



SHINKAWA

Introduction to SEC of America



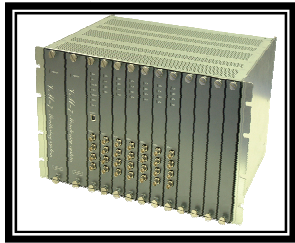
SHINKAWA



Company Introduction

Product Overview

API-670 Protection



**VM-7 Series
TSI Monitor**



**VM-5 Series
TSI Monitor**

General Protection



**VM-15
4-Ch Monitor**



**VM-16
12-Ch Monitor**

Transmitters



RN-series

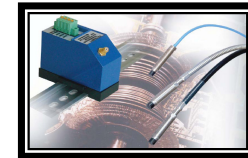


WK-series



VM-21

Sensors



**FK-series
API-670 Probes**

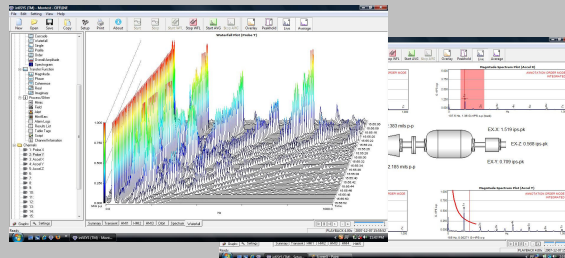


