



LASE 2000D-13x Series

2D Laser scanner



The long-range outdoor laser scanners from the LASE 2000D-13x Series are contactless two-dimensional distance measuring systems especially built for harsh industrial environments and numerous outdoor purposes.

The scanner outputs contour data of the recorded surroundings as constant raw data which incorporates distance and angle values. The 2D profile of the surrounding is scanned by multiple pulsed IR laser beams transmitted via a rotating lens head. The scanners out of the LASE 2000D-13x Series send extremely short light pulses, measure the running time of these pulses to the object calculates the distance as well as determines the angle of the pulses which are sent back. This process is produced with a max. rate of 10 times per second and provides a captured profile of the complete environment, including all surrounding objects. The LASE 2000D-13x Series has a capture range of up to 120 m radius on dark surfaces and up to 250 m on bright surfaces with an 360° field of view.

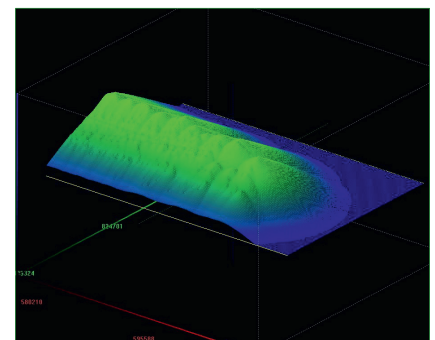
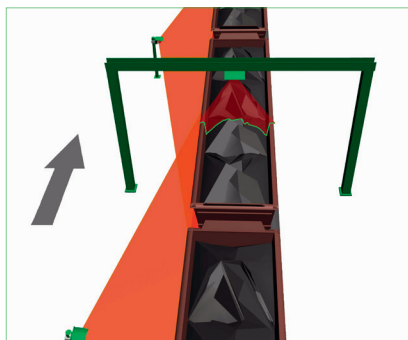
With its large measuring range, unrestricted scan angle and high angular resolution the LASE 2000D-13x Series is suitable for a huge variety of industries and applications such as:

- 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 far reaching 2D profile measurement
- Range of up to 120 m on dark natural surfaces
- Range of up to 250 m on natural surfaces
- High accuracy, high resolution and fast measuring rate
- Intelligent onboard PC for parameter value setting
- RS 232/RS 422; Ethernet TCP/IP, CAN BUS interfaces
- Self-test incorporated
- User friendly software
- Simple installation at each position
- Rugged construction type to IP 67
- Outdoor applicable due to integrated heating

Typical applications



Technical data

Model	LASE 2000D-138	LASE 2000D-139
DISTANCE MEASUREMENT		
Measurement range [^{1,2}]	2,5 ... > 80 m max. 250 m	5 ... > 120 m at 10 % target reflectivity at 90 %
System error	± 38 mm	20 ... 90 % reflectivity
Beam divergency	2,8 mrad	0,16°
Light source	laser diode with rotating scanner head	infrared
Pulse repetition frequency	max. 14,4 kHz	10,8 kHz with mean across 360 °
Laser safety class	class 1	EN/IEC 60825-1; eyesafe
SCAN AND PROFILE MEASUREMENT		
Usable scan angle	360°	
Angular step width	0,0625° ... 1°	choosable
Scan frequency	5 ... 15 Hz ± 5 %	1 Hz steps
INTERFACES		
RS-422	4800, 9600, 19200, 38400, 57600, default, 115200 Baud	data transmission rate
Data format	8 data bits	1 stop bit, no parity, fixed output format
Ethernet	100 Mbit/s	TCP/IP
ELECTRICAL & MECHANICAL		
Power connections	1 x 20-pin Harting connection	
Power supply	electronic: DC 24V ± 15 % heating: DC 24 V	to IEC 364-4-41 [VDE 0100 part 410] max. 6 V ripple / max. 6 A cyclic
Supply electronic	switched on: max. 1,5 A start-up peak: 2,1 A	at 24 VDC [³]
Protection class	IP 67	to DIN 40 050
Housing [³]	PUR IHS	
Safety class	class 3	
Shock & Vibration	IEC 68	to part 2-26, 2c
Weight	approx. 9,1 kg	
ENVIRONMENT DATA		
Temperature range	operation: -25° C ... +45° C storage: -25° C ... +70° C	temperatures > 45° C on request
Max. relative humidity	5 ... 85 %	non-condensing
Attachment	4 x securing threads M8 x 9 mm	

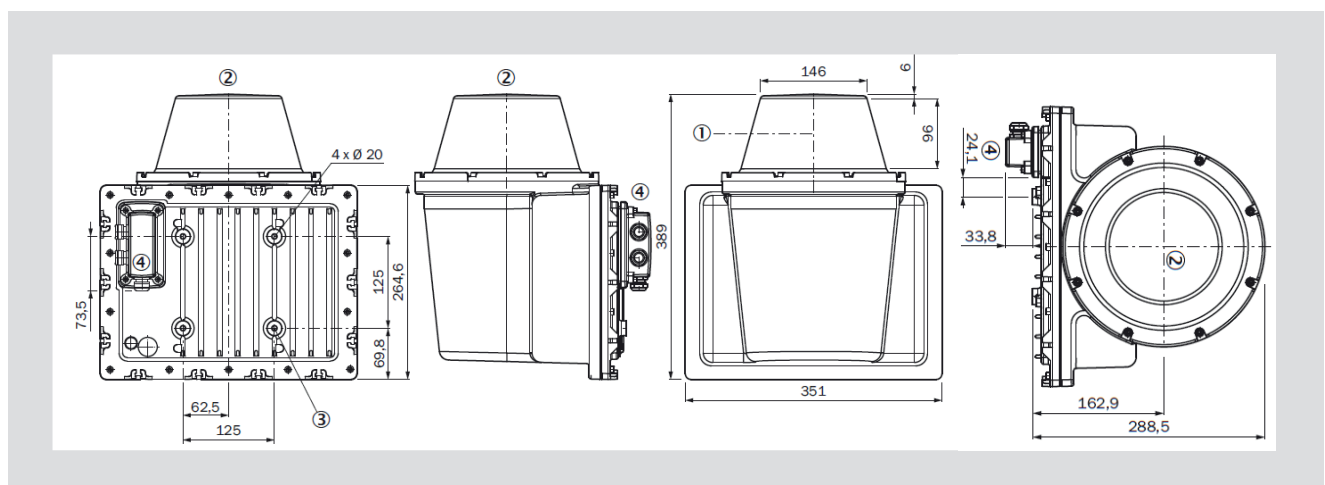
¹⁾ Condition: laser spot completely on the object; kept warming time 30 min

²⁾ By using without close range blanking

³⁾ PUR-IHS: Polyurethan integral foam

Scope of delivery:

- Sensor
- Operating instruction
- Configuration software



Contact

LASE Industrielle Lasertechnik GmbH

Rudolf-Diesel-Str. 111
D - 46485 Wesel

Tel.: +49 (0) 281 - 9 59 90 - 0
Fax: +49 (0) 281 - 9 59 90 - 111
E-Mail: info@lase.de
Website: www.lase.de