



M5™

Machine-Mounted Methane Monitor



- **MSHA approved**
- **No “zero drift”**
- **Water resistant**
- **Tough, effective & simple**
- **Easy, stable calibration**
- **One system can run two sensors**

The Matrix M5™ is a significant improvement over existing machine-mounted methane monitors available in the US coal market. Because of its unique sensor design, system software and beacon sensor monitoring technology, the M5 is more precise and maintains no “zero drift” even when environmental conditions vary.

M5 offers lower total cost of ownership, easy and stable calibration (at display or beacon), water resistance and simple maintenance.

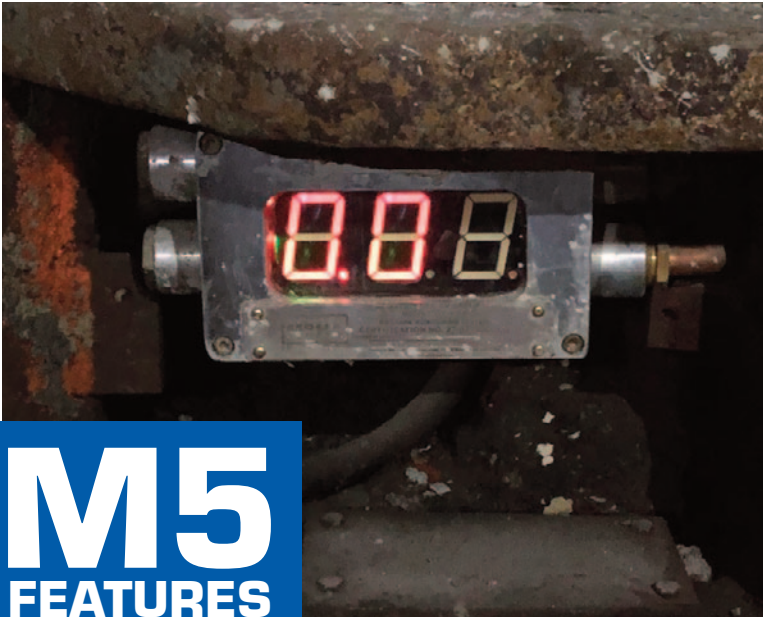
Worldwide, more than 300 units are in operation.

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M5™

Machine-Mounted Methane Monitor



NO “ZERO DRIFT” Faster, Easier Calibration

Users can calibrate M5 on the display *or* beacon. If the beacon is mounted close to the sensor, a miner can apply test gas to the sensor and apply the magnets to the beacon without going back to the display.

The sensor can be connected directly to the beacon or extended as shown on the next page. This option gives you more choices on where to position the sensor.

While miners still need to bump check each shift, the 4-20 milliamps connection allows for a more stable calibration, so they generally don't need to calibrate as often.

M5 FEATURES

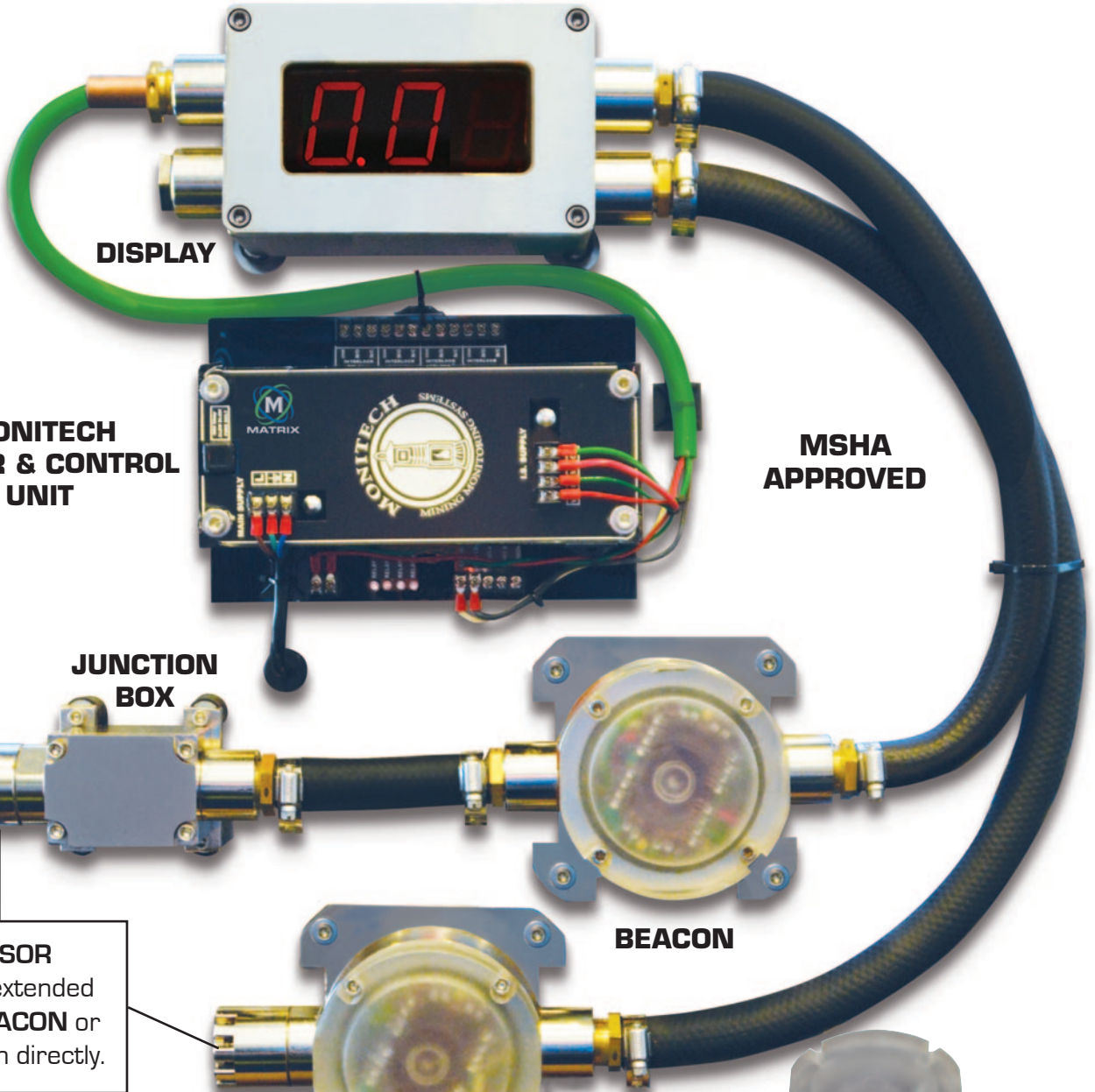
- **Highly Water-Resistant:** Improved sensor design and component materials makes it extremely water-resistant. The M5 advantage is that miners can wash off their CM with a hose without worry.
- **Easily to Maintain:** M5 is a new sensor technology but maintained the old, familiar way, so it's easy for miners to adopt.

