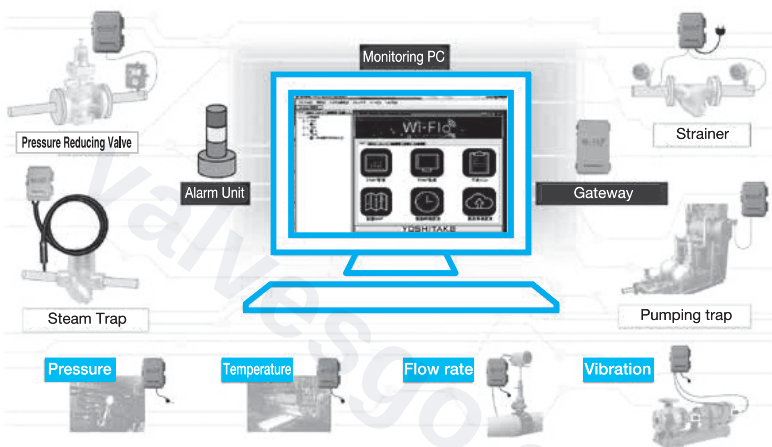




Wi-Flo System Overview

Wi-Flo is a system that allows you to monitor the operating status of fluids and devices at any time with PC. Measurement data such as steam trap operation, pressure, differential pressure, vibration, temperature, and flow rate can be confirmed wirelessly on a monitor PC. Man-hours required to visit the site can be reduced, as well as centralized management of equipment and facilities, history management, and room maintenance.



Feature 1 Energy savings and CO₂ reduction

Energy efficiency in steam pipe systems requires early detection of steam trap malfunctions and leakage, also replacement of faulty equipment. Daily monitoring enables immediate replacement or repair of steam traps the day after a malfunction or leakage occurs.

Feature 2 Process and quality stabilization

In light of trend analysis of accumulated monitoring data and preset alarm threshold values, you can perform predictive maintenance before the occurrence of serious issues such as production suspension, utility shutdown, and drop in product quality. Early action may only require part replacement or minor repairs.

Feature 3 Man-power reduction and increased safety

The system lowers the man-power required for site patrol, reducing the frequent visit to the site, and work at high place, near the hot place or rotating places, and in other dangerous locations. This increase safety condition for maintenance operations.

Feature 4 Ease of installation and mounting

Installing the end device for steam trap monitor do not require any plumbing work. It only require the clamp which is included. The pressure and differential pressure monitoring sensor do not require major plumbing work either, as they use the existing manometer connection.

Feature of Wi-Flo system

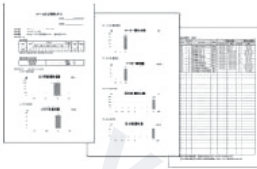
Monitoring, MAP function



Data Storage, Trend analysis



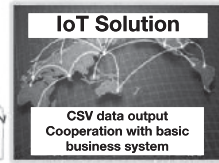
Report output



Remote mounting/Data linkage



Wi-Flo



Monitor and MAP Function

[Monitor]

Trap leakage, clogging, and defect in pressure can be defined in different color and monitored clearly. It can monitor the loss of money and energy, and also increase the maintenance motivation.

[MAP Function]

When the trap leakage, clogging, and defect in pressure is detected, alarm will turn on immediately upon measurement. Monitoring is available not only in data form on the monitor, but also in color-coded plot form on a map.

Data Accumulation and Trend Analysis

Accumulated data can be displayed in graph form. Trend analysis in graphs is useful for predictive maintenance.

Report Output Function

Diagnostic reports can be output for a specified period. In addition to the overall quantity and amount of steam loss, quantity and amount of loss can be calculated by area, manufacturer, or pressure for each type of failure.

Remote Network Monitoring and CSV Output

The CSV data output function allows an interface with existing network systems.



Advantage of usage

Why automatic monitoring?

Point.
1

Early detection and action!

By monitoring, it enables early detection, minimizing the trap leakage, clogged strainer, and other problems.