VK-series Probes

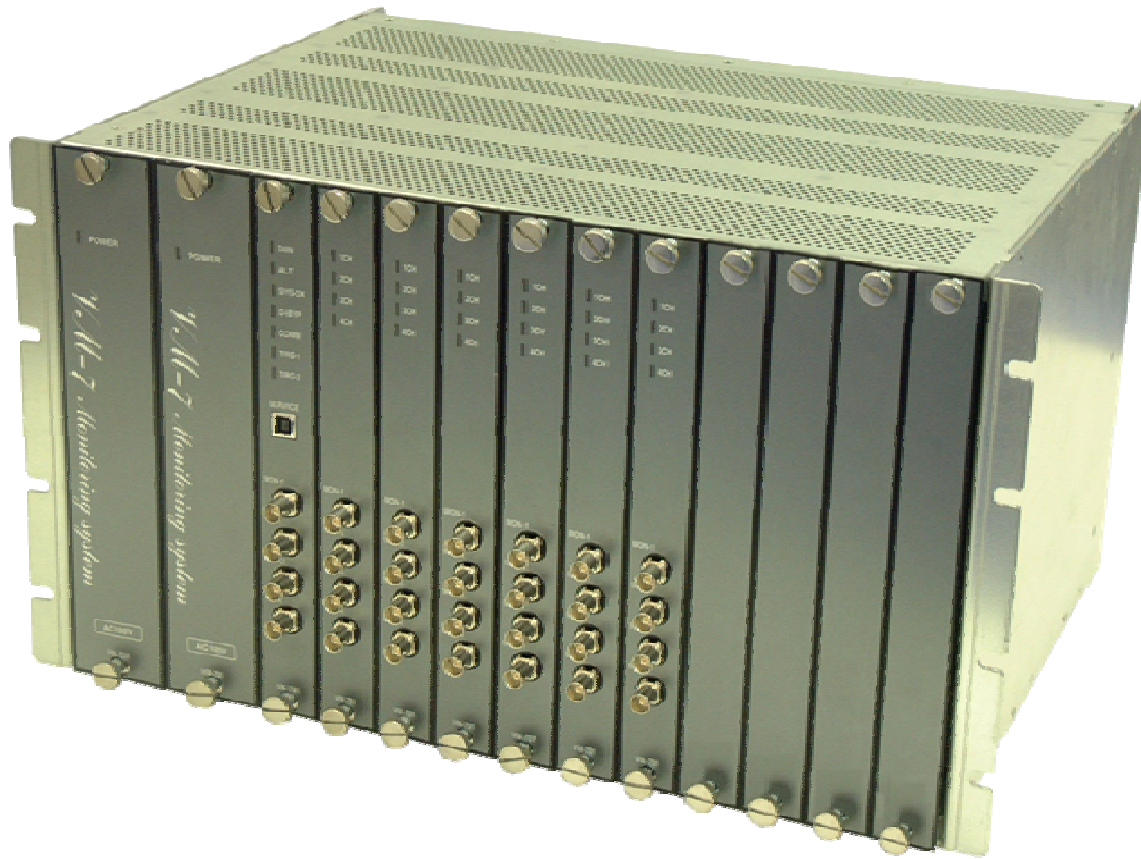


RN-series Accels

High-speed Data Acquisition and Transient Analysis



VM-7 Protection Monitor



VM-7 Protection Monitor

PC Configurable and output to display

Notebook
PC



OR

Panel PC



Ethernet

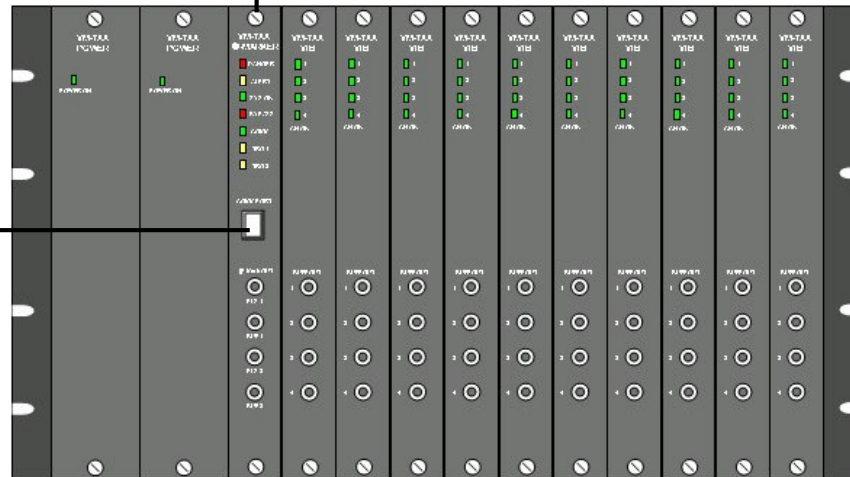
VM-741

Local Communication &
Phase Marker Module

Notebook
PC

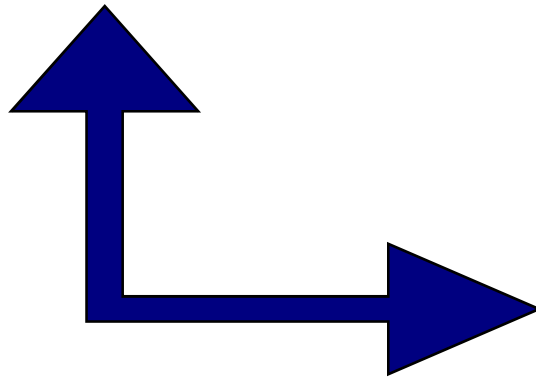
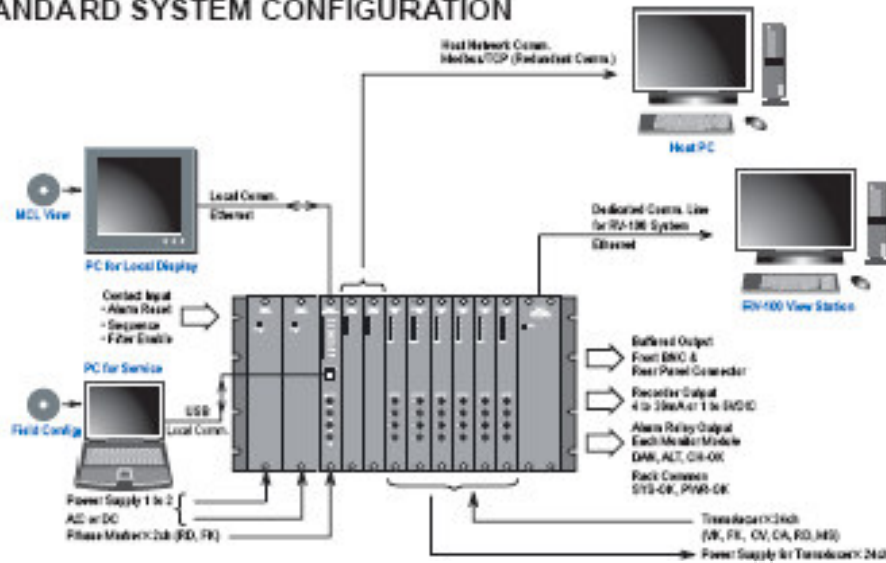


