

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

VM-706B /NB1 /CS1 /TRP /TB□

Non-incandive		Monitor Function	Tropical spec.	I/O terminal block for	
1	Class I Division 2 CSA	Custom setup		1	VM-761B instrument rack
				2	VM-762B instrument rack

## Specification

### INPUT (Rod drop)

Input points : 4 points  
Input impedance : Approx. 50kΩ

### INPUT TRANSDUCER (Rod drop)

FK series : FK-202F, FK-452F, FK-302F, FK-602F  
VK series : VK-202A, VK-452A, VK-302P, VK-602P

### INPUT (Phase marker)

Input point : 1 point  
Input impedance : Approx. 50kΩ  
Hysteresis set value : 1V, 2V, 5V  
Min. Pulse Width : 50μsec

### INPUT TRANSDUCER (Phase marker)

FK series : FK-202F  
RD series : RD-05A

### SYNCHRONIZED SIGNAL SOURCE

Another VM-706B or VM-701B : Input via transducer input terminal.  
VM-741B : Input via internal mother board. (2ch)

### OUTPUT

Indicators : OK LED (Green)  
When channel is normal : ON, When alarming : Flashing  
TRG LED (Yellow)  
When rotational pulse is not detected : ON  
When rotational pulse is detected : Flashing

Monitor output : Input signal is output via buffer amplifier.  
Location : BNC (Front) and connector (Back)  
Output impedance : Approx. 100Ω (Max. 5mA)

Pulse output : Shaped pulse signal is output via a buffer amplifier.  
Location : BNC (Front)  
Output impedance : Approx. 1kΩ (Max. 5mA)  
Signal level : 0V (V<sub>OL</sub>), 5V (V<sub>OH</sub>)

Synchronize signal output : Shaped pulse signal is output via a buffer amplifier.  
Location : Terminal (Back)  
VM-761B : D5 / D6  
VM-762B : 15pin D-SUB 13, 14  
Output impedance : Approx. 1kΩ (Max. 5mA)  
Signal level : 0V (V<sub>OL</sub>), 5V (V<sub>OH</sub>)

Recorder output : Voltage or current output proportional to measurement value  
Measurement value of each channel can be assigned to any output channel of its own module.  
Number of output points : 4 points  
Output range : 1 to 5V, 4 to 20mA, 0 to 5V, 0 to 10V  
I/O conversion accuracy : ±1% of F.S. at 25°C \*1  
±2% of F.S. at 0°C to 65°C \*1  
Max. load resistance: 600Ω (current mode)  
Output impedance : Approx. 500Ω (voltage mode)  
Insulation resistance : 10MΩ at 100VDC

### OUTPUT

Transducer power supply:  
Proximity transducer : -24VDC / 25mA Max.

Contact output : Number of relay : 6 points (logic changeable)  
Contact type : Dry contact (SPDT)  
Enagization method: Normally de-energized or Normally energized field changeable  
Contact capacity : 250VAC/5A, 30VDC/5A

Note) \*1 At calibrate frequency.

### ALARM

Alarm set point : 4 points (H-DANGER, H-ALERT, L-DANGER, L-ALERT), from -50 to +50% of monitor range, field changeable  
Alarm set accuracy : ±(0.2% of F.S.+1digit) or less at 25°C  
Alarm set repeatability : ±1digit or less at 25°C  
Alarm delay time : 0 to 99sec (0.1 sec step, field changeable)  
Alarm reset : AUTO-RESET or SELF-HOLD field changeable.  
Alarm bypass function : Block off alarm output (DANGER)

### ROD DROP MONITORING

Measure mode : Trigger mode (Should be input phase marker signal)  
Average mode  
Real mode (for run-out measuring)

Accuracy : ±1% of F.S. at 25°C  
±2% of F.S. at 0°C to 65°C

Measurement range : 60 to 1200rpm (Trigger mode)  
0 to 1200rpm (Average mode)  
0 to 60rpm (Real mode)

Zero shift function : -50 to +50% of monitor range

### CALCULATION (TRIGGER MODE)

Sampling angle range : 0 to 359.9deg.  
Input resolution : 0.1deg.

