VM-5 SERIES MONITOR SPECIFICATIONS

MODEL VM-5R TACHOMETER

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Model Code / Additional Spec. Code (No entry if additional spec. code is not specified.)			
VM-5R-			
Monitor range (velocity) 1 to 1,000rpm 2 to 2,000rpm 3 to 5,000rpm 4 to 10,000rpm 5 to 15,000rpm 6 to 20,000rpm 7 7	Monitor range (acceleration) Input signal Recorder -100 to +100rpm/min 1 VK,RD,FK Series*1 0 4 to 2 -200 to +200rpm/min 2 VE Series*2 1 1 to -500 to +500rpm/min -500 to +500rpm/min 3 MS Series*3 Outp (Voltage output only) 0 -2,000 to +2,000rpm/min 4 VC Series*2 2 // ISD -2,000 to +5,000rpm/min 4 (Voltage output only) 0 -5,000 to +5,000rpm/min - - - -9,999 to +9,999rpm/min - - - -9,000 to +5,000 rpm/min - - - -10,000 to +5,000 rpm/min - - - -2,000 to +5,000 rpm/min - - - -3,999 to +9,999rpm/min - - - -3,099 to +9,999rpm/min - - - -3,090 to +5,000 rpm/min - - - -3,090 to +5,000 rpm/min - - - -4,000 rpm/min - -	Note) *1 VK t or F 20mADC 5VDC 35VDC 35VDC 4 It is ON 4 It Is ON 4 It Is Is ON 4 It Is Is Is Is Is Is Is Is Is Is Is Is Is	ransducer can not detect the wire break in the sensor system, so RD K driver which can detect the wire break shall be recommended. It abnormal alarm is not applicable in case of VC and VE input signal. rt circuit is not detectable in case of MS input signal. necessary to set all monitor units in the same rack in first out function when it is used first out function. Note) *5 The product that the power supply voltage specification is 0 or 2 does not conform to CE. neset Alarm reset Alarm reset Alarm reset R2) (SR4) (OK) O-RESET 0 IAUTO-RESET 0 IAUTO-RESET
1 Under speed 1 Under	speed 1 Under speed 1 0.1V 2 0.2V 3 0.5V - <td< td=""><td></td><td>)/5G /TRP</td></td<>)/5G /TRP
Relay mode (SR1) Relay (S 0 NORMALLY DE-ENERGIZED 0 NOC DE-EN 1 NORMALLY ENERGIZED 1 NOF 1 NORMALLY ENERGIZED 1 NOF 1 NORMALLY ENERGIZED 1 NOF 1 USE the speed relation Use the speed relation Do not use the more NOF	Image Relay mode Relay mode Relay mode Fire R21 (SR3) (SR4) (OK) out RMALLY 0 NORMALLY 0 NORMALLY 0 IERGIZED 0 DE-ENERGIZED 0 DE-ENERGIZED 0 DE-ENERGIZED 0 MMALLY 1 NORMALLY 1 NORMALLY 1 NORMALLY RGIZED 1 ENERGIZED 1 ENERGIZED 1 ENERGIZED 1 Vacation 1 ENERGIZED 1 ENERGIZED 1 ENERGIZED 1 vacation 1 ENERGIZED 1 ENERGIZED 1 ENERGIZED 1 vacation 1 ENERGIZED 1 ENERGIZED 1 ENERGIZED 1 ENERGIZED 1 ENERGIZED 1 Vacation 1 Vacation 1 Vacation 1 Vacation 1 Vacation 1 1 1 1 Vacation 1 <td< td=""><td>t Trigger Monitor/pulse *4 mode output FF 0 AUTO 0 Pulse DN 1 MANUAL 0 output 1 Monitor 1 output</td><td>Isolate output Record option output Input power supply requirements*5 Tropical spec. 0 4 to 20mADC 2 0 to -10VDC 0 85 to 264VAC 1 1 to 5VDC 3 0 to 10VDC 1 24VDC 2 0 to -10VDC 4 0 to -5VDC 2 110VDC 3 0 to 10VDC 5 0 to 5VDC 2 110VDC 4 0 to -5VDC 5 0 to 5VDC 5 0 to 5VDC 0 specify this option code.</td></td<>	t Trigger Monitor/pulse *4 mode output FF 0 AUTO 0 Pulse DN 1 MANUAL 0 output 1 Monitor 1 output	Isolate output Record option output Input power supply requirements*5 Tropical spec. 0 4 to 20mADC 2 0 to -10VDC 0 85 to 264VAC 1 1 to 5VDC 3 0 to 10VDC 1 24VDC 2 0 to -10VDC 4 0 to -5VDC 2 110VDC 3 0 to 10VDC 5 0 to 5VDC 2 110VDC 4 0 to -5VDC 5 0 to 5VDC 5 0 to 5VDC 0 specify this option code.