USB



VM-7 Protection Monitor

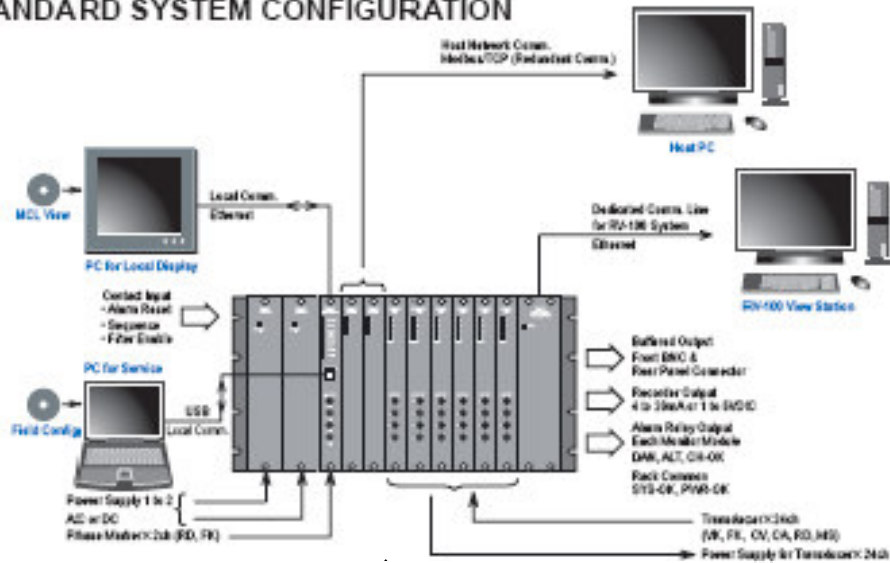
STANDARD SYSTEM CONFIGURATION



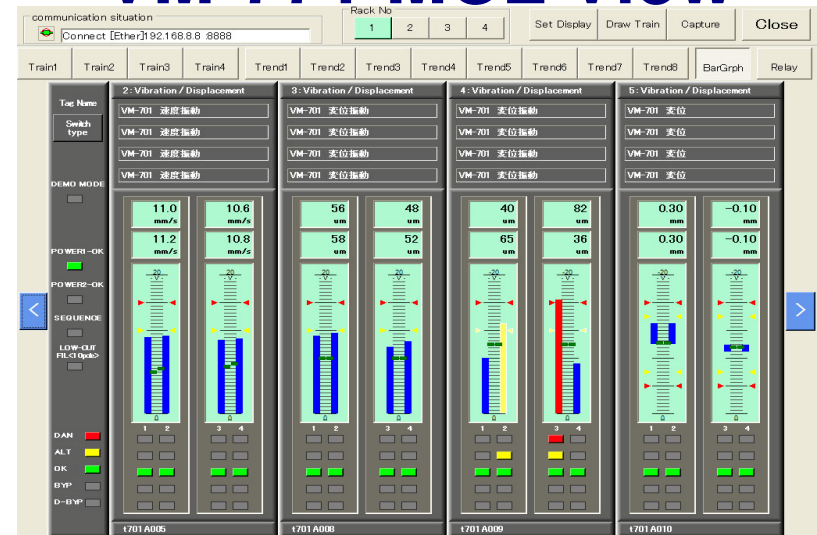
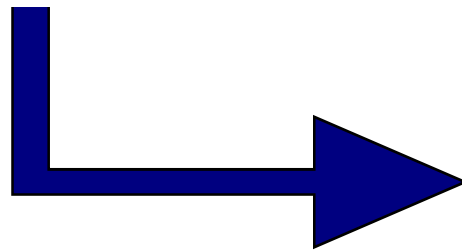
VM-772 Field Configuration

VM-7 Protection Monitor

STANDARD SYSTEM CONFIGURATION

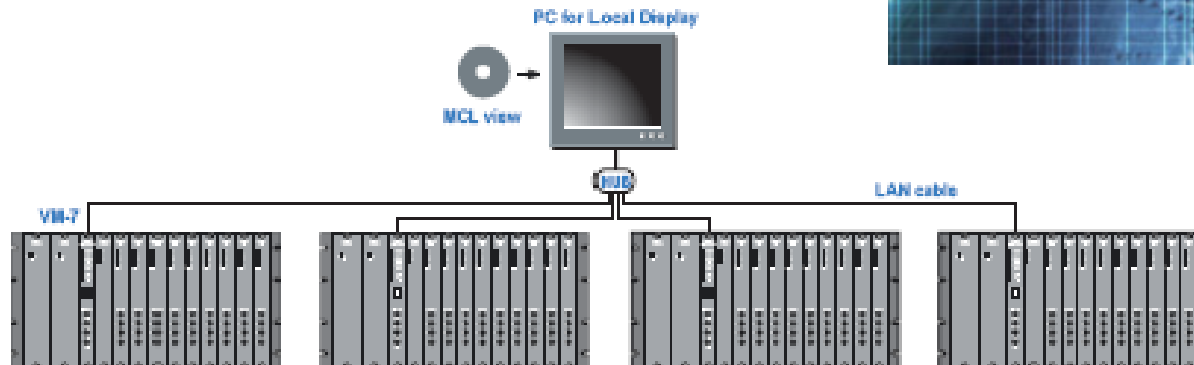
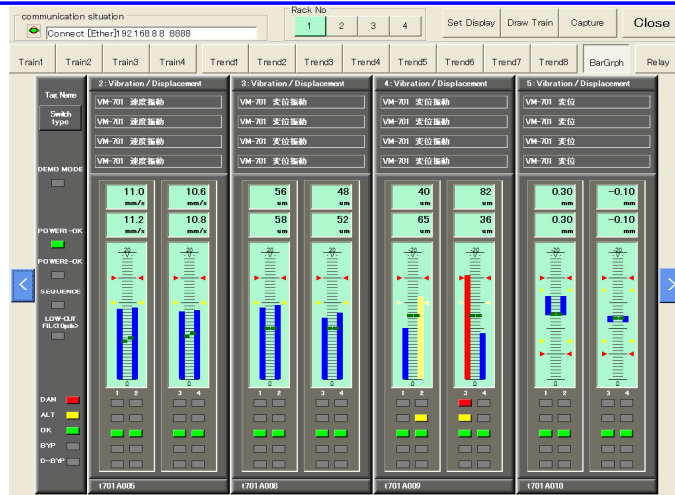