### ENVIRONMENTAL CONDITION

Operating temperature : 0 to +65°C  
Storage temperature : -30 to +85°C  
Relative humidity : 20 to 95%RH (non-condensing)

### POWER CONSUMPTION

Module : Less than 15W

### MATERIAL AND FINISH

Face plate : ABS (Black)  
Sheet : Polyester tough top (Gray)  
Base plate : Aluminium allo (Silver)

### MASS

Body : Max. 1.0kg (2.2lb)

Specification

ACCESSORY SPECIFICATION CODE / IDENTIFIED BY TB□

Code	Accessory	Quantity (Part Code)
/TB1	Transducer input terminal block plug (15pin) FRONT-MC-1.5/15-STF-3.81 (PHOENIX CONTACT)	2pieces <sup>*3</sup> (7072NAB)
	Recorder output terminal block plug (6pin) FRONT-MC-1.5/6-STF-3.81 (PHOENIX CONTACT)	2pieces <sup>*3</sup> (7072NAC)
	Contact output terminal block plug (18pin) FRONT-MC-1.5/18-STF-3.81 (PHOENIX CONTACT)	1piece (7072NAA)
/TB2	Contact output terminal block plug (18pin) FRONT-MC-1.5/18-STF-3.81 (PHOENIX CONTACT)	1piece (7072NAA)

Note) \*2 D-sub plugs and hoods are not included in this code. Please make necessary arrangement separately, if required.

\*3 When individually ordering specify the parts code, it is require to arrange for a necessary amount.

**WARNING**  
Some functions may not be available with old version.  
For details, please refer to "infiSYS Family Improvement Information" (6H16-011).

OTHERS

Default Value

INPUT (ROD DROP)

Monitor range : 0 to 2mm  
Input transducer : FK-202F (non-intrinsic safety)  
Input points : 4 points  
Input impedance : 50kΩ

INPUT (PHASE MARKER)

Input port : Direct (input to transducer input terminal)  
Input transducer : RD-05A  
Hysteresis set value : 1.0V  
Trigger level : -18.0V  
OK bypass function : OFF

CALCULATION

Measure mode : Trigger mode  
Sampling angle : 180 deg.

RECORDER OUTPUT

Output range : 4 to 20mA  
(4mA at the burnout)

ALARM

H-DANGER set point : 1.6mm  
H-ALERT set point : 1.2mm  
L-ALERT set point : None  
L-DANGER set point : None  
Alarm delay tim : 3sec (DANGER, ALERT)  
Alarm Reset : AUTO-RESET

OK ALARM

Rod drop : -1.4V (Low), -18.8V (High)  
Phase marker : -1.4V (Low)  
Alarm reset : AUTO-RESET

CONTACT

Contact (RELAY1) : ALERT-1  
Contact (RELAY2) : ALERT-2  
Contact (RELAY3) : ALERT-3  
Contact (RELAY4) : ALERT-4  
Contact (RELAY5) : OR logic (DANGER-1, 2, 3 and 4)  
Contact (RELAY6) : OR logic (NOT-OK-1, 2, 3, 4 and NOT-OK-Φ<sup>\*5</sup>)  
Enagization method : Normally de-energized

Note) \*5 NOT-OK-Φ : Phase marker OK alarm

OTHERS

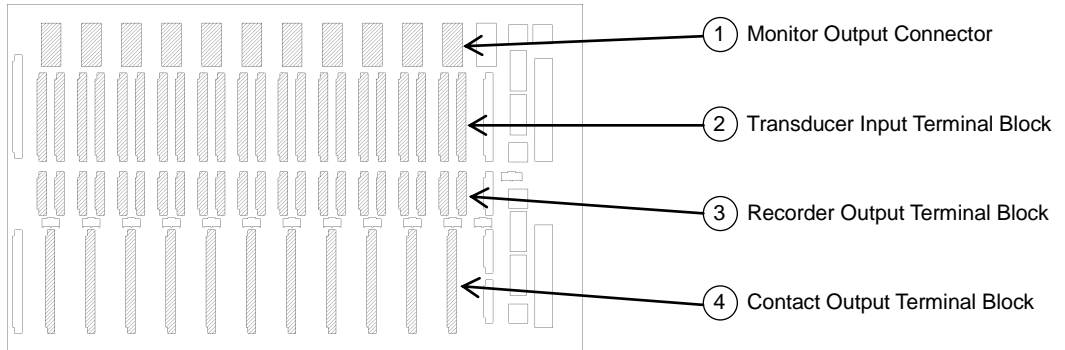
First out : OFF  
Timed OK channel defeat : ON  
Burnout : Downscale 0%

