

online laser particle size analyzer with different model

The online laser particle size analyzer is a highly automated particle size inspection device for powder production, designed to monitor and optimize the particle size distribution during the production process in real time.

Online Laser Particle Size Analyzer

Online laser particle size analyzer not only improves product quality and capacity, but also significantly reduces energy consumption and labor involvement. Through deep integration with the production line, it realizes intelligent, unattended and efficient management of powder particle inspection, which is an important part of modern industrial automation.

Main Features

1. **Modularity and flexible combination:** The equipment adopts modular structural design, core components such as sampler and test host can be flexibly matched according to the site requirements, to adapt to a variety of complex working conditions.



2. **A wide range of industry applicability:** Not only in the carbon, building materials, chemicals, abrasives and other traditional industry applications, but also gradually expanded to food, medicine, metallurgy and other fields.
3. **High-precision data collection:** The system integrates automatic sampling and automatic testing process, effectively eliminating human error, particle size detection accuracy far exceeds the manual sieving or offline testing.
4. **Real-time data feedback:** Continuous monitoring of production status, rapid response to process fluctuations, reducing the occurrence of defective and scrap.
5. **High durability and self-maintenance:** With power outage protection, shutdown protection, automatic cleaning and other functions to ensure long-term stable operation, basically no manual maintenance.
6. **Automatic recycling of materials:** After testing, the materials are automatically returned to the production line or transportation pipeline to avoid waste of raw materials.
7. **Standardized data interface:** Seamless access to DCS, PLC and other automation control systems, and other equipment to achieve linkage, support for remote monitoring and unattended.

Different Models of Online Laser Particle Size Analyzer

1. **Model LP1001:** Adopts laser diffraction method, based on Fraunhofer and MIE theory, Rong light scattering light energy spectrum inversion of particle size distribution, the resolution reaches the international level. Convergence of wide Fourier light path involved, energy consumption reduced by 30%. Laser diffraction method is fast and efficient, real-time, suitable for high-frequency data acquisition scenarios, such as cement raw materials, coal powder production line.
2. **Model LP1002, LP1003, LP1004:** Are used image analysis method, without mathematical modeling, through the high frame rate industrial camera to capture the particle really shape. In addition to the particle size distribution, you can obtain the sphericity, length-to-diameter ratio and other morphological parameters, suitable for industries that require shape control, such as construction aggregates, fertilizer particles and so on.

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Model	LP1001	LP1002	LP1003	LP1004
Measurement Range	0.1um to 500um	30um to 3000um	10um to 300um	50um to 10000um
Field of Application	Cement, slag powder, coal powder, battery materials	Ore slurry, metal slurry, mud slurry	Ore Aggregate, Ore Crushing	Mechanized sand, fertilizer pellets, grain
summarize	Specialized for dry measurement of fine powders by laser diffraction method	Wet image method	Imaging method specialized for large particles	Large Particle Dry Imaging method