POSTNOVA

PN3712 Online DLS

Flow-Through DLS for PN3600 MALS

High-Sensitivity Flow-Through DLS selectable at various angles for Postnova PN3600 MALS Series

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Features

High Sensitivity Online Dynamic Light Scattering Detector Add-on Module, especially for connection to MALS detector cell as subsequent detector for Size Exclusion and Field-Flow Fractionation (FFF) separation. Possibility to perform online DLS and MALS measurement to obtain Particle Size (R_h/R_g) and Molecular Weight (M_W) in the same scattering volume in one flow cell.

Online DLS Detector Module

The new PN3712 advanced online DLS module can be directly linked to any PN3600 series MALS detector. It operates with state-of-the–art industry leading photodetector hardware and a powerful hardware correlator. The correlator has been especially developed to meet the requirements of complex samples such as biopharma, polymer and particle systems with significant heterogeneity and high diluted lower concentrated samples. The PN3712 Online DLS module allows direct operation of Online Mode DLS inside any PN3600 MALS flow cell and can be connected to any angle in the range of 44° - 140° and connected to upfront SEC and FFF separation. The module allows to continuously determine correlation functions and R_h values in the same flow cell volume where the MALS static light scattering data for calculation of R_g and M_W is acquired without dilution effects.

Online DLS Software Module

The advanced DLS control software for operation in connection with Nova software allows fully automated operation and ease of use for any operators. Software allows specific selection of DLS parameter including calculation model (Contin, etc.) for advanced DLS research application. By using the standards settings software also can be used in routine mode for generating DLS and R_h data for standard measurements. Software also allows post-adjustment of processing parameters in order to obtain most meaningful DLS data. Data will be stored additional as ASCII / CSV files and thus be exported to other external software packages, such as Mathlab, Origin, etc. for further evaluation and processing. Several parameters can be exported additional to R_h, such as temperature, DLS settings and intercept.

Online Mode Specifications

- Particle size range (R_h): 0.5 - 500 nm*
- Sensitivity: 50 µg of 60 nm polystyrene latex
- Typical SEC/FFF flow rate range: 0.05 to 0.5 mL/min
- Pressure range: maximum 15 bar differential pressure at cuvette inlet/outlet

* Depending on sample material, concentration and SEC/FFF flow rate

Ordering Information

S-DET-3712-001	Add-on Online DLS for PN3600 MALS
P-NVA-DLS-001	NovaDmax DLS Control Software for PN3712

Specifications

- Operatom Mode:
  Multiple Tau Correlator Mode
- Channel Layout:
  16/8 semi-logarithmic correlator computes auto and cross correlation function in real time
- Measuring Cell Volume:
  63 µL
- Initial Lag Time Selectable:
  12.5 ns
  200 ns
  400 ns
  800 ns
  1600 ns
  3200 ns
- Number of Correlation Channels:
  320
- Number of Monitor Channels:
  296
- Minimum Sampling Time:
  12.5 ns
- Maximum Sampling Time:
  3436 s
- Normalization Selectable:
  Symmetric, Compensated
- Max Count Rate:
  20 Mcps over 52 ms integration interval
- Channel Capacity:
  40 bit
- Strd Count Trace Sampling Time:
  ~52 ms
- Host Communication Modes:
  USB2, 480 Mbit/s maximum data rate
- Software Algorithms:
  Cumulant Analysis, CONTIN
- Power Requirements:
  100 - 240 VAC @ 50 - 60 Hz, 40 VA / 100 W max.
- Environmental Conditions:
  20 - 80 % relative humidity (non-condesing) at an operating temperature range of 5 - 30°C
- Dimensions:
  43 cm x 27 cm x 9 cm
- Shipping Weight:
  5 kg

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