



# AS-3100 Sensors

**CO**  
**Methane**  
**Airflow**



- **High accuracy airflow sensor**
- **Flexible use CO sensor**
- **Low power methane sensor**
- **Sensor array for sections**
- **Wi-fi version coming soon!**

Matrix AS-3100 sensors provide the most advanced atmospheric monitoring technology for coal mine ventilation management. Working independently or together as an array, AS-3100 sensors can detect everything from quick-changing, hazardous conditions requiring immediate action to subtle, slower-changing conditions. This accurate, real-time information allows mine personnel to manage potentially unsafe conditions while avoiding costly downtime when possible.

AS-3100 sensors include a high-accuracy airflow sensor, a low-power methane sensor, and a flexible-use carbon monoxide sensor. Each sensor is Intrinsically Safe, with MSHA approval.

[www.matrixteam.com](http://www.matrixteam.com) 

# AS-3100 Sensors

Dynamic on-screen  
instructions for  
step-through  
calibration



Deploy sensors individually or as a sensor array to minimize advancement labor costs.

## Airflow Sensor (AS-3100-AF):

- MSHA approved Intrinsically Safe
- Uses custom Matrix low-power consumption sensing element – much more accurate than other sensors currently in use.
- Sensor element is easy to clean with compressed air and is independently replaceable.
- Wired or wireless configuration, with IS barrier for wired use in permissible areas
- High-visibility backlit graphic LCD display and simple four-button keypad user interface
- Sensor is accurate from -2000 to 2000 FPM (can measure airflow in both directions)
- Sensor is able to detect airflow at less than 100 fpm

## CO Sensor (AS-3100-CO):

- MSHA approved Intrinsically Safe
- Uses electro-chemical sensor element, with advanced Matrix PCB, accurate from 0 - 200 PPM
- Reports temperature and is temperature compensating
- Wired or wireless configuration, with IS barrier for wired use in permissible areas
- Simple on-screen calibration – no complex instructions
- High-visibility backlit graphic LCD display and simple four-button keypad user interface
- Stable in areas with ambient CO
- The successor to the proven Matrix S1000 CO sensor, the first MSHA-approved wireless, battery-powered CO sensor

## Methane Sensor (AS-3100-CH4):

- MSHA approved Intrinsically Safe
- Uses an advanced infrared element, capable of high-resolution measurements in permissible environments (0.01 % for 0-10% methane and 0.1% for 10-100% volume)
- Reports temperature and is temperature compensating
- Wired or wireless configuration, with IS barrier for wired use in permissible areas
- Simple on-screen calibration – no complex instructions
- High-visibility backlit graphic LCD display and simple four-button keypad user interface

Wi-Fi Versions and new OXYGEN SENSOR coming soon!

The Matrix Sensor Relay let's you seamlessly interface through other systems

## Sensor Relay (SR-3000):

- Supports 16 sensors. All sensors can be in permissible areas if needed, using a single inexpensive Sensor Barrier (SB3000)
- Uses industry-standard 4-20mA analog outputs for data, which readily interfaces with most data collection/control systems
- Uses the same simple user interface as the AS3100 sensors, making channel-mapping simple

## Sensor Array (AS-3100):

- Airflow, Methane, and CO sensing in a convenient, easy-to-deploy package
- Designed to be used at section splits to minimize advancement labor
- A single power & data wire can be daisy-chained from sensor to sensor
- Uses inexpensive uni-strut channel which can be hung from roof bolts with a variety of fasteners

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