VM-773B-A infiSYS ANALYSIS VIEW

Model Code / Additional Spec. Code (No entry if additional spec, code is not specified.)

VM-773B-A

Specification

CONNECTION DEVICE

Number of system measurement poins : Max. 2048 points*1

ZARK Series

Number of ZARK X8II HUB registrations : 40 units
Number of connected sensors

Model code	Product Name	Maximum Number of Connected Units
ZN-4A	ZARK Nano battery-powered sensor (sensor-integrated)	32 units / X8II HUB : 1 unit

infiSYS RV-200 Series

Number of connected unit for DAQpod infiSYS data acquision unit

Model code	Product Name	Maximum Number of Connected Units
DP-2000	infiSYS data acquisition unit	20 units
AP-2000*2		

Modbus Client function (Master side : Data request)

Maximum number of connections : 20
Number of system measurement points : Max. 2048 points
Protocol : Modbus/TCP(RTU mode)
Received data : Various numerical data

Modbus Server function (Slave side : Data return)

Protocol : Modbus/TCP(RTU mode)
Number of simultaneous connection : 5
Transmitted data : Measured value and alarm status

*1 The number of units that can actually be measured and the number of measurement point are limited by system requirements.
For the size of data used in this system, refer to the data specifications described later.
*2 In AP-2000H containing system B, the number of devices is counted as two units.

∗ For detailed conditions for the number of connected units, refer to the product specifications of each wireless device.

SHORT TERM / LONG TERM DATA SAVING FEATURES

Real-Time Data（Short Term Data）

Saves the data received from the connected device as real-time data.

Data collection interval	ZARK	Trend	1,2,4,6,12,24 hour
		Waveform	1,2,4,6,12,24 hour
	DAQpod Data Acquisition Unit (BOP)	Trend	10 sec
		Waveform	10 sec, 30 sec, 1min, 10 min, 30 min, 1 hour
		Process	1 sec
	Modbus Server device	Process	1 to 600sec
Saving period	10 years*3		

*3 Data before the saving period is automatically deleted.
You can change the saving period. (1 month, 2 month, 3 month, 6 month, 1 year, 2 years, 3 years, 5 years, 10 years)

Historical data（Long Term Data）

Statistical calculation (maximum value, minimum value, average value) of data collected from connected devices is performed for the purpose of confirming long-term trends, and the result is saved as historical data.

Calculation cycle	ZARK Nano	Trend	24 hour
		Waveform	24 hour
	DAQpod Data Acquisition Unit (BOP)	Trend	1 hour
		Waveform	24 hour
		Process	1 hour
	Modbus Server device	Process	1 hour
Saving period	10 years*4		

*4 Data before the saving period is automatically deleted.

FUNCTION

Web page display	You can access this software via the corporate LAN by using a web browser.
Analysis	A trend plot and an analysis graph can be displayed using the data collected from the connected devices.
Rolling bearing diagnosis	Diagnosis of rotating machines can be performed. ※ DAQpod(BOP) device only
Alarm	Alarms for the OA vibration value, the process value (such as temperature) and frequency band alarm can be set.
Export graph data	Data displayed on the graph can be output to a file (CSV).
E-mail	The state of alarm occurrence can be received by e-mail at the time of alarm occurrence or periodically.
Report file output	Data (trend, spectrum) at the time of alarm occurrence or at any point can be output to a file.
Simplified diagnostic tools output	Trend confirmation and simplified diagnosis can be performed using frequencies and amplitudes of the frequency analysis results.
Data file output*5	Collected data and alarm settings can be output to a CSV file.
Modbus/TCP communication (Server)	Measured values and status of infiSYS 3.0 can be output to the Modbus Client device.
Modbus/TCP communication (Client)	Measured values and status output from Modbus server devices can be obtained with infiSYS3.0.

*5 ZARK is not supported

⚠ WARNING
To use wireless devices in countries and regions around the world, it is necessary to obtain a certification under the radio law of the relevant country or region.
The wireless module used in the system can only be used in the country where it has been certified.
If the system is to be used outside Japan, contact the sales office where you purchased the system.

VM-773B-A infiSYS ANALYSIS VIEW

Specification

DISPLAY

List

Measured value list (wired・wireless)	Displays the current measured values collected from the connected devices in a list format.
Device state list	Displays the information and communication state of the connected devices (Base unit).
Module state list	Displays the information and communication state of the connected devices (sensor).
History of alarms	Displays the alarm occurrence and recovery histories.
History of system	Displays the occurrence and recovery histories of system error (communication error, sensor error).
Report list	Displays a list of report information created at the time of alarm occurrence.

