



EN

HidroSmart and HidroScope Monitoring and control of pumps

Cloud-based solutions for failure-free pump operation



Optimal pump performance with our monitoring solutions

In an era where precision and reliability define industrial success, the pivotal role of pump monitoring and control cannot be overstated. Unplanned downtime and maintenance inefficiencies are challenges of the past with HidroSmart and HidroScope, our cutting-edge solutions designed to optimize your pump operation.

Imagine a world where every pump in your facility operates seamlessly, anticipating and preventing issues before they occur. HidroSmart, our intelligent pump monitoring and control system, takes the lead as your

guardian in the field of pump operation. Paired with HidroScope, our advanced vibration monitoring module, it makes a formidable team ensuring optimal performance.



Your guardian in pump monitoring and control:
HidroSmart



Advanced vibration monitoring for reliable pump performance: **HidroScope**



Cloud application: seamless remote monitoring

Implementing smart connectivity, Hidrostal's cloud application takes control of seamless remote monitoring. Enhance your pump management journey with an intuitively designed, user-friendly interface offering real-time insights, discreet data analytics, and easily customizable control settings.

The web client for accessing the cloud application runs in a web browser and accesses the Hidrostal cloud service on a Microsoft azure server. For devices/clusters with cloud connectivity, the web client allows remote access to:

- View current and recorded data (measurements, alarms, settings, status ...)
- Download recorded data (measurements, alarms, settings, status ...)
- Monitoring of connected pumps
- Analyzing vibration data (only in combination with the HidroScope)
- Configuring sensor ranges and controller settings
- Checking the status of the system (sensors, controllers)

Depending on the selected application, a fail-safe trip logic can be configured. This function enables tripping (usually shutting down the pump) when certain alarm limits are exceeded. The trip logic depends on the alarm status and the interlock settings of the different input channels. The system also allows the possibility of informing users if an alarm/warning occurs, through mail or SMS.

Real time monitoring

Cloud-based monitoring and control of pumps in operation minimizes malfunctions and maintenance costs. At the same time, the highest value is placed on system safety.

Continuous monitoring of pumps in combination with an adapted control strategy and access to Hidrostal expertise through a corresponding service model enables an optimized maintenance strategy and leads to reduced operating costs.



The user-specific functionality in the cloud application depends on the access rights granted to the user.

- Quick overview of connected pumps
- Winding and / or bearing temperatures
- Configurable analog and digital in- and outputs
- Spectrogram of vibration data: up to 6 different alarm levels can be set for each signal

HidroSmart:

Intelligent pump monitoring and control

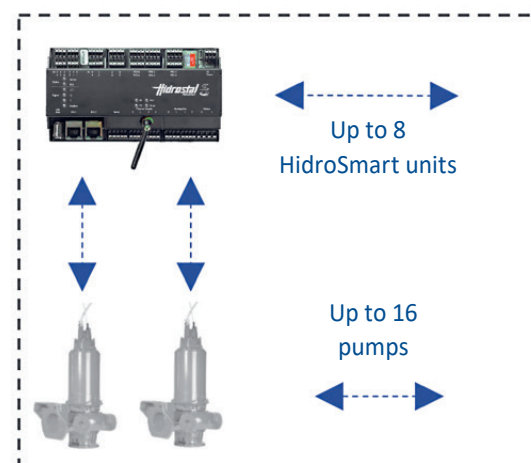
In the dynamic field of industrial processes, real-time monitoring stands as the cornerstone of efficient pump maintenance. HidroSmart emerges as the beacon, ensuring your pumps operate optimally by providing instant insights into their performance.

Features

- Central switching point: Seamlessly integrates signals and algorithms, serving as the command center for comprehensive pump control.
- Programmable PLC via openPCS: Tailor the system to your specific needs, putting control in your hands for a personalized experience.
- Technician interface: Facilitates on-site access, ensuring swift response and adjustments without the need for an internet connection.
- Expandable capacity: Monitor and control up to 16 pumps effortlessly by connecting multiple HidroSmart modules, adapting to the scale of your operations.
- Standard input signals integrate with a wide range of sensors available on the market and are compatible with existing installations.
- Versatile data storage: Choose between direct storage on mini-SD cards or secure cloud servers for convenient access and analysis.
- Communication methods: Stay connected through ethernet TCP / IP or 4G mobile connection, ensuring constant communication with your pumps.
- Connectivity: Connect to existing installations via SCADA to make use of the pump specific monitoring and control capabilities.

