

Innovative technology for contact-free measurement of surface weight and thickness

## PC16S®-wave

### Precise measurement - maximum reliability

The PC16S®-wave transmission sensor measures the surface weight or thickness of flat sheet materials, using non-ionising, electromagnetic waves for the contact-free measuring process. This is why it is perfect for the accurate and rapid measurement of polymer-based mono films.

Compared with sensors based on ionising radiation, the national or international official requirements in this respect in terms of transport, operation and disposal do not apply to this sensor. Its outstanding EMC properties make PC16S®-wave a harmless and reliable choice for a wide range of measurement tasks. There is no interference with other devices and there are no health hazards.

### Application

- contact-free measurement of the surface weight of flat sheet materials of varying composition
- with constant thickness: thickness measurement in the same manner
- measurement and regulation of polymer-based mono films on calendars and flat film extrusion system
- measurement of heavily filled materials is possible

### Measuring process

The sheet of material to be measured is fed through the sensor gap. The interaction of the waves with the goods to be measured takes place there, including absorption of the waves. The signal becomes weaker depending on the surface weight and composition of the goods to be measured, with the latter saved as a product-specific variable. The time-resolved measurement of the signal records its weakening and delivers precise measurement results on that basis.



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# TECHNICAL DATA

Parameter	
Goods to be measured	Monofolie, polymerbasiert
Measurement range, typically <sup>[1]</sup>	bis 2000 g/m <sup>2</sup> <sup>[2]</sup>
Measurement accuracy 2σ, typically <sup>[1]</sup>	0,5 % bzw. 0,05 g/m <sup>2</sup>
Measuring gap	10 mm
Ambient temperature	maximum 30 °C
Ambient temperature	maximum 50 °C with water cooling
Scanning frequency	100 Hz
Interface	Ethernet; OPC communication
Dimensions of each sensor unit	350 x 175 x 150 mm <sup>3</sup> (L x b x h)
Weight	3 kg
Power rating	0,1 kW
Voltage	230 VAC, 3 - phase

[1] Measurement range and accuracy are dependent on the composition of the goods to be measured.

[2] An extended measurement range > 2000 g/m<sup>2</sup> is available as an option.

## PC16S®-wave – its advantages

- compact design
- simple installation into existing systems
- modular application adaptation
- innovative technology, e.g. with digital processing of measured values in the measuring head
  
- high scanning frequency of 100 Hz
- large measuring range, up to 2,000 g/m<sup>2</sup>
- rapid transmission of the measured data via Profinet protocol
- greater measurement accuracy in some respects with regard to measurement range than is the case with sensors using ionising radiation
  
- easy handling, for example as a result of the rapid replacement of the plug-in emitter, rapid changeover device for measurement windows and quick clamping device for mounting sensors
- no official requirements for transport, operation and disposal
- effective component replacement as a result of modular construction
  
- high efficiency – lower ancillary purchase costs than for comparable sensors with ionising radiation
- long-term minimisation of radiation protection costs
- longer life cycle of approx. 15 years

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### We are happy to help!

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