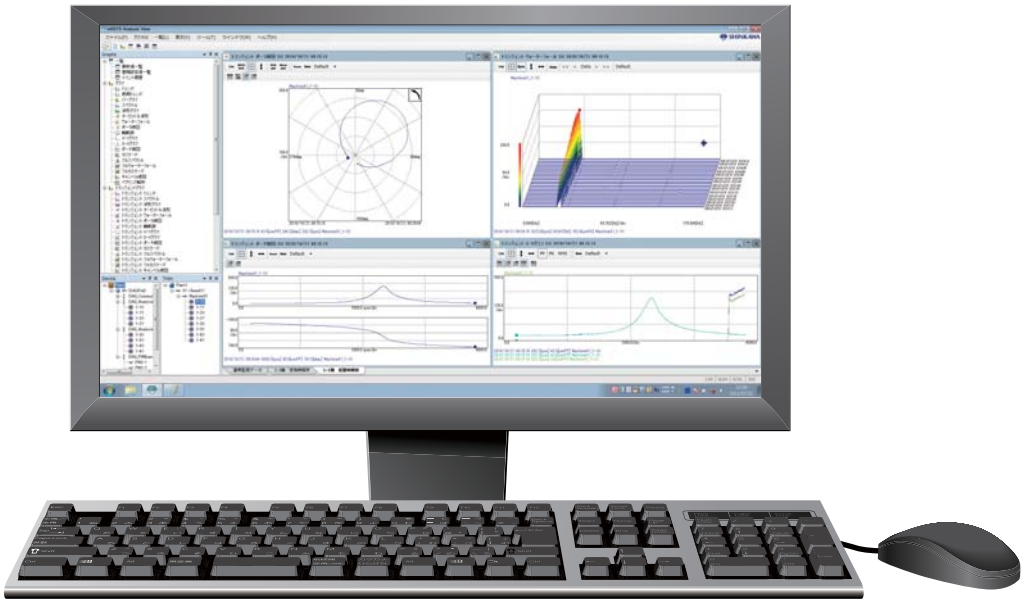


infiSYS Family

infiSYS RV-200/VM-7 Monitoring System

UPDATED INFORMATION

SHINKAWA

6H16-011 Rev.3

Table of Contents

* Release date basically refers to the month in which the new feature becomes applicable, while for a new product or specification, it means the month in which it is made available for order.

1 New Optional Feature: Phase Marker Input

(VM-701B/PM1/ALY)

New Product

For on-line monitoring and analysis applications of multiple rotating machinery

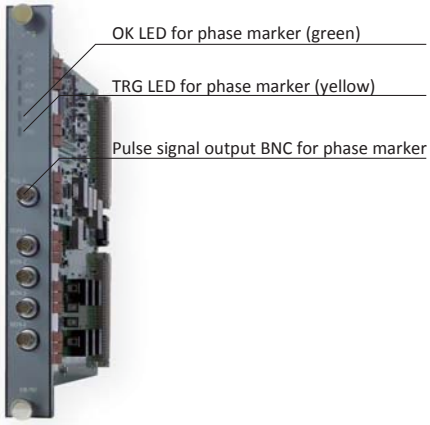
In applications where a multitude of middle-scale rotating machinery or multiaxis rotating machinery needs to be monitored/analyzed, a larger number of phase marker inputs is required in a VM-76□B rack. For this application, now phase marker input (1 channel) is optionally available for the VM-701B Vibration/Displacement Monitor Module.

By specifying optional codes "/PM1/ALY" on the purchase order, the maximum amount of phase marker inputs per rack increases up to 15 channels.

Note: The versions of the related products need to support this function.

VM-701B (conventional)

VM-701B/PM1/ALY (+ new feature)



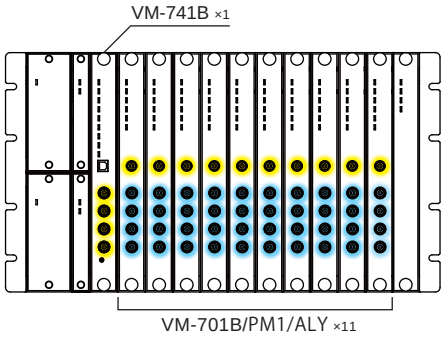
Point

Condition monitoring/analysis of multiple middle-scale rotating machinery in a few racks

By specifying the option codes "/PM1/ALY" , adding a phase marker input feature to VM-701B, monitoring and analysis can be managed in fewer racks, even in cases where the scope extends to a large amount of middle-scale rotating machinery, to each of its axes.

[VM-701B (conventional)] The number of phase marker inputs available for vibration analysis is 4.

[VM-701B/PM1/ALY (with new option)] On top of the 4 channels on VM-741B, phase marker input is also available one per VM-701B monitor module. → (VM-741B) 4 ch + (VM-701B/PM1/ALY x 11) 11 ch = 15 ch



The increased number of phase marker inputs will not affect the number of vibration inputs!

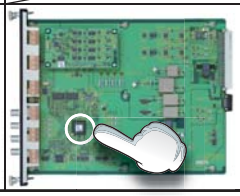
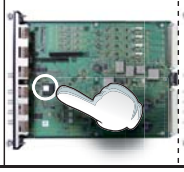
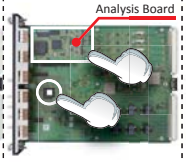
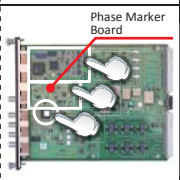
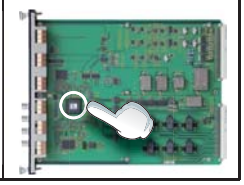
Vibration input:
4 ch × 11 slot = **44** ch

Phase marker input:
VM-741B + (VM-701B/PM1/ALY × 11) = **15** ch
4 ch 1 ch

1

Support information of related products

In addition to installation of VM-701B/PM1/ALY, the feature must be supported by the versions of the related products. Please refer to the following table for support information. The previous versions of firmware will not support this feature. The firmware versions that support this feature are shown below.

Hardware					
Model	★ **VM-741B**	★ **VM-701B**			**VM-706B**
Product Name	Local Communication & Phase Marker Module	Vibration/Displacement Monitor Module (Board version: 2R10-001-P001D*1)			Rod Drop Monitor Module
Option Code		PM0/AL0	PM0/ALY	PM1/ALY	
Firmware ID	2R10-005-F001C	2R12-001-F001	2R12-001-F001	2R12-001-F001	2R10-008-F001A*2
(Analysis Board)		—	2R12-001-F002	2R12-001-F002	
(1 ch Phase Marker Board*3)		—	—	2R12-001-F011	
Identifications on Modules (Versions can also be checked on VM-772B Device Config.)					

