GE
Sensing

Features

- Compliance with 21 CFR Part 11
- Provides the information needed for internal analysis and regulatory-required documentation
- Audit trail of alarms and corrective actions taken
- Advanced graphic user interface and simple menu structure provides easy navigation
- Complete history of alarms and data in one central location
- Variety of alarm notification methods for local and remote personnel
- Review of alarm conditions remotely via telephone
- Optical web interface for remote viewing
- Secure data storage via encrypted files
- OPC interfaces to wired and commercially available wireless sensors and PLCs

The Kaye LabWatch™ is a complete solution for laboratory, warehouse and stability monitoring. The system cost effectively provides real time data collection to maintain your equipment and monitor your valuable inventory. You get all of the information needed to be confident that your equipment is operating as efficiently as possible, increasing your overall uptime and protecting your assets.

Integrating high-quality sensors, measurement hardware and networked PCs into an easy-to-use turnkey solution, LabWatch combines precision monitoring with effective alarms, hassle-free reporting and secure data archiving.

LabWatch detects alarm conditions and alerts personnel wherever they are, documents any number of chambers without generating stacks of paper, protects data with secure storage, creates an audit trial of alarms and actions taken by the system and system operators, and provides ready access to historical data.

The extensive reporting capabilities of the LabWatch system allow you to generate reports easily. By maintaining a secure archive of monitored values from your sensors, the system can readily provide the information you need for internal analysis and regulatory-required documentation. The extensive reporting capabilities of the LabWatch system enable compliance with 21 CFR Part 11.

Kaye LabWatch™

Centralized monitoring, alarm and reporting system for laboratory, warehouse, and stability monitoring

Kaye Instruments has joined other GE high-technology sensing businesses under a new name–GE Industrial, Sensing.

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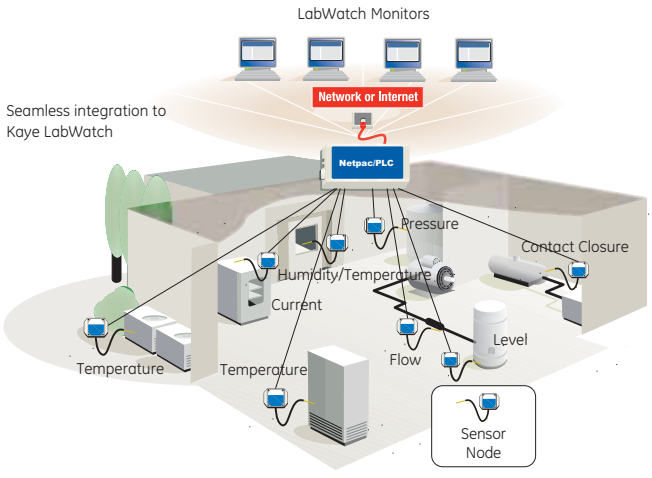
LabWatch can be used to monitor:
- Stability rooms
- Freezers
- Refrigerators
- Incubators
- Cold rooms
- Water baths
- Exhaust hoods
- Laboratories
- Warehouses
- Clean rooms
- Cryogenic freezers
- Liquid nitrogen tanks

LabWatch monitoring systems extend far beyond the hardware and software. Our applications engineers take responsibility for the entire project, providing accountability at each step along the way to a complete turnkey solution. With one supplier responsible for the entire project, you can expect consistency, on-time delivery and total support.

Services include:
- Needs evaluation
- System specifications
- System installation
- IQ/OQ protocol development
- Systems start-up
- Operator training
- Systems validation
- Ongoing support

Sensors are available for differential pressure, relative humidity, temperature, contact closure, CO_2, and any device that outputs an analog or discrete signal.

Wired sensors are best suited for environments where sensor locations are fixed and there is a high risk of electric noise interference.

