sensor data sheet

LASE 1000D-R SERIES

With its large measuring range and rugged design the LASE 1000D-R Series is suitable for many different branches of industry and applications such as:

- Measurement of dimensions, levels and positions of objects
- Anti-collision
- Crane positioning
- Intelligent light barrier

THE SENSOR

The sensors from the LASE 1000D-R Series are contactless one-dimensional distance meters especially built for the operation in harsh industrial environments.

The LASE 1000D-R sensor measures by TOF technology (Time of flight principle) at distances of up to 800 m where reflectors are used. 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 interfaces, as well as a programmable analog 4 - 20 mA output. Furthermore, a PROFIBUS DP interface is available, too. Two switching outputs are on board which can be configured in logic and band width.

The LASE 1000D-R Series 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. Thus specific distances can be defined as threshold values.

SCOPE OF DELIVERY

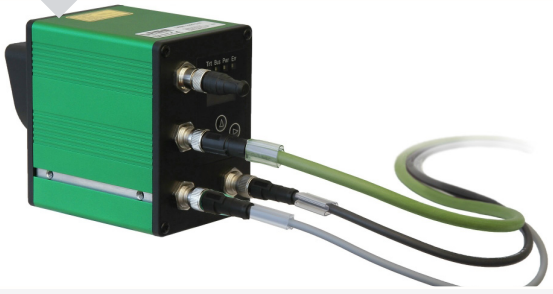
- Sensor, operating instruction, configuration software, gsd-file, S-7 function block

THE FEATURES

- Contactless distance measurement
- Ranges of up to 800 m
- Laser pointer for sensor alignment
- Measuring frequency 20 kHz
- S7 function block included
- Close-up range blanking for dirt/dust supression on front glasses
- Internal device temperature displayed via interface

THE BENEFITS

- Reliable TOF technology
- High accuracy, high resolution and fast measuring rate
- Several interfaces
- Active dynamic control
- Simple configuration by 4 keys and display
- Measuring beam: Laser class 1



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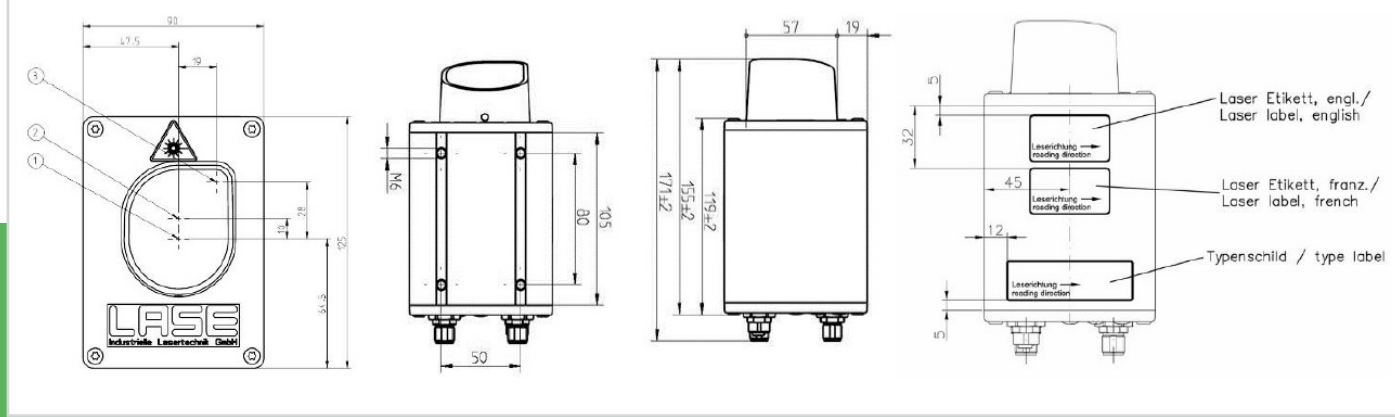
TECHNICAL DATA: LASE 1000D-R/ SERIES

LASE 1000D	-R	INFO
DISTANCE MEASUREMENT		
Measurement range [1]	1 ... 500 m	on reflection foil (LASE)
	1 ... 800 m	on HR plastic reflectors
Reproducibility [2]	< 0,5 mm	on white targets (90% reflectivity)
		on grey targets (18 % reflectivity)
		on black targets (6 % reflectivity)
Beam divergency	2 mrad	
Visual displays / controls	4 LED's	function indicator
	4-key control pad	for parameterisation
	backlit display	displays values and parameter settings
Laser classes	class 1	measuring laser (905 nm)
	class 2	marking laser (660 nm)
SCAN AND PROFILE MEASUREMENT		
Measuring frequency	20 kHz	
Resolution	0,1 mm	adjustable
Light spot	ca. ø 100 cm at 500 m	
Distance output	ASC II text	
INTERFACES		
RS 232 / RS 422	yes	
SSI	yes	
Analog	4 ... 20 mA	
Profibus DP	yes	
Digital outputs 2 x PNP	E 1, E 2	
ELECTRICAL & MECHANICAL		
Voltage	18 ... 30 V DC	
Current	0,25 A (24 V)	
Protection class	IP 65	
Weight	1,34 kg	
ENVIRONMENT DATA		
Temperature range	operation: -10° C ... +55° C	
	storage: -30° C ... +70° C	

[1] When close-up range blanking is activated, the minimum distance increases to 1,5 m.
[2] Typical reproducibility for devices under constant environment conditions (approx. 20° C, 1013 mbar, same target) after at least 30 min. operation time.



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