VM-5 SERIES MONITOR

SPECIFICATIONS

MODEL VM-5B DUAL ACCELERATION MONITOR

*5 CE

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

VM-5B- □□□□□□

Monitor range				Input signal		Low cut-off frequency*2		High cut-off frequency*2		Rectification		Recorder output	
1	0 to 20m/s² pk	G	0 to 2g pk	1	CA Series	1	10Hz or less	1	100Hz	0	Average value	0	4 to 20mADC
2	0 to 50m/s² pk	H	0 to 5g pk			2	20Hz	2	200Hz	1	pk-pk	1	1 to 5VDC
3	0 to 100m/s² pk	J	0 to 10g pk			3	50Hz	3	500Hz	2	rms (additional spec./RMS)	2	Output card /IS□ or /RE□ option
4	0 to 200m/s² pk	K	0 to 20g pk			4	100Hz	4	1kHz				
5	0 to 20mm/s pk	L	0 to 1in/s pk			5	200Hz	5	2kHz				
6	0 to 50mm/s pk	M	0 to 2in/s pk			6	500Hz	6	5kHz				
7	0 to 100mm/s pk	N	0 to 2g rms*1			7	1kHz	7	10kHz				
8	0 to 20m/s² rms*1	P	0 to 5g rms*1			8	9.5Hz Seismic filter*3	8	20kHz				
A	0 to 50m/s² rms*1	Q	0 to 10g rms*1			A	14Hz Seismic filter*3						
B	0 to 100m/s² rms*1	R	0 to 20g rms*1			B	15Hz Seismic filter*3						
C	0 to 200m/s² rms*1	S	0 to 1in/s rms*1			C	40Hz(36dB/oct) Pipe filter*3						
D	0 to 20mm/s rms*1	T	0 to 2in/s rms*1			D	60Hz(36dB/oct) Pipe filter*3						
E	0 to 50mm/s rms*1												
F	0 to 100mm/s rms*1												

Note) *1 Rectification circuit (option) required for this rms range.

*2 Select so that [high cut-off frequency≥Low cut-off frequency×10]
In the monitor ranges for velocity vibration measurement (e.g., 0 to 20mm/s pk) , the monitor also picks up low-frequency vibrations from the surroundings, such as transmitted by the piping and foundation, so that the measured value may be greater than the vibrations produced by the monitored object itself. This should be taken into account when selecting a low cut-off frequency.
The use of seismic and pipe filters is recommended where low-frequency ambient vibration are especially strong.

Note) *3 A filter card (option) is required for use of seismic and pipe filters.
The seismic filter can be turned ON/OFF (IN/OUT) by an external contact signal. (Preset to OFF(OUT)) At seismic filter is OFF (OUT), the low cut-off frequency is 2Hz.
The pipe filter is normally ON (IN) ; it cannot be set to OFF (OUT).

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Alarm reset (DANGER)		Alarm reset (ALERT)		Alarm reset (OK)		Relay mode (DANGER)		Relay mode (ALERT)		Relay mode (OK)		Alarm delay time(DANGER)		Alarm delay time(ALERT)		Alarm output type		First out*4	
0	AUTO-RESET	0	AUTO-RESET	0	AUTO-RESET	0	NORMALLY DE-ENERGIZED	0	NORMALLY DE-ENERGIZED	0	NORMALLY DE-ENERGIZED	0	3 sec.	0	3 sec.	1	CH1:2 points(DANGER1,ALERT1) CH2:2 points(DANGER2,ALERT2)	0	OFF
1	SELF-HOLD	1	SELF-HOLD	1	SELF-HOLD	1	NORMALLY ENERGIZED	1	NORMALLY ENERGIZED	1	NORMALLY ENERGIZED	1	1 sec.	1	1 sec.			1	ON
												2	6 sec.	2	6 sec.	2	CH1:4 points(DANGER1,DANGER2, ALERT1,ALERT2) CH2:None		
												3	None.	3	None.				

