SMART SENSOR BUSINESS

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the sensor people





Part no.: 50113665 AMS 300i 40 H Optical distance sensor



Figure can vary

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- · Dimensioned drawings
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Part no.: 50113665 – AMS 300i 40 H – Optical distance sensor

Technical data

Series AMS 300i Application Collision protection of cranes / gantry cranes Positioning of high-bay storage devices Positioning of skillet systems and side-tracking skates Functions Heating Functions Heating Characteristic parameters Image: Storage devices MTTF 31 years Optical data Image: Storage devices Light source Laser , Red Laser class 2, IEC/EN 60825-1:2007 Measurement data Image: Storage devices Measurement data Image: Storage devices Reproducibility (3 sigma) 0.9 mm Max. traverse rate 10 m/s Electrical data Image: Storage devices Transmission speed 19,200 115,200 Bd Rs 422 Image: Storage devices Connection Image: Storage devices	Basic data	
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No. of pins 5 -pin	Thread size	M12
No. of pins 5 -pin	Туре	Male
		5 -pin

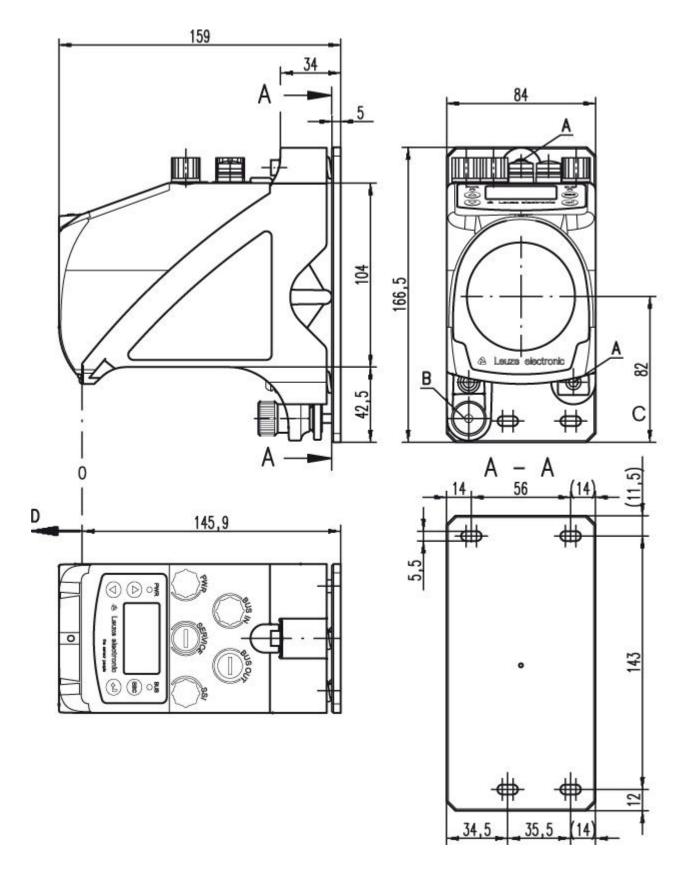
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Connection 3			
Type of connection	Connector		
Designation on device	PWR		
Function	PWR / SW IN/OUT Voltage supply		
Thread size	M12		
Туре	Male		
No. of pins	5 -pin		
Encoding	A-coded		
Connection 4			
Type of connection	Connector		
Designation on device	SERVICE		
Function	Service interface		
Thread size	M12		
Туре	Female		
No. of pins	5 -pin		
Encoding	A-coded		
lechanical data			
Design	Cubic		
Dimension (W x H x L)	84 mm x 166.5 mm x 159 mm		
lousing material	Metal		
let weight	2,450 g		
ype of fastening	Through-hole mounting		
Operation and display			
ype of display	LC Display LED		
Operational controls	Membrane keyboard		
Environmental data			
mbient temperature, operation	-30 50 °C		
mbient temperature, storage	-30 70 °C		
Relative humidity (non-condensing)	90 %		
Certifications			
Degree of protection	IP 65		
Protection class			
Certifications	c UL US		
Classification			
Customs tariff number	90318020		
Cl@ss 8.0			
Cl@ss 9.0			
TIM 5.0	EC001825		
TIM 6.0	EC001825		

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Dimensioned drawings

All dimensions in millimeters



A M 5 screw for alignment

- B Knurled nut with WAF 4 hexagon socket and M 5 nut for securing
- C Optical axis

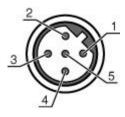
D Zero point of the distance to be measured

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Electrical connection

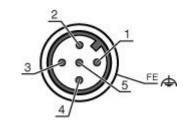
Connection 1	BUS IN	
Type of connection	Connector	
Function	BUS IN Data interface	
Thread size	M12	
Туре	Male	
Material	Metal	
No. of pins	5 -pin	
Encoding	B-coded	

