NAUTITECH®

HARNESSING TECHNOLOGY TO KEEP MINERS SAFE

METHANE MASTER

Methane Master

CH4 Monitoring and Shutdown

Scan QR Code for
more information

nautitech.com.au

The Nautitech® Methane Master with hybrid snout is designed and tested for STATIC and DYNAMIC conditions in underground mining where there are sudden shocks in temperature and/or humidity. The Methane Master monitors and measures the concentration of methane in hazardous environments and is the leading shut-down and start-up system in Australia.

Manual and automated time response and telemetry testing to AS2290.3.2018 standards

Shock resistant to sudden changes in temperature or humidity

KEY FEATURES

DISPLAY
Rugged Hawkeye display with full colour graphics

RAPIDSENSE I.S. SENSOR HEAD
For continuous methane monitoring (with software upgrade)

FITTING FOR SENSOR
With anti-condensation heating

SINTERED FILTER KIT
For increased Ingress Protection

HYBRID SNOUT
Designed for quick removal for cleaning

- Shock resistant to sudden changes in temperature or humidity
- Manual and automated time response and telemetry testing to AS2290.3 2018 standards
- Intrinsically Safe sensor
- Not susceptible to "poisoning"
- Infrared sensing technology
- Fast warmup times
- Rugged stainless-steel construction
- Robust ingress protection
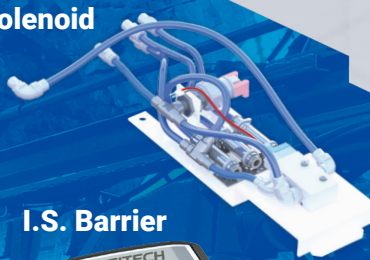
STANDARD SYSTEM

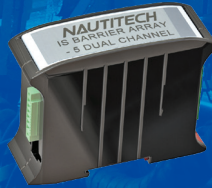## MEDIUM FLAMEPROOF ENCLOSURE

Battery Charger

Air Solenoid

I.S. Barrier

7.2V Battery with I.S. and Non I.S. Outputs

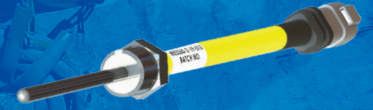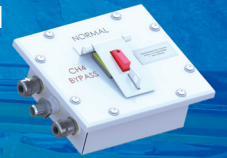**Flame Trap**
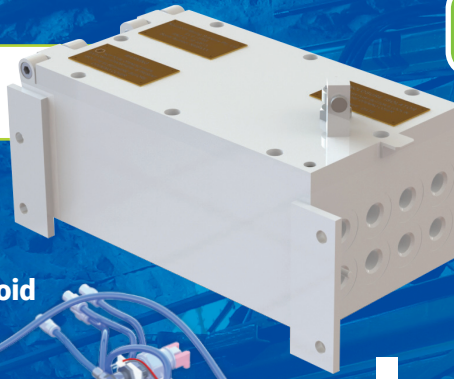
OPTIONS

Temperature Sensors

For On-Engine and/or remote sensing (0-125°C)

Deputy Bypass Switch

For authorised override of CH4 sensor

DATA LOGGING AND ANALYTICS

PROFILER SPITFIRE®

- Unit for data logging on vehicle CAN networks
- Collect and buffer data from critical vehicle components
- Transfer data to surface via mine network as vehicle passes through WiFi Access Points (WAP)
- Create a dashboard of machine analytics

Antenna

Profiler

Connectors

SYSTEM APPLICATIONS

The Methane Master is ideal for a wide range of underground mining applications including Diesel and Electric Personnel Transporters, LHDs, Brumbys, C9 Diesel Machines, Shotcreters and Electric Mules
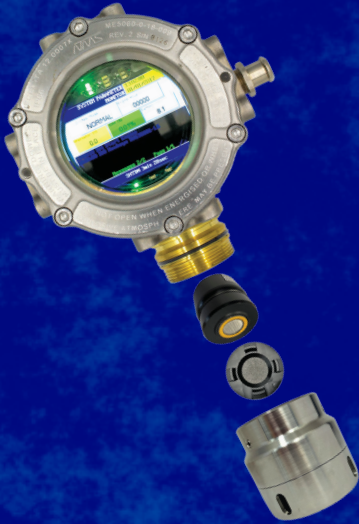
| Grader | Dozer | Flitmate | Loader | C9 Diesel | Man Transporter |

Methane Master With Hybrid Snout
Hawkeye Display Ex d ia LCD

BASIC System
(Key Components)
CT118501

ME5350-2-99-260 - Hawkeye Display (Basic)
ME5070-2-19-009 - RapidSense Ex ia CH4 Sensor
ME5070-2-99-151 - 7.2V Battery Pack (w/RTC)
PL118504 - Charger Module
PL118534 - Air Solenoid Valve
PL118541 - Flameproof Main Enclosure (White)
ME5060-2-99-016 - Flameproof Display Enclosure
ME5070-2-99-112 - Sensor Assembly
ME5350-2-26-008 - Magnetic Pencil (triple magnet)
ME5070-2-07-019 - Hybrid Calibration Cap
ME5070-2-90-159 - Hybrid Snout
ME5070-2-24-005 - Sintered filter for Hybrid Snout
SW507001 - Software Upgrade 2.0.2

