



LASE 3000D-C3-22x Series

3D Laser scanner



The laser scanners out of the LASE 3000D-C3-22x 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-22x-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.

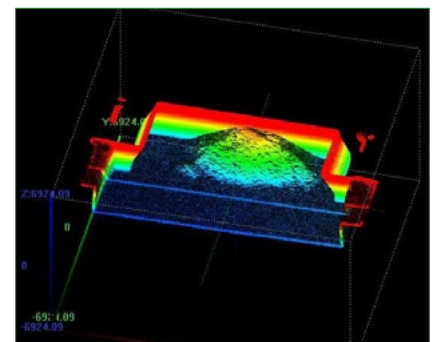
With its large measuring range, unrestricted scan angle and high angular resolution the LASE 3000D-C3-22x Series is suitable for a huge variety of industries and applications such as:

- Measurement of dimensions, profiles or levels of objects and environments
- Object positioning
- Container recognition/measurement in ports
- 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 95 m on dark natural surfaces
- Range of up to 300 m on natural surfaces
- Scan area up to 90° x 180°
- Interfaces: Ethernet TCP/IP, RS-232, CAN-Bus
- Self-test incorporated
- User friendly software
- Simple installation
- Rugged construction type to IP 65
- Outdoor applicable due to integrated heating

Typical applications



Technical data

Model	LASE 3000D-C3-224	LASE 3000D-C3-226	LASE 3000D-C3-227
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DISTANCE MEASUREMENT

Distance range	0,6 ... 170 m	2,5 ... 250 m	2,9 ... 300 m	White, 100% target reflectivity
	0,6 ... 47 m	1,8 ... 80 m	2,1 ... 95 m	Black, 10 % target reflectivity
Accuracy	4 mm		5 mm	Repeatability 1 sigma [strong signal]
	15 mm			Repeatability 1 sigma [weak signal]
	≤ 3 mm	≤ 4 mm		Systematic error
Laser spot size	12 x 16 mm			At sensor window
	24 x 24 mm	24 x 64 mm	24 x 80 mm	At 40 m range
Divergence	0,3 mrad			Vertical
	0,7 mrad	1,33 mrad	1,67 mrad	Horizontal
Resolution	1 mm			
Laser pulse rate	40 kHz			
Laser class	1	1 M		Scanner; to EN 60825-1; 94, 96, 01
	2			Marker

SCAN AND PROFILE MEASUREMENT

Scan angle	± 90°			Adjustable
Step width	0,09			Normal mode
	0,023			Fine mode
	0,18			Fast mode
Measurement points (per scan)	1000			Normal mode [at 90°]
	4000			Fine mode [at 90°, 4 scans / 5 Hz]
	500			Fast mode [at 90°, 40 Hz]
Scan frequency	20 / 40 Hz			
Rotation angle: platform	up to ± 90°			
Angular resolution: platform	up to 0,002°			
Swivel speed	max. 150°/s			

INTERFACES

Ethernet	100 Mbit/s	Real time data output
RS 232	115 kBaud	Configuration and FW updates
CAN-Bus	250 Kbit/s	Communication servo drive

ELECTRICAL & MECHANICAL

Power supply	24 VDC ± 2 V / max. 8 A	
Protection class	IP 65	to EN 60529
Weight	Platform: approx. 22 kg	
	Scanner: approx. 2,6 kg	

ENVIRONMENT DATA

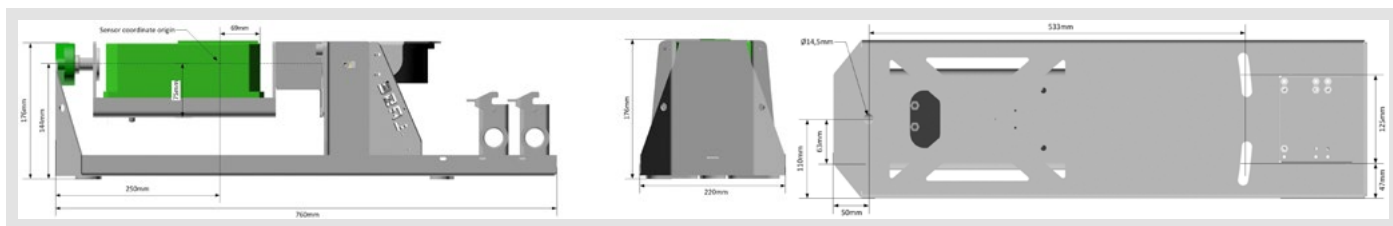
Temperature range	operation: -25° C ... +50° C	with optional heating system
	storage: -10° C ... +70° C	
Shock & Vibration	IEC 68	to EN 60068-2-27 / -2-28 / -2-29

OPTIONS

Connection box	Power supply 24 VDC / 15 A - Heating	
	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



Contact

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