Software			
Model	**VM-771B**	★ **VM-772B**	**VM-773B**
Product Name	MCL View	Device Config	infiSYS Analysis View
Software Version	Version 1.1.0.0	Version 1.1.0.0	Version 1.1.0.0

★ Products withi this feature.
★ Related products mandatory for this feature.

*1 A board of this or later version with 5 BNC connectors is required.
*2 The firmware of this or later version is required to provide the synchronous signal to VM-706B from VM-701B/PM1/ALY.
*3 This is not required if the module only receives synchronous signal, instead of directly receiving phase marker input.

Vibration channels to allocate phase markers

The phase marker signals received by VM-741B (4 ch max.) can be allocated to all vibration channels of the same rack; the phase marker signals received by a VM-701B/PM1/ALY can only be distributed to the vibration channels of the same module.
However, VM-701B/PM1/ALY also outputs pulse signals for phase marker synchronization of other modules, and by providing the pulse signals to another VM-701B/PM1/ALY, which is set as a slave, via a hardwire connection, one channel of a phase marker input can be allocated to up to 8 vibration channels (2 modules).
The following table shows the vibration channels to which the phase marker inputs can be allocated.

	VM-701B/PM1/ALY		VM-741B
Number of phase marker input per module	1		4
Number of modules installed per rack	1 to 11		1
Scope of phase marker allocation	Within the same module	Within the same module + Slave modules*1	Within the same rack
Number of vibration channels allocated to a phase marker	Up to 4	Up to 8	Up to 44

*1 If the pulse signal for synchronization from the VM-701B/PM1/ALY, set as the master, is connected via a hardwire to another VM-701B/PM1/ALY, set as a slave.

2 infiSYS Report Software

VM-783B

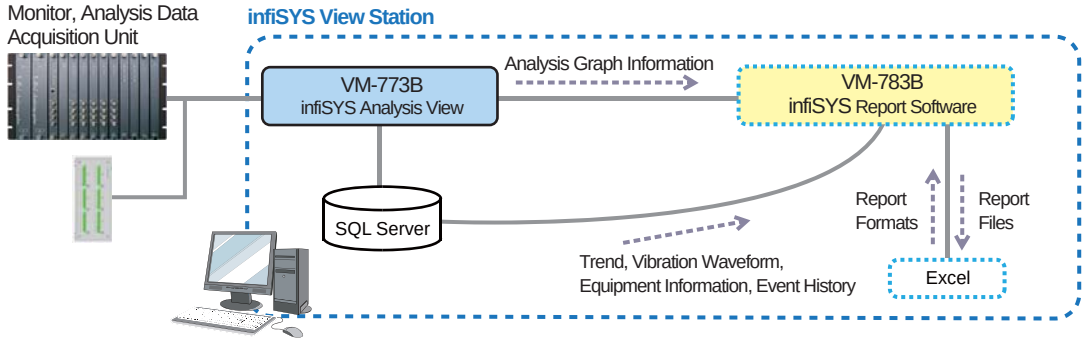
New Product

For more efficient trend management and vibration analysis/diagnostic reporting

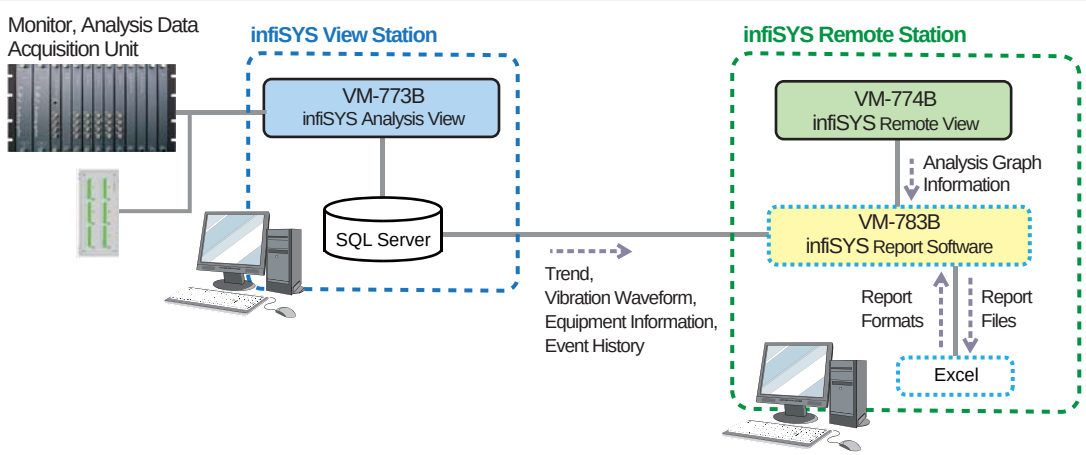
By installing this software to the infiSYS View Station, Remote Station or Kenjin Portable View Station, the user will be able to output the event history, trend data and analysis graph images into report files.

Configuration

With infiSYS View Station

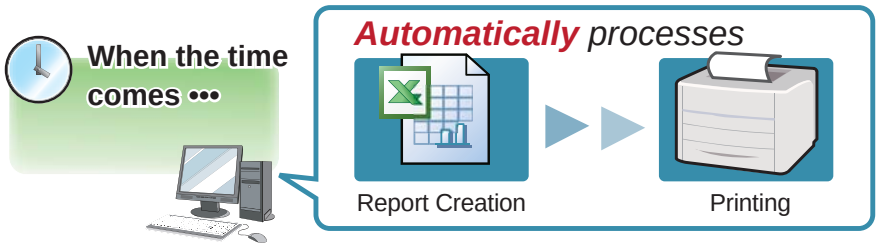


With infiSYS Remote Station



Point *Easier, faster report preparation using a format*

Using a preinstalled or customized format, user can create a report in a desired format in a shorter time.
If it is set beforehand, the system automatically creates and prints out, if desired, reports periodically or at the time of alarm activation.



Support information of related products

The feature must be supported by the versions of the related products, as shown below. The previous versions will not support this feature.

VM-773B
infiSYS Analysis View
Version: 1.2.0.0

VM-774B
infiSYS Remote View*
Version: 1.2.0.0

* Compatibility of this product also needs to be checked, if it is or to be in use.