TORQUE System
(Variations to BASIC Components)
ME5260-2-99-196

E5350-2-99-263 - Hawkeye Display (Torque)
PL118594 - Torque Charger Module
ME5070-2-99-462 - Deputy Bypass Junction Box (Torque)
ME5790-2-99-479 - IS Barrier Array
ME5260-2-19-018/019/020/021/022 - RTDs

JUG-A-O System
(Variations to BASIC Components)
CT118513

ME5350-2-99-262 - Hawkeye Display (JUG-A-O)
PL118514 - Juganaut Charger Module
PL118542 - Flameproof Enclosure (Black)
ME5070-2-99-461 - Deputy Bypass Junction Box
PL002900 - Scrubber RTD
CT118509 - Super Charger RTD
ME5790-2-99-479 - IS Barrier Array

Engine Management System (C9)

ON ENGINE KIT

CT500130 - Injectors
CT500131 - Heui Pump
CT500114 - Air Switch (5-7mA)
CT500105 - Air Switch ON/OFF
CT500104 - Speed Sensor
CT500115/116 - Temperature Sensors (Intake/Coolant)
CT5001-11-01-01 - Boost Pressure Sensor
CT5001-12-01-02 - Fuel Pressure Sensor
CT5001-13-01-02 - Oil Pressure Sensor
CT5001-24-02-03 - Injection Pressure Sensor

Engine Management System (C9)

OFF ENGINE KIT

ME5350-2-99-266 - Hawkeye Display (C9)
ME5070-2-99-153 - 12V IS Battery
CT500142-DL-02 - PMU
CT500126-02 - ECU
CT500516 - IS Power Supply
Type 5002 - CAN Guages
ME5230-2-99-061 - Large Enclosure

• *C9 system uses the 5230 large enclosure*

Vehicle Maintenance

Temperature

Battery

Engine

COMPLEMENTARY ADD ON

The Spitfire® Data Master MR (Mobile Reports) is the FIRST connectivity and data visualisation tool for underground diesel machines in Australia. It works seamlessly with the Methane Master.

For the person in charge of scheduling and maintenance of underground diesel vehicles, having critical vehicle data is invaluable for a proactive approach to operational efficiency and incident investigation.
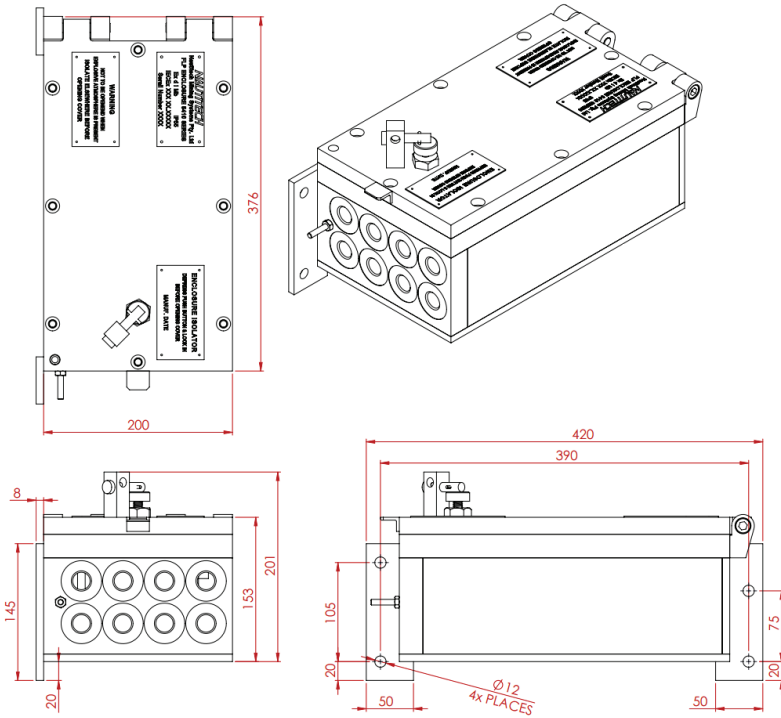
Data is collected from sensors on diesel RTVs as they come within Wi-Fi range. This data is analysed and presented in a visual format to support many operational outcomes.
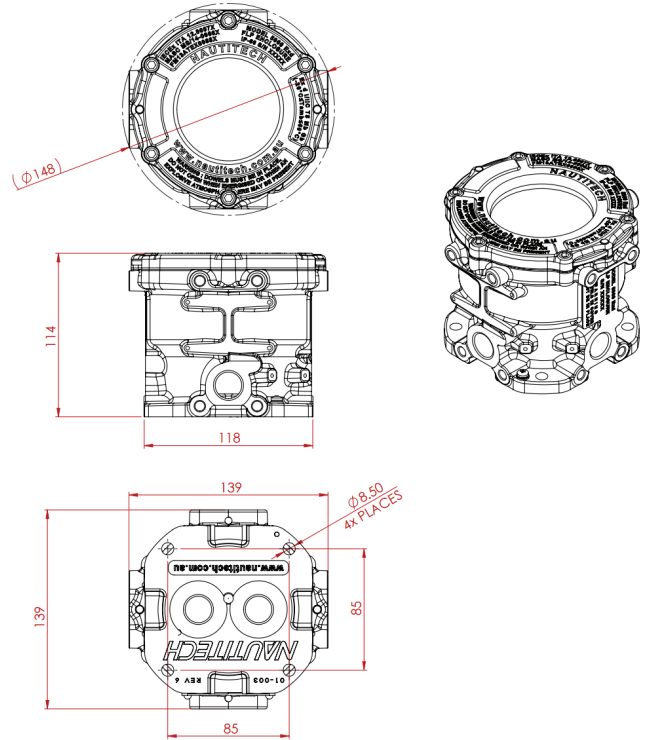
Scan QR Code for info about the DataMaster