Alarm Contact Operation

Contact type	Enagization method	Power OFF	Power ON	
			Normal state	Alarm state
N.O. contact	NORMALLY DE-ENERGIZED	OPEN	OPEN	CLOSE
	NORMALLY ENERGIZED	OPEN	CLOSE	OPEN
N.C. contact	NORMALLY DE-ENERGIZED	CLOSE	CLOSE	OPEN
	NORMALLY ENERGIZED	CLOSE	OPEN	CLOSE

Plug/ Terminal Block (Connector) Pin Assignment

VM-761B Instrument Rack  
(Back)



	Back of Instrument Rack	Plug/ Terminal Block (Connector) Pin Assignment	Fitting Plug	Part Code																																																												
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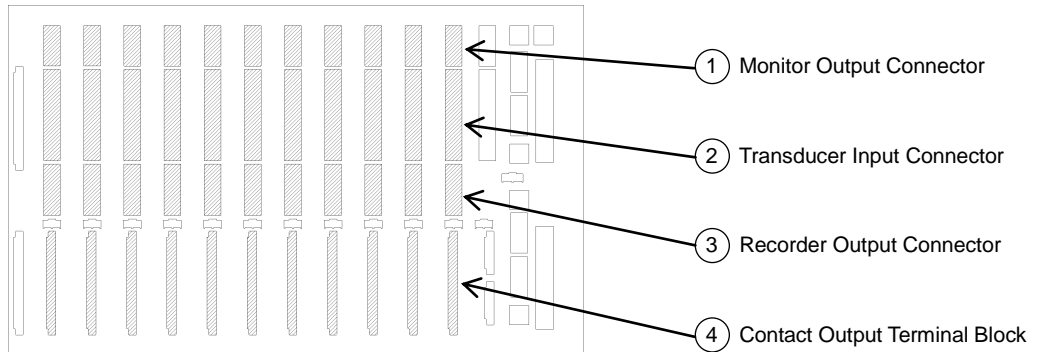
Note1) For the accessory specification code “/TB1”, the fitting terminal block plugs ② ③ ④ are included.

For the accessory specification code “/TB1”, the D-sub plug and hood ① are not included. If required, please make necessary arrangement separately referring to the part code above.

Note2) When individually ordering specify the parts code, it is require to arrange for a necessary amount.

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④		<table border="1"> <tr><td>E1</td><td>RL1 N.O.</td><td>E10</td><td>RL4 N.O.</td></tr> <tr><td>E2</td><td>RL1 COM</td><td>E11</td><td>RL4 COM</td></tr> <tr><td>E3</td><td>RL1 N.C.</td><td>E12</td><td>RL4 N.C.</td></tr> <tr><td>E4</td><td>RL2 N.O.</td><td>E13</td><td>RL5 N.O.</td></tr> <tr><td>E5</td><td>RL2 COM</td><td>E14</td><td>RL5 COM</td></tr> <tr><td>E6</td><td>RL2 N.C.</td><td>E15</td><td>RL5 N.C.</td></tr> <tr><td>E7</td><td>RL3 N.O.</td><td>E16</td><td>RL6 N.O.</td></tr> <tr><td>E8</td><td>RL3 COM</td><td>E17</td><td>RL6 COM</td></tr> <tr><td>E9</td><td>RL3 N.C.</td><td>E18</td><td>RL6 N.C.</td></tr> </table>	E1	RL1 N.O.	E10	RL4 N.O.	E2	RL1 COM	E11	RL4 COM	E3	RL1 N.C.	E12	RL4 N.C.	E4	RL2 N.O.	E13	RL5 N.O.	E5	RL2 COM	E14	RL5 COM	E6	RL2 N.C.	E15	RL5 N.C.	E7	RL3 N.O.	E16	RL6 N.O.	E8	RL3 COM	E17	RL6 COM	E9	RL3 N.C.	E18	RL6 N.C.		7072NAA																																								
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Note) For the accessory specification code "/TB2", the fitting terminal block plug ④ is included.  
For the accessory specification code "/TB2", the D-sub plugs and hoods ① ② ③ are not included.  
If required, please make necessary arrangement separately referring to the part code above.