

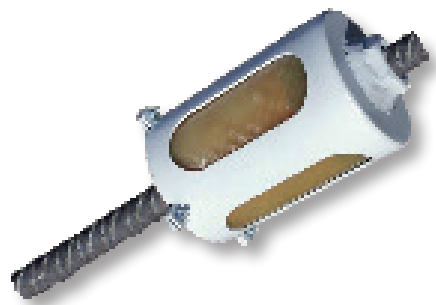
Maximize Production and Safety in Underground Mines

NEXT GENERATION OF GROUND SUPPORT MONITORING, POWERED BY THINGWAVE



RBM-VX™

The wireless Rock Bolt Monitor
RBM-VX™ is an extensometer for
ground support monitoring.



- Measures **elongation up to 300 mm with 0.02 mm resolution**
- Monitors rupture and vibrations
- Supports resin and concrete grouting by jumbo
- Size: 80x110 mm
- Weight: 1.1 kg
- Enclosure: steel
- Rating: IP66
- Fully integrated into ThingWave's Mining 4.0 digital platform
- Real-time rock strata deformation data
- Lifetime up to 7 years
- Immediate alarms
- Easy installation

The RBM-VX™ is a cost-effective and scalable solution deployed in underground mines. Integrated with a rock bolt, RBM-VX™ measures the bolt's elongation like an extensometer, and thus monitors phenomena such as pre-tensioning and squeezing ground as well as dynamic events like blasting.

Data acquisition is enabled by ThingWave's high-performance mesh radio technology, transmitting wirelessly to a gateway and then to a backend server (cloud or local network). The RBM-VX™ and gateways are compatible with various bolt types, including dynamic bolts.

The RBM-VX™ is designed to facilitate resin installation and pre-tensioning with jumbos, minimizing manual intervention. Its robust design and high accuracy ensure reliable real-time measurements in harsh underground environments, while easy installation and automated alarms enhance safety and efficiency for mining operations.

ThingWave's Digitalized Ground Support (DGS) solution empowers geotechnical engineers with real-time insights into ground deformations.

Experience the future of data-driven operation with ThingWave!

