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

【When "Security function" is not selected】

VM-742B☐ – ☐

| Install location | | | Communication port |
|---|---|---|---|
| 1 | C1 (Upper position) | 1 | Port A : Fieldbus (Modbus/TCP) / Port B : Blank |
| 2 | C2 (Lower position) | 2 | Port A : Fieldbus (Modbus/RTU) / Port B : Blank |
| | | 3 | Port A : Analysis software communication (TCP/IP) / Port B : Blank |
| | | 4 | Port A : Fieldbus (Modbus/RTU) / Port B : Fieldbus (Modbus/TCP) |
| | | 5 | Port A : Fieldbus (Modbus/TCP) / Port B : Analysis software communication (TCP/IP) |
| | | 6 | Port A : Fieldbus (Modbus/RTU) / Port B : Analysis software communication (TCP/IP) |

/NB1 /CS☐ /TRP /CTR /WD1

| Non-incendive | | Custom setup | | | | Tropical spec. | Option | 1 sec wave datacollection |
|---|---|---|---|---|---|---|---|---|
| 1 | CSA C/US: Class I, Division 2, Groups A,B,C and D | 0 | ·IP address setup | B | ·IP address setup ·Customize work 91ch to 100ch | | | |
| | | 1 | ·IP address setup ·Customize work 1ch to 10ch | C | ·IP address setup ·Customize work 101ch to 110ch | | | |
| | | 2 | ·IP address setup ·Customize work 11ch to 20ch | D | ·IP address setup ·Customize work 111ch to 120ch | | | |
| | | 3 | ·IP address setup ·Customize work 21ch to 30ch | E | ·IP address setup ·Customize work 121ch to 130ch | | | |
| | | 4 | ·IP address setup ·Customize work 31ch to 40ch | F | ·IP address setup ·Customize work 131ch to 140ch | | | |
| | | 5 | ·IP address setup ·Customize work 41ch to 50ch | G | ·IP address setup ·Customize work 141ch to 150ch | | | |
| | | 6 | ·IP address setup ·Customize work 51ch to 60ch | H | ·IP address setup ·Customize work 151ch to 160ch | | | |
| | | 7 | ·IP address setup ·Customize work 61ch to 70ch | J | ·IP address setup ·Customize work 161ch to 170ch | | | |
| | | 8 | ·IP address setup ·Customize work 71ch to 80ch | K | ·IP address setup ·Customize work 171ch to 180ch | | | |
| | | 9 | ·IP address setup ·Customize work 81ch to 90ch | L | ·IP address setup ·Customize work 181ch to 190ch | | | |
| | | | | M | ·IP address setup ·Customize work 191ch to 200ch | | | |

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

【When "Security function" is selected】

VM-742B☐ – ☐ - 2

| Install location | | Communication port | | Security Function | |
|---|---|---|---|---|---|
| 1 | C1 (Upper position) | 1 | Port A : Fieldbus (Modbus/TCP)<br>Port B : Blank | 0 | None |
| 2 | C2 (Lower position) | 2 | Port A : Fieldbus (Modbus/RTU)<br>Port B : Blank | 2 | Available (Achilles Certificate Level2) |
| | | 3 | Port A : Analysis software communication (TCP/IP)<br>Port B : Blank | | |
| | | 4 | Port A : Fieldbus (Modbus/RTU)<br>Port B : Fieldbus (Modbus/TCP) | | |
| | | 5 | Port A : Fieldbus (Modbus/TCP)<br>Port B : Analysis software communication (TCP/IP) | | |
| | | 6 | Port A : Fieldbus (Modbus/RTU)<br>Port B : Analysis software communication (TCP/IP) | | |

/NB1 /CS☐ /TRP /CTR

| Non-incendive | | Custom setup | | | | Tropical spec. | Option |
|---|---|---|---|---|---|---|---|
| 1 | CSA C/US: Class I, Division 2, Groups A,B,C and D | 0 | ·IP address setup | B | ·IP address setup<br>·Customize work 91ch to 100ch | | |
| | | 1 | ·IP address setup<br>·Customize work 1ch to 10ch | C | ·IP address setup<br>·Customize work 101ch to 110ch | | |
| | | 2 | ·IP address setup<br>·Customize work 11ch to 20ch | D | ·IP address setup<br>·Customize work 111ch to 120ch | | |
| | | 3 | ·IP address setup<br>·Customize work 21ch to 30ch | E | ·IP address setup<br>·Customize work 121ch to 130ch | | |
| | | 4 | ·IP address setup<br>·Customize work 31ch to 40ch | F | ·IP address setup<br>·Customize work 131ch to 140ch | | |
| | | 5 | ·IP address setup<br>·Customize work 41ch to 50ch | G | ·IP address setup<br>·Customize work 141ch to 150ch | | |
| | | 6 | ·IP address setup<br>·Customize work 51ch to 60ch | H | ·IP address setup<br>·Customize work 151ch to 160ch | | |
| | | 7 | ·IP address setup<br>·Customize work 61ch to 70ch | J | ·IP address setup<br>·Customize work 161ch to 170ch | | |
| | | 8 | ·IP address setup<br>·Customize work 71ch to 80ch | K | ·IP address setup<br>·Customize work 171ch to 180ch | | |
| | | 9 | ·IP address setup<br>·Customize work 81ch to 90ch | L | ·IP address setup<br>·Customize work 181ch to 190ch | | |
| | | | | M | ·IP address setup<br>·Customize work 191ch to 200ch | | |

**SHINKAWA Sensor Technology, Inc.**

## Specification

### OUTPUT

Indicator : ACTIVE 1 LED (Green)
  On : Communication function included
  Off : Communication function not included
 COMM 1 LED (Green)
  On : Communication is connected
  Flash : Communication data is being passed
  Off : Communication is disconnected
 ACTIVE 2 LED (Green)
  On : Communication function included
  Off : Communication function not included
 COMM 2 LED (Green)
  On : Communication is connected
  Flash : Communication data is being passed
  Off : Communication is disconnected

### ANALYSIS SOFTWARE COMMUNICATION

Network : Ethernet 100Base-TX
  Max. distance Hub to nodes between 90m.
protocol : TCP/IP
I/O connector : RJ-45 (on VM-76□B rear panel)
Communication item : Dynamic data, Static data, Event history
  Refer to the specification sheet of
  VM-773B infiSYS ANALYSIS VIEW

Note : For redundant analysis software communication, a total of two modules are required.

