

Pump monitoring is in your hands

Imagine having immediate visibility to the status of all your pumps and seals on a hand-held device while conducting routine maintenance routes. It all starts with a versatile mobile app called IPS Mobile Insight. IPS Mobile Insight is a configurable mobile application that allows operators, reliability engineers and maintenance technicians to access discrete timestamped data and generate reports with the touch of a button. This is the

critical information you need to identify developing equipment problems and prevent downtime.

Find the pump and the problem immediately

With IPS Mobile Insight, technicians can instantly know the conditions of pumps in the field, and navigate straight to the assets in alert status. With a swipe of the screen, they will immediately see a pump's current pressure, temperature, vibration, fluid condition and other data. Users also

can access last alarm time, date and cause. Historical performance data can be downloaded to a tech's handheld device or pushed to the IPS Insight data logging portal for further analysis.

IPS Mobile Insight gives operations and maintenance personnel visibility to critical sensor data that is required to proactively solve problems — and optimize operations.

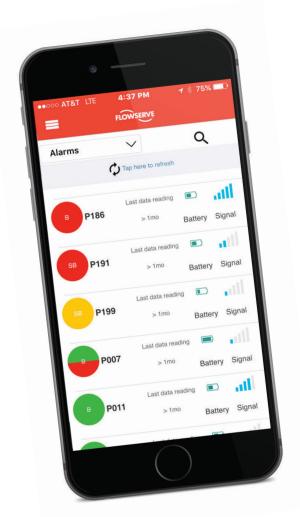


Diagnose and fix the problem before it starts

Dramatic improvements in process uptime, reliability and yield are facilitated at lower costs with the Flowserve® *Bluetooth*®-enabled IPS Beacon™ 2 condition monitoring devices. These compact, battery-powered and visual alert sensor packages monitor machine and system conditions, record data used to quickly diagnose undesirable operating conditions, and expedite corrective actions that significantly reduce return-to-operation times.

Customize your insights

IPS Mobile Insight features



Asset Status

When an asset is in range, asset status, signal strength, battery life and time of last broadcast are shown. When asset is out of range, there will also be a countdown counter since the last broadcast.



Trending

Access data history, including average, min and max readings along with trending data visualization to help analyze changes in equipment operation.



Asset Dashboard

Shows last sensor readings and runtime.

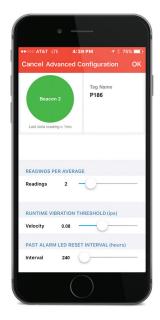
Gives access to last alarm data;

IPS Beacon 2 firmware version; synchronize clock function; data download command; export to CSV function; and auto-upload to the IPS Insight data logging portal.



Set Alarms

Set and view alarm settings used to enable the visual alert systems on the IPS condition monitoring devices.



Custom Settings

Data averaging scheme, runtime, minimum vibration setting, and read and log rate interval control.

Two proactive tools. One powerful solution.





The Flowserve IPS Mobile Insight app and IPS Insight data logging portal can be used independently or together to save you time and money while maximizing equipment uptime.

The IPS Mobile Insight app optimizes your valuable time by providing a quick overview of conditions. This allows technicians to zero in on pumps with potential problems, minimizing the need to check each individual piece of equipment.

The IPS Insight data logging portal gives you the detailed insights you need to optimize operations and address problems before they cause costly downtime. Data visualization streamlines performance monitoring, reporting, and trend analysis by generating easy-to-read charts and tables.

Together, IPS Insight tools keep you informed — on- or off-site — while running at peak efficiency.

IPS Insight

Data logging portal

Secure IPS Insight data logging portal enables remote access to equipment information

The Flowserve IPS Insight data logging portal extends the capabilities of the IPS suite of visual alert and condition monitoring products to enable remote access to discrete time-stamped data, on-site equipment status and performance information. Hosted via a secure, subscription-based service, the IPS Insight portal facilitates collaboration among multiple plant teams — from maintenance and operations to reliability engineering — to enable swift response to deviations in process or equipment parameters.

The IPS Insight portal and remote condition monitoring technology increase system availability by:

- Enhancing the effectiveness of traditional route-based inspection programs through continuous monitoring and data logging of key parameters such as vibration and temperature
- Addressing "bad actor" systems by facilitating collaboration among maintenance, operations and engineering teams
- Installing permanent or temporary multi-point condition monitoring devices as needed
- Managing alarm thresholds and custom reporting equipment performance trends

Key IPS Insight portal features

Secure access — IPS Insight utilizes a secure web framework. An authentication process is required to begin using the service.

Intuitive data and asset structure — Plant assets are organized in an easy-to-access classification structure that provides plant-level alarm summaries and equipment-level asset details.

Alarm thresholds/data upload — Customers can configure alarm thresholds on individual monitoring points at the equipment level through an intuitive CSV file data upload process or by automatically receiving sensor data through the IPS Mobile Insight app via the auto-upload feature.

Data visualization, trends and reporting — Alarm data is available graphically via charts and tables to help customers visualize equipment performance and evaluate trends. Performance monitoring reports can be easily generated to review specific data points.



Compatible IPS products

IPS Beacon 2 — Battery-powered, Class 1, Div 1 (Zone 0) condition monitoring device for pump installations. Monitors temperature and vibration and compares to pre-set limits, and provides local visual alerts. An optional Bluetooth Module enables onboard data logging and connectivity to the IPS Mobile Insight app.

IPS 103 Smart Multi-port — Battery-powered, Class 1, Div 1 (Zone 0) condition monitoring device for up to five sensors (seven data points) on pumps or other rotating equipment. Data can be transmitted via IPS wireless system or optionally stored in the IPS Take-Away Memory Module (VB-103-TAM) to be accessed via the IPS Docking Station and DockTalk PC Software. Visual alert system (VB-103-VIS) is available to supplement walk-around inspections.

IPS Smart RTU — AC powered, Class 1, Div 2 (Zone 2) remote transmitting unit (RTU) monitors up to six sensor points (which can be programmed individually.) Local alarm status given by the optional RTU-VIS system. Data can be wirelessly transmitted to the IPS Wireless Receiver system or logged onboard with the optional VB-103-TAM (data accessed via the IPS Dock and DockTalk PC software). Also, an optional backlit sensor display is available to give local on-site teams immediate access to equipment performance status.

IPS Take-Away Memory Module (VB-103-TAM) and IPS

Docking Station — Removable Take-Away Memory Module for the IPS 103 Smart Multi-port complements walk-around inspections by capturing multi-point data logs. Module and IPS Beacon 2 interface with the IPS Dock for customer access via a USB port and the IPS DockTalk software.



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