



DOLPHIN SMART TAP DATA COLLECTION SHEET

VERSION 1.0 - AUGUST 2024

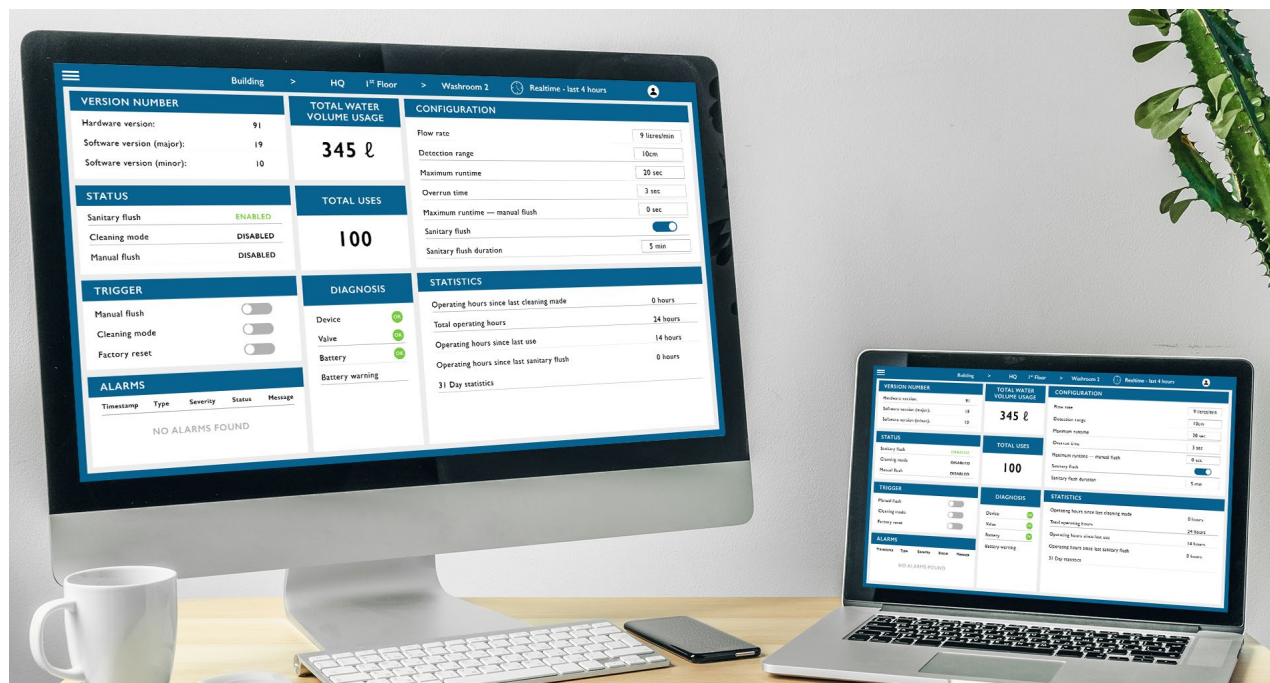
DOLPHIN SMART TAP DATA COLLECTION SHEET

The main purpose of a SMART washroom system is to run commercial washrooms more efficiently, but it also offers other benefits such as saving money on water bills, ensuring compliance with UK regulations, conserving water, and demonstrating sustainability and water savings data to green building assessment bodies such as BREEAM.

To help understand how a SMART washroom system can do this, this detailed data collection sheet provides information on Dolphin SMART taps and the data that can be collected and displayed on a Building Management System (BMS).

The SMART tap data collection sheet also explains each setting and outlines its benefits.

This serves as an illustration of a SMART washroom system for sensor taps within a BMS dashboard, designed for visual comprehension rather than an exact replica or accurate data of a live dashboard display.