Specifications:

- Installation: HidroSmart can be installed in a standard electrical enclosure, also as an upgrade to an existing system, ensuring safety and reliability
- Compatibility: Whether your power supply operates at 50 Hz or 60 Hz, HidroSmart seamlessly adapts to ensure compatibility with your system



HidroScope:

Advanced vibration monitoring module

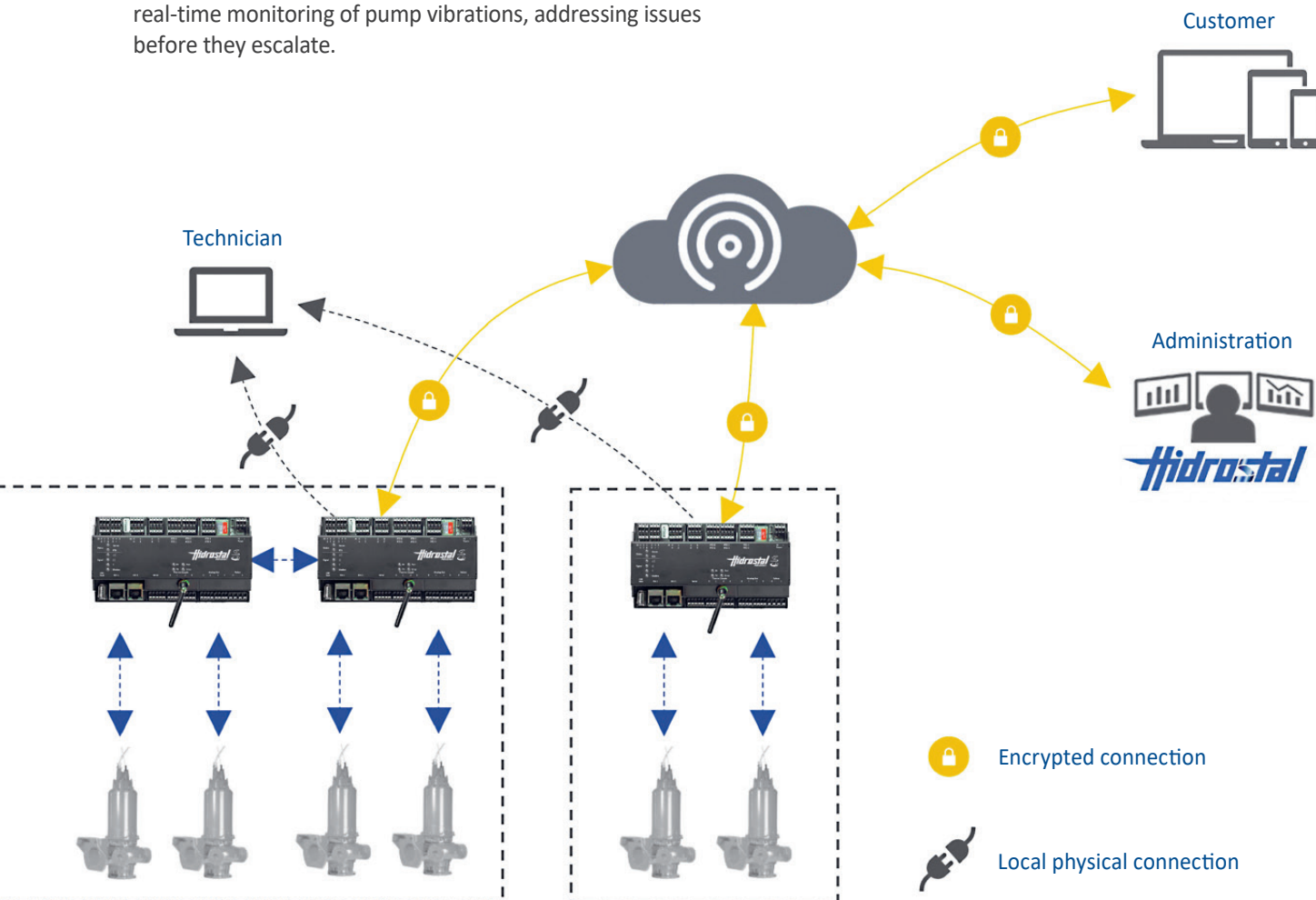
In the pursuit of operational excellence, HidroScope takes center stage, introducing a new dimension to pump monitoring through advanced online vibration analysis. Gain unmatched insight into the condition of your pump to ensure peak performance and longevity.

Features

- 6 vibration channels: Unlock a detailed perspective with high-resolution vibration analysis across six channels, providing a comprehensive view of your pump's behavior.
- Filtering and FFT calculation: With advanced filtering and Fast Fourier Transform (FFT) calculations, pump vibrations can be analyzed in detail, enabling predictive maintenance.
- Compliance with pump standards: HidroScope adheres to relevant pump standards, ensuring accuracy in monitoring and diagnosis.
- Real-time monitoring: Stay ahead of potential issues with real-time monitoring of pump vibrations, addressing issues before they escalate.

