PAMAS
Partikelmess- und Analysesysteme

PAMAS S50DP
Online particle counter with integrated dilution system

Automatic particle counter for online measurements with integrated dilution device

Applications:

- Sample fluids which cannot be analysed without prior dilution, e.g. highly contaminated or high viscous fluids or samples containing undissolved additives
- Fuel containing free water:
  Without prior dilution, free water in fuel would lead to false measurements. With the dilution device, the water drops in the fuel sample are dispersed in the added solvent and thus are not detected as particles during posterior online measurement.

Volumetric measuring cell:

The volumetric cell design of PAMAS sensors guarantees highest accuracy and reproducibility. Every single particle of the sample volume is analysed on its way through the measuring cell.

Resolution:

Particle measurement in eight size channels

REV 03/2018

IN THE WORLD OF PARTICLES PAMAS COUNTS

PAMAS S50DP
Automatic dilution before online measurement

The **PAMAS S50DP** online particle counter offers an integrated dilution system to dilute the sample liquid directly online. The measuring instrument is best for samples which are either too contaminated or too viscous or which may contain undissolved additives. Such sample fluids until now could not be analysed without prior dilution.

The **PAMAS S50DP** is equipped with an integrated dilution system which continuously adds a programmable amount of a low viscous solvent (e.g. Resolver™) to the raw sample before online measurement. The system's inner structure ensures that solvent and raw sample are thoroughly mixed. This helps to get a good homogeneity of the mixture and hence repeatable measuring results.

In addition to digital data transfer, the instrument has an interface for analogue data transfer; via 4-20 mA-channel, the data can be transferred to a PLC (Programmable Logic Controller).

The integrated wear resistant ceramic piston pump guarantees a constant flow rate of 25 ml/min at a pressure range from 0 to 6 bar.

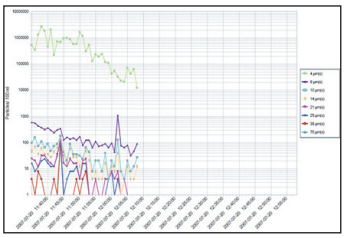
With its eight different size channels, the **PAMAS S50DP** particle counter counts particles in eight size classes. The instrument measures the particle sizes
> 4 µm(c), > 6 µm(c),
> 10 µm(c), > 14 µm(c),
> 21 µm(c), > 25 µm(c),
> 38 µm(c) and > 70 µm(c).

Calibration
The Automatic Particle Counter is calibrated according to International Calibration Standards. The Calibration is traceable to Standard Reference Material® of the NIST (National Institute of Standards and Technology).

Software
The PAMAS S50DP online particle counter can be operated with two optional software programmes:
- PAMAS POV software (PAMAS Online Visualization)
- PAMAS PCT software (PAMAS Component Test)

With the help of the software, the measuring results are reported according to common cleanliness standards (e.g. ISO 4406 or SAE AS 4059). The measuring parameters may be programmed individually according to operator needs.

PAMAS POV software
The measuring operation can be started and stopped with the PAMAS POV software (PAMAS Online Visualization). The measuring results are displayed on charts and schedules and can be printed and exported.



Cumulative and differential counts reported in numerical tables or in illustrative graphs

The software simultaneously controls several sample points.

PAMAS PCT software
The PAMAS PCT software (PAMAS Component Test) enables online cleanliness tests of manufactured components in machinery engineering applications (test rigs).

The particulate contamination is reported numerically or shown on a graph via single measurement results or via arithmetic means of successive measurements. The PAMAS PCT software automatically stores measuring data and parameter.

TÜVRheinland ZERTIFIZIERT
Management System
ISO 9001:2015
www.tuv.com
ID 9105038017

▪ Technical Data

Particle counter:
Particle measurement in eight size channels: > 4 µm(c), > 6 µm(c), > 10 µm(c), > 14 µm(c), > 21 µm(c), > 25 µm(c), > 38 µm(c) and > 70 µm(c)

Pressure range:
0 - 6 bar

Data transmission:
- standard equipment: RS 485 interface
- optional equipment: analogue 4-20 mA interface. Parallel data transmission for the size channels 4, 6, 14 and 70 µm(c) or serial data transmission for all eight size channels.

Volumetric sensor:

PAMAS HCB-LD-50/50
Calibration range:
4-70 µm(c) according to ISO 11171
Max. particle concentration:
24,000 p/ml*

PAMAS HCB-LD-25/25
Calibration range:
4-70 µm(c) according to ISO 11171
Max. particle concentration:
120,000 p/ml*

*at a flow rate of 25 ml/min and a coincidence rate of 7,8%

Size:
330 x 230 x 164 mm

Case protection:
IP 64

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