

# LASE 3000D-C3-23x SERIES

With its large measuring range, unrestricted scan angle and high angular resolution the LASE 3000D-C3-23x 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

## THE SENSOR

The laser scanners out of the LASE 3000D-C3-23x 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-23x 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.



## SCOPE OF DELIVERY

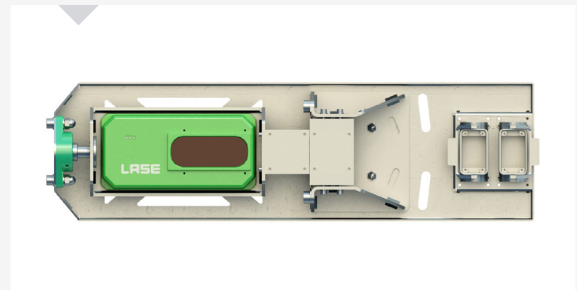
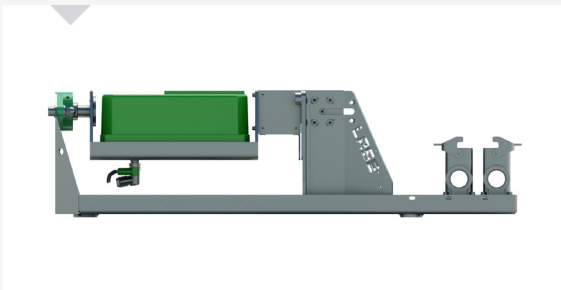
- » 3D laser scanner
- » Operating instruction
- » CD-ROM

## THE FEATURES

- ✓ Contactless long range 3D profile measurement
- ✓ 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
- ✓ Rugged construction type to IP 65

## THE BENEFITS

- ✓ High accuracy, high resolution and fast measuring rate
- ✓ Unique stable object detection
- ✓ Self-test incorporated
- ✓ User friendly software
- ✓ Simple installation
- ✓ Outdoor applicable due to integrated heating



# TECHNICAL DATA: LASE 3000D-C3-23x SERIES

LASE 3000D-C3	-234	-236	-237	-238	INFO	
DISTANCE MEASUREMENT						
Distance Range	0.8 ... 150 m	1.8 ... 250 m	2.5 ... 300 m	2.7 ... 400 m	White. 100% reflectivity	
	0.8 ... 45 m	1.8 ... 80 m	2.5 ... 95 m	2.7 ... 120 m	10% target reflectivity	
Accuracy	5 mm			6 mm	Repeatability 1 σ at strong signal	
	20 mm				Repeatability 1 σ at weak signal	
	≤ 5 mm				Systematic error	
Laser spot size	12 x 18 mm			12 x 19 mm	at Sensor window	Focused at 45 m
	15 x 24 mm	15 x 55 mm	15 x 68 mm	15 x 102 mm	at 40 m range	
Divergence	0.5 mrad			0.6 mrad	Vertical	
	0.7 mrad	1.33 mrad	1.67 mrad	2.5 mrad	Horizontal	
Resolution	1 mm					
Laser pulse rate	Up to 60 kHz					
Laser class	1				EN/IEC 60825-1:2014	
INTERFACES						
Ethernet	TCP/UDP 100 Mbits/s				Real time data output	
RS232	115 kBaud				Configuration and FW updates	
ELECTRICAL & MECHANICAL						
Voltage	24 VDC or PoE 15 W max				PoE with Injector	
Voltage - direct	DC Input 24 V ±5 V					
Power consumption	8 W				without heater	
Startup time	30 s					
Protection class	IP 67					
Enclosure	Aluminium				seawater resistant	
Dimension	247 mm x 121 mm x 109 mm					
Weight	2.8 kg					
ENVIRONMENT DATA						
Operating temperature range	-30°C ... +50°C				Temperatures > 50°C on request	
Storage temperature range	-30°C ... +70°C					
SCAN & PROFILE MEASUREMENT						
Scan angle	1 to 90°				Adjustable	
Step Width	0.18°				Fast-Mode	
	0.09°				Normal-Mode	
	0.045°				Fine-Mode	
	0.0225°				Interlaced-Mode	
Measuring points (per scan)	500				Fast-Mode (at 90°)	
	1000				Normal-Mode (at 90°)	
	2000				Fine-Mode (at 90°)	
	1000 (4000 per profile)				Interlaced-Mode (at 90°)	
Scan Rate	15 / 30 / 60 Hz					