Compatibility

Designed to seamlessly integrate with HidroSmart, HidroScope forms a powerful partnership to deliver comprehensive vibration monitoring and analysis. Together, they create a perfect system that optimizes performance and minimizes downtime.



Use case scenarios:

Various scenarios for different applications are predefined on the HidroSmart controller, allowing for quick implementation. All applications work both with and without a cloud connection. For each scenario, up to two pumps can be connected per HidroSmart.

Predefined scenarios:

- Monitoring: Pure monitoring and data recording of the connected pumps.
- Pump protection: Monitoring of connected pumps, programmed shutdown limits, and notifications.
- Control: Complete control and monitoring, including pump protection.

Efficient communication channels:

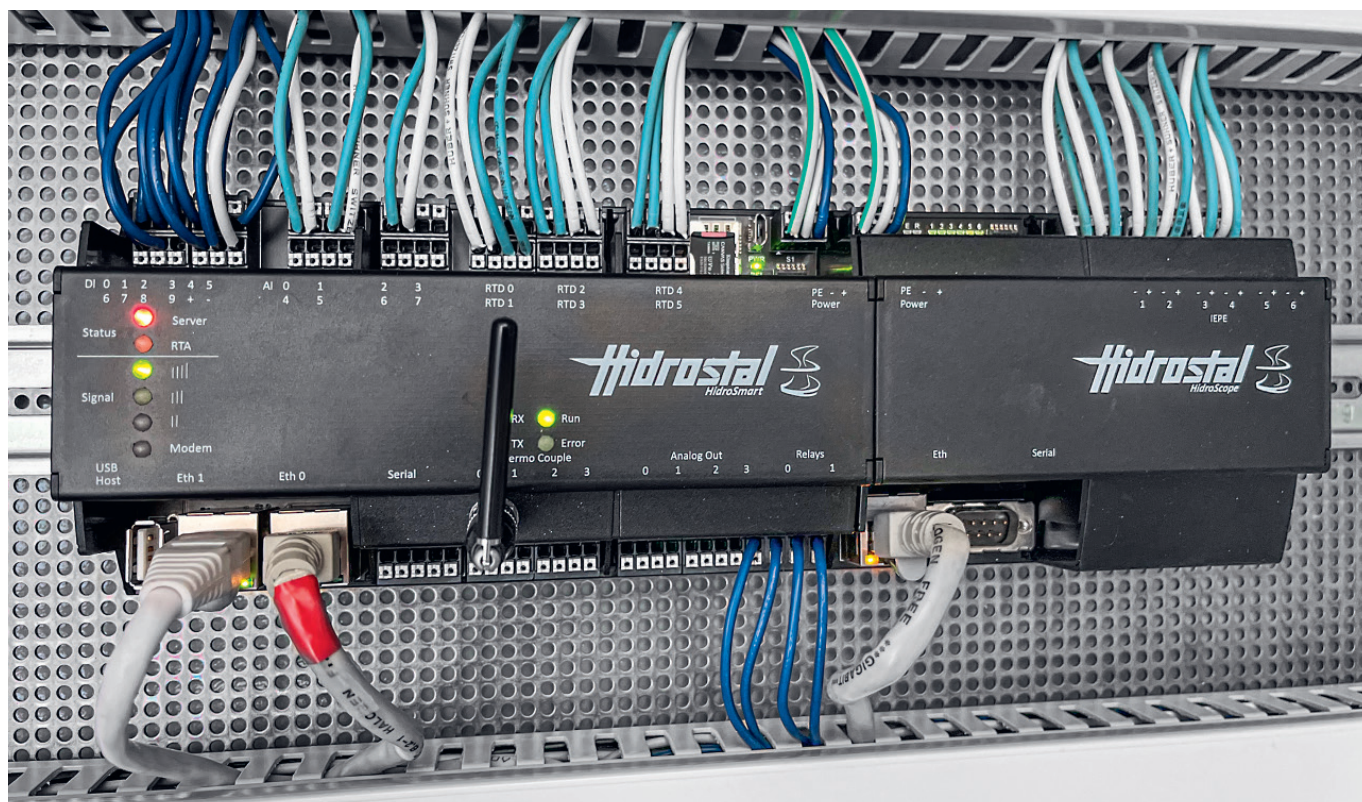
- Versatile connectivity: Access HidroSmart via ethernet or 4G mobile connection and cloud application.
- Setting adjustments: Change settings or download data seamlessly.
- Instant alerts: Receive SMS or email alerts for swift responses and minimized downtime.

