

OLAS - Optical Light Absorption Sensor

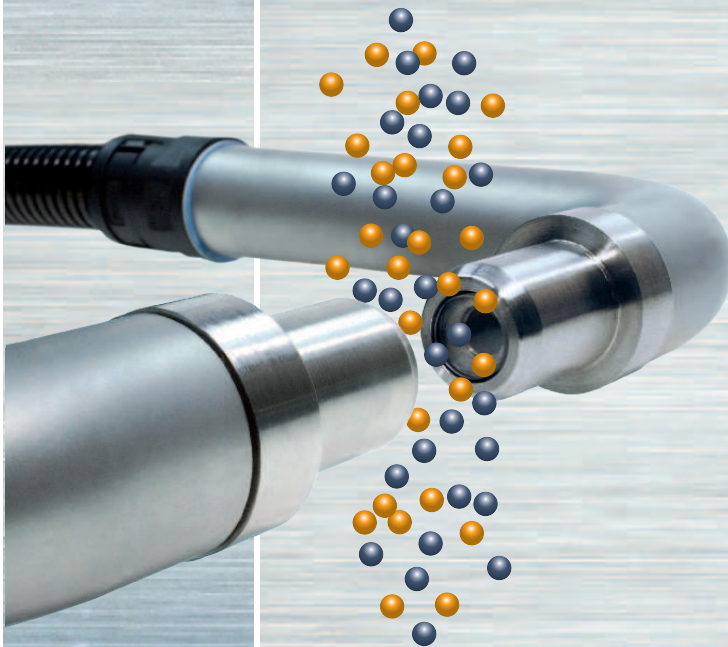
WORLD-NOVELTY

Optical system based on absorption of infrared light

Supersensitive and high linear online precision measuring method with a short settling time (instantaneous change of signal 10,000,000 : 1 is only 30msec)

Entire dynamic range: 140dB - 10.000.000 : 1 with just one measuring range

Optimized for high absorbing substances e.g. food industry, cuemical industry, petrochemical indistry, concrete industry, recycling industry, paper- and pulp industry, waste water industry, etc



Insensible for scratches and contamination of the measuring optic

Intgrated long-term-drift compensation

Contactless, hygiene compatible measuring is possible (e.g. through a teflonpipe barrel)

CIP - clean-in-place compatible

Menue driven teach-in calibration (user defined range of absorption)

Simple insttallation of the sensors e.g. by VARINLINE ®- housings or VARIVENT ® - sight glass



OLAS - TPC

 sensortechnik
WERNE & THIEL

Werne & Thiel sensortechnik GbR
Untere Muehlewiesen 2a, 79793 Wutoeschingen, Germany
Phone +49 7746 2425, Fax +49 7746 2588
info@werne-thiel.de, www.werne-thiel.de

OLAS - functional principle & specific features

The Optical Light Absorption Sensor - OLAS sends light into the medium and makes use of the accurately measured absorption of light to determine the composition of medium.

By this method not only the composition of water slurries, suspensions and composite materials of all kinds (e.g. foodstuffs, cement slurry, chemical pulp, particle filter etc.) can be determined, but also the thickness of foils and coatings and much else. Whatever in production, manufacturing or processing results in a change of absorption of light of medium can be measured, monitored and controlled by the OLAS.

Measuring range:

The OLAS needs only one measuring range to cover the entire dynamic range of 1:10,000,000 (internally even 1:100,000,000). So, there's no need to switch between several measuring ranges when measuring. The use of only one measuring range makes the OLAS extremely fast and precise: The settling time for an instantaneous change of signal (10,000,000:1) is only 30msec!

A fast settling time is crucial, if the absorption of fast changing media has to be measured, for instance when an inhomogenous medium is pumped through a pipe and the OLAS is mounted there.

Variable distance between emitter and receiver:

As the light absorption can differ a lot from the applications, the light path of the OLAS can be adapted to the medium of interest.

The distance between emitter and receiver is variable - so you can use the whole measuring range for the respective medium.

Illuminance changings of 1 : 10.000.000 is no problem for the OLAS.

Tough measuring-optic:

As the OLAS is designed to handle extremely high absorbing media, the OLAS is much less susceptible to contamination at the optics, because the medium is normally absorbing much more light than the contamination. So, normally, the influence of contamination at the optics on the measuring accuracy of OLAS is negligible.

Moveable optics can be use as submersible sensor in a basin/ tank or to integrate by VARINLINE®- housings in the process.