VM-771 MCL View



VM-7 Protection Monitor

MCL View Software
can handle up to 4 Racks



VM-7 Protection Monitor

Train, Trend, Bar Graph SW

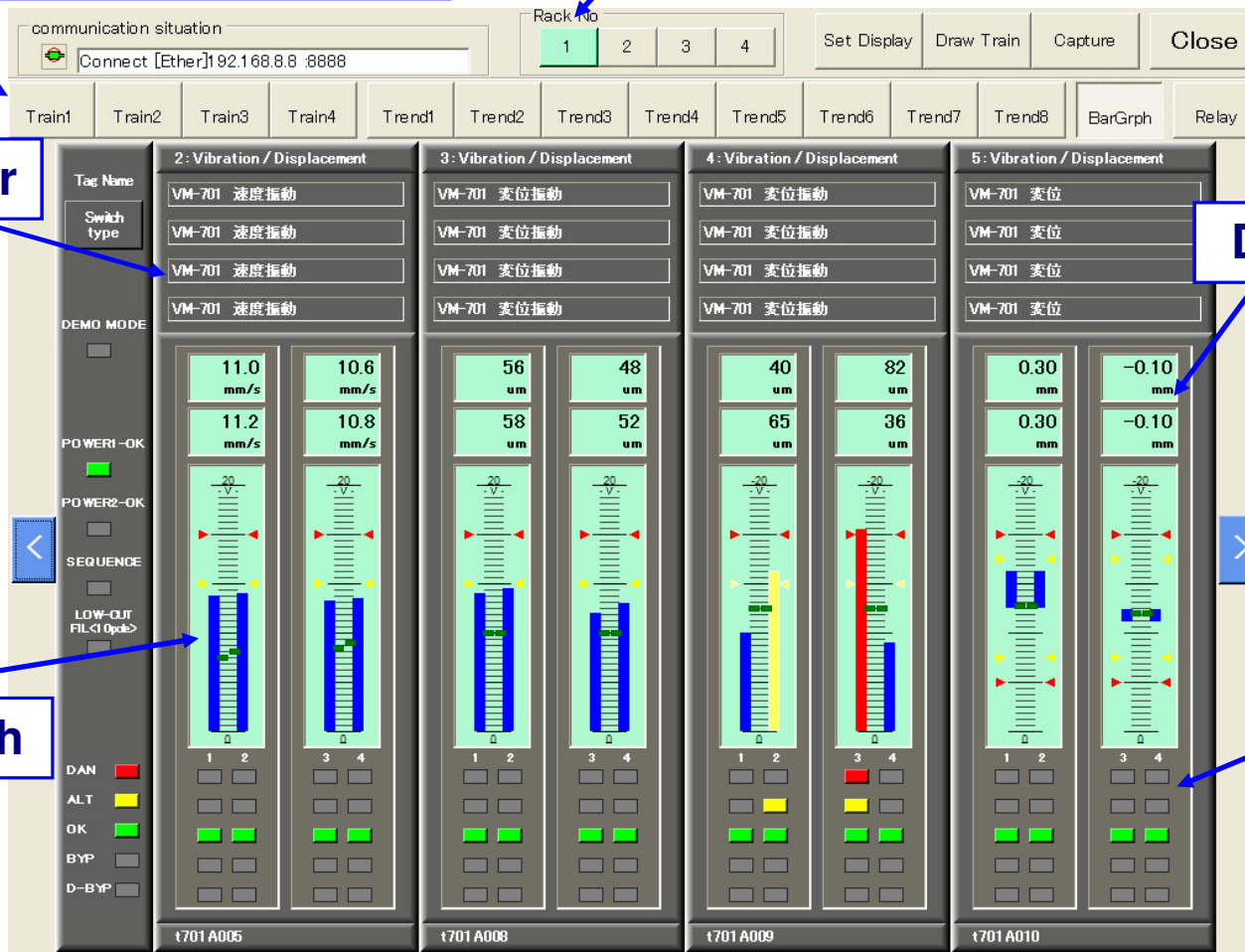
Rack SW

Tag Number

Digital Value

Bar Graph

Alarm



VM-7 Protection Monitor

Machine Train Diagram

communication status Connect [Ether] 192.168.8.8 :8888

Rack No: 1 2 3 4

Set Display Draw Train Capture Close

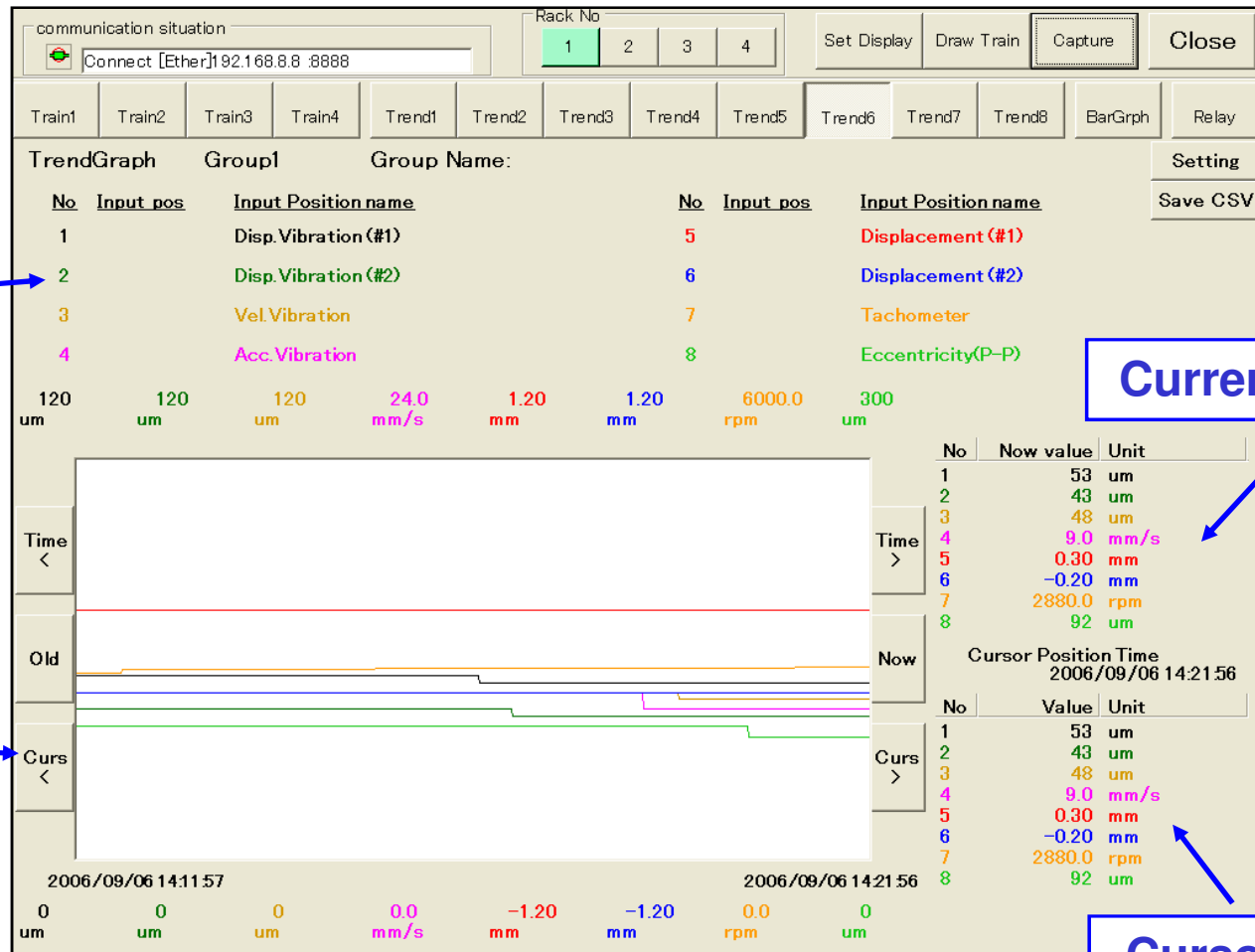
Train1 Train2 Train3 Train4 Trend1 Trend2 Trend3 Trend4 Trend5 Trend6 Trend7 Trend8 BarGrph Relay

Train1 Setting

No	Name	Unit	DAN(-)	ALT(-)	Measure	ALT(+)	DAN(+)	Date	Slot	Ch
#1	Vibration 1	um	100.0	90.0	37.7	90.0	100.0	2007/05/09	2	1
#2	Vibration 2	um	100.0	90.0	37.7	90.0	100.0	2007/05/09	2	2
#3	Vibration 3	mils	0.00	10.00	1.48	2.00	3.00	2007/05/09	2	3
#4	Vibration 4	mils	0.00	10.00	1.48	2.00	3.00	2007/05/09	2	4
#5	Thrust	mils	-35.0	-20.0	8.0	20.0	35.0	2007/05/09	3	1
#6	Acceleraiion	G	100.0	90.0	0.0	0.5	1.0	2007/05/09	3	4