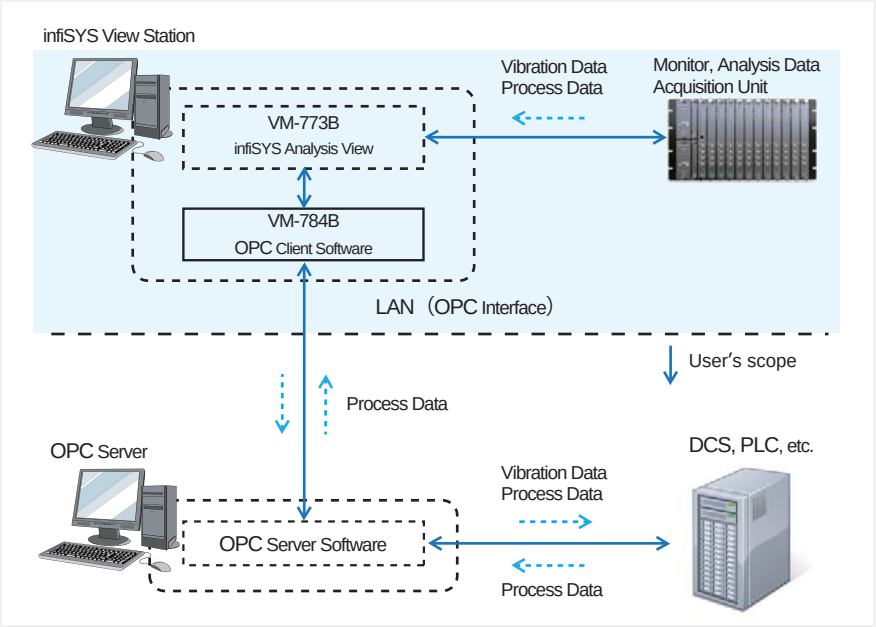
3 OPC Client Software

VM-784B

New Product

Realizes communication between infiSYS Analysis View and the host network via OPC server

By adding to infiSYS Analysis View (version 1.2.0.0 or later), interactive data communication with the host system, such as DCS and PLC, will be available through OPC server.



Support information of related products

The feature must be supported by the versions of the related products, as shown below. The previous versions will not support this feature.

VM-773B
infiSYS Analysis View
Version: 1.2.0.0

Point *Mutually take advantage of data of infiSYS and the host system (DCS, PLC, etc.)*

The infiSYS RV-200 system acquires process data (temperature, pressure, generating power, etc.) along with vibration data, and performs a variety of analysis with the information linked to each other. Likewise, the host system can utilize the analysis data of infiSYS Analysis View.

Examle of use:

infiSYS View Station

Creating a generating power (load) - vibration correlation plot (L-V plot)

An X-Y plot displays data acquired by infiSYS which are set as the x-axis and the y-axis.

This is useful to check the relationship between the vibration and the process data, i.e., load, temperature, pressure, etc.

Process data can also be displayed in the bar graph and trend plot.

With the conventional system, vibration analysis data can only be transmitted to the host system from VM-7 Series monitors via Modbus protocol. Now, this software enables the system with only the infiSYS Data Acquisition Units (DAQpod AP-2000 or DP-2000) to integrate the analysis data into the alarm system at the DCS. Also, as OPC server software supports general protocols (Modobus, CC-Link, etc.), infiSYS RV-200 can communicate with almost any host system you may have.

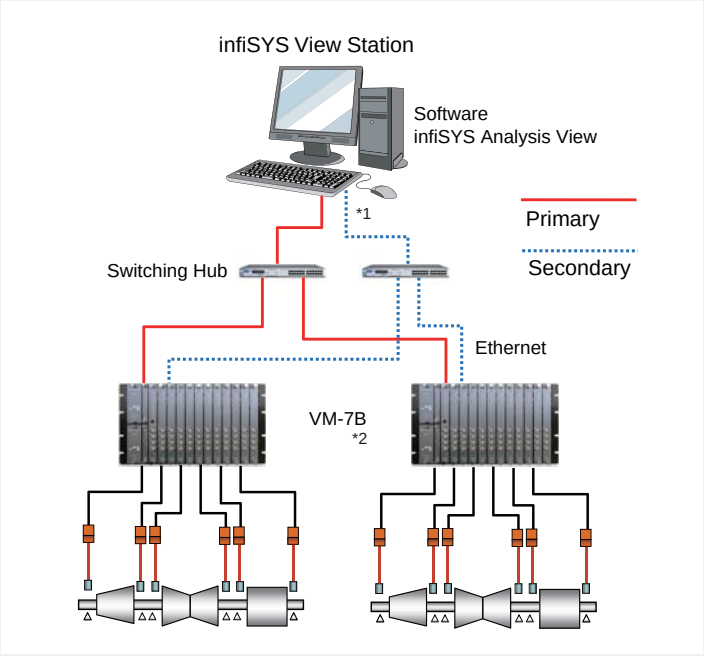
4 Support for Redundant Analysis Communication

New Feature

For continued, secure analysis data acquisition despite a single line failure.

VM-7B now supports redundant analysis data communication with the infiSYS View Station. This prevents long term loss of analysis data due to disconnection of the communication cable, a failure on the hub or communication failure resulted from noise from the cable on the primary line.

Once communication failure is detected on a communication line, which has been set as primary, infiSYS Analysis View automatically switches the line to secondary line and continues communicating with the VM-7B monitor.

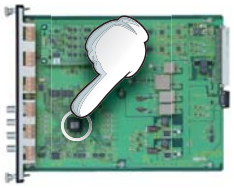
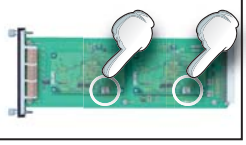


*1 A LAN card must be added on the infiSYS View Station for secondary communication.

*2 VM-742B Network Communication Modules, both with analysis function and of supported versions, must be installed in Slot C1 and Slot C2.

Support information of related products

Use the products of versions specified in the following table or later versions. Older versions do not support this function.

Hardware		
Model Code	★ **VM-741B**	★ **VM-742B**
Name	Local Communication & Phase Marker Module	Network Communication Module
Firmware ID	2R10-005-F001C	2R10-006-F002B
Identification on Module (Versions can also be checked on VM-772B Device Config.)		

Software		
Model Code	★ **VM-773B**	**VM-774B**
Name	infiSYS Analysis View	infiSYS Remote View
Software Version	1.2.0.0	1.2.0.0

★ Related products mandatory for this feature.

5 9-Channel Relay Module

VM-722B

New Product

For redundant alarm relay module or more reliable, flexible alarm logic employment

VM-722B is a module that has nine channels of programmable alarm relays (single-pole, single-throw type).
More than one of these modules can be installed in a rack, allowing for alarm relay module redundancy.
It can accept as much as 1023 logic elements*, the largest number per alarm relay among the series, to satisfy the needs where employment of very complex logic is required.

