



OFS-2000P™ Optical Flow / Particulate Sensor

OSi's patented Optical Flow/particulate Sensor (OFS) makes drift-free measurements across the entire stack, duct or pipe diameter and calculates accurate average flow and mass emissions rates. It is the only sensor that combines flow velocity and particulate measurement and gives a true non-contacting cross-stack measurement of the process. The OFS uses our EPA Method 14 approved optical scintillation technology. The optical scintillation technique relies on advanced Digital Signal Processing (DSP) electronics to "see" and measure the movement of turbulence and particulates found in a gaseous flow stream to provide highly accurate, path-averaged velocity and particulate measurements. The accuracy of the OFS has been proven both in NIST's (National Institute of Standards and Technology) wind tunnel and in numerous real-world installations.

- **Cross stack/duct/pipe line measurement for more accurate readings.**
- **Measures both true flow velocity and particulate mass emissions rate.**
- **Non-interfering; nothing protruding into flow path.**
- **Uses visible / modulated LED source – not affected by background light.**
- **Easy installation and optical alignment.**
- **DSP and microprocessor based with built in continuous self-test diagnostics.**
- **Optional z-purge available for Class I / Div 1 & 2 applications**
- **Standard RS-232 and 4-20mA current loop outputs (other options available)**
- **No upstream/downstream diameters or angled-path installation requirements.**
- **Long-term reliability; no blowers or moving parts; operates unattended - 24 / 7 / 365.**
- **Ultra low maintenance design.**
- **Rugged; designed for harsh environments.**
- **No high temp limits; can be easily isolated from media with optional sight glasses.**
- **Measurement unaffected by path length & media temp, pressure or moisture.**
- **CE, CSA & UL certified. OSi is ISO-9001.**
- **Unbeatable combination of advanced technology, high performance and proven reliability!**

The OFS consists of DSP / multiprocessor - based control unit teamed with a set of optical transmit and receive heads which are easily installed on opposite sides of a stack, duct, vent or pipe. The OFS heads mount fully outside of the media volume behind optical windows for easy access, more accurate measurements, and greater durability. The transmit head sends a visible diverging light beam (easy to align and vibration resistant) directly across and perpendicular to the flow (although existing angled-path port can be used). The control unit processes the fluctuations seen by the receive head and displays the flow and particulate data locally and transmits it to a PC, PLC, DAS or other data collection device that accepts a serial data link and / or a 4-20 mA current loop. The control unit can be configured from either the local keypad and display, or from a laptop or portable terminal.