WHAT MAKES THE M5 SENSOR BETTER?



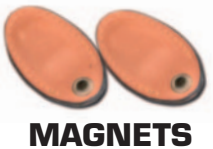
- **Baffle Design** – the baffle on the end of the sensor helps stop water from getting back to the sensor.
- **Internal Design** – the sensor is manufactured to be more robust and vibration-resistant.

- **Beacon:** Monitors operating environment and communicates with the control unit. M5 converts volts to milliamps, which is a more stable way to transmit information and less susceptible to outside interference.
- **Highly Vibration-Resistant:** Rubber grommet mountings and robust filaments deliver longer service life in high-vibration environments.
- **High-Level Service and Support:** Matrix has highly experienced field service people that are available to advise, install and service the M5.



SENSOR

SENSOR
can be extended from **BEACON** or plugged-in directly.

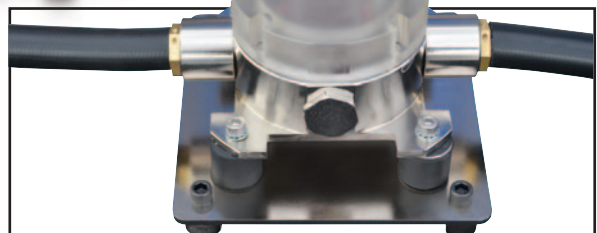


MAGNETS

SENSOR

BEACON

BEACON



WHAT DOES THE BEACON DO?

The M5 beacon is a new feature for methane monitors in the US.

- Monitors sensor output with M5's unique monitoring technology, then communicates with the system software to maintain a steady zero.
- Provides longer lasting and better calibration. You can calibrate the system at the BEACON or DISPLAY.

TWO SENSORS – ONE POWER SUPPLY

If your operation is required to run two CH4 sensors, you only need one M5 system. When M5 runs a dual system, it has two beacons, two sensors and cabling into the controller. Only one power supply and display are needed. The sensor detecting gas is the one that will actively display its reading. An LED will indicate which sensor you're looking at, then you can use your magnet to switch between the two.

VENTILATION MANAGEMENT

Matrix atmospheric monitoring sensors provide the most advanced technology for ventilation management. Working independently or together as an array, Matrix 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.

Wi-Fi or Wired • Dynamic on-screen instructions for step-through calibration



Airflow Sensor



CO Sensor



Methane Sensor

ABOUT MATRIX

Matrix Design Group LLC is the safety and productivity technology leader for underground mining and industrial applications. Its innovative product line includes systems for proximity detection, communications and tracking, atmospheric monitoring, lighting and cameras. Since 2006, Matrix's core business has been mining safety. The company designs, manufactures, sells and supports a range of



cost-effective, built-for-purpose new-tech products. While best known for its IntelliZone® proximity detection system, Matrix has expanded beyond the underground coal mining industry and now sells into all types of mining and industrial markets globally. Today, the company has introduced – and continues to launch – suites of leading-edge products that help their customers operate more safely and productively. M5 is the latest example.

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