Point *Differences from VM-721B 18-Channel Relay Module*

■ **Number of outputs**
- VM-721B, 18 points; VM-722B, **9 points**

■ **Number of logic elements***
- VM-721B, 255 elements; VM-722B, **1023 elements**

■ **Slot location**
- VM-721B, Slot 11 (fixed); VM-722B, **any** of the **Slots 1 to 11**

***Logic Element**

A logic element is an alarm status (e.g. DANGER of ch 1) or a logical connective (e.g., "AND '*'", "OR '+' '", "NOT '!'", "Opening bracket '('", "Closing bracket ')'".
It is counted as follows;

Example 1) Alarm is activated when either one of two transducers falls into DANGER condition.

ch1 DANGER + ch2 DANGER ⇒ **3 logic elements**

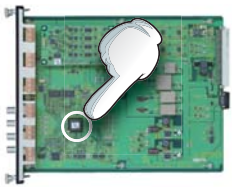
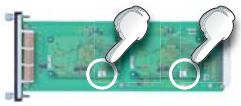
Example 2) Alarm is activated when either one of two transducers fall into DANGER condition, and either one of other two transducers falls into ALERT condition.

(ch1 DANGER + ch2 DANGER) * (ch3 ALERT + ch4 ALERT) ⇒ **11 logic elements**

5

Support information of related products

In addition to installation of VM-722, the feature must be supported by the versions of the related products. Please refer to the following table for support information. The previous versions of firmware will not support this feature. The firmware versions that support this feature are shown below.

Hardware		
Model Code	★ **VM-741B**	**VM-742B**
Name	Local Communication & Phase Marker Module	Network Communication Module
Firmware ID	2R10-005-F001C	2R10-006-F002B*1
Identification on Module (**Versions can also be checked on VM-772B Device Config**)		

Software			
Model Code	**VM-771B**	★ **VM-772B**	**VM-773B**
Name	MCL View	Device Config	infiSYS Analysis View
Software Version	Version 1.1.0.0	Version 1.1.0.0	Version 1.2.0.0

★ Related products mandatory for this feature.

※1 The firmware of this or later version is required to output the status of VM-722B via Modbus/TCP or Modbus/RTU.

VM-7 Monitoring System Redundancy

The VM-7 Monitoring System does not support redundant communication of the VM-741B Local Communication & Phase Marker Modules and other modules.
The system can detect module failures and communication errors between the modules with a logic “RACK COM-OK”.
For greater reliability, it is recommended to use this logic along with the redundant relay module employment.
(For more detail on the logic “RACK COM-OK”, refer to the manual “VM-772B 9-Channel Relay Module Manual”.)

6 Customizable Recorder Output Configuration

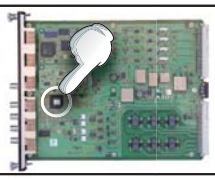
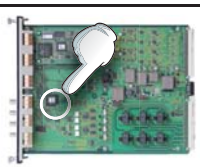
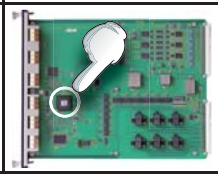
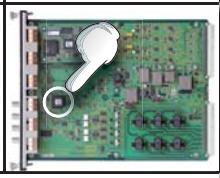
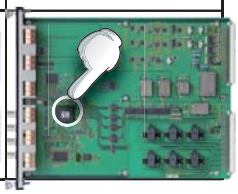
New Feature

Multiple recorder output per measurement point

A feature to set a measurement value within a module to one or more recorder output(s), which realizes flexible output configuration, i.e., simultaneous output of current and voltage, redundant output of a single measurement value, etc.

Support information of related products

Use the products of versions specified in the following table or later versions. Older versions do not support this function.

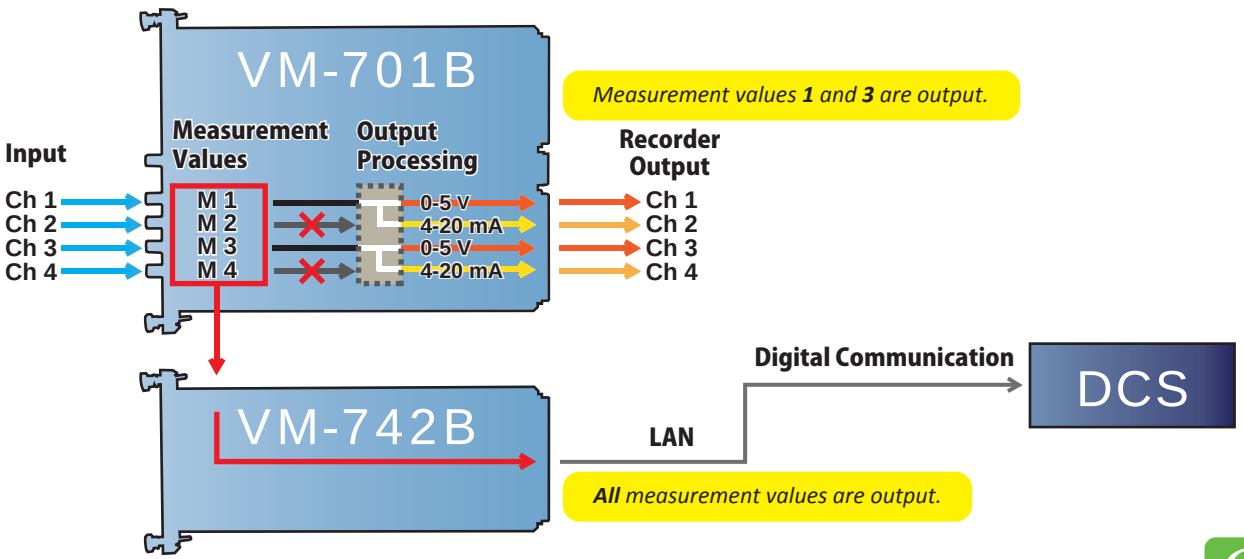
Hardware					
Model Code	★ **VM-701B/PM□/AL□**	★ **VM-702B**	★ **VM-703B**	★ **VM-704B**	★ **VM-706B**
Name	Vibratino/Displacement Monitor Module (Board version: 2R10-001-P001D)	Absolute Vibration Monitor Module	Tachometer & Eccentricity Monitor Module	Temperature Monitor Module	Rod Drop Monitor Module
Firmware ID	2R12-001-F001	2R10-007-F001A	2R10-002-F001B	2R10-003-F001A	2R10-008-F001A
Identification on Module (Versions can also be checked on VM-772B Device Config.)					

Software	
Model Code	★ **VM-772B**
Name	Device Config
Software Version	Version 1.1.0.0

★ Products with this feature.
★ Related products mandatory for this feature.

Measurement values not set for recorder output

Since the number of recorder outputs per module is limited, when one measurement is set for multiple recorder outputs, there may be measurement values that cannot be set for recorder outputs due to output shortage. Even in such a case, all measurement values within the module are output to the host network as shown in the figure below.