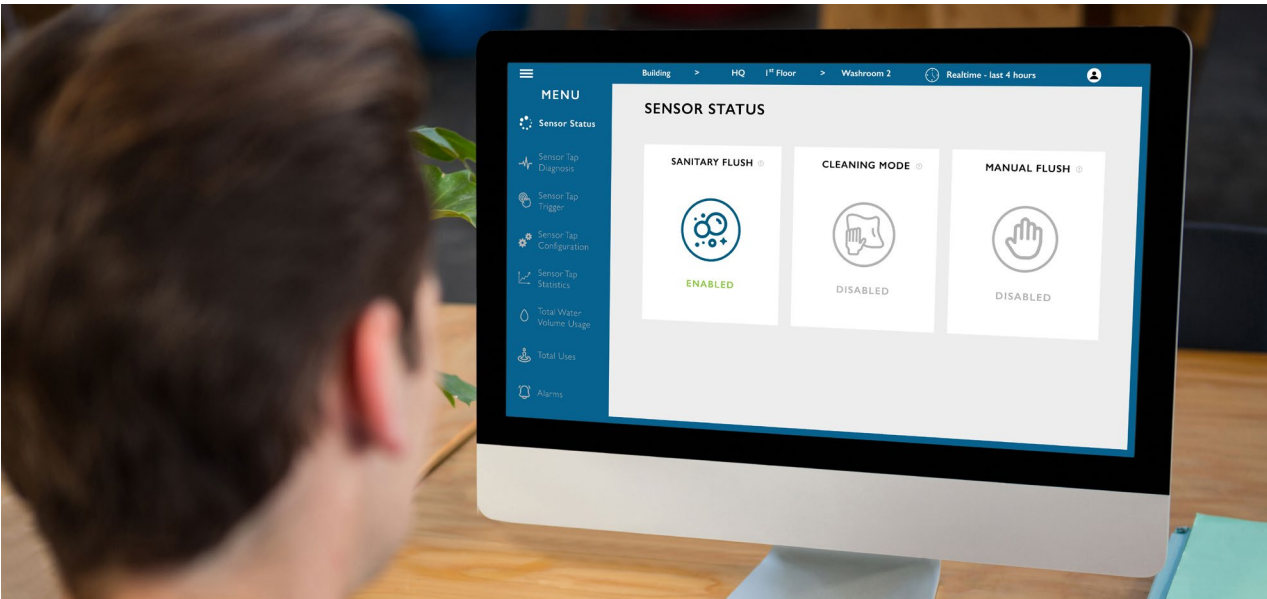


SMART SENSOR TAP

SENSOR TAP STATUS

The sensor tap status shows the current state of the following settings:

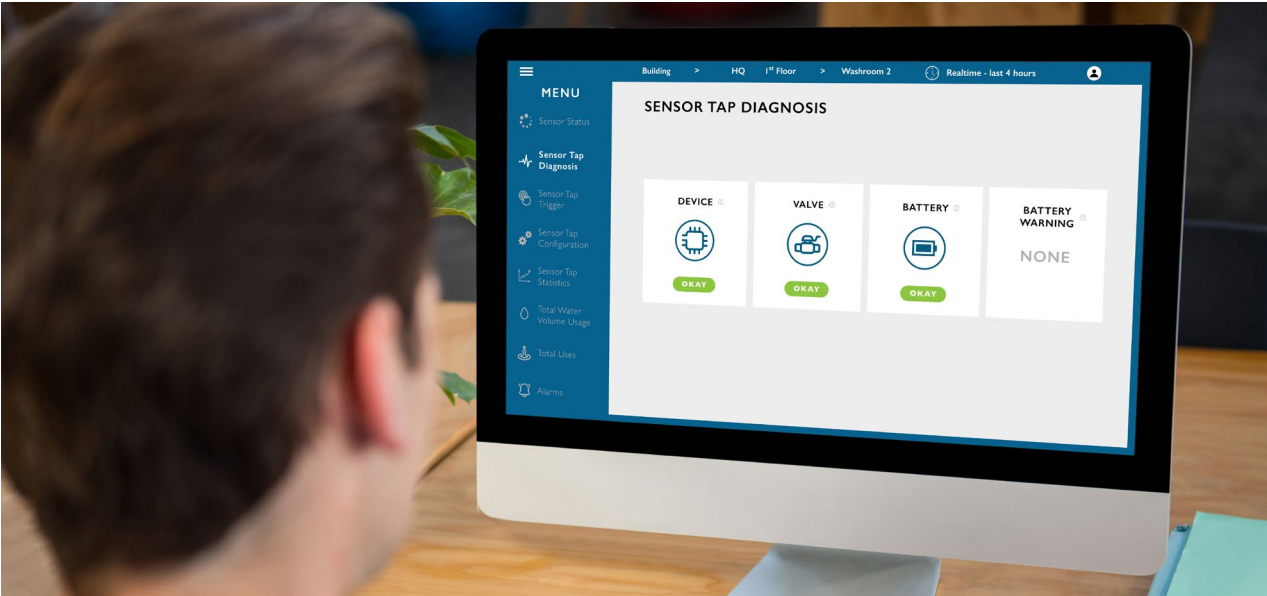
STATUS	DATA AVAILABLE	WHAT DOES THIS DO	STATUS BENEFIT
Sanitary Flush	Enabled or disabled status	This data displays whether the sanitary flush schedule (hygiene flush) is enabled or disabled.	Provides a quick overview of current washroom operations, enabling continuous monitoring of critical functions without the need for detailed analysis. Quickly determining whether a setting is enabled or disabled allows for swift decision-making and action.
Cleaning Mode	On / Off status	This data indicates the current status of the cleaning mode, whether it is enabled or disabled.	
Manual Flush	On / Off status	This data indicates the current status of the manual flush, whether it is enabled or disabled.	



