

OS421 Smoke Sensor

The OS421 optical smoke sensor is used in mine haulages and shafts to measure smoke in the environment. It is an indispensable aid to the ventilation engineer, providing accurate measurements of smoke and early fire warning in underground mining operations.

The optical smoke sensor seamlessly integrates with any third-party system capable of interpreting 4-20mA signals, which includes our industry leading SL2010 Fire Detection and Environmental Monitoring system.

KEY FEATURES

- Laser Scattering Technology
- Measures Smoke in 0-100% range.
- 15-30Vdc Input Voltage, 4-20mA Analog Output
- Ruggedized Design

APPLICATIONS

- Intake air ways
- Return air ways
- Cable ducts/ tunnels
- Conveyor belt drive houses
- Conveyor Tunnels

PRODUCT INFO

Type: OS421

Part Number: SP00845



OS421 OPTICAL SMOKE SENSOR

FUNCTIONALITY

- The OS421 is an optical smoke sensor that uses laser scattering from visible smoke particles to detect smoke.
- The sensing module uses a fan to draw in air for sampling inside an optical chamber. The visible particles are counted and measured for size to determine the level of smoke.
- The OS421 has a 3 wire 4-20 mA industry standard electrical interface, making it compatible with most industry standard controllers, including SL2010 IOC devices.
- The OS421 electronic enclosure is ingress protected to IP 65 against dust and water.
- The OS421 is fitted with two external voltage test pads where the output signal can be verified with a Digital Multi- Meter (DMM).

CERTIFICATION

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MECHANICAL SPECIFICATIONS

Physical Dimensions: 127mm x 123mm x 260mm

Weight: ± 2.3 kg

SPECIFICATIONS

Measuring Range: 0 – “100%” Smoke

Analog Output Signal: 4-20 mA

Maximum Load Resistance: 800 ohm @ 24V

Test Signal: 40 mV: Zero
200 mV: Full Scale

Supply: 15 - 30VDC
(3 wire system)

Analog Output Signal: 4 mA - 0%
20 mA - 100%

Electrical Protection: Test output is short circuit protected

Warm Up Time: < 30 sec

Life Expectancy: Up to 10 years

ENVIRONMENTAL SPECIFICATIONS

Water and Dust: IP 65

Temperature: 0 °C to +55 °C