



# CONSPEC®

INNOVATION THAT DIGS DEEPER.

## OPTIO GM



## Optio G Ground Motion Monitor

For over 50 years, Conspec has pioneered the design, development, and manufacturing of environmental and atmospheric monitoring, process control and safety technology relied upon by mining, industrial, oil & gas, and commercial operations all over the world.

Conspec's NEW Optio Ground Motion Monitor is a joint effort between Mine Design Technologies and Conspec Controls to the Optio Monitor and the MDT MPBX (Multi-Point Borehole eXtensometer).

The SMART MPBX has six anchor points and an integrated electronic readout head. The small instrument diameter means that the head can be recessed in a 50 mm (2 inch) borehole - no need for oversize holes or reamed collars. It also allows multiple MPBX's to be installed in the same long borehole. Each instrument is custom manufactured to the length you require and allowing you to place the anchor locations where you need. They arrive on site ready to install. Just place in a borehole, grout and connect to the Optio G GM for continuous ground monitoring. No assembly required.

### BENEFITS

- Reliable & Stable Operation
- SMART MPBX Sensor
- Enhanced Alarming Capabilities
- Easy Menu Navigation - Icon Based
- Native Horn/Strobe Support

### APPLICATIONS

- Monitoring of underground excavations including walls and backs of mining drifts
- Monitoring of walls in open-pit mines
- Surface crown-pillar monitoring
- Tunnels and dams
- Backfill monitoring in underground mines

**OPTIO™ GM**  
Reliability when every second matters.

### SENSORS

#### The SMART MPBX Specifications

- Length up to 60 m
- Diameter 33 mm
- Weight 0.5kg/m
- Borehole diameter 50 mm minimum
- Transducer Linear potentiometers
- Stroke 31.75, 63.5, 127, 190.5, 254, or 508 mm
- Linearity +/- 2% (1% available upon request)

### 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 (NON-IS)

- 6 Relay Outputs (250 VAC, 220 VDC, 2A)
- 2 420mA outputs

### I/O CAPABILITIES (IS)

- Horn/Strobe Configurable Control

### INPUT POWER OPTIONS (IS)

- 6-15 VDC (MSHA)
- DC Battery Pack (wireless operation)

### INPUT POWER OPTIONS (NON IS)

- 6-30 VDC
- 100 - 240VAC 50/60Hz
- DC Battery Pack (wireless operation)

### COMMUNICATION INTERFACES (IS)

- MSHA: Conspec Trunk, RS-485. Conspec Wireless 900MHz Band (pending)
- Com Distance up to 6km (3.75miles)

### COMMUNICATION INTERFACES (NON IS)

- Conspec Trunk, RS-485, RS-232, Conspec Wireless 900MHz/800MHz (pending) Band, Wi-Fi, Ethernet, POE, LTE, Leaky Feeder (VHF, UHF)

### 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

- Must be connected to Optio Monitor
- IR remote control
- 4 Local Tactile Buttons
- Conspec OASIS Windows configuration software

### DIMENSIONS

- 9"x9"x5" @ 6lbs (Optio Monitor Only)

### POWER CONSUMPTION

- 2mA @ 15VDC (no sensors and 10% Backlight)

### TEMPERATURE & HUMIDITY RANGE

- -20°C to +40°C, 0-95% RH non-condensing

### WARRANTY

- One year standard warranty

### APPROVALS

- MSHA Part 18 (pending)
- Commonwealth of Pennsylvania Approval (pending)