



CONSPEC®

INNOVATION THAT DIGGS DEEPER.

Stench Gas Release

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The Conspec Optio I/O Controller is a simple easy to use I/O controller designed to give the user the ability to monitor and control a range of field devices either locally or remotely via Modbus, making it the the perfect solution for Stench Gas Release Applications.

Due to the flexibility of being able to deploy the system using a mine's existing Ethernet, POE, LTE, Wi-Fi and VHF/UHF Leaky Feeder Data Communications Infrastructure, the Optio I/O Controller provides Mine Managers the greatest flexibility in installation options and system configurations for Stench Gas Release applications.

Our exacting ISO 9001:2015 certified quality assurance system for design and development along with Conspec's IEC 80079 and ATEX Directive 94/9/EC certified manufacturing, customer support, service and training quality systems deliver the best in performance and reliability in all the products and systems. Conspec produces the highest standard of quality in customer service, support, and training for the best protection of your personnel, property and profits.

GREATER PRODUCTIVITY



Conspec products increase productivity for companies through time-saving and safety-enhancing applications. Our monitoring devices measure atmospheric levels and deliver quality values in real time, allowing system controllers and operators to make quick decisions, leading to more efficient working and mine re-entry times.

SAFETY



Our products are designed to ensure safety first. Safeguarding personnel and assets leads to a safer, more efficient work site and better profitability.

LESS DOWNTIME



Nuisance alarms can cause costly shutdowns, sometimes mine-wide. This leads to lost time and profits. Conspec's advanced alarming capabilities removes this risk, providing reliable advance warning of real hazards, in real time.

24/7 SUPPORT



When it comes to safety and work efficiency, Conspec understands that every second matters. We provide 24/7 support to our customers to ensure that your operation is never stopped or stalled.

EASE OF USE



From manufacturing, to installation, to troubleshooting, to repair and calibration - the full experience of the monitor Conspec provides for you has been specifically designed to maximize the user experience. Our UI has been designed for ease of use and maintenance, no matter who is using it.

RELIABILITY



With 55+ years experience developing monitors, Conspec can design equipment that can withstand the harshest environments. Our products can withstand almost anything, with minimal issues with power, noise, drifting, temperature, and humidity.

COST EFFECTIVE



Our new state-of-the-art monitors combine multiple features into a single all-in-one unit. This will save thousands on the costs of hardware and software. Such a wide array of options for power and communications allows our systems to run on any existing infrastructure.

SCALABLE



Conspec's monitors grow as your needs do. This enables users to start off with single gas, with the option to convert to multi gas and more custom levels as needs increase. Such versatility extends the life and usefulness of our equipment, cementing the reputation for reliability and innovation that Conspec has earned over the years.

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Technical Specifications

SENSORS

- Up to six installed sensors per monitor
- Factory preconfigured and calibrated
- Sensor extension up to 100ft (30m)
- Plug-and-Play Electrochemical sensors:
 - CO, O2, NO2, NO, H2S, and more
- NDIR sensors:
 - CO2, CH4
- Other sensors:
 - Particulate Matter, Air Velocity, Weather Station, etc.

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"

I/O CAPABILITIES

- 6 Relay Outputs (250 VAC, 220 VDC, 2A)
- 6 Multi Function Ports - DI/DO/AI (0-5V, 0-3.6V)
- 2 4-20mA outputs
- Horn/Strobe configurable control

INPUT POWER OPTIONS (NON IS)

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

COMMUNICATION INTERFACES

- Conspec Trunk, RS-485, RS-232, Conspec Wireless 900MHz/800MHz (pending) Band, Wi-Fi, Ethernet, POE, LTE, Leaky Feeder (VHF, UHF)
- Com Distance up to 6km (3.75miles)

COMMUNICATION PROTOCOLS:

- MODBUS RTU, MODBUS TCP, Conspec Legacy ACCESSOR

CONFIGURATION

- Using IR remote with local LCD menu
- Via MODBUS/Conspec Legacy Accessor Register Map using Conspec OASIS software/Conspec Senturion SCADA

MENU & DISPLAY

- Intuitive menu using graphical LCD
- Password protected (user or admin)
- Quick info screen shows device settings
- Real-time readings of multiple sensors
- Dimmable RGB backlight
- Backlight color indicates monitor status

USER INTERFACE

- IR remote control
- 4 Local Tactile Buttons
- Conspec OASIS Windows configuration software

DIMENSIONS

- 12"x15"x8" @ 12lbs
- 15"x15"x8" @ 12lbs with horn/strobe

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)
- 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°C to +40°C, 0-95% RH non-condensing
- Condensation recovery algorithm for NDIR CH₄ sensors

WARRANTY

- One year standard warranty