Pin	Pin assignment
1	NC
2	TXD
3	GND ISO
4	NC
5	RxD



Connection 3	PWR	
Type of connection	Connector	
Function	PWR / SW IN/OUT Voltage supply	
Thread size	M12	
Туре	Male	
Material	Metal	
No. of pins	5 -pin	
Encoding	A-coded	

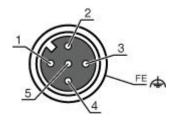
Pin	Pin assignment
1	VIN
2	I/O 1
3	GND
4	I/O 2
5	FE



Connection 4	SERVICE	
Type of connection	Connector	
Function	Service interface	
Thread size	M12	
Туре	Female	
Material	Metal	
No. of pins	5 -pin	
Encoding	A-coded	

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Pin	Pin assignment	
1	n.c.	
2	RS 232-TX	
3	GND	
4	RS 232-RX	
5	n.c.	



Operation and display

LEDs

LED		Display	Meaning
1	PWR	Off	No supply voltage
		Green, flashing	Voltage connected / no measurement value output / initialization running
Green, continuous light		Green, continuous light	Device OK, measurement value output
	Red, flashing		Device OK, warning set
		Red, continuous light	No measurement value output
2	BUS	Green, flashing	Device ok, initialization phase
		Green, continuous light	Data transmission active

Part number code

Part designation: AMS 3XXi YYY Z AAA

AMS	Operating principle: AMS: absolute measurement system
3XXi	Series/interface (integrated fieldbus technology): 300i: RS 422/RS 232 301i: RS 485 304i: PROFIBUS DP / SSI 308i: TCP/IP 335i: CANopen 338i: EtherCAT 348i: PROFINET RT 355i: DeviceNet 355i: DeviceNet 355i: EtherNet/IP 384i: Interbus
YYY	Operating range: 40: max. operating range in m 120: max. operating range in m 200: max. operating range in m 300: max. operating range in m
Z	Special equipment: H: with heating
AAA	Interface: SSI: with SSI interface

Note

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

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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.

WARNING! LASER RADIATION - LASER CLASS 2

Never look directly into the beam!

The device satisfies the requirements of IEC 60825-1:2007 (EN 60825-1:2007) safety regulations for a product of **laser class 2** as well as the U.S. 21 CFR 1040.10 regulations with deviations corresponding to "Laser Notice No. 50" from June 24, 2007.

- Never look directly into the laser beam or in the direction of reflected laser beams! If you look into the beam path over a longer time period, there is a risk of injury to the retina.
- Do not point the laser beam of the device at persons!
- Interrupt the laser beam using a non-transparent, non-reflective object if the laser beam is accidentally directed towards a person.
- When mounting and aligning the device, avoid reflections of the laser beam off reflective surfaces!
- CAUTION! Use of controls or adjustments or performance of procedures other than specified herein may result in hazardous light exposure.
- · 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.

NOTE

Affix laser information and warning signs!

Laser information and warning signs are affixed to the device. In addition, self-adhesive laser information and warning signs (stick-on labels) are supplied in several languages.

- Affix the laser information sheet to the device in the language appropriate for the place of use. When using the device in the US, use the stick-on label with the "Complies with 21 CFR 1040.10" note.
- Affix the laser information and warning signs near the device if no signs are attached to the device (e.g. because the device is too small) or if the attached laser information and warning signs are concealed due to the installation position.
- Affix the laser information and warning signs so that they are legible without exposing the reader to the laser radiation of the device or other optical radiation.
- · For UL applications, use is only permitted in Class 2 circuits in accordance with the NEC (National Electric Code).
- Use as safety-related component within the safety function is possible, if the component combination is designed correspondingly by the machine manufacturer.

Accessories

Connection technology - Connection cables

Part no.	Designation	Article	Description
50104171	KB SSI/ IBS-5000-BA	Connection cable	Suitable for interface: SSI, Interbus-S Connection 1: Connector, M12, Axial, Female, B-coded, 5 -pin Connection 2: Open end Shielded: Yes Cable length: 5,000 mm Sheathing material: PUR
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

Reflective tapes for distance sensors

Part no.	Designation	Article	Description
50115020	Reflexfolie 200x200mm-H	Reflector	Special design: Heating Supply voltage: 230 V, AC Design: Rectangular Reflective surface: 200 mm x 200 mm Base material: Aluminum composite Fastening: Mounting plate, Through-hole mounting
50104361	Reflexfolie 200x200mm-S	Reflective tape	Design: Rectangular Reflective surface: 200 mm x 200 mm Chemical designation of the material: PMMA Fastening: Adhesive

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.