Flexible subscription models:

- Diverse options: Explore different subscription models.
- Customer-oriented: Choose the model aligning with your requirements.
- Versatile control: Monitor, protect, or control pumps via the HidroSmart cloud service.

Ensuring security at every level:

- Advanced encryption: State-of-the-art encryption algorithms to protect your data.
- Custom authorization levels: Each user experiences a secure cloud application with tailored authorization.
- Two-factor authentication: Rest easy with a login process that reinforces the integrity of your system.





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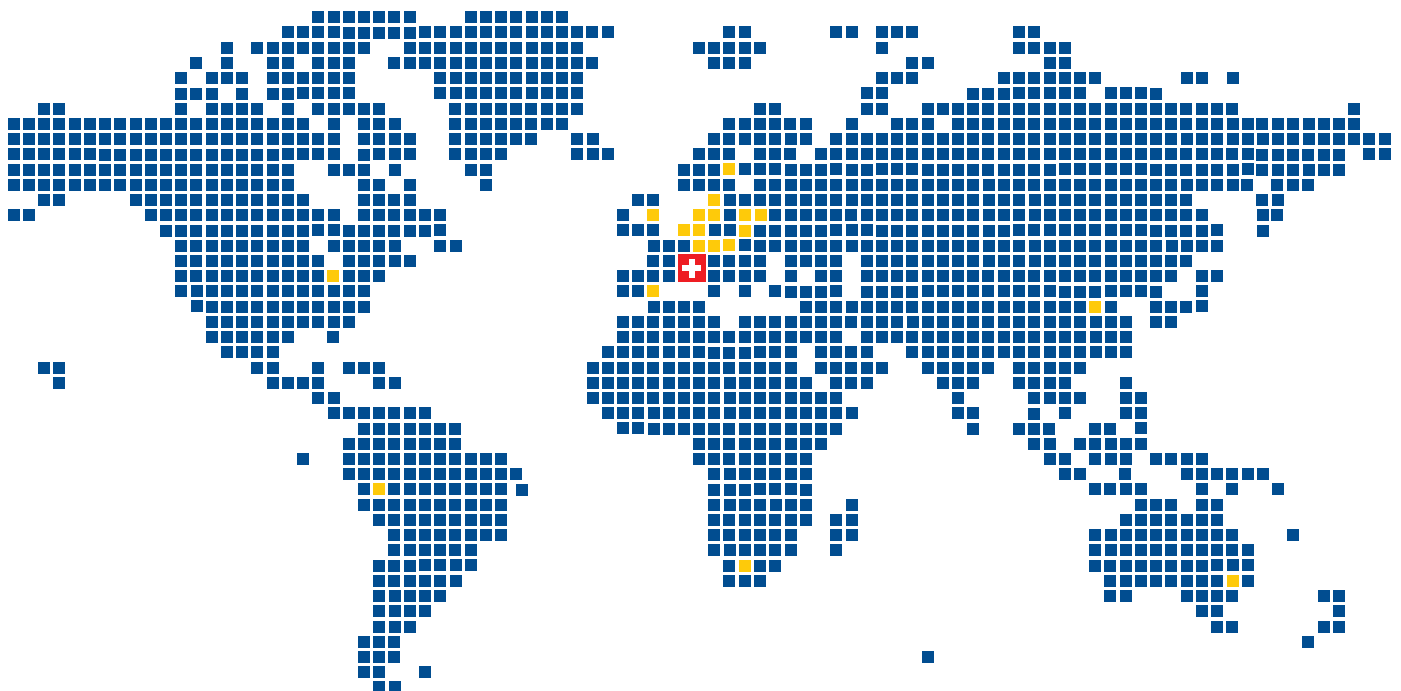
Hidrostal pumps

Make a quick and accurate
pump selection:
[hidrostal.com / pumpselector.php](http://hidrostal.com/pumpselector.php)



Hidrostal pumps are used in numerous branches and industries due to their excellent pumping characteristics. They convey a wide variety of liquids and materials with low pulsation and gentle handling. Our specialists select the suitable material combinations and adapt each pump individually to the conditions on site. This approach ensures that Hidrostal pumps prove their worth even in difficult applications and thus achieve the best results in terms of efficiency, energy efficiency and low life cycle costs.

- Non-clogging delivery
- High suction capacity
- Gentle conveying due to low shear forces
- High efficiency
- Stable characteristic curve
- Long service life
- Low pulsation
- Continuous, speed proportional conveying
- High pressure stability



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Hidrostal
Pioneers in Pump Technology