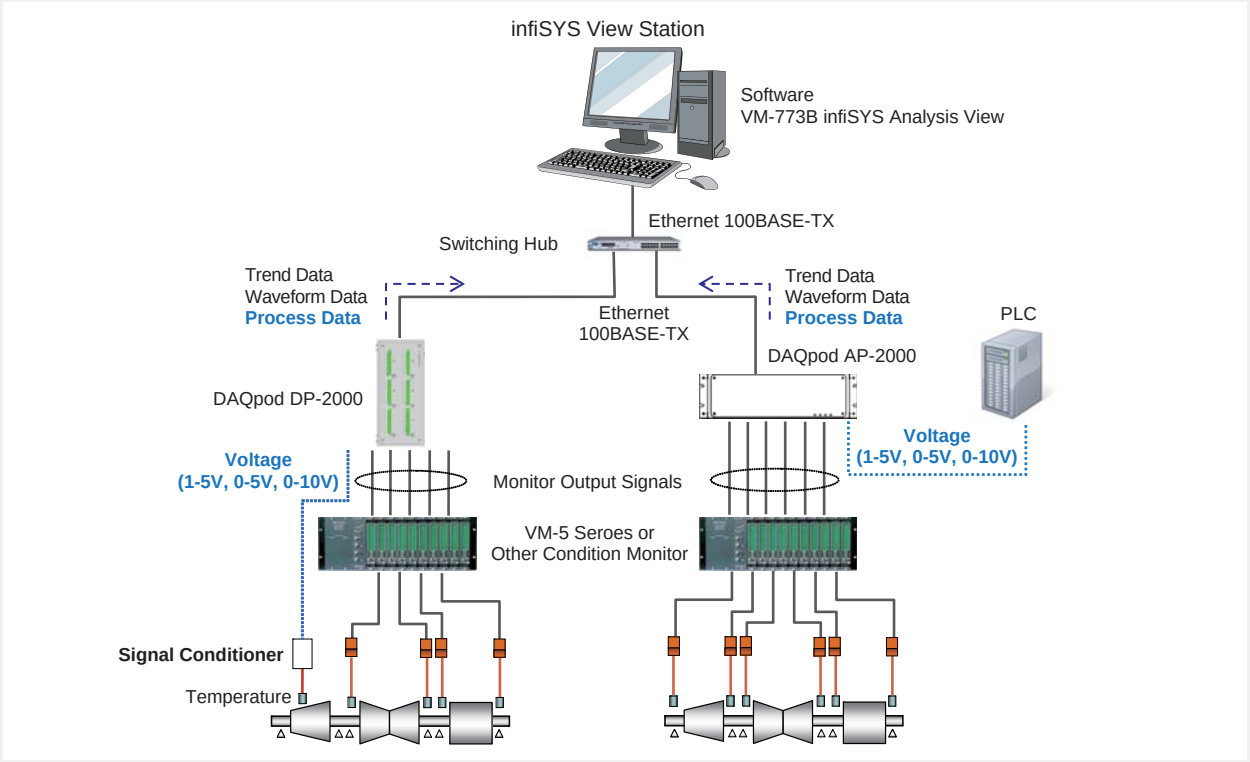


7 Extended Process Data Input Function

New Feature

Process data communication & display via DAQpod

The infiSYS RV-200 System now supports process data input to its analysis software (infiSYS Analysis View) from DAQpod.
The conventional system only accepted process data provided in a form of voltage or electric current signal to the VM-701B modules . This improvement allows the users to provide signals from a variety of signal conditioners through the infiSYS Data Acquisition Unit DAQpod DP-2000 or AP-2000. The vibration input channels of the DAQpod DP-2000 and AP-2000 are used as voltage input channels. The input voltage is calculated into a measurement value (process data) and transmitted to infiSYS Analysis View.



Support information of related products

Use the products of versions specified in the following table or later versions. Older versions do not support this function.
The firmware ID of a hardware can be checked on VM-772B Device Config.

Hardware		
Model Code	★ **DP-2000**	★ **AP-2000**
Name	infiSYS Data Acquisition Unit	
Analysis Board / **Firmware ID**	2R10-051-F002C	

Software			
Model Code	★ **VM-772B**	★ **VM-773B**	**VM-774B**
Name	Device Config	infiSYS Analysis View	infiSYS Remote View
Software Version	1.1.0.0	1.2.0.0	1.2.0.0*1

★ Products with this feature.
★ Related products mandatory for this feature.
*1 Although an older version can display process channels of DP-2000 or AP-2000, it is recommended to use the software of the same version as infiSYS Analysis View.

8 VM-7B Alarm High Speed Data Acquisition

New Feature

High speed data acquisition from before to after the alarm now available on VM-7B

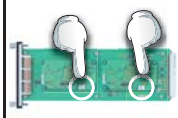
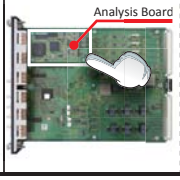
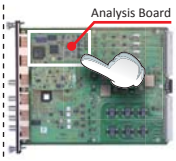
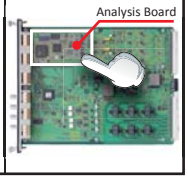
Data acquisition function via the VM-7B Monitoring System has improved to support fast data acquisition during the alarm event. Trend data from 20 sec. before the alarm is taken in increments of 0.1 sec. up until 10 sec. after the alarm, providing in-depth information of the changing conditions using the infiSYS Analysis View software.

Other than this period, trend data acquisition interval is 1 sec. Please also note that the waveform data is acquired at a preset interval (10 sec. minimum) for 60 sec. each before and after the alarm (total 120 sec.).

* This feature is also available with DAQpod.

Support information of related products

Use the products of versions specified in the following table or later versions. Older versions do not support this function.

Hardware				
Model Code	**VM-742B** ★	**VM-701B** ★		**VM-702B** ★
Name	Network Communication Module	Vibration/Displacement Monitor Module		Absolute Vibration Monitor Module
Optional Code		/PM0/ALY	/PM1/ALY	/ALY
Firmware ID	2R10-006-F002C			
(Analysis Board)		2R12-001-F002A	2R12-001-F002A	2R12-001-F002A
Identification on Module (Versions can also be checked on VM-772B Device Config.)				

Software	
Model Code	**VM-773B** ★
Name	infiSYS Analysis View
Software Version	V1.3.0.0

★ Products with this feature.
★ Related products mandatory for this feature.

