



OPTIO IS

Diesel Station Monitor



The Conspec Optio IS Diesel Station Monitor is a simple, easy to use multigas monitor designed to provide Diesel Emissions values as well as a Corrected CO value from Diesel with a wide array of sensor/IO support providing a TRUE CO Value despite Diesel gas in the air. Used for mining applications where the measure of diesel emissions is important, and CO values are often affected by Diesel Gas, the Conspec Optio IS Diesel Station Monitor is approved for hazardous environments

The Conspec Optio IS Diesel Station Monitor produces NOx readings generated from a mine's diesel equipment. The Conspec Optio IS Diesel Station Monitor compensates for the diesel and provides a TRUE CO value in that environment, preventing false alarms on CO systems.

Ease-of-Use

The full experience of the monitor – from manufacturing, to installation, to troubleshooting and repair – has been specifically designed to create the maximum user experience. The UI has been designed to ensure that, irrespective of who's using it, they will find it easy to use and maintain.

Robust Design

After 55 years of developing monitors, Conspec has been able to design something that can withstand the harshest environments including power issues, noise issues, drifting, temperature issues, humidity issues, etc.

Scalable

The monitor grows as needs do, enabling users to start off with a single gas, and turn it into a multi gas or more as needs increase.

Affordable

The Conspec Optio IS Diesel Station Monitor has been designed to be extremely cost effective, especially when being used with multiple sensors.

Flexible Design

The design enables users the ability to employ a multitude of different communications technologies, sensor technologies, IO technologies, etc.

Approved for Hazardous Areas

The Conspec Optio IS Diesel Station Monitor can be installed in hazardous and non-hazardous areas.

Low Power Consumption

The Conspec Optio IS Diesel Station Monitor uses 90% less power than previous designs. This brings a tremendous amount of value, as users can run further distances of cable without the need of power boosters, etc. saving the mine thousands of dollars in hardware and installation costs.



Built-In Maintenance System

The Conspec Optio IS Diesel Station Monitor's in place gas intelligence reminds the user when it is time to calibrate the sensor, provide readings on how healthy the sensors are, and when the sensors may need replacing. Statistics are provided to determine the health of the communications, and provide in depth troubleshooting statistics to see and understand if there are any communications weaknesses etc.

Wide Array of Sensor, I/O Support

Regardless of a user's gas monitoring need, Conspec will find a sensor for it. Because the Optio IS Diesel Station Monitor has so many options for sensor inputs, and IO support, Conspec will find a way to detect whatever it is users are looking for.

Backwards Compatibility

The Conspec Optio IS Diesel Station Monitor is fully compatible with existing infrastructures. There is no need to replace the front end, as it will work with the communications backbone, etc. that is already in place.

Native Horn/Strobe Support

The Conspec Optio IS Diesel Station Monitor has a native, very low power IS Horn/Strobe that is very loud and bright.

KEY TECHNICAL SPECIFICATIONS

SENSORS

- Up to six installed sensors
- Plug-and-Play Electrochemical sensors
 - Factory preconfigured and calibrated
 - CO, O₂, NO₂, NO, H₂S, and more
- Plug-and-Play NDIR sensors
 - CH₄, CO₂, and more
- Mini-Weather Station
 - (Dry Bulb Temperature, Wet Bulb Temperature, Humidity, Barometric Pressure)
- Sensor extension up to 100ft (30m)

ALARMS

- 4 Custom Alarm Levels with hysteresis and hold-to-alarm times
- Sensor Fail-High and Fail-Low alarms
- Ability to associate relay outputs with alarm levels from a single sensor, or multiple sensors using logical "AND/OR"

IO CAPABILITIES

- 2 Relays (Not Intrinsically Safe)
- 2 channels 4-20mA outputs
- Horn/Strobe configurable control

INPUT POWER OPTIONS (NON IS)

- 6-30 VDC
- 100 - 240VAC 50/60Hz

INPUT POWER OPTIONS (IS)

- 6-18 VDC (IECEX/ATEX)
- 6-15 VDC (MSHA)
- Battery Power (wireless operation)

COMMUNICATION INTERFACES

- RS485, RS232, Conspec TRUNK, Conspec Wireless (900Mhz Band), WIFI, Ethernet, POE
- NEWTRAX
- Modbus RTU (wired or wireless)
- ACCESSOR
- Com Distance up to 6Km (3.75miles)

CONFIGURATION

- Using IR remote with local LCD menu
- Via Modbus register map or wireless

MENU & DISPLAY

- Intuitive menu using graphical LCD
- Password protected (user or admin)
- Real-time readings of multiple sensors
- RGB backlight indicates monitor status

USER INTERFACE

- IR remote control
- Simple 4 Button Keypad

DIMENSIONS

- 12"x10"x6" @ 12lbs

POWER CONSUMPTION

- 2mA @ 15VDC (no sensors and 10% Backlight)
- 3mA @ 15VDC (3 EC Sensors and 10% Backlight)
- 3mA @15VDC (1 NDIR CH₄ Sensor and 10% Backlight)
- 3mA @15VDC (1 Pressure/Humidity/Wet-Bulb and 10% Backlight)
- 9mA @15VDC (1 NDIR CO₂ Sensor and 10% Backlight)
- 12mA @ 15VDC (2 EC, 1Pres/Hum/WB, 1 CH₄, 1 CO₂ and 10% Backlight)
- 33mA @15VDC (1 Pellistor CH₄ Sensor and 10% Backlight)

TEMPERATURE & HUMIDITY RANGE

- -20 to +45°C, 0-99% RH non-condensing
- Condensation recovery algorithm for NDIR CH₄ sensors

WARRANTY

- Two years standard warranty

APPROVALS

- IECEX: Ex ia I Ma (Pending)
- ATEX: Ex I M1 Ex ia I Ma (Pending)
- MSHA Part 18, Part 22, Part 27