Analysis Graph

Real-time trend	Displays a trend plot of measured values collected from the connected devices.
Historical trend	Displays a trend plot of the statistically processed data (maximum value, minimum value, and average value) of the measured values collected from the connected devices.
Waveform Plot	Displays the vibration waveform collected from the connected devices in a graph.
Spectrum	Displays the results of frequency analysis in a spectrum plot.
Waterfall	Displays a graph showing spectrum data in chronological order.

The analysis/diagnosis functions that can be displayed by this software vary depending on the connected device and the type of measurement target.

Analysis graph	ZARK Nano		
	Vibration (Acceleration)	Vibration (Velocity)	Process
Real-time trend	○	○	○
Historical trend	○	○	○
Waveform Plot	○*6	—	—
Spectrum Plot	○*7	—	—
Waterfall Plot	○*7	—	—
Simplified diagnostic tools (Top10 trend)	○	—	—
Simplified diagnostic tools (Top10 diagnosis)	○	—	—
Rolling bearing diagnosis	—	—	—

*6 A waveform plot can only be displayed from acceleration measurement points.
*7 In 920 MHz and ZARK Nano, the spectrum plot and waterfall plot display the Top10 spectrum data.

Analysis graph	DP-2000、AP-2000	
	Vibration(BOP)	Process
Real-time trend	○	○
Historical trend	○	○
Waveform Plot	○	—
Spectrum Plot	○	—
Waterfall Plot	○	—
Simplified diagnostic tools (Top10 trend)	—	—
Simplified diagnostic tools (Top10 diagnosis)	—	—
Rolling bearing diagnosis	○	—

○ : To display、—: Do not display

Diagnosis Function

Rolling bearing diagnosis	Displays the cause of the vibration phenomenon and the waveform and spectrum at the time of diagnosis. ※ DAQpod(BOP) device only.

Diagnosis possible malfunctions cause :

Rolling bearing diagnosis
Bearing damage
Lubricating Trouble （Rolling Element Bearing）
Insufficient tightness – Bearing
Unequal stiffness
Unbalance
Vane unbalance
Cooling fin unbalance
Coupling inaccuracy or damage
Misalignment
Seal or rotor rub
Gear inaccuracy
Electrically excited vibration
Insufficient tightness - Casing
Vane Passing Vibration

Display of the diagnosis result : A malfunction cause is displayed in order from the high thing of the factor as a result of diagnosis.
Requires 2048 or more sampling points.

SOFTWARE SUPPLY

DVD-ROM

※ The specifications and other items indicated herein are subject to change without notice.
※ All company and product names in this brochure are trademarks or registered trademarks.

Requirements

SYSTEM REQUIREMENTS

infiSYS View Station*1 (for data collection and monitoring)

CPU	Intel Core i5 or higher
Memory	8GByte or higher
OS	Windows 10 Pro(64bit) (20H2 or later)*2 Windows 10 IoT Enterprise 2016 LTSB (64bit) Windows 10 IoT Enterprise 2019 LTSC (64bit) Windows 10 IoT Enterprise 2021 LTSC (64bit) Windows 11 Pro Windows 11 IoT Enterprise Windows Server 2019 Standard Windows Server 2022 Standard
Storage	The required capacity depends on the system configuration (connected devices, number of measurement parameters, data acquisition conditions) (see supplement)
Graphic	1366 × 768 of higher resolution (recommended 1920 × 1080)
Web browser	Google Chrome、Microsoft Edge(Chromium)
Drive	External or built-in DVD-ROM drive
Network	Ethernet 100 BASE-TX or higher

*1 A PC installed with this software is called an infiSYS View Station.
*2 Upgrade Windows10 Pro to 20H2 or later.
※ To view the simplified diagnostic tool or report file, you also need Microsoft Excel 365 or 2019 or later.

User PC (for viewing)

CPU	Intel Core i5 or higher
Memory	8GByte or higher
OS	Windows 10 Pro(64bit) or Windows 11 Pro recommended
Graphic	1366 × 768 or higher resolution (recommended 1920 × 1080)
Web browser	Google Chrome, Microsoft Edge (Chromium)

※ Since installation of dedicated software is not necessary, there are no storage requirements.
※ To view the simplified diagnostic tool or report file, you also need Microsoft Excel 365 or 2019 or later.