	Ordering Information	S	tandard Specifications
SPEED RELAY SET VALUE	SR1 :	ROTOR SPEED SPEED RELAY INDICATOR ANOBR. ALARM INDICATOR BYPASS INDICATOR	LCD digital meter with 5 digits (7 segments, with back light) LCD bar graph meter (40 segments, with back light) SR1,SR3 : (yellow LED) (90 segments, with back light) SR2,SR4 : (red LED) (7 segments, with back light) OK : (green LED) (90 segments, with back light) BYPASS : (red LED) (10 segments, with back light)
	Velocity : Preset to +50% of monitor range unless specified otherwise. Acceleration(speed relay type : over speed) : Preset to +50% of monitor range unless specified otherwise. Acceleration(speed relay type : under speed) : Preset to -50% of monitor range unless specified otherwise.	TRANSDUCER INPUT INPUT IMPEDANCE INPUT VOLTAGE MIN. PULSE WIDTH MIN. INDICATED FREQUENCY NO. OF IMPUT PULSE	VK,RD,FK Series, VE Series, MS Series, VC Series Number of input points : 1 points Approx.5kΩ Less than 100Vpk-pk Approx.50µsec 1Hz 60 pulses or 120 pulses
SPEED RELAY HYSTERESIS	Speed relay hysteresis can be specified from 0 to 100rpm (1rpm step) SR1 : SR2 : SR3 : SR4 :	TRIGGER MODE EXTERNAL CONTACT INPUT (FROM REAR PANEL)	AUTO, MANUAL (selectable) In case of auto trigger mode, input pulse duty ratio should be between 10 and 90% and input pulse frequency should be 1Hz and over. it depends on the target. Contact type : Dry contact Contact for external reset
NO. OF INPUT P/R	Preset to 10rpm unless specified otherwise. Can be specified from 60 P/R or 120 P/R.	DIGITAL METER	Velocity : ±(0.003% of rdg. +1 digit) at 25°C(+77°F) ±(0.03% of rdg. +1 digit) at 0 to 65°C(32 to 149°F)
DIMENSION OF TARGET (Model VK,RD,FK)		BAR GRAPH METER RECORDER OUTPUT CONVERSION ACCURACY	Recorder output conversion accuracy ±2.5% of F.S. Velocity: ±0.5% of F.S. at 25°C(+77°F) ±2.0% of F.S. at 0 to 65°C(32 to 149°F) Acceleration: ±(20pm/F.S.)×100±0.5% of F.S. at 25°C (+77°F) ±(20pm/F.S.)×100±0.5% of F.S. at 25°C (±77°F)
Note) To detect a projection (gear), provide surface A of the projection with a concentric curve. Do not make it flat. A= mm $ Input \frac{VK-202A}{RD-05A} \frac{VK-452A}{FK-452F} \frac{VK-302P}{FK-452F} $ B= mm $ A \ge 6 \ge 16 \ge 8$		RECORDER OUPUT (FROM REAR PANEL)	$\begin{array}{c} \hline \\ \hline $
D=mm D [re	$\begin{array}{c c c c c c c c c c c c c c c c c c c $	MONITOR/PULSE OUTPUT (FROM FRONT, REAR PANEL)	Monitor output:Input signal is output via a buffer amplifier. Signal level : -0.8 to -22VDC(VK,RD) ±15V(MS),0 to 15VDC(VE), 0 to 5VDC(VC) Pulse output:Shaped pulse signal is output via a buffer amplifier. Signal level : -1 to +1V(PL),4 to 6V(PH) Output impedance : Approx 1000 (load resistance 50k0 or more)
SPEED RELAY SET POINT SPEED RELAY SET RANGE	4 points (SR1,SR2,SR3,SR4) Speed relay can be set in 1rpm increment until 110% of monitor range.	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%PH/(approx/dension)
ACCURACY SPEED RELAY OUTPUT	4 points (SR1,SR2,SR3,SR4) 1 point (OK)	MATERIAL AND FINISH WEIGHT	Face plate : Aluminum Munsell N-4.0 (equiv.) Monitor : max.0.7kg (including single unit instrument rack max 2.5kg)

SHINKAWA Sensor Technology, Inc.

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