



Operating Conditions

In what conditions can the Bayer Rodent Monitoring System (RMS) operate?

The Sensor is rated to a dust and water resistance of IP54^a. It will operate in temperatures ranging from -18C to +55C (detailed in the *System Technical Specifications*). It is appropriate for use in a wide range of conditions including cold storage rooms and semi-wet production areas.

The Gateway is able to receive RF messages in the sub-1GHz ISM bands from multiple Monitors. It is based on a wireless communication technology that has both low power and long range capabilities. This allows the Sensors to be deployed in a wide variety of places (e.g., in buildings, outside) and maintain the ability to communicate with the Gateway.

System Connectivity

How can facility personnel demonstrate to an auditor that the signal (for either a “Capture Message” or daily “Heartbeat Messages”) will not be blocked or otherwise lost?

All authorized personnel, whether with the service provider or the facility (e.g., the QA Manager), can log-in to the Digital Pest Management (DPM) web portal to access the full message history of each installed device. The message history includes the daily “Heartbeat Message” sent from each Monitor that verifies the integrity of the communication system. Additionally, a System Verification Report can be generated from the web portal to show communication flow and any disruptions during a given time period. The date a Monitor missed its “Heartbeat Message” is recorded in the report under the “Date Reconnected” column; this provides the date when connectivity recovered.

If for any reason a “Capture Message” is missed (e.g., the Gateway is unplugged or there is a power outage), the next “Heartbeat Message” will transmit the capture status. The user will receive the “Capture Message” at that moment.

On the rare occasion that connectivity lapses, it is suggested that the responsible personnel perform root cause analysis and appropriately document the occurrence and corrective action.

Monitor Captures and Moves

What happens when there is a capture?

The RMS provides an early warning of potential rodent activity. This allows the service provider or facility management to perform an area inspection, root cause analysis and document the actions taken in response to the alert, proactively enhancing food safety and compliance.

Will the RMS recognize if a trap has been moved an inch or two away from the wall? The trap is no longer effective if there is a gap.

Each Sensor is equipped with an accelerometer that detects movement after the Monitor has been activated and put in place. When moved for any reason, the accelerometer detects the motion and a “Move Message” is sent by the system. The Sensor is sensitive to movement, whether actual physical movement or vibration from within the monitored environment.

Authorized personnel can access “Move Messages” along with exact timestamps through the DPM web portal. “Move Messages” are not sent via email or text; however, a summary of “Move Messages” per monitored location is reflected in the System Verification Report.

If there is a “Move Message” from one monitored location, what response and corrective actions are taken?

A “Move Message” does not necessarily mean that the trap is no longer positioned against the wall. A Monitor’s “Move Messages” over time are summarized in the System Verification Report for periodic review between the service provider and QA Manager. This information may be helpful for trap optimization and communication with facility operations staff.

As for specific response and corrective actions, these actions should be detailed in the service agreement.

^aIP = ingress protection; explanation of the letters is given in IEC 60529 (Ed. 2.1), clause 4.1



Service Records & System Maintenance

What reports will be available for customer visits and audits?

The system will generate an Area Event Report at every service interval, advising the service provider which Monitors have had activity, which have been moved and may need to be repositioned or any other possible actions needed. The report uses up-to-date data to provide meaningful insights. The data can be easily retrieved, expediting the process of regulatory compliance with regard to rodent control.

In addition, a System Verification Report can be generated for an auditor, service provider or other interested party. This report allows them to check the integrity of the communication system over a period of time and view trend reports of Monitor activity and movement.

With the old scanning system, barcodes were placed inside traps to ensure the technician opened each trap and cleaned it. If the button is on the outside of the RMS, how can we ensure the trap was opened?

The Sensor enters "Test Mode" after the button is pressed for 3 seconds and the green LED light starts flashing. If the technician opens the trap and triggers the inside probe, a message will be recorded as a "Test Mode Capture", sending a notification as proof that regular testing was performed. "Test Mode" lasts for 60 seconds to enable cleaning.

This "Test Mode Capture" proves Sensor functionality has been tested end to end, and the Monitor has been serviced (inspections and cleanings should be included). A record of each "Test Mode Capture" including location, date and time can be compiled in the System Verification Report for auditing purposes.

If the system is performing well and empty trap checking can be eliminated, what is the recommended frequency for human inspection? Traps collect dust and cobwebs.

The recommended minimum inspection frequency is influenced by the cleanliness of the monitored location and an evaluation of pest infestation based on IPM and historic data. The details of the inspection frequency should be specified in the service agreement.

One of the activities the service provider should perform while checking traps is inspecting for pest evidence. Will this inspection activity go away if trap checking goes away?

By freeing the service provider from routinely checking traps (the majority of which are empty), the RMS actually frees up time for the service provider to accomplish other more meaningful tasks at the account. These tasks may include looking more carefully for pest signs, evidence or correcting conducive conditions in the monitored location. The RMS supports IPM; it does not replace trap inspections but modifies inspection frequency depending on facility conditions. The details should be specified in the service agreement.

Either in the System Verification Report or the Service Reports you need to describe the action(s) taken when a capture is reported by the system. How can the RMS help with this?

Facility personnel or service providers can record actions taken in their internal reports or the "Comments" field of the System Verification Report. Additionally, capture data streams can be created to feed pest service software, where corrective actions are recorded as they are today.