VM-5 SERIES MONITOR

SPECIFICATIONS

MODEL VM-5K DUAL VIBRATION MONITOR

*4

CE

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

VM-5K-□□□□□□ - □□□

Monitor range		Input signal		Low cut-off frequency *3		High cut-off frequency *3		Rectification		Recorder output		Alarm reset (DANGER)		Alarm reset (ALERT)		Alarm reset (OK)	
1	0 to 100μm pk-pk	1	VK-202A, VK-202P, FK-202F	1	5Hz or less	1	100Hz	0	Average value	0	4 to 20mADC	0	AUTO-RESET	0	AUTO-RESET	0	AUTO-RESET
2	0 to 125μm pk-pk			2	9.5Hz Seismic filter*1	2	500Hz	1	pk to pk	1	1 to 5VDC	1	SELF-HOLD	1	SELF-HOLD	1	SELF-HOLD
3	0 to 200μm pk-pk			3	14Hz Seismic filter*1	3	1kHz	2	rms (additional spec./RMS)	2	Output card (/IS□ or /RE□ option)						
4	0 to 400μm pk-pk	2	VK-302P, FK-302F	4	15Hz Seismic filter*1	4	4kHz										
5	0 to 500μm pk-pk			5	40Hz(36dB/oct) Pipe filter*1	5	10kHz										
6	0 to 3mils pk-pk	3	VC Series (Voltage output only)	6	60Hz(36dB/oct) Pipe filter*1												
7	0 to 5mils pk-pk																
8	0 to 10mils pk-pk																
A	0 to 15mils pk-pk																

Note) *1 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).

Note) *3 Select so that [high cut-off frequency≥Low cut-off frequency×10]

Note) *4 The product that the power supply voltage specification is 0 or 2 does not conform to CE.

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Relay mode (DANGER)		Relay mode (ALERT)		Relay mode (OK)		Alarm delay time (DANGER)		Alarm delay time (ALERT)	
0	NORMALLY DE-ENERGIZED	0	NORMALLY DE-ENERGIZED	0	NORMALLY DE-ENERGIZED	0	3 sec.	0	3 sec.
						1	1 sec.	1	1 sec.
1	NORMALLY ENERGIZED	1	NORMALLY ENERGIZED	1	NORMALLY ENERGIZED	2	6 sec.	2	6 sec.
						3	None	3	None

Alarm output type		First out*2	
1	CH1 : 2 points (DANGER1,ALERT1) CH2 : 2 points (DANGER2,ALERT2)	0	OFF
		1	ON
2	CH1 : 4 points (DANGER1,DANGER2, ALERT1,ALERT2) CH2 : None		
3	Special alarm logic(option)		

Note) *2 It is necessary to set all monitor units in the same rack in first out function ON when it is used first out function.

/RMS/(IS □ or RE □)/5G □ /TRP/EX □ /LG □

rms. rectification
When rectification code 2 is selected, specify this option code.

Isolate output		Recorder option output	
0	4 to 20mADC	2	0 to -10VDC
1	1 to 5VDC	3	0 to 10VDC
2	0 to -10VDC	4	0 to -5VDC
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.

Input power supply requirements	
0	85 to 264VAC
1	24VDC
2	110VDC

Tropical spec.

Sensitivity correction	
1	TIIS(IEC)
2	FM
4	CSA
5	ATEX

	Special alarm logic			
	DANGER		ALERT	
	1CH	2CH	1CH	2CH
1	>DANGER	>DANGER	>ALERT	>ALERT
	>DANGER	NOT OK	>ALERT	<ALERT
	NOT OK	>DANGER	<ALERT	>ALERT
	———	———	>ALERT	NOT OK
	———	———	NOT OK	>ALERT
2	>DANGER	>DANGER	>ALERT	>ALERT
	>DANGER	>ALERT	>ALERT	<ALERT
	>ALERT	>DANGER	<ALERT	>ALERT
	>DANGER	NOT OK	>ALERT	NOT OK
	NOT OK	>DANGER	NOT OK	>ALERT

Note) Input abnormal alarm is not applicable in case of VC input signal.

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,ALERT2,DANGER2,OK) or 6 points (DANGER1,ALERT1,ALERT2,DANGER2,OK1,OK2)
MEASURED VIBRATION 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)
TRANSDUCER INPUT	VK-202A,VK-202P,FK-202F,VK-302P,FK-302F,VC 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 100Hz at 25°C (77°F REF.) ± 2.0% of F.S. at 100Hz at 0 to 65°C (32 to 149°F REF.)
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(VK), 0 to 5VDC(VC) Output impedance : 100Ω (load resistance 50kΩ or more)
TEMPERATURE RANGE	Operating temperature : 0 to 65°C (32 to 149°F REF.) Storage temperature : -30 to +85°C (-22 to +185°F REF.) Relative humidity : 20 to 95% (noncondensing)
MATERIAL AND FINISH	Face plate : Aluminum Munsell N-4.0 (equiv.)
MASS	Monitor : max.0.7kg (max.1.6lb REF.) (including single unit instrument rack : max.2.5kg (max.5.5lb REF.))
OTHERS	