



# LASE 1000D

## 1D Laser Distance Meter



### Short description:

The **LASE 1000D sensor** can measure with his TOF technology (Time of flight technology) at distances of up to 800m where reflectors used and up to 110m on natural targets.

The sensor transmits extremely short multiple light pulses, measures the running time of these pulses to the object and back and computes the distance. The measuring data will send serially over a RS-232 / RS-422 and SSI interface, as well as a programmable analog 4 - 20 mA output. Further more, a PROFIBUS DP interface is available. Also two switching outputs are on board which can be configured in logic and band width.

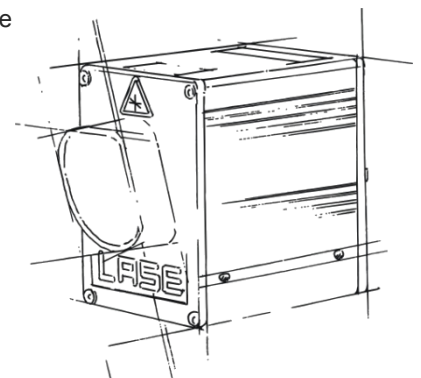
The LASE 1000D is equipped with a microprocessor, with which the application ranging is evaluated. High accuracies can be measured by controllable averaging that accommodates high-dynamic movements. Specific distances can be defined as threshold values.

With the large measuring range the sensor can be used in many different industries for a large variety of tasks:

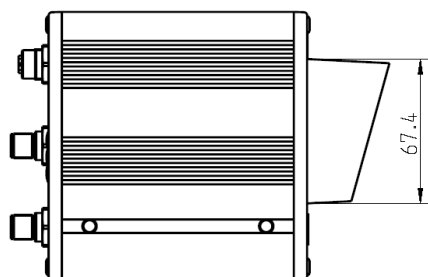
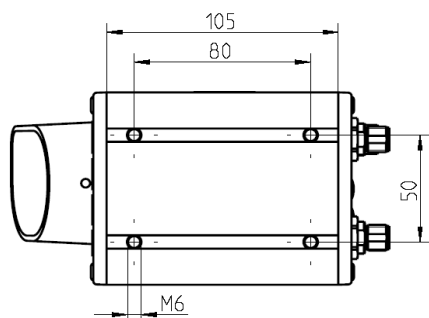
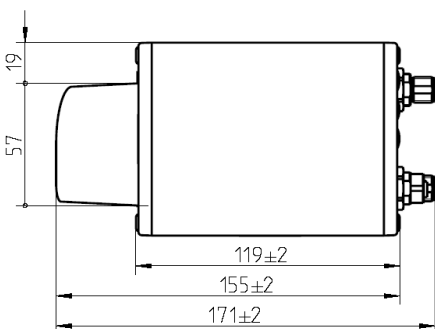
### General features:

- Contactless distance measurement
- Ranges of up to 800 m
- High accuracy, high resolution and high measuring rate
- Laser Pointer for the adjustment
- Interfaces: RS-232 / RS-422 / SSI  
Analog: 4..20 mA / Profibus DP / 2x digital
- Measuring frequency: 20 kHz
- Active dynamic control
- Modern lightweight design
- Simple configuration through 4 keys and display  
(alternative by configuration software)
- Complete S7 function block inclusive
- Close-up range blanking for dirt/dust suppression on front glasses
- Internal device temperature to read out via interface
- Continuous visible alignment light for easy adjustment
- Easy connection over 4 electrical plugs
- Measuring beam: Laser class 1

- Positioning of vehicles
- Intelligent light barrier
- Crane positioning
- Collision avoidance



# Technical Data LASE 1000D



Signification:	LASE 1000D-R	LASE 1000D-T
	Measurement on Reflector	Measurement on natural targets
<b>Interfaces</b>		
RS 232 / RS 422	✓	✓
SSI	✓	✓
Analog 4 .. 20 mA,	✓	✓
Profibus DP	✓	✓
Digital Outputs 2xPNP	E1, E2	E1, E2
<b>Ranges <sup>2)</sup></b>		
Reflektion foil (LASE)	1...500m	
HR-Plastic reflektors	1...800m	
white 90%		1...110m
grey 18%		1...55m
black 6%		1...30m
<b>Reproducibility <sup>1)</sup></b>	< 0,5 mm	white 90 % <50m ± 1mm " >50m ± 2mm grey 18% <35m ± 2mm " >35m ± 3mm black 6% <20m ± 2mm " >20m ± 3mm
<b>Measuring frequency</b>	20 kHz	20 kHz
<b>Resolution</b>	0,1mm, adjustable	0,1mm, adjustable
<b>Laserclass</b>		
Measuring laser	1 (905nm)	1 (905nm)
Laser pointer	2 (660nm)	2 (660nm)
<b>Divergence</b>		
Measuring laser	2 mrad	6 mrad
<b>Light spot</b>	ca. Ø 100cm by distance s=500m	ca. Ø 15cm by distance s=20m
<b>Output distance</b>	ASCII-Text	ASCII-Text
<b>Display / Controls</b>		
Function indicator 4LEDs	✓	✓
Control pad (4keys) for parameterization	✓	✓
Backlit Display for value display and parameter settings	✓	✓
<b>Electrical supply</b>		
Voltage	18 up to 30 VDC	18 up to 30 VDC
Current	0,25 A (24 V)	0,25 A (24 V)
<b>Environmental protection class</b>	IP 65	IP 65
<b>Temperature range</b>		
Operation	-10°C...+55°C	-10°C...+55°C
Storage	-30 C up to +70°C	-30 C up to +70°C
<b>Weight</b>	1,5 kg	1,5 kg

1) Typical Reproducibility for devices under constant environmental conditions (approx. 20°C, 1013 mbar, same target) after at least 30 min. power-on time

2) When close-up range blanking is activated the minimum distance increases to 1,5m

**LASE**  
Industrielle Lasertechnik GmbH

**Scope of delivery LASE 1000D:**

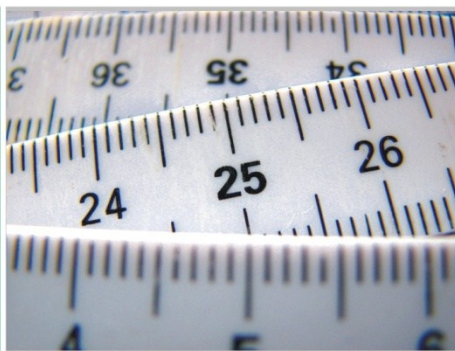
Sensor, Operating instruction, Configuration software, gsd-file, S7-function block

**SARLIN**

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V:/Dokumentation/Distanzmesser/LASE1000D/Datenblätter/DB LASE 1000D-E

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Updated:  
19.06.2013