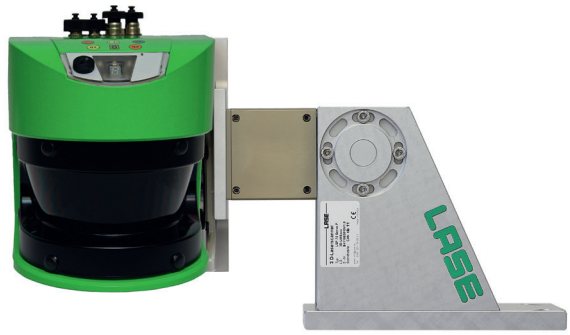
LASE
Industrielle Lasertechnik GmbH

LASE 3000D-C1-11x Series

3D Laser scanner



The laser scanners out of the LASE 3000D-C1-11x Series are three-dimensional measurement devices which are especially built for measurements in harsh industrial environments and for numerous outdoor purposes.

The high performance 3D laser scanners from the product range of the LASE 3000D Series are based on the components of a 2D laser scanner out of the LASE 2000D-11x-Series and a swiveling platform which is powered by a servo-drive. A high resolution encoder on the servo-drive measures the angle of rotation of the platform and by connection of the 2D laser data with the encoder data, high precision 3D profile measurements are produced. Optionally LASE can provide sophisticated software either to control and collect data from the laser scanner or for complete measurement solutions.

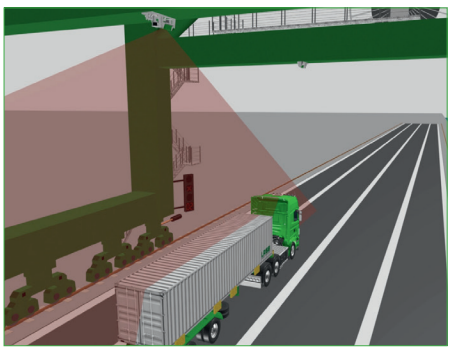
With its large measuring range, huge scan angle and high angular resolution the LASE 3000D-C1-11x Series is suitable for a huge variety of industries and applications such as:

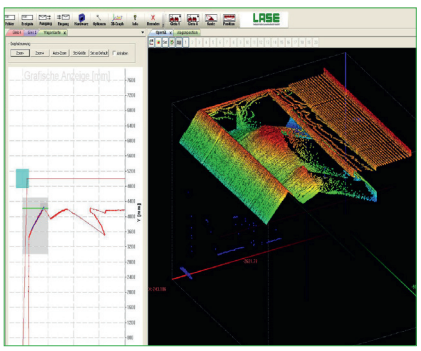
- Measurement of dimensions, profiles or levels of objects and environments
- Object positioning
- Container recognition/measurement in ports
- Support of crane open-loop controls by goods detection
- Object protection
- Bulk material measurement at heaps, piles, bunkers or trucks

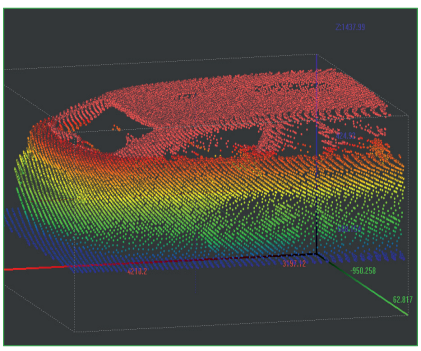
Features and Benefits:

- Contactless long range 3D profile measurement
- High accuracy, high resolution and fast measuring rate
- Unique stable object detection
- Range of up to 40 m on dark natural surfaces
- Range of up to 80 m on natural surfaces
- Scan area up to 190° x 200° (scan/swivel)
- Interfaces: Ethernet TCP/IP, RS-232/RS-422, USB, CAN
- Self-test incorporated
- User friendly software
- Simple installation
- Rugged constructon type to IP 64, 65 and 67
- Outdoor applicable due to integrated heating

Typical applications





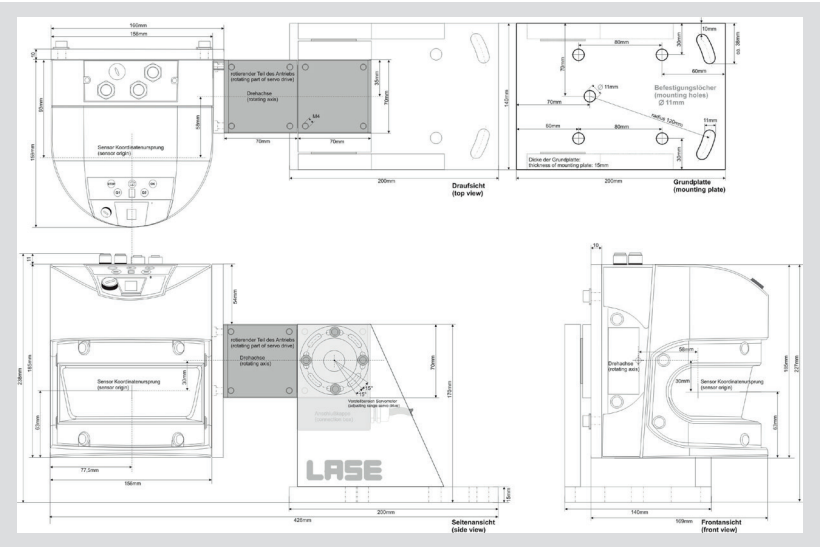


Technical data

Model	LASE 3000D-C1-118	LASE 3000D-C1-119	
DISTANCE MEASUREMENT			
Measurement range	0,7 ... > 26 m	1 ... > 40 m	at 10 % target reflectivity
	1 ... > 80 m		at 90 %
Resolution	± 12 mm	± 24 mm	
Beam divergence	4,7 mrad	11,9 mrad	
Laser safety class	class 1		EN/IEC 60825-1; eyesafe
Visual displays	5 x LED		additonal 7-segment display
SCAN AND PROFILE MEASUREMENT			
Usable scan angle	190°		
Angular step width	0,167°, 0,25°, 0,333°, 0,5°, 0,667°, 1°		choosable
Scan frequency	25 Hz, 35 Hz, 50 Hz, 75 Hz, 100 Hz		
Rotation angle: platform	up to ± 100°		
Angular resolution: platform	up to 0,002°		
Swivel speed	max. 150°/s		
INTERFACES			
Ethernet	100 Mbit/s		TCP/IP, OPC
RS 422	9,6 ... 500 kBaud		switchable, max. 15 m
USB	max. 500 kBaud		reduced data rate
CAN	250 kBaud		communication servo drive
ELECTRICAL & MECHANICAL			
Power supply	24 VDC ± 3 % / max. 12 A		
Protection class	Laser: IEC IP 67		to EN 60529
	Servo: IP 64 / IP 65		
Weight	Platform: approx. 5 kg		
	Scanner: approx. 3,7 kg		
ENVIRONMENT DATA			
Temperature range	Operation: -25° C ... +50° C		with optional heating system
	Storage: -10° C ... +70° C		
Shock & Vibration	IEC 68		to EN 60068-2-27, 60068-2-28, 60068-2-29
OPTIONS			
Connection box	Power supply 24 VDC / 15 A		
	Ethernet 5-port switch		
	CAN-Ethernet converter		
	Fuses, terminals, fittings		
Cable set	Required data and power lines in lengths of: 5 m, 10 m or 20 m		

Scope of delivery:

- 3D laser scanner
- Operating instruction
- CD-ROM



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