SENSOR TAP DIAGNOSIS

Assess the condition, functionality, and potential issues of any sensor tap.

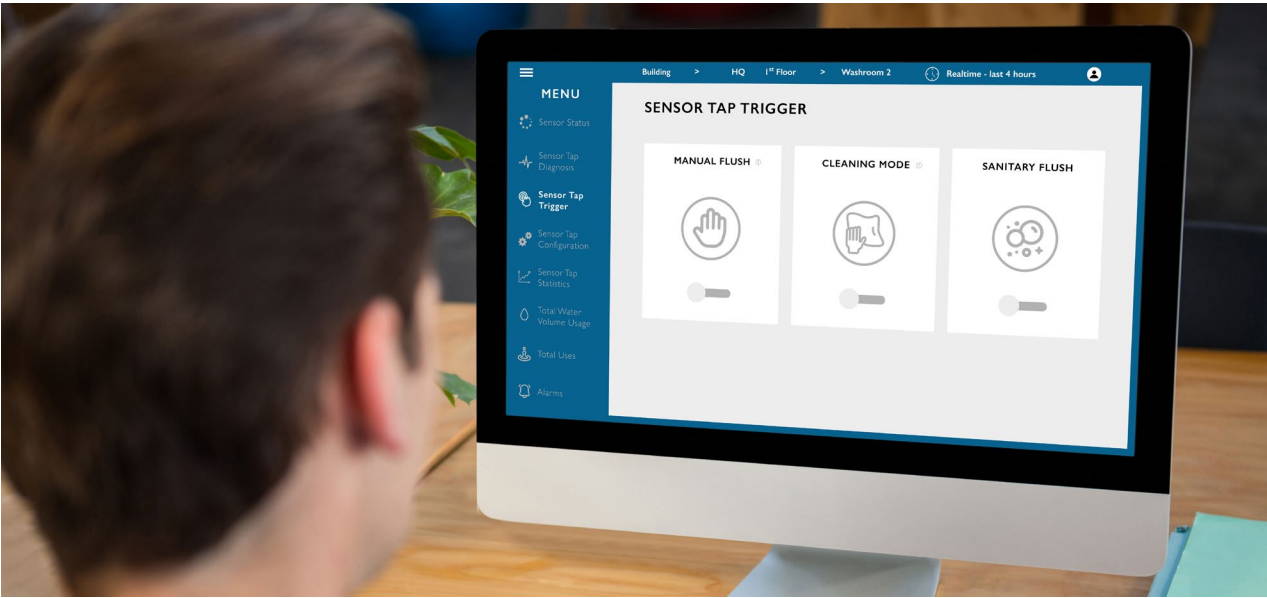
DIAGNOSIS	DATA AVAILABLE	WHAT DOES THIS DO	DIAGNOSIS BENEFIT
Device	OK or Faulty	Provides the operational status of the sensor device.	Enables swift verification of the operational status of all sensor taps.
Valve	OK or Faulty	Provides the operational status of the sensor valve.	
Battery	OK or Faulty	Provides the operational status of the sensor battery.	Should the data signal a fault or warning, maintenance personnel can promptly intervene to rectify the issue, thereby minimising any potential downtime.
Battery warning	Alert notification	If the sensor battery is low or if a fault arises, a notification will promptly alert the issue.	



