



VMS-R Vibration Monitoring Rack



Masibus' VMS-R Vibration Monitoring Rack comprising of electronic modules – monitors, power supply, Relay, data acquisition unit in 19" Rack accepts Proximity Vibration input and provides continuous operational supervision of rotating machinery such as turbosets, compressors, Multistage pumps, gearbox etc.

VMS-R is available in 19" sub-rack with 10 I/O slots, the architecture supports upto 8 Cards for Vibration Input modules, upto 2 Cards for Digital output modules, Power Supply and Main Controller Module in combination.

VMS-R comes with dual RS485 port & an Ethernet Port to enhance the communication capabilities of the unit and for direct interface with PLC, DCS or SCADA

An isolated 4-20mA analog output proportional to Vibration range per vibration input channel is available to interface with PLC/DCS/RTU for centralized monitoring and protection. VMS-R comes with Buffered output on BNC connector per channel for analysis purpose of raw signal of Vibration input.

The 8 Relay output module or 16 OC output module can be freely mapped to any channel set points and configured as Alarm/Trip or status functionality.

VMS-R has a battery backed memory with RTC that allows user to setup channels for real-time logging with time-stamp.

The Logging function allows user to setup channels for real-time logging with time-stamp, Windows utility software works on windows platform and is used for VMS configuration, calibration and retrieving logged data to PC.

Optionally, Operator terminal (HMI) is used for local display, configuration and programming of Vibration monitoring unit

Features

- Compatible with most sensors and probes
- Accepts Proximity input
- Programmable Proximity input range
- Upto 10 slots for Input/Output
- Inbuilt Flash memory for Datalogging
- Windows based utility software for configuration
- Dual RS485 port (Modbus RTU protocol)
- Ethernet port
- USB port for logged data retrieval
- Buffered output for analysis
- Relay / Open Collector output modules
- Diagnostics and status LEDs
- 19" Rack based

Applications

- Generator/ Turbine Monitoring and Protection
- Vibration measurement and protection of
 - Gear boxes
 - Pumps
 - Compressors

TECHNICAL SPECIFICATIONS

Input		RS485 Communication Output	
Proximity Input		No of ports	2
No of Input	2 Channels per Card	Type	RS485, 2-wire
Input Range	-2 to -22V (Programmable)	Protocol	Modbus RTU
Supply Voltage Output to Proximity Transducer	-24 VDC, @30mA Max	Baud Rate	9600, 19.2K bps
Measure Parameter	Displacement peak to peak	Connector type	Screw connections
Relay Connector	Screw Type Plug-in Connector	Ethernet Communication Output	
Status Indication		No of ports	1
Status LED	Power ON, Main Controller Module Status, Communication Status, Relay and OC Module Status and Input Channel Module Status	Protocol	Modbus TCP/IP (Modnet) Slave
Switch	Power ON/OFF Switch	Speed	10/100 Mbps
Output		Connector type	RJ45
Relay Output		USB Port	
No of Relays	8 channels per Card	No of ports	1
Function	Alarm or Trip	Standard	2.0
Output Signal	1 Form C Configuration	Fetch Data Format	Standard Tabular or AES-128 bit encrypted (Optional)
Relay Response Time	03 sec MAX.	Data File Format	*.xls
Relay contact Rating	2A @250VAC/30VDC	Max. USB pen drive size	4GB supported with FAT16/FAT32 formatting
Relay Set Point	2 or 4	Data logging	
Relay Set Point Type	L – VL, L – H, H – VH, VL – L – H – VH	Data Logging Memory Type	Flash Nonvolatile Memory
Relay Connector	25 Pin D-Type Connector	Logged Data Retrieval	Through Configuration Software
Open Collector Output		Periodic Memory Size	25 MB
Open Collector Output	16 channels per Card	RTC Time Format	DD/MM/YY – HH:MM:SS
Response Time	03 sec Max.	Periodic Logging	1 Second minimum
Contact Rating	100 mA @30VDC Max	Power Supply	
Relay Connector	25 Pin D-Type Connector	Voltage Range	85 - 265VAC 50/60 Hz or 120 – 370VDC
Analog Output		Power consumption	≤ 35VA
No. of Analog Output	2 nos per Card (One per Input Channel)	Isolation (Withstanding voltage)	
Output Signal	0-20 mA, 4-20 mA or 0-5 V, 1-5 V, 0-10 V DC (factory settable)	- Between primary terminals* and secondary terminals**: At least 1500 V AC for 1 minute - Between secondary terminals**: At least 500 V AC for 1 minute * Primary terminals indicate power and Relay terminals. ** Secondary terminals Vibration input signals, Digital Contact output terminals, communication Terminal. - Insulation resistance: 20MΩ or more at 500 V DC between power terminals and grounding Terminal	
Load Resistance	For Current output: 500 ohms Max. For Voltage output: 3000 ohms Min.	Physical	
Output Accuracy	±0.25 % of Full Range (Display to output)	Size (in mm)	132.5(H) X 482(W) X 260(D)
Buffer output		Mounting	19" Sub-Rack Mount
No. of output	2 nos per Card (One per Input channel)	Weight Approx.	4.5 Kg
Output Impedance	<100 Ohms	Material	Aluminum
Frequency Range	0.5 Hz to 10KHz	Environmental	
Accuracy	0.25% of Full Range	Operating Temperature	0°C to 55°C
		Storage Temperature	0°C to +85°C
		Humidity	30% to 95%, non-condensing
		Warm-Up Time of Instrument	15 Min

Ordering Code

	Model	No of Proximity Input Cards*	Digital O/P Card-1*	Digital O/P Card-2*
	VMS-R	XX	XX	XX
	P1	1 Cards	N	N
	P2	2 Cards	RL	RL
	P3	3 Cards	OC	OC
	P4	4 Cards		
	P5	5 Cards		
	P6	6 Cards		
	P7	7 Cards		
	P8	8 Cards		
	P9	9 Cards		
	P10	10 Cards		

*Total upto 10 I/O Cards can only be selected.
If all 10 Input Cards are selected, then Digital Output Card cannot be selected

Optional Accessories on Request

Part Code	Description
m-HMI-VMS	7", TFT-LCD touch screen, 1 × Ethernet, 1 × serial port, IP20, 24VDC
DOC-2.5	Relay / Open Collector output cable 25 Core 2.5 mtrs long