OptoElektronik GmbH

LDPC
Monitoring Systems

The LDPC series particle sensors have been specifically designed for the manifold measuring tasks in cleanrooms. The flexible connection via RS-485 bus system utilizes the LDPC series for all common measuring methods and standards used in the pharmaceutical industry, semiconductor production, biotechnology and many other manufacturing processes with cleanroom conditions. In particular, the continuous particle monitoring of the LDPC system offers superior performance compared to conventional monitoring systems: The installation in an existing cleanroom requires minimum effort and each sensor can be provided with either an internal or external vacuum pump which saves the labour of installing vacuum nets. It is also possible to connect the LDPC sensors to an in-house vacuum net.

At a glance
- Size range from 0.1 µm with a max. of 16 feely selectable particle size channels
- Networking with up to 32 sensors
- Can be connected to the central building control system
- System available with internal vacuum pump, external vacuum pump and connections for in-house vacuum system
- Connections for air velocity, differential pressure and Temp/RH probes

Applications
Using the LDPC series monitoring system, you're able to realize the continuous control and supervision of sensitive production processes. The LDPC is used in the:
- Pharmaceutical industry
- Biotechnology
- Semiconductor technology

Benefits
Probes for air velocity, differential pressure and Temp/RH as well as audible alarm transmitters can be connected directly to the system.

Optional accessories
- Air velocity probe, differential pressure probe, Temp/RH probe
- Alarm console with optical and audible alarm, acknowledgement function
- Isokinetic probe with stand
- Installation accessories for the integration in cleanrooms
- **and much more accessory you can find on our homepage or simply give us a call**

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Specifications*

LDPC P1

Monitoring systems with internal vacuum pump (P1), networking via RS232 or RS485 interface.

Features	LDPC 1-2 P1	LDPC 2-5 P1	LDPC 3-10 P1	LDPC 5-10 P1
Size range [µm]	0.1 - 2	0.2 - 5	0.3 - 10	0.5 - 10
Particle Channels	Standard setting or a maximum of 16 freely selectable particle size channels			
Counting Efficiency per ISO 21501-4	50% at 0.1 µm 100% at > 0.15 µm	50% at 0.2 µm 100% at > 0.3 µm	50% at 0.3 µm 100% at > 0.45 µm	50% at 0.5 µm 100% at > 0.75 µm
Concentration Limit	1 Mio./ 1 CFM			
Light Source	Laser diode			
Zero Count	Per ISO 21501-4: < 1 count/ 5 min.			
Flow Rate	1 CFM; 28.3 L/ min.			
Flow-Generator	Internal vacuum pump			
Calibration	Per ISO 21501-4: Latex-Aerosol			
Communication Mode	Standard RS 232 for single application, RS 485 for networking			
Dimension DxWxH [cm]	15x20x30			
Weight [Kg]	8			

LDPC P0/ P0Z

Monitoring systems with external vacuum pump (P0) or with connections for the in-house vacuum system (P0Z), networking via RS232 or RS485 interface.

Features	LDPC 3-10 P0	LDPC 5-10 P0	LDPC 3-10 P0Z	LDPC 5-10 P0Z
Size range [µm]	0.3 - 10	0.5 - 10	0.3 - 10	0.5 - 10
Particle Channels	Standard setting or a maximum of 16 freely selectable particle size channels			
Counting Efficiency per ISO 21501-4	50% at 0.3 µm 100% at > 0.45 µm 50% at 0.5 µm 100% at > 0.75 µm			
Concentration Limit	1 Mio./ 1 CFM			
Light Source	Laser diode			
Zero Count	Per ISO 21501-4: < 1 count/ 5 min.			
Flow Rate	1 CFM; 28.3 L/ min.			
Flow-Generator	External vacuum pump module in a separate housing		Connection to the in-house vacuum system	
Calibration	Per ISO 21501-4: Latex-Aerosol			
Communication Mode	Standard RS 232 for single application, RS 485 for networking			
Dimension DxWxH [cm]	15x15x17			
Weight [Kg]	2			

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LDPC 420

Monitoring systems with internal vacuum pump (P1), external vacuum pump (P0) or with connections for the in-house vacuum system (P0Z). Networking via 4 -20 mA analog output.

Features	LDPC 3-10 P1 420	LDPC 5-10 P1 420	LDPC 3-10 P0 420	LDPC 5-10 P0 420	LDPC 3-10 P0Z 420	LDPC 5-10 P0Z 420
Size range [µm]	0.3 - 10	0.5 - 10	0.3 - 10	0.5 - 10	0.3 - 10	0.5 - 10
Particle Channels	Standard setting or a maximum of 16 freely selectable particle size channels					
Counting Efficiency per ISO 21501-4	50% at 0.3 µm 100% at > 0.45 µm 50% at 0.5 µm 100% at > 0.75 µm					
Concentration Limit	1 Mio./ 1 CFM					
Light Source	Laser diode					
Zero Count	Per ISO 21501-4: < 1 count/ 5 min.					
Flow Rate	1 CFM; 28.3 L/ min					
Flow-Generator	Internal vacuum pump		External vacuum pump module in a separate housing		Connection to the in-house vacuum system	
Calibration	Per ISO 21501-4: Latex-Aerosol					
Communication Mode	Networking via 4-20 mA analog output					
Dimension DxWxH [cm]	30x15x20	30x15x20	17x15x15	17x15x15	17x15x15	17x15x15
Weight [Kg]	8	8	2	2	2	2

* All information is non-binding; specifications are subject to change without notice.

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