VM-7 Protection Monitor

Trend Graphs



CH Information

Current Values

Cursor

Cursor Values

VM-7 Protection Monitor

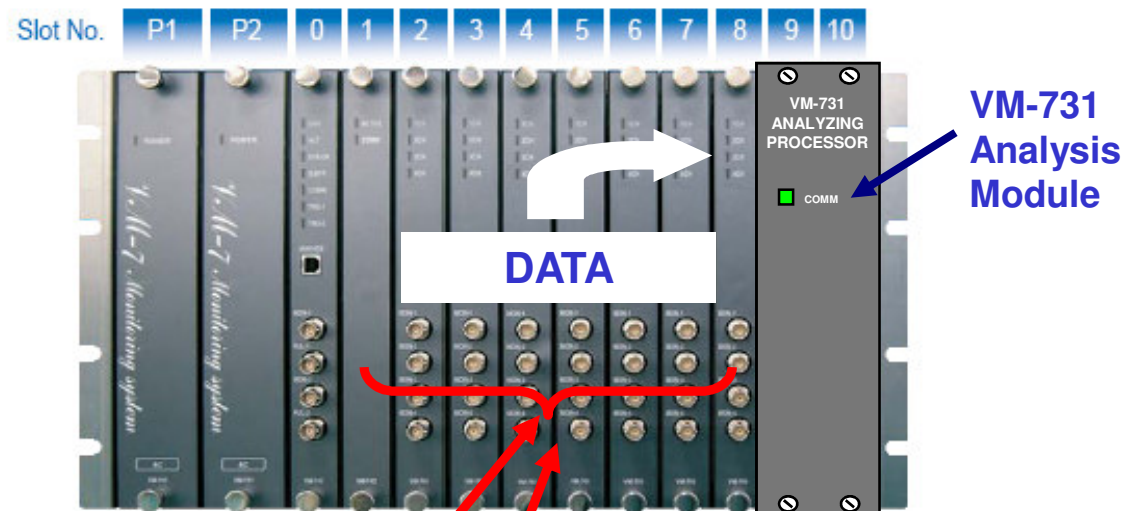
VM-76 19" Rack



Module	Slot No.												
	P1	P2	0	1	2	3	4	5	6	7	8	9	10
VM-75□1 Power Supply Module (primary)	○												
VM-75□2 Power Supply Module (secondary)		○											
VM-741 Local Communication & Phase Marker Module			○										
VM-742 Host Network Communication Module				○	○								
VM-701 Displacement/Vibration Monitor Module				○	○	●	●	●	●	●	●	○	○
VM-702 Absolute Vibration Monitor Module				○	○	●	●	●	●	●	●	○	○
VM-703 Tachometer & Eccentricity Monitor Module				○	○	○	○	○	○	○	○	○	○
VM-704 Temperature Monitor Module				●	●	●	●	●	●	●	●	○	○
VM-706 Rod Drop Monitor Module ^{*1}				○	○	●	●	●	●	●	●	○	○
VM-721 18-CH Relay Module													○
VM-731 Analysis Module ^{*2,3}													○
VZ-71 30mm (W) Blank Panel			— ^{*4}	○	○	○	○	○	○	○	○	○	○
VZ-72 50mm (W) Blank Panel	— ^{*5}	○											

- *1 : VM-706 Rod Drop Monitor module is under development.
- *2 : ● indicates modules data transmitted to VM-731 Analysis Module.
- *3 : VM-731 Analysis Module occupied 2-slot space. Install slot 8 & 9 or slot 9 & 10.
- *4 : Local Communication & Phase Marker installed in slot 0 with any rack design.
- *5 : Primary power supply installed in slot P1.