9 Aeroderivative Gas Turbine Monitor Module

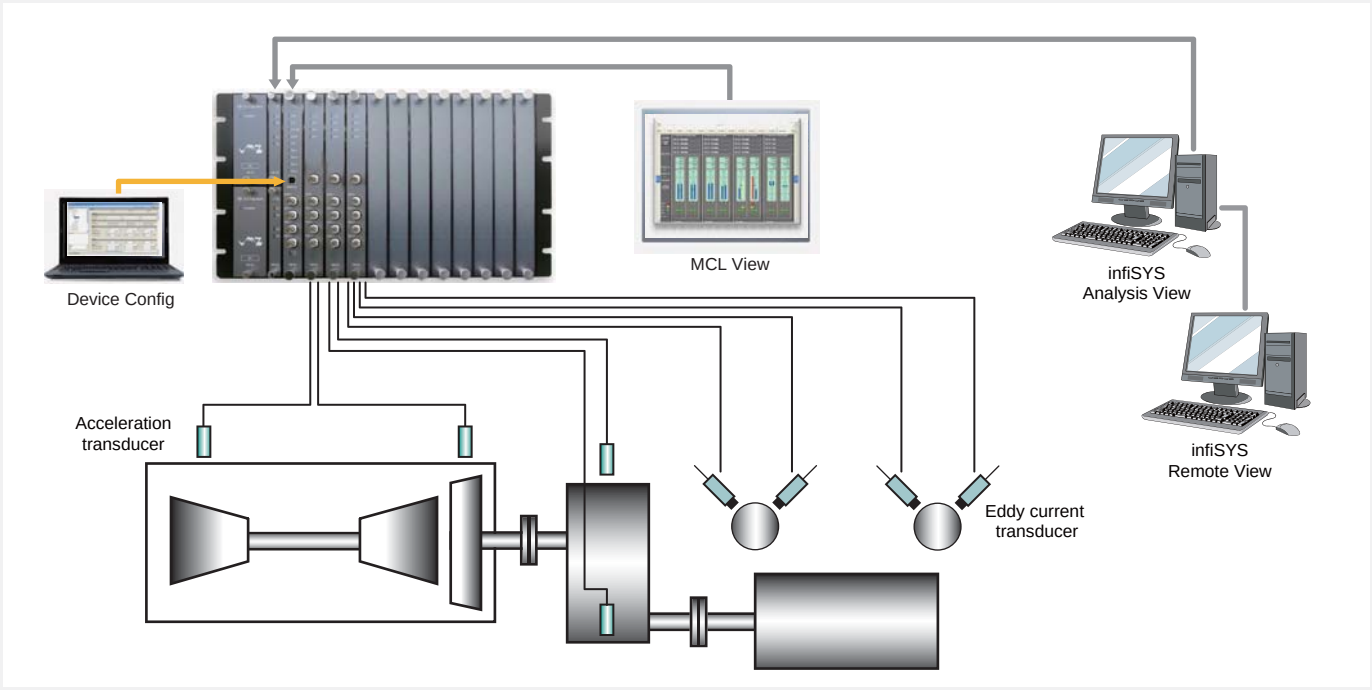
VM-707B

New Product

VM-7B enables to monitor vibration of aeroderivative gas turbine whose market is expected to expand.

The aeroderivative gas turbine employs a monitoring system for jet engine condition in the aerospace industry. In jet engine monitoring, damage that interferes with flight (loss of blades, gross imbalance, etc.) is detected by extracting vibration consisting only of the rotation frequency (1X) component.

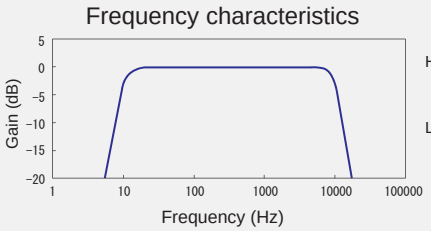
To realize this vibration measurement, VM-707B aeroderivative gas turbine monitor module employs a new measurement method, 1X vibration tracking monitoring.

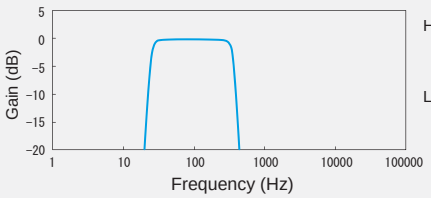


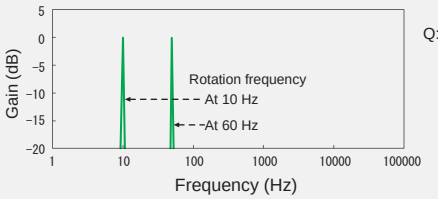
Point Features

Measurement Method

- Overall monitoring
- Band-pass vibration monitoring
- 1X vibration tracking monitoring
  (Each channel is set for two out of three measurements as Measure-A and Measure-B, respectively.)



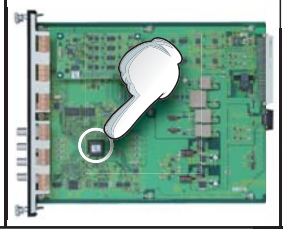
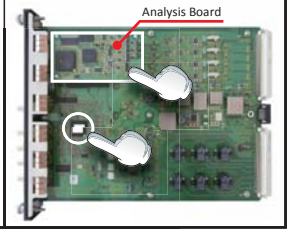




9

Support information of related products

In addition to installation of VM-707B, the feature must be supported by the versions of the related products. Please refer to the following table for support information. The previous versions of firmware will not support this feature. The firmware versions that support this feature are shown below.

Hardware		
Model Code	**VM-741B** ★	**VM-707B/ALY** ★
Name	Local Communication & Phase Marker Module	Aeroderivative Gas Turbine Monitor Module
Firmware ID	2R10-005-F001D	2R14-001-F001
Analysis Board		2R14-001-F002
Identifications on Modules (Versions can also be checked on VM-772B Device Config.)		

Software			
Model Code	**VM-771B**	**VM-772B** ★	**VM-773B**
Name	MCL View	Device Config	infiSYS Analysis View
Software Version	Version 1.4.0.0	Version 1.4.0.0	Version 1.5.0.0

★ Products with this feature.

★ Related products mandatory for this feature.

Limitations

(1) As this product requires the analysis board, the order type must be with "/ALY", such as "VM-707B/ALY".

(2) The following various settings are common to Measure-A and Measure-B in the channel: monitoring range, unit, displayed decimal point digits, suppression value, Timed-OK Channel Defeat, burn-down, and first out.

(3) The filter characteristics of 1X vibration tracking monitoring is fixed (Q = 22).

(4) The phase is not measured.

(5) In recorder output and Modbus output, only the amplitude value measured by the method selected for Measure-A is output.

(6) Recorder output is not equipped with a function to assign a measured value in the module to multiple arbitrary recorder outputs.

(7) The alarm status of Alert and High Alert outputs Alert alarm (Alert-A) for Measure-A or Alert alarm (Alert-B) for Measure-B.

(8) The alarm status of Danger and High Danger outputs Danger alarm (Danger-A) for Measure-A or Danger alarm (Danger-B) for Measure-B.

(9) The rotation speed is only displayed in the MCL View.

10 New Feature for Measurement of Temperature Difference between Channels

VM-7B enables to monitor the temperature difference between channels.

