Leuze

Technical data sheet Optical data transmission

Part no.: 50132932 DDLS 508 40.4 L H



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Technical data

Basic data

Encoding

Basic data		Connectio
Series	DDLS 500	Type of con
On a sigl warming		Designatior Thread size
Special version		Туре
Special version	Heating	No. of pins
	Integrated laser alignment aid	Encoding
	Not influenced by reflective surfaces	
	Operation of parallel light axes	Mechanical
Optical data		Dimension (W
Working range	100 40,000 mm	Housing mate
Light source	Laser	Net weight
Transmission frequency	F4	Operation a
Opening angle	1 °	
Electrical data		Type of displa
Performance data		Environmen
Supply voltage U _B	18 30 V, DC	Ambient temp
		Ambient temp
Inputs		
Number of digital switching inputs	1 Piece(s)	Certification
		Degree of prot
Outputs		Certifications
Number of digital switching outputs	1 Piece(s)	Test procedur
Interface		with standard
Туре	PROFINET IRT	Test procedur with standard
Transmission protocol	EtherNET/IP	Test procedur
	PROFINET IO / RT	accordance w
	PROFINET IRT	Test procedur
	PROFINET/PROFIsafe	accordance w
	TCP/IP 100 Mbit	Classificatio
Туре	EtherNet TCP/	
	IP, PROFINET, PROFIsafe over PROFINET	Customs tarif
		ECLASS 5.1.4
Ethernet		ECLASS 8.0
Architecture	Transparent	ECLASS 9.0
Address assignment	None	ECLASS 10.0
Transmission speed	100 Mbit/s	ECLASS 11.0
Function	Process	ECLASS 12.0
Switch functionality	None	ECLASS 13.0
Transmission protocol	TCP/IP , UDP	ECLASS 14.0
-		ETIM 5.0
PROFINET		ETIM 6.0
Function	Process	ETIM 7.0
Conformance class	В	ETIM 8.0
Switch functionality	None	ETIM 9.0
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	

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Connection 0	
Connection 2 Type of connection	Connector
Designation on device	BUS
Thread size	M12
Туре	Female
No. of pins	4 -pin
Encoding	D-coded
2.1000.119	2 00000
Mechanical data	
Dimension (W x H x L)	100 mm x 156 mm x 99.5 mm
Housing material	Metal
Net weight	1,255 g
Operation and display	
Type of display	Bar graph
	LED
Environmental data	
Ambient temperature, operation	-35 50 °C
Ambient temperature, storage	-35 70 °C
Certifications	
Degree of protection	IP 65
Certifications	c UL US
Test procedure for EMC in accordance	EN 1000-6-4
with standard	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	EN 60068-2-27
accordance with standard	
Classification	
Customs tariff number	84718000
ECLASS 5.1.4	19039001
ECLASS 8.0	19179090
ECLASS 9.0	19179090
ECLASS 10.0	19170506
	40470500

19170506

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EC000515

EC000515

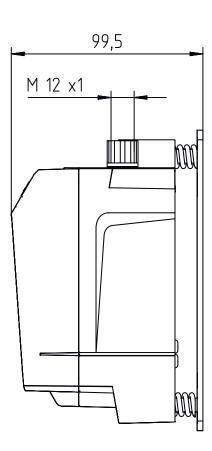
EC000515

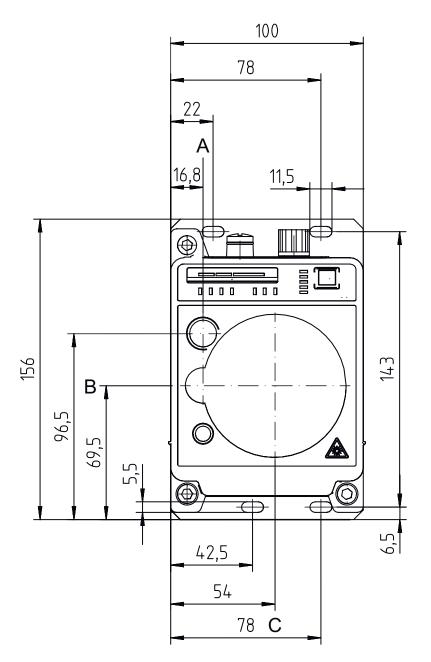
EC000515

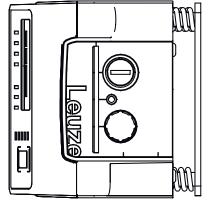
EC000515

Dimensioned drawings

All dimensions in millimeters







A Center axis of transmitter and alignment laser

B Center axis of transmitter and receiver

C Center axis of receiver

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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	3
4	102	
5	FE/SHIELD	