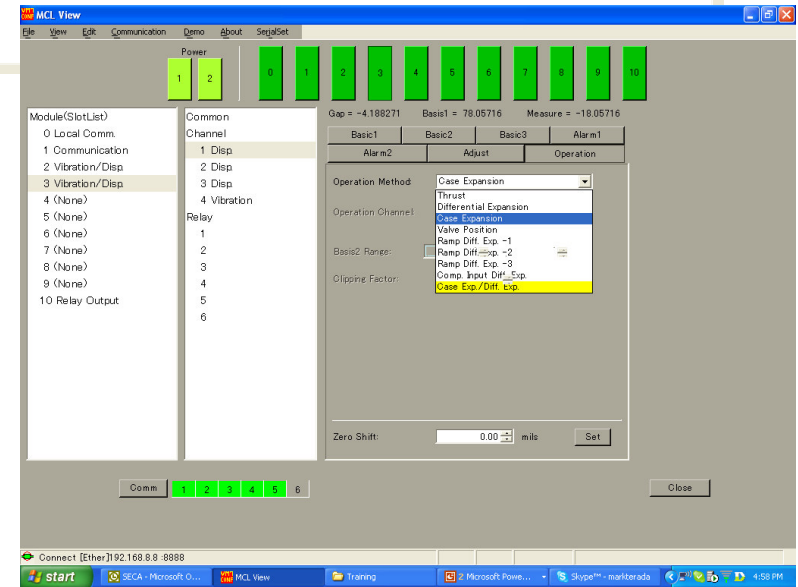
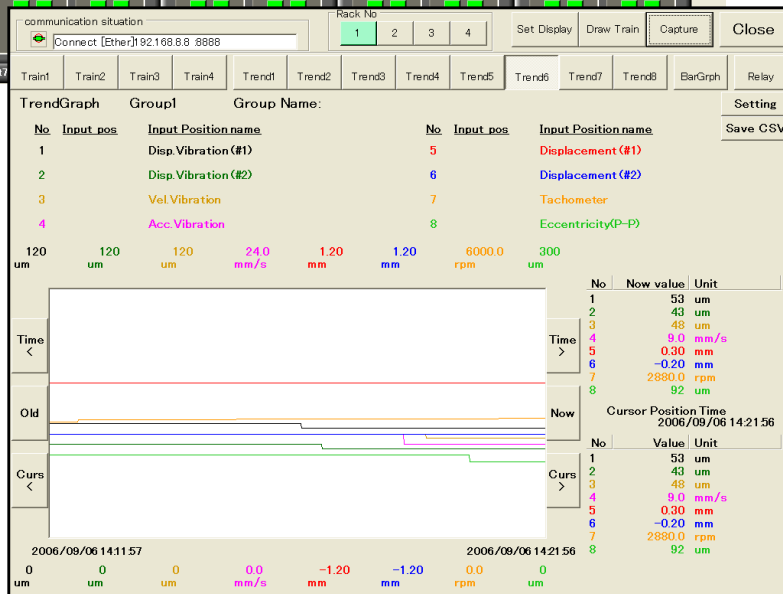
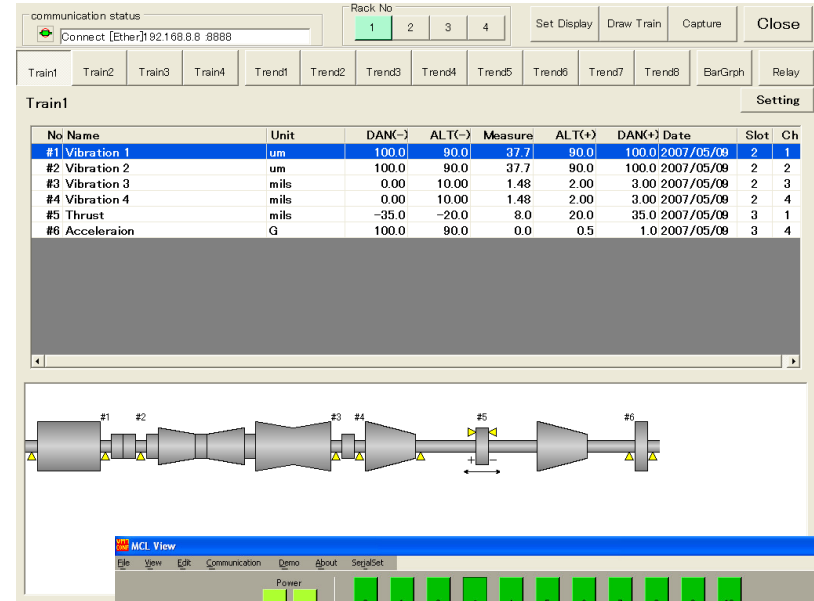
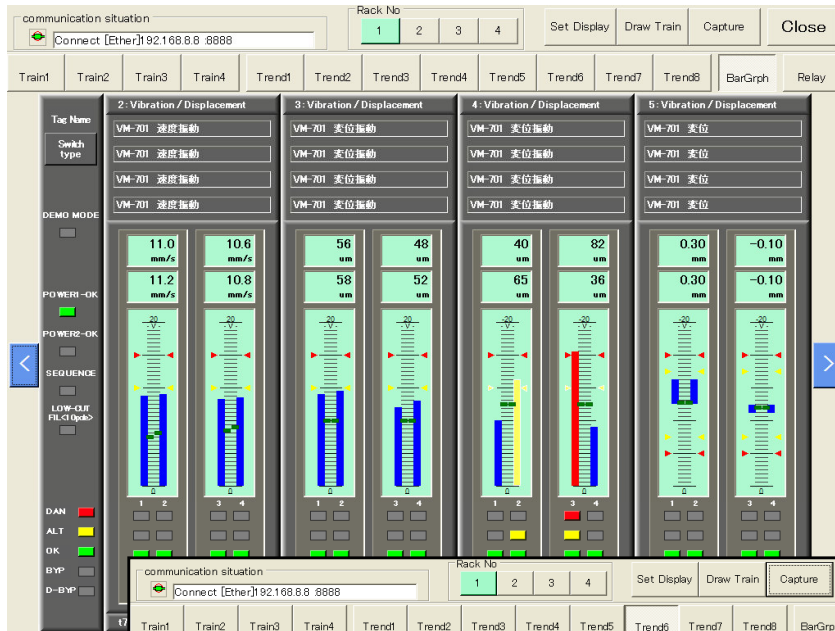
VM-7 Protection Monitor



Module	Slot No.													
	P1	P2	0	1	2	3	4	5	6	7	8	9	10	
VM-75□1 Power Supply Module (primary)	○													
VM-75□2 Power Supply Module (secondary)		○												
VM-741 Local Communication & Phase Marker Module			○											
VM-742 Host Network Communication Module				○	○									
VM-701 Displacement/Vibration Monitor Module				○	○	●	●	●	●	●	●	○	○	
VM-702 Absolute Vibration Monitor Module				○	○	●	●	●	●	●	●	○	○	
VM-703 Tachometer & Eccentricity Monitor Module				○	○	○	○	○	○	○	○	○	○	
VM-704 Temperature Monitor Module				●	●	●	●	●	●	●	●	○	○	
VM-706 Rod Drop Monitor Module ^{*1}				○	○	●	●	●	●	●	●	○	○	
VM-721 18-CH Relay Module													○	
VM-731 Analysis Module ^{*2,3}													○	
VZ-71 30mm (W) Blank Panel			— ^{*4}	○	○	○	○	○	○	○	○	○	○	
VZ-72 50mm (W) Blank Panel	— ^{*5}	○												

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VM-7 Protection Monitor



VK-series and FK-series Probes



Typical Applications

- Sleeve bearings where the machine casing is massive compared to the shaft
- Most turbo-machinery, such as main T-G, BFPs, and centrifugal compressors
- Applications in which 'X-Y' data is required for measurements such as:
 - Shaft centerline, from DC gap data
 - Orbits, from vibration data
- Position measurements such as:
 - Differential expansion
 - Thrust