Sleeve bearings are used in a large high-speed rotating machine such as turbine and turbo compressor, which is important equipment for power generation and in oil refining/petrochemistry plant. However, to detect and diagnose a failure symptom, monitoring is required for the lubrication of the bearing sliding part and the cooling of the lubrication oil including the oil pump. These can be monitored by measuring the temperature difference between the bearing and the lubrication oil.

Existing VM-704B temperature monitor module could measure only individual temperatures at the parts with the temperature sensor installed; however, this functionality upgrade development has enabled to measure this temperature difference.

Point Features

Measurement

- Capable of three modes (Direct, Composite, and Differential)

Mode	Description
Direct	Direct temperature
Composite	When one input channel is selected: Direct temperature of the selected input channel When two to six input channels are selected: Average temperature of the selected input channels
Differential	Temperature difference obtained by subtracting Composite from Direct

Output

To the recorder output and the output via Modbus communication, one in three modes can be assigned arbitrarily, and it is assigned as Measure-A. The remaining measurement types are automatically assigned as Measure-B and Measure-C.

Only Direct is enabled (Composite and Differential are disabled)

Assignment			Recorder Output and the Output via Modbus Communication (Measure-A)
Measure-A	**Measure-B**	**Measure-C**	
Direct	—	—	Direct

Direct, Composite, and Differential are all enabled (Composite and Differential are enabled)

Assignment			Recorder Output and the Output via Modbus Communication (Measure-A)
Measure-A	**Measure-B**	**Measure-C**	
Direct	Composite	Differential	Direct
Composite	Direct	Differential	Composite
Differential	Direct	Composite	Differential

- To MCL View and infiSYS Analysis View, the values of Direct, Composite, and Differential are output.

Setting

The following various settings of Composite and Differential are common to those of Direct in the same channel.

Unit, Displayed decimal digits, Timed-OK Channel defeat, First-out, First low alarm bypass, Alarm delay, Alarm reset options

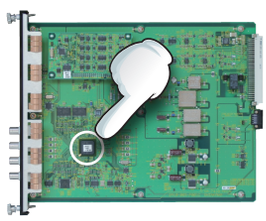
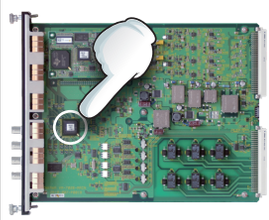
Alarm Status

- The Alert (including Low and High) alarm status will be each Alert alarm of Direct, Composite, or Differential.
- The Danger (including Low and High) alarm status will be each Danger alarm of Direct, Composite, or Differential.

10

Support information of related products

To enable the function of this product, use a product with versions later than the ones described in the following table.

Hardware			
Model Code	**VM-742B**	**VM-741B** ★	**VM-704B** ★
Name	Network Communication Module	Local Communication & Phase Marker Module	Temperature Monitor Module
Firmware ID	2R10-006-F002D	2R10-005-F001E	2R10-003-F001B
Identifications on Modules (Versions can also be checked on VM-772B Device Config.)			

Software						
Model Code	**VM-771B**	**VM-772B** ★	**VM-773B**	**VM-774B**	**VM-783B**	**VM-784B**
Name	MCL View	Device Config	infiSYS Analysis View	infiSYS Remote View	infiSYS Report Software	infiSYS OPC Client Software
Software Version	Version 1.5.0.0	Version 1.5.0.0	Version 1.7.0.0	Version 1.7.0.0	Version 1.3.0.0	Version 1.3.0.0

★ Products with this feature.

★ Related products mandatory for this feature (only measurement and recorder output).

Limitations

(1) Measurement

- For Composite and Differential, only the channels in the same slot (monitor module) can be selected and applied to calculation. Channels in other slots (monitor modules) cannot be selected or applied to calculation even if they are in the same rack.

(2) Output

- For recorder output and the output via Modbus communication, only the value of the mode assigned as Measure-A is output. Values of the mode assigned as Measure-B or Measure-C are not output.

(3) Setting

- Each of the following is set individually for Direct, Composite, and Differential in the channel.
  Monitoring range, Burn-out, Danger alarm, Alert alarm
- The set value of the first low alarm bypass is applied only to Direct and Composite, and not to Differential.

(4) Alarm status

- The individual alarm status of Direct, Composite, and Differential cannot be set for the alarm signals of the multistage relay logic (Relay Logic2) or VM-721B/VM-722B standard relay logic (Relay Logic1).

11 18-Channel Temperature Monitor Module

VM-705B/7A1

New Product

For on-line monitoring applications of multiple temperature measurement points

For monitoring the condition of rotating machineries such as compressors or pumps, a great number of temperature sensors are used. To make it possible to build a more cost-effective condition monitoring system at the site where such machineries are used, we have developed the 18-Channel Temperature Monitor Module that opens the door to multi-channel temperature monitoring capability with fewer racks than the existing products.

VM-705B/7A1

This product demonstrates a remarkable ability in combination with VM-705B 18-Channel Temperature Monitor Module and VM-7A1B 18-Channel Temperature Input Module. In order to input the temperature sensor for 18 channels, the VM-7A1B must be attached on the back of the VM-7B rack.

VM-705B

VM-7A1B

Installation Image

Only a small number of racks can manage the condition monitoring system for the rotating machinery that exploits a host of temperature measurement points.

This approach enables a monitoring system configuration with fewer racks than ever before.

Example:A vibration input of 24 channels and a temperature input of 36 channels

Conventional: Two racks

- VM-7B rack 1:
  VM-701B×6
  VM-721B×1
- VM-7B rack 2:
  VM-704B×6

New: One rack

- VM-7B rack 1:
  VM-701B×6
  VM-705B/7A1×2
  VM-721B×1

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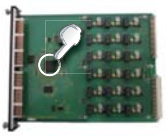
Difference between VM-704B and VM-705B

VM-705B is a product dedicated to multi-channel measurement. For this reason, when the recorder output or contact output from its own module is required, VM-704B must be used.

	VM-704B	VM-705B/7A1
Input points	6 points	18 points
Cold Junction Compensation Sensor (RJC)	Dedicated module should be attached on the back of VM-7B rack	Installation not required (built-in chips)
Recorder Output	6 points	N/A * The output ria Modbus Communication is possible
Contact Output	6 points (Programmable logic)	N/A * Can be output via VM-721B or VM-722B relay module
Hardware Configuration	Monitor module only	Monitor module + Input module
Attachable Rack	VM-761B, VM-762B	VM-761B, VM-762B * The Euro type of this product can also be used to VM-762B.

Firmware IDs for Related Products Vs Software Versions

When using this product, be sure to use the products with firmware IDs and software versions described in the table below or later ones.