SENSOR TAP TRIGGER

Sensor tap settings that can be adjusted from a BMS dashboard.

TRIGGER	DATA AVAILABLE	WHAT DOES THIS DO	TRIGGER BENEFIT
Manual Flush	On	Use this setting to turn the manual flush on.	It's easy and convenient to toggle these settings on or off from a single BMS dashboard, automating the entire process and saving time.
Manual Flush	Off	Use this setting to turn the manual flush off.	
Cleaning Mode	On	Use this setting to turn the cleaning mode on.	
Cleaning Mode	Off	Use this setting to turn the cleaning mode off.	
Factory Reset	Active / Inactive	Use this control to start a factory reset.	



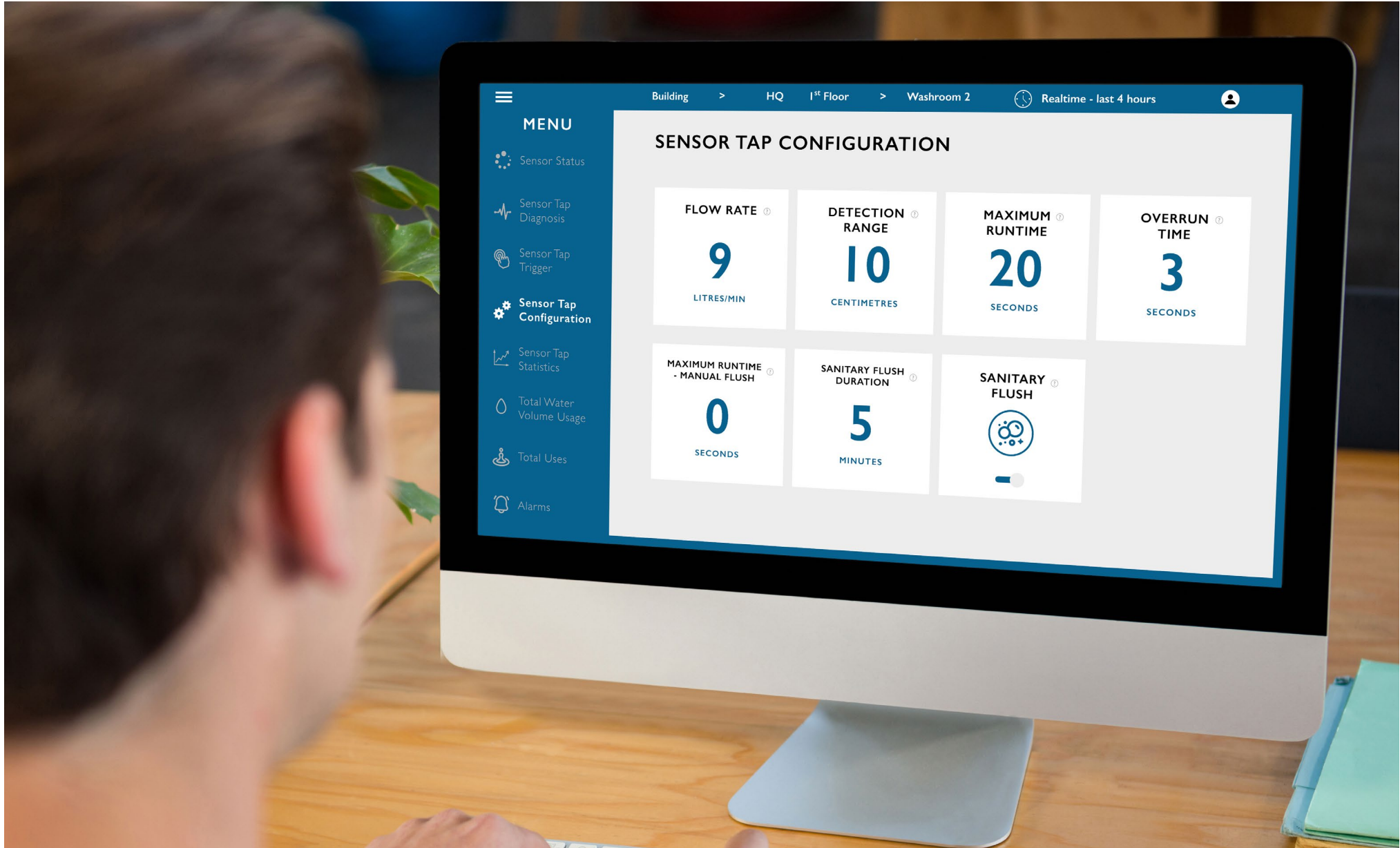
SENSOR TAP CONFIGURATION

These are the settings you can input and adjust on a BMS dashboard.

CONFIGURATION	DATA AVAILABLE	WHAT DOES THIS DO	CONFIGURATION BENEFIT
Detection range	Detection area metric value (cm) setting	This is the zone where the sensor detects an object and turns on. Use this setting to adjust the detection zone for all taps simultaneously, and increase or reduce it as needed.	Ensures the sensor accurately detects hand movements, reducing unnecessary activations and conserving water. Allows tailoring the tap's responsiveness to better suit specific user preferences or environmental conditions.
Maximum runtime – water dispensed	Water run time setting during activation of washing hands (seconds)	This setting refers to the number of seconds water flows from the tap when the sensor is activated. It can be adjusted to reduce or increase the runtime.	To conserve water, you can adjust this setting to reduce the run time. *Note - For adequate handwashing and sufficient hygiene practices, 20 seconds is considered the optimal duration for effective hand cleaning.
Overrun time	Water run time setting after activation (seconds)	This setting shows how long the tap will run after a user has removed their hands. It can be adjusted to reduce or increase the water run time.	This setting presents another opportunity to conserve water by reducing the duration of the water flow overrun time. If there is a need for the water to flow for a longer duration after a user washes their hands, this setting can also be modified to extend the time accordingly.
