

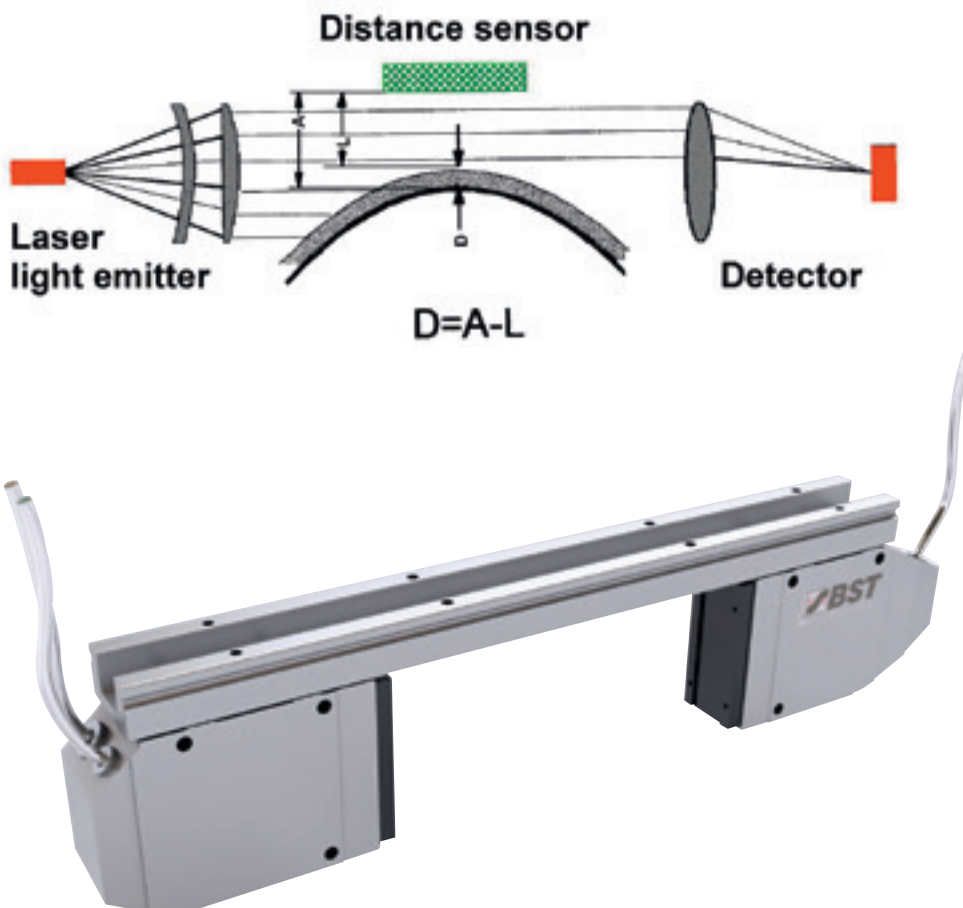
OPTICAL THICKNESS SENSOR "SHADEX"

Non-contact measurement of materials like foam, rubber, non-woven, composites

Features

- Measurement of thickness by non-contact principle
- Not influenced by colour/transparency
- Not influenced by material composition
- Resistant against harsh industrial environment

The measuring principle uses the shadowing of a linear laser beam by the material to be measured. A geometric well defined laser beam illuminates a rectangular measuring spot of typically 1 mm in cross direction to ensure high resolution. The material to be measured screens the beam within the measuring range, thus indicating the thickness over a reference roll. The dimension of the measuring range is adaptable to the application. The thickness of the web modulates direct the signal at the detection diode. With scanning sensors any offsets are compensated for by cyclic reference measurements at edges of web. An Eddy-current sensor compensates for the distance variations between the sensor and the reference roll. The optic can be protected for dust accumulation by air purging.



Be inspired. Move forward.

TECHNICAL DATA

Parameters	
Measuring range, typical	0 - 5.000 μm or 0 – 10.000 μm
Measuring accuracy, typical	+/- 3 μm or +/- 6 μm
Light source	Laser, class II
Wavelength	780 nm
Power	3 mW
Measuring spot (CD x MD) depending on application	1 x 5 mm, 1 x 10 mm (1 x 30 mm)
Ambient temperature	0....+45° C
Humidity, without condensation	max. 90 %

Measuring system with scanning frame and reference roll



For use in steamy / dusty environment and at higher ambient temperature special models with air purging and cooling are available.

We are happy to help!

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