Point.
2

Safety!

The system does not require inspection by personnel, which reduce the need for work at high place, hot areas, and in other dangerous locations.

Point.
3

Eliminate the measurement error! (trap monitoring)

Measurement may vary among personnel when done by hand. This system can eliminate human measurement errors.

Point.
4

It can provide automatic recording, report output, and data analysis!

Because data is stored in a PC, you can easily manage maintenance history records, analyze stored data, and output reports.

Why Wireless Communication?

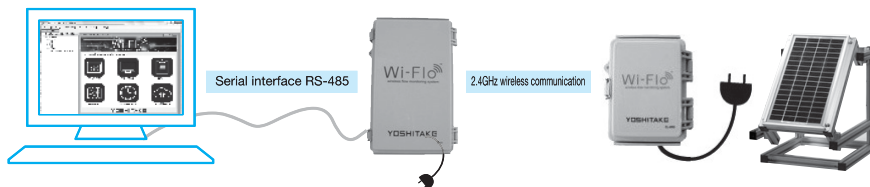
Point.
1

The system does not require installation work (for battery-powered specifications).

Point.
2

The system is easy to move and can be installed in a different location when not in use. This allows you to optimize your number of monitoring devices.

Product specifications



PC・Software	
Model	FMS-1, FMS-GWZ
CPU	Intel Pentium 4 2GHz or more
Memory	Server: 2GB or more (Recommend more than 4GB). Client: 1GB or more (Recommend more than 2GB).
Storage device	Free Space more than 250MB.
Communication port	1 USB port for serial communication 1 USB port for alarm operation.
Monitor Display	Resolution more than 1280x1024
Input device	Keyboard/Mouse
Software	Wi-Flo (Wireless Flow Monitoring System)

Gateway	
Model	WIF-1GW
Rated voltage	100-240V AC50/60Hz
Wired communication standard	Conform to RS-485
Wireless communication standard	Conform to IEEE802.15.4
Communication distance	Indoor: Maximum 60m Outdoor: 1.2Km (Module catalogue value).
Temperature and humidity range inside the instrument	-20-60°C 35-85%RH
Power consumption	10VA(MAX)

Router for AC power supply / Solar cell	
Model	WIF-1RT
Rated voltage	100-240V AC50/60Hz
Wireless communication standard	Conform to IEEE802.15.4
Communication distance	Indoor: Maximum 60m Outdoor: 1.2Km (Module catalogue value).
Temperature and humidity range inside the instrument	-20-60°C 35-85%RH
Power consumption	5VA(MAX)

The solar battery is equipped with a 12V battery and can supply power to the battery-powered end device.

For trap



Battery-powered

For Pressure reducing valve, Strainer, and other equipment



Mains-powered



Battery-powered

Features/Applications	
Model	WIF-1T
Rated voltage	DC3.6V (Dedicated battery)
Sensor	Vibration: Piezoelectric accelerometer Temperature: Thermister
Maximum piping temperature	300°C
Temperature and humidity range inside the instrument	-20-70°C 35-85%RH
Communication cycle time setting	2-1440 minutes (1minutes unit)*
Rated power consumption	0.75W
Battery life (Reference)	1 time transmitter per day and last for 1.5 to 2 years (25°C)

Sensor Signal transmission		Contact detection
Model	WIF-1S	WIF-1G
Rated Voltage	100-240V AC50/60Hz	DC3.6V (Dedicated battery)
Analog DC Input	4-20mA 2CH Possible with 2 wire and 3 wire	—
Input/Output	—	No voltage contact
Temperature and humidity range inside the instrument	-20-60°C 35-85%RH	-20-70°C 35-85%RH
Output voltage for sensor	DC24V	—
Communication cycle time setting	10-9999 seconds (1 second unit)*	1-1440 minutes (1min unit)*
Power consumption	8VA (MAX)	0.75W (Rated)

*Communication standby time is limited by the number of end devices.