Maximum runtime – manual flush	Water run time setting (seconds/minutes)	Use this function to set the duration of the water run time during a manual flush. This setting is typically configured when engineers or maintenance personnel are in the washroom. Each tap is equipped with its own Bluetooth adapter and manual flush function.	The feature allows engineers to input the desired duration, in seconds or minutes, for the manual flush setting. They can use this setting to activate a tap and have it run water for the necessary time needed to identify and work on it, facilitating their tasks or assessments.

		The manual flush function is specific to each tap, meaning you can only activate it individually for each tap. Unlike a sanitary flush, this function cannot be used to trigger all taps simultaneously.	
Maximum runtime – cleaning mode	Time setting (seconds/minutes)	This setting controls the duration of the cleaning mode. Usually configured by the cleaning team on-site, this process involves specifying the duration for which the cleaning mode should remain active. The cleaning mode will automatically deactivate once the specified duration in seconds or minutes has elapsed.	The cleaning mode is engineered to assist facilities staff in cleaning the washbasins or troughs effectively and efficiently without activating the sensors to dispense water. If the cleaners use this function, water can be saved by temporarily deactivating all taps simultaneously, preventing any water from being dispensed during this period.
Sanitary flush (hygiene flush)	Enable / Disable function	Use this setting to enable or disable the sanitary flush schedule. When the function is set to 'enabled', a sanitary flush cycle will run according to the specified duration and intervals. When the setting is disabled, the sanitary flush schedule, including its duration and intervals, will be inactive.	Enabling a sanitary flush schedule is convenient for companies aiming to maintain a consistent hygiene cycle. If facilities teams prefer to conduct manual flushes, this automatic function can be easily turned off. By setting this function to 'enabled', the process is automated and documented, reducing the risk of forgetting to manually perform a sanitary flush. Sensor taps with a hygiene flush (programmable line-purge system) are also part of the WELL Standard criteria, contributing to achieving WELL certification.