Supplement

Overall	If you want to achieve a prolonged stability and improved reliability of infiSYS View Station, we recommend a server PC or factory automation PC (FAPC). To improve the fault tolerance of storage, RAID configuration storage is recommended.
CPU	Although infiSYS View Station and the CPU of the user PC operate with Intel Core i3, Intel Core i5 or higher is recommended because a high load is applied on the CPU when the view change operation of the waterfall plot is performed.
Memory	Because infiSYS View Station and the memory of the user PC consume approx. 4 GB with the OS and browser running, 8 GB or more memory is recommended.
OS	Windows 10 Home and Windows 11 Home cannot be used for the operating system of infiSYS View Station and user PC
Storage	infiSYS View Station requires approx. 2 GB of storage during installation. The amount of storage used during operation depends on the connected devices and the number of measurement parameters. Approximate amount of the storage used based on expected use conditions is as follows. (The real-time data and the historical data is saved for 10 years.) The report file at the time of alarm occurrence uses approx. 2 MB per file. Considering the space required for backup, it is recommended to allocate storage capacity at least twice as large as the amount used.

Example of HDD usage

Trial calculation based on 10 year of real-time data and 10 years of historical data.

ZARK

Conditions	Amount used
X8II : 1 unit, Nano: 1 unit (Trend, waveform: 2048 points, 1 hour)	7.2GByte
X8II : 1 unit, Nano : 32 units (Trend, waveform: 2048 points, 1 hour)	28.8GByte

DAQpod infiSYS Data acquision unit (AP-2000、DP-2000)

Conditions	Amount used
DP-2000B: 1 unit, vibration channel: 24ch (BOP mode, trend: 10sec, waveform: 2048 points, 1 hour	97.1GByte
AP-2000D: 1 unit、vibration channel: 48ch (BOP mode, trend: 10sec, waveform: 2048 points, 1 hour	194.3GByte

Modbus Server device

Conditions	Amount used
Modbus Server, process:100ch Trend : 10sec	28.4GByte

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SYSTEM CONFIGURATION

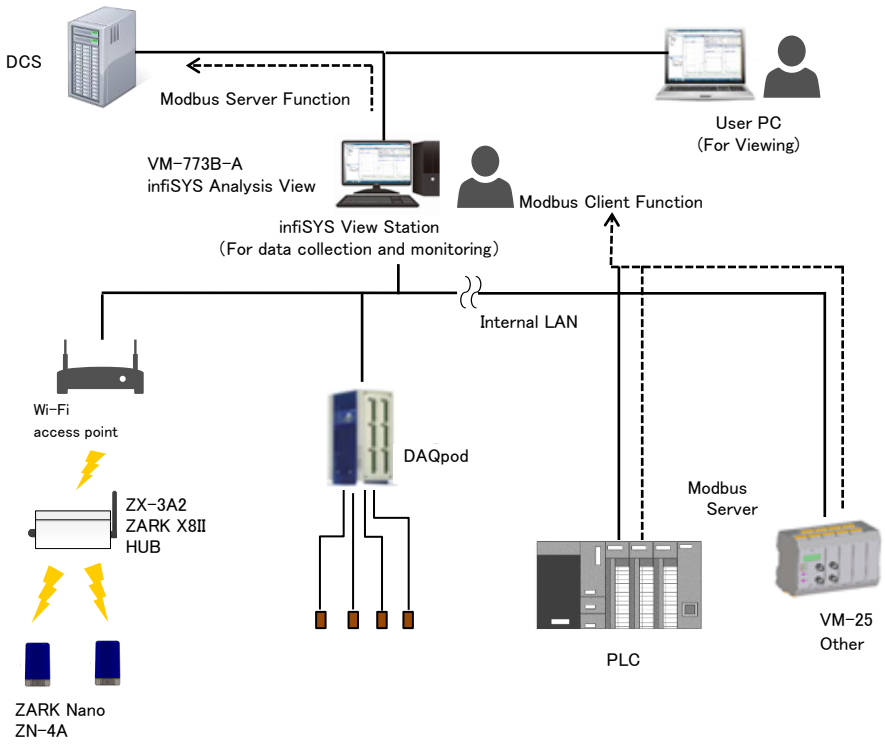

Figure 1 Example of system configuration