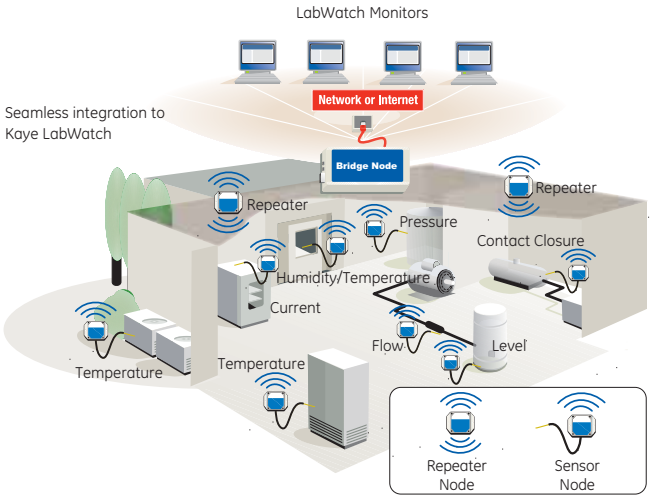


LabWatch System with wired sensors

OPC interfaces to third party applications such as wireless sensors and PLCs allow system flexibility to meet your particular monitoring and facility's needs.

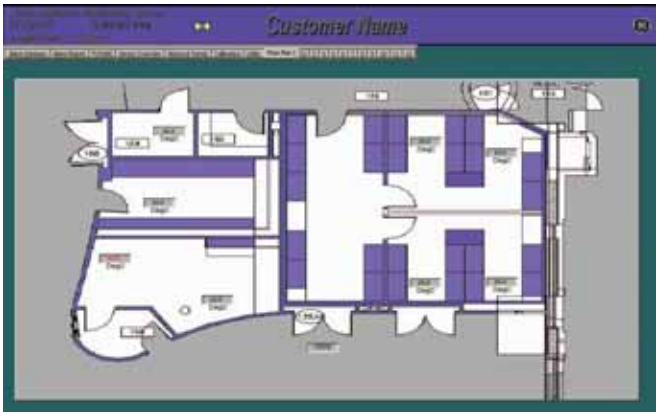
Commercially available wireless sensors provide the ability to monitor important parameters easily, especially when wired sensors cannot be located, such as in difficult to reach places and high traffic areas where wires could be damaged.

Wired and wireless systems can be mixed in the same facility, lowering the total cost of ownership, allowing expansion of a current LabWatch system to accommodate new communication technology or to quickly and easily expand the monitoring area as your facility grows.



LabWatch System with wireless sensors

The system's main floor plan screen is customized for your particular facility, giving you complete visibility to current conditions in any area.



Main screen, facility floor plan

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Security
A system administrator grants access privileges and maintains an operator registry. Users are assigned individual ID and password combinations that permit system operation and provide access to system features dependent on security level. LabWatch allows use of existing network security rules in Microsoft Windows™ domains, thereby alleviating maintenance of multiple login names and passwords. All of the existing features of Windows security such as password aging and minimum character length can be used with the LabWatch system.

Audit Trail
The LabWatch monitoring system creates an audit trail for every action executed. All alarm events and user comments are captured to a secure encrypted file that becomes part of the permanent record, archived to the secure audit trail in compliance with 21 CFR Part 11.

The LabWatch Alarm Report System is a built-in reporting and analysis tool that allows you to collect data and create reports from secure encrypted files. You can review historic or real-time conditions within the monitored areas. All changes to the system are recorded in the audit trail of events.

Alarms and Corrective Actions
LabWatch detects environmental excursions the moment they occur and notifies the appropriate personnel for the corrective response. Using high-quality industrial sensors, the system continually scans all inputs and notifies the user only when genuine alarms occur. Alarm detection can be customized to suit your operating requirements, including individual alarm delays for each limit setting to prevent unnecessary alarm notification.

With proper security access, adjustments can be made to alarm limits and delays, with all modifications documented in the audit file indicating who made the change, the new and old alarm value, and any comments describing corrective actions taken.

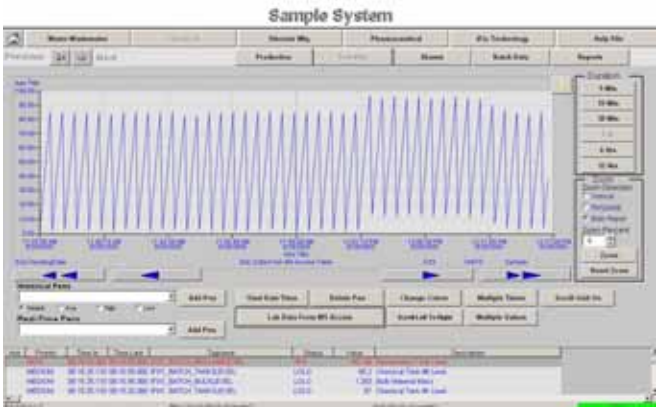
LabWatch provides alarm notification in a variety of ways:
- **Flashing area on main screen** shows alarm location and details the alarm condition
- **Audible alarm** at the main viewing terminal
- **Automatic dialing/emailing** from a priority list that you input calls personnel via telephone, pager system or handling device, based on any work schedule
- **Dialing in** from a remote site to inquire about system status.