Medium Ex d Enclosure

3½ Display

ENVIRONMENTAL SPECIFICATIONS

Range Methane	Accuracy	Operating Voltage Range	Operating Temperature Range	Humidity
0-5% v/v	0.1% CH4	7-16VDC	-20°C to +60°C	0-95% non-condensing

CERTIFICATION



IECEx · ATEX · CE · MASC · NATA · SIL

NAUTITECH®

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NAUTITECH® is an Original Technology Manufacturer (OTM), and global provider of **smart electronic** and **software** solutions for OEMs and mine sites in underground mining.

We design and manufacture equipment that delivers **Communications** and **Visibility**, supports Automation, and provides a platform for **Asset and Condition Monitoring** of underground equipment. Our **data analytics** software can help detect safety risks and gain intelligence for improved mining operations.
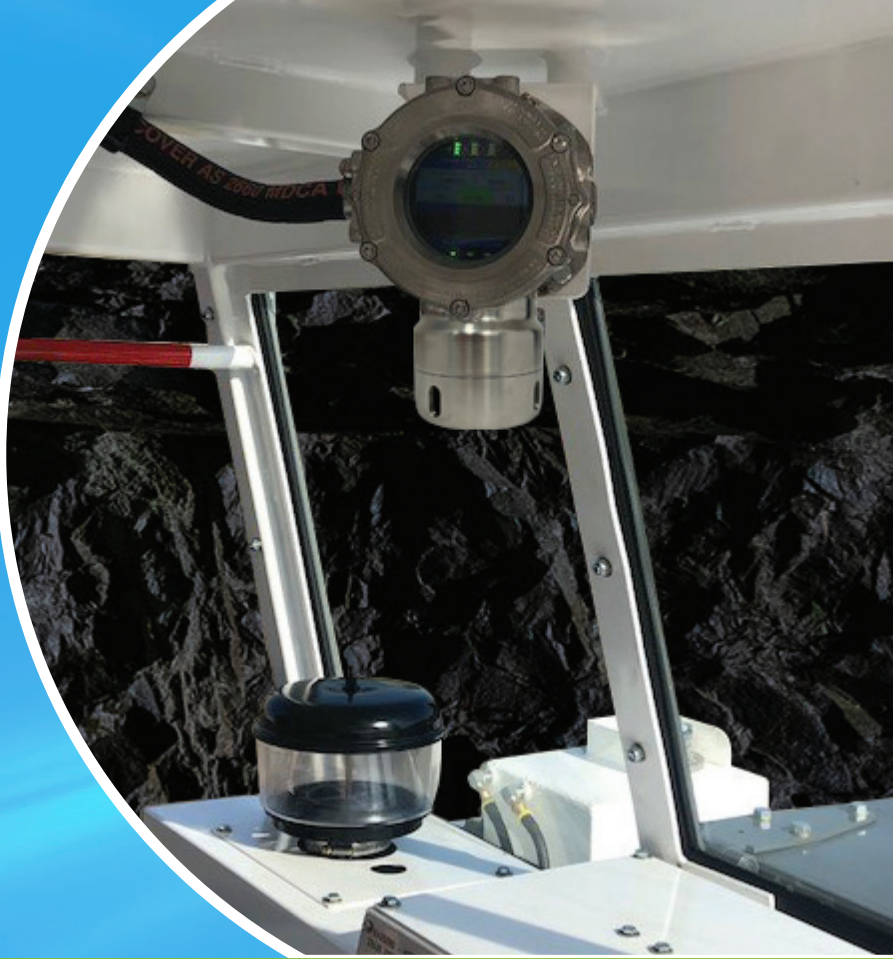
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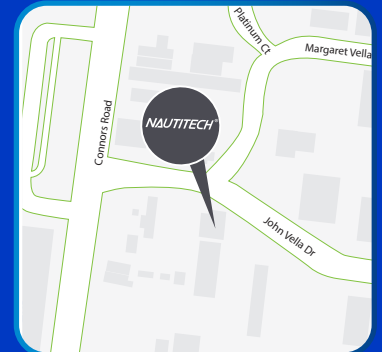South Africa

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