

## + Overview

Mill & Silo Monitoring is a monitoring system specifically designed to continuously detect carbon monoxide (CO) in pulverizing mills. The high level of CO produced by any incomplete combustion process is used by the MSM-100 system as advance warning of a mill fire. It is suitable for any coal or peat system where advance warning of spontaneous combustion is required. MSM-100 is intended for operation in the electricity, metals, cement, steel and processing industries. The MSM-100 system consists of three principle parts, probe, blowback unit, and the monitoring unit.

## + Product Features

- + The MSM-100 probe is flange mounted, and designed to withstand a very high level of abrasive particles. The probe surface has Nanometer wear-resistant coating
- + Automatic blowback function
- + Double-sensor technology, automatic timer, auto calibration mechanism, extended sensor service life, precision information, and zero point stability.
- + MSM-100 technology can detect and alert personnel faster than any temperature gradient detection mechanism.

## Typical Applications

- + Storage Silos
- + Pulverizing Mills
- + Grinding Plants
- + Coal Bunkers



## + Specifications

|                             |  |
|-----------------------------|--|
| Measuring Range             | 1ppm ~ 100ppm / 1ppm ~ 4000ppm   |
| Resolution Ratio (Optional) | 1ppm (1mg)   |
| Repeatability               | ± 2% Measuring Range   |
| Linear                      | < 2% Full Range  |
| Zero-drift/Span-drift       | < 2% Full Range  |
| Current Loop Outputs        | 4mA ~ 20mA isolated Output, Maximum Loop Impdance 1000 Ω   |
| Relay Outputs               | CO High Alarm, CO Low Alarm, System OK, System Maintenance   |
| Operating Temperature       | -40 ~ +55 °C (-40 ~ + 131 °F)  |
| EMC                         | EN-61326   |
| Power Supply                | EN-61010-2,220V 50Hz,300W  |
| Zero Calibration (Air)      | 2 bar, Clean & Dry, Flow Volume 5L/min   |
| Cooling Air                 | 2 bar ~ 10bar, Clean & Dry, Flow Volume 90L/min, Ambient temperature<30°C, cooling is not required |
| Overall Dimension           | 600mm x 600mm x 350mm  |
| Weight                      | 53kg   |
| Standard Gas Categories     | Working Components CO / Background Components N <sub>2</sub>                                       |

## Operating Principle

1. Mill
2. Probe
3. Sample Gas- to detecting unit
4. Radiator
5. Cooler Unit
6. Condensate Catch Pot
7. Particulate Filter
8. Sampling gas flow sensor
9. Sample Pump
10. O<sub>2</sub> Sensor (Single Channel Optional)
11. Ambient Air Inlet
12. Solenoid Valves
13. CO double sensors
14. Exhaust outlet
15. Compressed air blowback electromagnetic valve
16. Compressed Air Inlet