Alarm review screen

Automatic dialing for remote personnel allows the system to deliver a message using text to speech messaging to notify the recipient of the alarm description and condition. The calling list can be arranged in a cascading fashion to ensure the most efficient response to alarm situations.

Using a remote workstation, the recipient can obtain more information to make informed decisions. Viewing historical data can provide insight that can drive the most appropriate response, whether it is to call maintenance, go to the plant personally, or shut down a process remotely. With an access code, you can acknowledge alarms, view facility screens and enter action comments for maintenance or security personnel.

Trends
LabWatch stores live sensor data at regular intervals, which can be used to display graphical process trends. View multiple parameters on a historical screen for any time period selected. Move the cursor to any point on a graph to display the instantaneous value or zoom in or out to get a historical overview of the minimum, maximum or average of the entire process.



Historical trends screen

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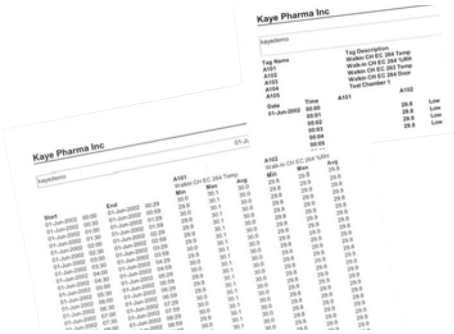
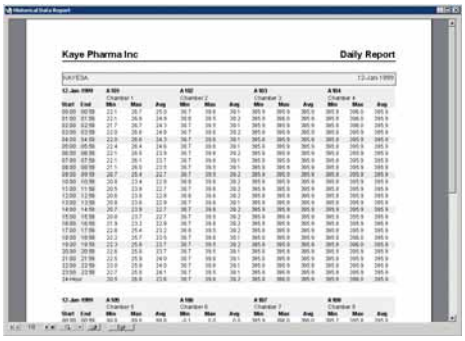
Reports

You can select a report to suit your needs. Daily Reports summarize the hourly average, maximum and minimum values of selected sensors over a 24-hour period. The report can be automatically generated for the previous day's data, or manually generated to select any previous date for data display.



Daily report

Historical Reports allow you to review data, calculations or alarms for any excursion or any input over a specified time period.



Historical report

The Value Report includes all values for selected sensors at specified intervals over a period of time. You can also filter sensor values by defining upper and lower limits. Included in the report are values that exceed the specified upper limit and those that fall below the specified lower limit.

The Max/Min/Avg Report provides the minimum, maximum average values for selected sensors at specified intervals over a period of time and can be configured to produce daily or weekly reports.

Mean Kinetic Temperature Report

Mean Kinetic Temperature (MKT) is the isothermal temperature that corresponds to the kinetic effects of a time temperature distribution. The MKT calculation produces a single value that characterizes the effect of fluctuating temperatures on long term product storage by weighing higher temperatures more heavily than lower ones. This is appropriate because at higher temperatures, product degradation occurs at an accelerated rate.

System Documentation

To validate that your system is operating correctly and documented correctly, Installation and Operational Qualification protocols are available. These protocols can be executed by GE Sensing or your own personnel.

Services

Standard Maintenance Agreement

- One day visit to inspect, correct minor problems, make minor modifications, and train personnel pertaining to the LabWatch application
- Application development assistance
- Maintenance of application files
- Remote support for customer training, fault correction and general remote maintenance
- Remote support for catastrophic system software failure recovery
- Telephone support for fault isolation or corrective action to restore normal equipment operation during normal business hours
- Next business day delivery of parts required to restore normal operation
- Field service engineer dispatch within 72 hours of determination that spare part replacement or telephone support will not restore operation
- Annual visit to inspect, clean, lubricate, replace faulty parts and calibrate the equipment.

Preferred Maintenance Agreement

Standard Maintenance Agreement plus:

- Catastrophic system software failure recovery including up to one visit of two consecutive days of site assistance, if remote support cannot correct the problem
- 24/7 telephone support for fault isolation or corrective action to restore normal equipment operation
- Annual visit to include loop calibration of all sensors supplied with the LabWatch package.

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