/RMS/(IS □ or RE □)/5G □ /TRP/EX□

rms. rectification	Isolate output		Recorder option output		Input power supply requirements*5		Tropical spec.	Sensitivity correction	
When rectification code 2 is selected, specify this option code.	0	4 to 20mADC	2	0 to -10VDC	0	85 to 264VAC		1	TIIS(IEC)
	1	1 to 5VDC	3	0 to 10VDC	1	24VDC		7	NEPSI
	2	0 to -10VDC	4	0 to -5VDC	2	110VDC			
	3	0 to 10VDC	5	0 to 5VDC					
	4	0 to -5VDC							
	5	0 to 5VDC							
	When recorder output code 2 is selected, specify this option code.								

Note) *4 It is necessary to set all monitor units in the same rack in first out function ON when it is used first out function.

*5 The product that the power supply voltage specification is 0 or 2 does not conform to CE.

Ordering Information

ALARM SET VALUE	DANGER1 : _____ ALERT1 : _____ DANGER2 : _____ ALERT2 : _____ Unless specified otherwise, preset to : DANGER : 100% of monitor range ALERT : 90% of monitor range
SEQUENCE SET VALUE (to increase alarm set value during operation of the sequence circuit)	: _____ ×1.0 to 10.0 (×0.1 step) Preset to ×1.0 unless specified otherwise. CAUTION : Set the alarm set value so that its designated multiple is within 110% of the measurement range during operation of the sequence circuit. If set to more than 110%, alarm may not be output.
SUPPRESSION FUNCTION SET VALUE	: _____ 0.0 to 10.0 % of monitor range (0.1 % step) Preset to 2.0 % unless specified otherwise. CAUTION : When the measurement value is not more than suppression function set value, indication and recorder output value shall be as 0 %.

Standard Specifications

ALARM SET POINT	4 points(DANGER1,ALERT1,DANGER2,ALERT2)
ALARM SET RANGE	0 to 110% of monitor range
ALARM SET ACCURACY	±1.0% of F.S. or less
ALARM SET REPEATABILITY	±0.1% of F.S. or less
ALARM OUTPUT	5 points (DANGER1,ALERT1,DANGER2,ALERT2,OK) or 6 points (DANGER1,ALERT1,DANGER2,ALERT2,OK1,OK2)
MEASURED VALUE	LCD digital meter with 5 digits (7 segments, with back light) LCD bar graph meter (40 segments, with back light) * Measurement value and alarm set value are indicated on the digital meter and bar graph meter simultaneously.

Standard Specifications

ALARM INDICATOR	DANGER : (red LED) ALERT : (yellow LED)
ABNOR.ALARM INDICATOR	OK : (green LED)
BYPASS INDICATOR	BYPASS : (red LED)
TRANSUDUCER INPUT	CA Series Number of input points : 2 points
INPUT IMPEDANCE	Approx.50kΩ
EXTERNAL CONTACT INPUT (FROM REAR PANEL)	Contact type:Dry contact Contact for external reset Contact for sequence
BAR GRAPH METER	Recorder output conversion accuracy ±2.5% of F.S.
DIGITAL METER	Recorder output conversion accuracy ±1.0% of F.S.
RECORDER OUTPUT CONVERSION ACCURACY	±0.5% of F.S. at calibration frequency at 25°C ±2.0% of F.S. at calibration frequency at 0 to 65°C (the calibration frequency is determined by the cut-off frequency range.)
RECORDER OUTPUT (FROM REAR PANEL)	Voltage or current output proportional to monitor range 1 to 5VDC (output impedance : 250Ω) 4 to 20mADC (max.load resistance : 500Ω) 0 to -10VDC*,0 to 10VDC*,0 to -5VDC*,0 to 5VDC* (output impedance : 100Ω) (*option) Number of output points : 2 points
MONITOR OUTPUT (FROM FRONT, REAR PANEL)	Input signal is output via a buffer amplifier. Signal level : 0.8 to 22VDC Output impedance : 100Ω (load resistance : 50kΩ or more)
TEMPERATIRE RANGE	Operating temperature : 0 to 65°C(32 to 149°F) Storage temperature : -30 to +85°C(-22 to 185°F) Relative himidity : 20 to 95%RH(noncondensing)
MATERIAL AND FINISH	Face plate : Aluminum Munsell N-4.0 (equiv.)
MASS	Monitor : max.0.7kg (including single unit instrument rack : max.2.5kg)