Hardware						
Model	**VM-742B**	**VM-741B** ★	**VM-722B**	**VM-721B**	**VM-705B** ★	**VM-7A1B** ★
Name	**Network Communication Module**	**Local Communication & Phase Marker Module**	**9-Channel Relay Module**	**18-Channel Relay Module**	**18-Channel Temperature Monitor Module**	**18-Channel Temperature Input Module**
Firmware ID	2R10-006-F002E	2R10-005-F001F	2R11-004-F001A	2R10-004-F001A	2R16-001-F001	2R16-002-F001
Identification on Model (Versions can also be checked on VM-772B Device Config.)						

Software					
Model	**VM-771B**	**VM-772B** ★	**VM-773B**	**VM-774B**	**VM-783B**
Name	MCL View	Device Config	infiSYS Analysis View	infiSYS Remote View	infiSYS Report Software
Software Version	Version 1.7.0.0	Version 1.7.0.0	Version 1.9.0.0	Version 1.9.0.0	Version 1.4.0.0

★ This product
★ Related products essential to use this product

12 Addition of the Function of High-Speed Waveform Data Collection

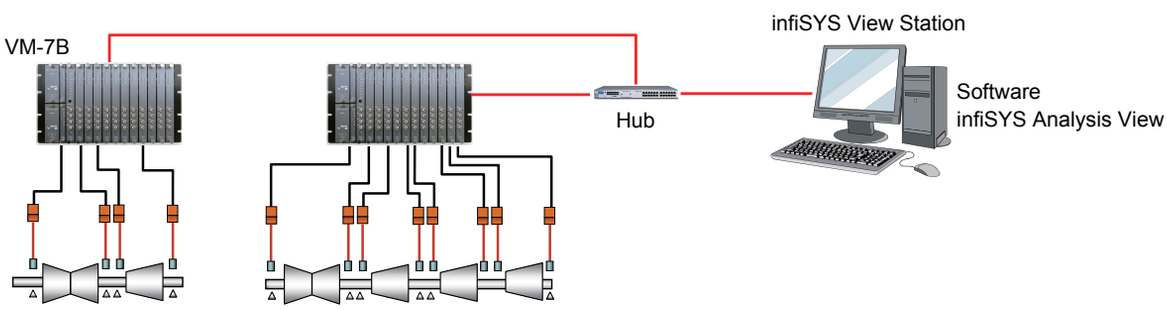
New Feature

By combining with the VM-7B monitor, high-speed data acquisition function of waveform data can be realized.

In the case of the configuration combining VM-7B monitor and infiSYS analysis view, the waveform data collection interval is at least 10 seconds so far, but by using the function added this time, it will be possible to collect at least 1 second interval.
This makes it possible to describe the contents as below, which leads to shortening the time to find out the cause of the abnormality and to recovery.

- Collection and storage of waveform data synchronized with the time history of trend data including overalls
- Reference of time waveform data and FFT data synchronized with time history of process data other than vibration collected by DCS

Configuration

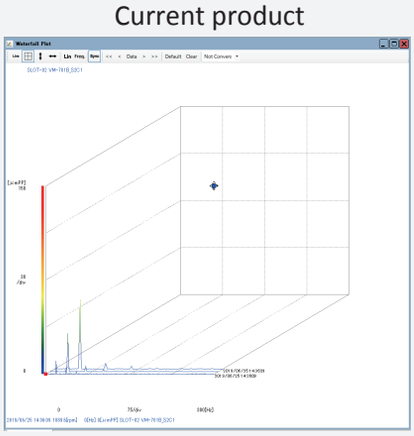


Point

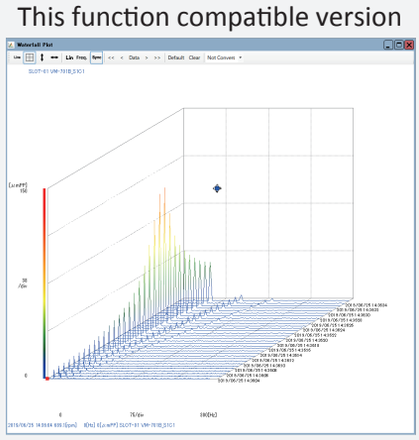
Waveform data can be collected at a minimum interval of 1 sec

- **In rated operation, startup and shutdown, not only trend data but waveform data can be collected at 1-second intervals. (If it is require to collect waveform data at shorter intervals, it is recommended to use the Kenjin.)**
- **Graphs using waveform data such as waterfalls and cascade graphs have high resolution.**

Current product



This function compatible version



12

Notice on Data collection limit for channel number of VM-7B monitoring system

In the case of waveform data collection interval is 1 second

Number of vibration channels	Trend Data	Waveform Data
1 to 12	○	○
13 to 44	○※1	△※2

In the case of waveform data collection interval is 2 second

Number of vibration channels	Trend Data	Waveform Data
1 to 24	○	○
25 to 44	○※1	△※2

○: Without data loss.

△: Data loss may occur. (The frequency of occurrence of drop depends on the number of CH.)

※1 There is no loss of trend data storage, but the graph display update interval may be about 3 seconds.

※2 Collection of latest waveform data is delayed little by little. (Up to approx. 2minutes)

- When an alarm has occurred or a high load is applied (e.g. during DB backup process) in infiSYS Analysis View, missing data may occur or missing data frequency may increase.

Notice on database size in infiSYS Analysis View

- If the waveform data collection interval is shortened, the amount of data stored in the database will increase. Check the hard disk size and set the appropriate settings.

Other notes

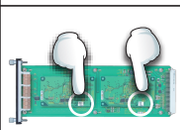
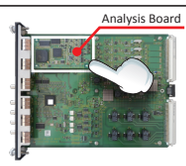
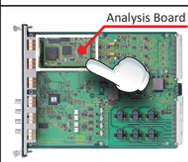
■ "VM-742B/WD1", a dedicated network communication module, will be required.

■ The waveform collection interval for "VM-701B" or "VM-702B" must be set to one second.

■ The waveform data collection interval must be set according to the number of channels to be mounted.

List of Firmware IDs for Related Products Vs Software Versions

When using this product, be sure to use the products with firmware IDs and software versions described in the table below or later ones.

Hardware			
Model	**VM-742B/WD1** ★	**VM-701B/ALY** ★	**VM-702B/ALY** ★
Name	**Network Communication Module**	**Vibration/Displacement Monitor Module Analysis Board**	**Absolute Vibration Monitor Module Analysis Board**
Firmware ID	**AA08-010-F001**	**2R12-001-F002B**	**2R12-001-F002B**
Identification on Model (Versions can also be checked on VM-772B Device Config.)			

Software			
Model	**VM-772B** ★	**VM-773B** ★	**VM-774B**
Name	Device Config	infiSYS Analysis View	infiSYS Remote View
Software Version	Version 1.10.0.0	Version 1.12.0.0	Version 1.12.0.0

★ This product

★ Related products essential to use this product

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