FE 📥

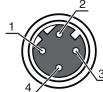
Connection 2

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

LED		Display	Meaning
1	AUT	Off	Operating mode not active
		Green, continuous light	Operating mode "Automatic"
2 1	MAN	Off	Operating mode not active
		Green, continuous light	Operating mode "Manual"
3 /	ADJ	Off	Operating mode not active
		Green, continuous light	Operating mode "Adjust"
1 1	LAS	Off	Operating mode not active
		Green, continuous light	Operating mode "Alignment-laser mounting support"
	LLC	Off	Operating mode not active
		Green, continuous light	LLC without interruption
		Red, continuous light	LLC interrupted at least once
	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
	ТМР	Off	Operating temperature OK
		Orange, continuous light	Operating temperature critical





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Operation and display

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LED	Display	Meaning
7 TMP	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 508
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 SIGN QUAL		Received signal level

Suitable transmitters

 Part no.	Designation	Article	Description
50132931	DDLS 508 40.3 L H	Optical data transmission	Special version: Operation of parallel light axes, Heating, Integrated laser alignment aid, Not influenced by reflective surfaces Working range: 100 40,000 mm Transmission frequency: F3 Interface: EtherNet TCP/IP, PROFINET Connection: Connector, M12

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
A	Option L: integrated laser alignment aid (for transmitter/receiver) n/a: standard
В	Special equipment H: with heating n/a: no special equipment
сс	Special equipment W: transmission optics with larger opening angle (on request) n/a: no special equipment

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

Notes

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Observe intended use!

✤ This product is not a safety sensor and is not intended as personnel protection.

b The product may only be put into operation by competent persons.



	Do not expose users of telescopic optics! The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of laser class 1M as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to Laser Notice No. 50 from June 24, 2007.
	Do not expose users of telescopic optics! The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of laser class 1M as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to Laser Notice No. 50 from June 24, 2007.
	Looking into the beam path for extended periods using telescope optics may damage the eye's retina. Never look using telescope optics into the lase beam or in the direction of reflecting beams.
	 CAUTION! The use of operating and adjusting devices other than those specified here or the carrying out of differing procedures may lead to dangere exposure to radiation! The use of optical instruments or devices (e.g., magnifying glasses, binoculars) in combination with the device increases the danger of eye damage.
	⇔ Observe the applicable statutory and local laser protection regulations.
	 The device must not be tampered with and must not be changed in any way. There are no user-serviceable parts inside the device. Repairs must only be performed by Leuze electronic GmbH + Co. KG.

ATTENTION! LASER RADIATION – CLASS 1 LASER PRODUCT (alignment laser)

The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of **laser class 1** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to Laser Notice No. 50 from June 24, 2007.

th The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of laser class 1 as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to Laser Notice No. 50 from June 24, 2007.

- ♦ Observe the applicable statutory and local laser protection regulations.
- ^t The device must not be tampered with and must not be changed in any way. There are no user-serviceable parts inside the device.

Repairs must only be performed by Leuze electronic GmbH + Co. KG.

Accessories

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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 Connector, LED: No Connection 2: Open end Shielded: No Cable length: 5.000 mm Sheathing material: PVC
Ŵ	50135074	KS ET-M12-4A-P7- 050	Connection cable	Suitable for interface: Ethernet Connection 1: Connector, M12, Axial, Male, D-coded, 4 -pin Connector, LED: No 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: 5,000 mm Sheathing material: PUR
	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
-	50020501	KD 095-5A	Connector	Connection: Connector, M12, Axial, Female, A-coded, 5 -pin
Contraction of the second	50112155	S-M12A-ET	Connector	Suitable for interface: Ethernet Connection: Connector, M12, Axial, Male, D-coded, 4 -pin

Accessories

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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.
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.

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