Sanitary flush duration	Time of manual flushing (seconds/minutes) setting	When the sanitary flush is enabled, this setting controls the duration of how long the sanitary flush must run. Use the function to set the seconds or minutes.	Use this setting to ensure the duration is set to comply with UK regulations. As per the UK Health and Safety Executive Legionnaires' disease technical guidance, each tap and appliance should be run sequentially for at least five minutes at full temperature (but not necessarily at full flow), and it should be measured and recorded.
Sanitary flush intervals	Time of flush intervals (minutes/hours) setting	Configure this setting to run based on the time elapsed since its last use, or set it to activate at regular intervals, such as every 72 hours. This function operates based on a schedule set in the length of time (minutes and hours). It cannot be configured to run on a 24-hour clock format (e.g., 08:00).	Configuring this setting to run based on the hours since its last use or at regular intervals ensures consistent sanitation without the need for manual intervention. This ensures a high standard of cleanliness, reduces the risk of Legionella contamination, and maintains compliance with health and safety regulations. Additionally, it saves time and effort for maintenance staff, allowing them to focus on other tasks and reallocate resources more efficiently within the building.
Flow rate	Litres per minute metric	This setting allows you to monitor and input the litres per minute. However, this setting is for reference only; it cannot change the actual flow rate in sensor taps. This section lets you update the litres per minute to reflect the current flow rate in the taps, ensuring accurate water usage data in the statistics.	By monitoring the flow rate in taps, you gain valuable insights that support water conservation, cost savings, and environmental sustainability, ultimately leading to more informed and effective water management decisions. A simple solution to adjust the flow rate is physically modifying the tap with a device like a flow regulator or aerator. Remember, only a physical device in a tap can control its flow rate.

