



Adventum Tech service: FlowSense



OVERDESIGN

CO₂
FOOTPRINT
REDUCING

SAFETY
EXCELLENCE

Sensors: FlowSense

Analytics: Liveload.app

Price is subject to project-specific parameters

The offer includes:

1. FlowSense sensor system
2. Wireless monitoring of construction groundwater level changes and environmental impacts
3. Real-time notification system for groundwater level changes
4. Access to Liveload.App system for analytics
5. Adventum Tech technical support
6. On-site delivery and sensor installation
7. Travelling costs
8. Base station and Data plan
9. Monthly Liveload.app subscription fee



Product Overview

FlowSense by Adventum Tech is a cutting-edge wireless monitoring system designed to track groundwater levels in real-time. By continuously measuring groundwater fluctuations, FlowSense prevents water-related structural risks, ensuring stability in deep excavations and underground structures.



Why Monitor Groundwater Levels?

Groundwater level monitoring is essential for:

- Preventing Structural Failures: Excessive groundwater lowering can cause soil shrinkage, leading to foundation settlement and instability in nearby structures.
- Avoiding Uncontrolled Water Infiltration: Inadequate dewatering results in continuous water ingress, complicating excavation and increasing pumping costs.
- Protecting Neighboring Buildings: Rapid changes in groundwater levels can trigger sinking, cracking, or collapse of adjacent properties.
- Ensuring Construction Efficiency: Maintaining stable groundwater levels optimizes dewatering operations and prevents costly delays.
- Complying with Regulations: Proper monitoring ensures adherence to environmental and geotechnical safety requirements.



Key Features

- Wireless Real-Time Monitoring:** Continuously tracks groundwater levels and transmits data via LoRa or 4G LTE.
- Automated Alerts:** Immediate notifications when groundwater reaches critical thresholds.
- Integrated Cloud Platform:** All data is processed and visualized in LiveLoad.app for instant access and analytics.
- Long Battery Life:** Rechargeable Li-ion battery provides extended operational capacity.
- Durable & Weatherproof:** Designed to withstand harsh construction environments.
- Seamless Integration:** Works alongside other Adventum Tech systems, such as SlabControl, QuakeControl, and GroundControl, for a comprehensive monitoring approach.

Technical Specifications

Parameter Details:

- Measurement Range: 0 – 50 meters groundwater depth
- Precision: ± 1 cm
- Signal Intensity: Customer-specific
- Protocol: LoRa / 4G LTE
- Data Transmission: Wireless (LoRa, LTE)
- Frequency: 868 MHz

Physical Specifications:

- Dimensions: 120 \times 110 \times 160 mm
- Weight: 900 g
- Battery Type: Li-ion, rechargeable
- Battery Life: 1 year

Available Accessories:

- Extended Battery
- PV Solar Panel
- Additional Data Logging Module



Benefits of FlowSense

Technical Benefits

- Real-time groundwater level monitoring
- Early warning system for water infiltration risks
- Improved excavation safety and efficiency
- Optimized dewatering and pumping strategies

Commercial Benefits

- Reduced risk of foundation failures and legal claims
- Optimized construction timelines and costs
- Competitive advantage in tendering
- Insurance benefits through documented risk mitigation

Environmental Benefits

- Prevents excessive groundwater extraction
- Minimizes impact on surrounding ecosystem
- Ensures compliance with environmental regulations



Software Integration

FlowSense data is seamlessly integrated into liveload.app, offering:

- Real-time data visualization and analysis
- Secure, cloud-based storage
- Project-specific dashboards
- Exportable reports for documentation
- Compliance monitoring



Contact Adventum Tech

For more details, custom configurations, or pilot projects:

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