency F2 3: Frequency F3 4: Frequency F4	
А	Option: L: integrated laser alignment aid (for transmitter/receiver) n/a: standard	



В	Special equipment: H: with heating n/a: no special equipment
CC	Special equipment: W: transmission optics with larger opening angle (on request) n/a: no special equipment

#### Note

A list with all available device types can be found on the Leuze electronic website at www.leuze.com.

#### **Notes**

#### Observe intended use!

- This product is not a safety sensor and is not intended as personnel protection.
- The product may only be put into operation by competent persons.
- · Only use the product in accordance with its intended use.

#### For UL applications:

· For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).

#### **Accessories**

### Connection technology - Connection cables

Part no.	Designation	Article	Description
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
50135074	KS ET-M12-4A- P7-050	Connection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Connection technology - Interconnection cables

Part no.	Designation	Article	Description
50137078	KSS ET-M12-4A- M12-4A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: Connector, M12, Axial, Male, D-coded, 4 -pin Shielded: Yes Cable length: 1,000 mm Sheathing material: PUR

Leuze electronic GmbH + Co. KG, In der Braike 1, 73277 Owen Phone: +49 7021 573-0, Fax: +49 7021 573-199



Part no.	Designation	Article	Description
50135081	KSS ET-M12-4A- RJ45-A-P7-050	Interconnection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connection 2: RJ45 Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR

## Connection technology - Connectors

	Part no.	Designation	Article	Description
<b>1</b>	50020501	KD 095-5A	Connector	Connection: Connector with screw terminals, M12, Axial, Female, A-coded, 5 -pin
	50112155	S-M12A-ET	Connector	Suitable for interface: Ethernet Connection: Connector, M12, Axial, Male, D-coded, 4 -pin

#### Services

Part no.	Designation	Article	Description
S981001	CS10-S-110	Start-up support	Details: Performed at location of customer's choosing, duration: max. 10 hours.  Conditions: Devices and connection cables are already mounted, price not including travel costs and, if applicable, accommodation expenses.  Restrictions: No mechanical (mounting) and electrical (wiring) work performed, no changes (attachments, wiring, programming) to third-party components in the nearby environment.
S981005	CS10-T-110	Product training	Details: Location and content to be agreed upon, duration: max. 10 hours. Conditions: Price not including travel costs and, if applicable, accommodation expenses. Restrictions: Travel costs and accommodation expenses charged separately and according to expenditure.

#### Note

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