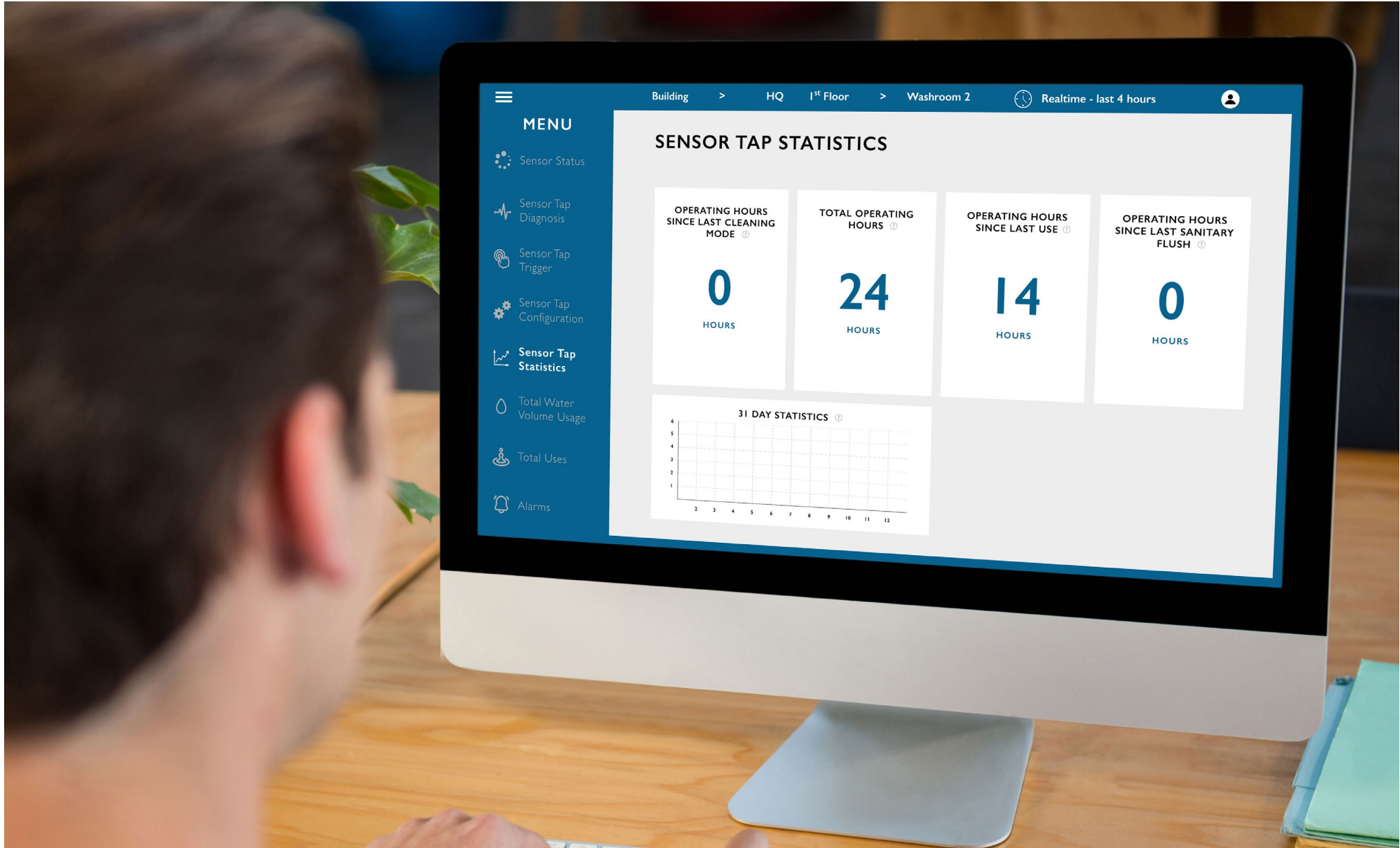


SENSOR TAP STATISTICS

Review detailed data gathered from the SMART washroom taps.

STATISTICS	THE BENEFIT OF ANALYSING STATISTICS
Operating hours since the last cleaning mode	This feature provides insights into the cleaning team's activities in the washroom, allowing administrators to verify whether the cleaning mode has been accidentally left on. It could inconvenience users if it has not been turned off, therefore, this function serves primarily as a status check.
Total number of uses	Knowing how many times the taps have been used contributes significantly to calculating water volume. By analysing this data, it can help identify areas where water consumption can be reduced. Another benefit to seeing this data is that if the number of tap activations seems low compared to the number of people using the washroom, then it could be possible that people are not washing their hands after using the facilities. Therefore, there is an increased risk of spreading bacteria and germs. Companies can then take action to implement measures to ensure that hygiene protocols are followed by making staff aware of the importance of washing their hands.
Total water volume dispensed	Analysing this data can help determine whether the water volume dispensed is significant and whether changes to the taps must be made to reduce it. This can be achieved by installing low flow components, such as a flow regulator and aerator, adjusting the overrun time, or changing the water dispensing run time. This statistic helps track and manage water consumption more effectively, naturally leading to lower water bills.
Total operating hours	This statistic shows how long the tap has been operating for since it was installed with a SMART system. It furnishes actionable insights guiding decisions regarding fixture upgrades or replacements, implementation of water conservation strategies, and enhancing overall facility management. By pinpointing overuse or inefficiencies, it facilitates prompt corrective actions. Insights into total operating hours optimise cleaning and refill schedules, ensuring both functionality and hygiene. It helps identify component wear, preempting failures and ensuring uninterrupted operation.

Operating hours since last use	Understanding when taps were last used can provide insights into user behaviour and preferences. Analysing this data helps prevent unnecessary resource allocation for maintenance or cleaning of taps that have not been recently used, resulting in cost savings by reducing the frequency of bringing in a cleaning team when their presence isn't required as often. Allows for the detection of possible leaks or malfunctioning taps by noting unusually long periods since the last use, preventing water wastage. Helps in scheduling routine maintenance tasks based on actual usage patterns, preventing unnecessary downtime and ensuring optimal performance. Understanding peak usage hours allows for improved resource allocation, ensuring taps remain operational during periods of high demand. It enables instant alerts in case of taps operating beyond expected hours, signalling potential tampering or misuse.
Operating hours since last sanitary flush	Enabling this feature allows the BMS to log and display the frequency of sanitary flushes, offering valuable insights to safeguard the building's water supply against Legionella contamination. It's worth noting that the UK Health and Safety Executive advises measuring and recording sanitary flushes as a best practice. Therefore, having these statistics available can demonstrate compliance with UK regulations.
31 day statistics	The system retains and presents statistics from the past 31 days, allowing for comparisons and providing a comprehensive overview of washroom operations and water usage.





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