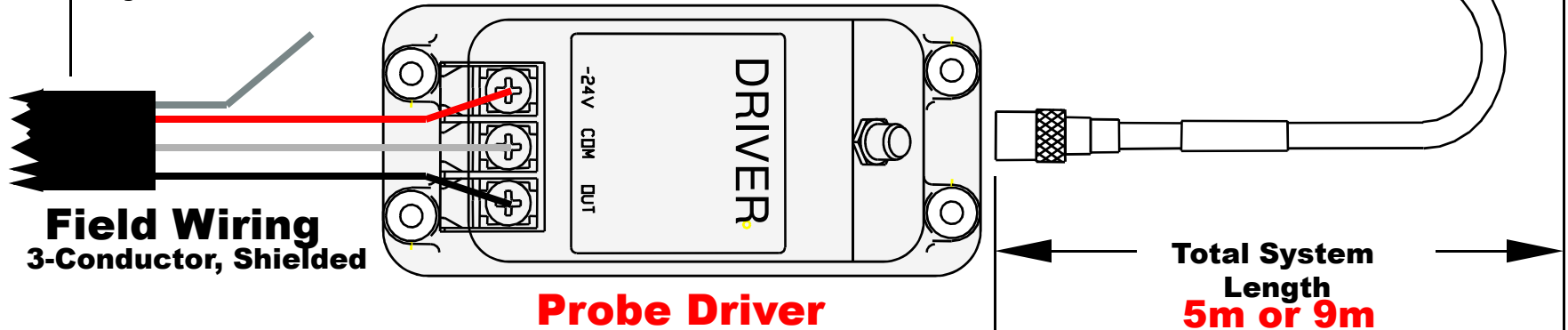
VK-series Proximity Probes



- Complete line of eddy-current probes
- Complies with API-670 (4th edition)
- Probe types include:
 - 5mm, 8mm, and 11mm vibration probes
 - Straight, reverse mount, and thrust probes
 - 18mm, 25mm, and 50mm Position Probes
 - Differential Expansion probes
 - Straight and Right Angle varieties
 - Speed / phase / eccentricity probes



To
monitoring
system



VM-21 Spec



VM-21B - A

Power supply	Measuring range ¹				Input transducer	Frequency response		Output	
	Velocity	Acceleration							
1 24VDC	20 0 to 15mm/s pk	61 0 to 2g pk	A CA Series (100mV/9.8m/s ² pk)		1	10Hz to 5kHz(-3dB) (vel. output)	1	1 to 5VDC	
2 100 to 240VAC/DC	21 0 to 25mm/s pk	62 0 to 5g pk				2	1kHz to 10kHz(-3dB) (acc. output)	2	4 to 20mADC
	22 0 to 50mm/s pk	63 0 to 10g pk					3		20Hz to 5kHz(-3dB) (vel. output)
	23 0 to 100mm/s pk	64 0 to 20g pk							
	71 0 to 20m/s ² pk	72 0 to 50m/s ² pk							
	73 0 to 100m/s ² pk	74 0 to 200m/s ² pk							

Standard

VM-21 Series Transmitters

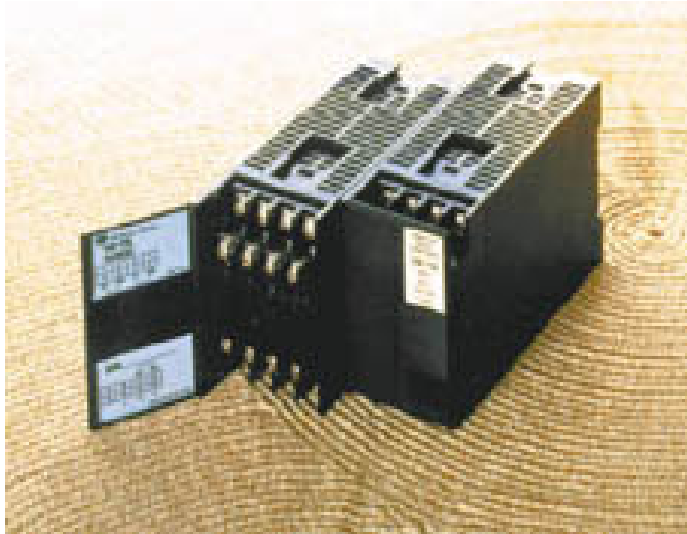
- Direct interface with Tricon
- 4-20mA Output
- 8 Module Backplane
- Buffered Output



- VM-21K Displacement Vibration
- VM-21U Velocity Vibration
- VM-21B Acceleration Vibration
- VM-21P LVDT
- VM-21H Backplane unit

invensys™
TRICONEX™

VM-11 Transmitters



- Simple 2-wire transmitter
- Communicates overall values to PLC /DCS
 - 4-20mA
 - 1-5VDC
- Modules for a wide range of inputs
 - Accelerometers
 - Velocity Coils
 - Eddy-current non-contact pickups
 - LVDTs

- Modules for various measurement types
 - Vibration (VM-11A,B,K,U)
 - Thrust (VM-11T)
 - Valve position, case expansion (VM-11P)
 - Speed (VM-11R)
- Mounting options
 - DIN-rail mounting
 - Rack mounting
 - Wall mounting

