

VM-5 SERIES MONITOR SPECIFICATIONS

MODEL VM-5U DUAL SEISMIC MONITOR



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

VM-5U- -

Monitor range	Input signal	Low cut-off frequency *2	High cut-off frequency *2	Rectification	Recorder output	Alarm reset (DANGER)	Alarm reset (ALERT)	Alarm reset (OK)
1 0 to 10mm/s pk	1 CV-851*5	1 10Hz or less	1 100Hz	0 Average value	0 4 to 20mADC	0 AUTO-RESET	0 AUTO-RESET	0 AUTO-RESET
2 0 to 20mm/s pk	2 CV-86	2 20Hz	2 200Hz	1 pk-pk	1 1 to 5VDC	1 SELF-HOLD	1 SELF-HOLD	1 SELF-HOLD
3 0 to 50mm/s pk	3 CV-87*5	3 50Hz	3 500Hz	2 rms	2 Output card			
4 0 to 100μm pk-pk	4 CV-852*5	4 9.5Hz Seismic filter *3	4 1kHz	(additional spec./RMS)	/IS or /RE option			
5 0 to 200μm pk-pk		5 14Hz Seismic filter *3	5 2kHz					
6 0 to 500μm pk-pk		6 15Hz Seismic filter *3	6 5kHz					
7 0 to 10mm/s rms *1		7 40Hz(36dB/oct) Pipe filter *3	7 10kHz					
8 0 to 20mm/s rms *1		8 60Hz(36dB/oct) Pipe filter *3						
A 0 to 50mm/s rms *1								
B 0 to 0.5in/s pk								
C 0 to 1in/s pk								
D 0 to 2in/s pk								
E 0 to 5mils pk-pk								
F 0 to 10mils pk-pk								
G 0 to 20mils pk-pk								
H 0 to 0.5in/s rms *1								
J 0 to 1in/s rms *1								
K 0 to 2in/s rms *1								

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

*2 Select so that [high cut-off frequency²Low cut-off frequency²×10]

In the monitor ranges for displacement vibration measurement (e.g., 0 to 100μm pk-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.

*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).

Relay mode (DANGER)	Relay mode (ALERT)	Relay mode (OK)	Alarm delay time (DANGER)	Alarm delay time (ALERT)	Alarm output type	First out*4
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 NORMALLY ENERGIZED	1 NORMALLY ENERGIZED	1 NORMALLY ENERGIZED	1 1 sec.	1 1 sec.	2 4 points (DANGER1,DANGER2,ALERT1,ALERT2) CH2 : None	1 ON
			2 6 sec.	2 6 sec.		
			3 None	3 None		

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

rms. rectification	Isolate output	Recorder option output	Input power supply requirements	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		8 KTL
	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 Short circuit is not detectable in case of CV-85,CV-87 input signal.

Ordering Information			Standard Specifications	
ALARM SET VALUE	DANGER1 : _____ ALERT1 : _____ DANGER2 : _____ ALERT2 : _____ Unless specified otherwise, preset to : DANGER : 100% of monitor range ALERT : 90% of monitor range		ALARM INDICATOR	DANGER : (red LED) ALERT : (yellow LED) OK : (green LED)
SEQUENCE SET VALUE (to increase alarm set value during operation of the sequence circuit)	: _____ ×1.0 to 10.0 (x0.1 step) Preset to x1.0 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.		ABNOR.ALARM INDICATOR	OK : (green LED)
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 %.		BYPASS INDICATOR	BYPASS : (red LED)
OTHERS			TRANSDUCER INPUT	CV Series Number of input points : 2 points
Standard Specifications			INPUT IMPEDANCE	Approx. 10kΩ (CV-851 input) Approx. 50kΩ (CV-852, CV-86, CV-87 input)
ALARM SET POINT	4 points (DANGER1,ALERT1,DANGER2,ALERT2)		EXTERNAL CONTACT INPUT (FROM REAR PANEL)	Contact type:Dry contact Contact for external reset Contact for sequence
ALARM SET RANGE	0 to 110% of monitor range		BAR GRAPH METER	Recorder output conversion accuracy ±2.5% of F.S.
ALARM SET ACCURACY	±1.0% of F.S. or less		DIGITAL METER	Recorder output conversion accuracy ±1.0% of F.S.
ALARM SET REPEATABILITY	±0.1% of F.S. or less		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.)
ALARM OUTPUT	5 points (DANGER1,ALERT1,DANGER2,ALERT2,OK) or 6 points (DANGER1,ALERT1,DANGER2,ALERT2,OK1,OK2)		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
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.		MONITOR OUTPUT (FROM FRONT, REAR PANEL)	Input signal is output via a buffer amplifier. Signal level : ±15V (CV-85,CV-87 Input) 0.8 to 22VDC (CV-86 Input) Output impedance : 100Ω (load resistance : 50kΩ or more)
OTHERS			TEMPERATURE RANGE	Operating temperature : 0 to 65°C(32 to 149°F) Storage temperature : -30 to +85°C(-22 to +185°F) Relative humidity : 20 to 95%RH(noncondensing)
			MATERIAL AND FINISH MASS	Face plate : Aluminum Munsell N-4.0 (equiv.) Monitor : max.0.7kg (including single unit instrument rack : max.2.5kg)