### FIELD BUS COMMUNICATION

Protocol : Modbus/TCP
  Network : Ethernet 10Base-T / 100Base-TX
  Connector : RJ-45 (on VM-76□B rear panel)
  Connection : 2
 : Modbus/RTU
  Network : RS-485
  Baud rate : 9600,19200 bps
  Data length : 8 bit
  Parity[*2] : ODD (odd number), EVEN (even number), NONE (none)
  Stop bit : 1 bit
  Flow control : None
  Protocols[*1] : Modbus®
   Based on AEG Modicon PI-MBUS-300
   Reference Manual. Uses Remote
   Terminal Unit (RTU) transmission mode.
  Slave ID : Set range 1 to 247
  Terminal setting[*2] : ON or OFF   Specified when ordering.
   Unless specified otherwise
    Slot C1 : ON
    Slot C2 : ON
  I/O Connector : 9pin D-sub (on VM-76□B rear panel)

Note: For redundancy using Modbus, a total of two modules are required.

Communication item
 : Data transmitted to host network
  Measurement value, GAP, Danger Alarm status,
  Alert Alarm status, OK Alarm status, Danger Bypass status,
  Setting of DANGER / ALERT, and OK Limit
  High-pass Filter (10pole) ON/OFF status, Power-OK status,
  Analyzed Data [*3] (0.5X amp./Phase, 1X amp./Phase,
  2X amp./Phase, Not-1X amp,$S_{(p-p) max.}$)
 Data received from host network
  Date and Time Data
Option communication item (/CTR) [*4]
 : Items Controllable from host network
  CH Bypass status ON / OFF, Danger Bypass status ON / OFF,
  Low Alarm Bypass status ON/OFF, Alarm Reset,
  Sequence Mode ON / OFF, High-pass Filter (10 pole) ON / OFF,
  Peak Hold Reset, Firstout Reset

Note)
*1 Modbus is a registered trademark of Modicon, Inc.
*2 Can be changed by internal switch.
*3 When the analysis option is added on VM-701B and/or VM-702B monitor module.
*4 VM-7B can be controlled by the host computer.by adding the option.

Note : The daisy chain connections are eight racks or less.

### SECURITY FUNCTION[*1]

Network : Ethernet 100Base-TX
Protocol : Fieldbus(Modbus/TCP)
  Analysis software communication (TCP/IP)
Connector : RJ-45(Back side of rack)
Filter function : None(non-compliant Security Function)
(Mobus/TCP)  Off(Filter OFF : Maintenance only)
  On(Client1 only)
   (Only one client PC Fileter ON: In Operation)
  On(Client1 & Client2)
   (Filter ON for all client PCs)
Filter function : None(non-compliant Security Function)
(TCP/IP)  Off(Filter OFF : Maintenance only)
  On(Filter OFF : In Operation)
Client(1 or 2) MAC Address : MAC Address of PC for Modbus/TCP or infiSYS
  Analisys View
Client(1 or 2) IP Address : IP Address of PC for Modbus/TCP or infiSYS
  Analisys View

*1 About the Security Function
・When selecting the presence of "security function", other networks (VM-741B:MCL View) to
 unify security policies are also " Please select the presence of security function "
・ "Security Function" is the network of "Fieldbus（Modbus/TCP）" and "Analysis software
 communication(TCP/IP) ".
・ Custom setup of "Security function" can't be order.
・ Select "Security Function", you can meet a global certification program
 (Achilles Certification Level 2) that proves to have a certain network robustness.
・ Achilles is a registered trademark of GE Digital.

### 1 SEC WAVEFORM DATA COLLECTION FUNCTION

Sampling interval(VM-701B, VM-702B) : Waveform
  : 1sec (Default value:10sec)
 -"1 sec waveform data collection function" is available "Analysis software
  communication (TCP/IP)" is specified.
 -"1 sec waveform data collection function" is available when "Security
  function" is "None".

### ENVIRONMENTAL CONDITION

Operating temperature : 0 to +65°C
Operating temperature at explosion proof construction
  : 0 to +60°C
torage temperature : -30 to +85°C
Relative humidity : 20 to 95%RH (non-condensing)

### POWER CONSUMPTION

Module alone : Less than 15W

### MATERIAL AND FINISH

Face plate : ABS (Black)
Sheet : Polyester tough top (Gray)
Base plate : Alminium alloy (Silver)

### MASS

Body : Max. 0.5kg ( 1.1lb )

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

### OTHERS

 Note) One or two modules can be installed in one rack, in either Slot
   C1 or C2 or both.

## Default Value

FIELDBUS COMMUNICATION (MODBUS/TCP)

| | | |
| --- | --- | --- |
| Slave ID | : | 1 |
| IP Address | : | 192.168.8.1 |
| Subnet mask | : | 255.255.255.0 |
| Port number | : | 502 |
| Time out | : | Enable (10sec) |

FIELDBUS COMMUNICATION (MODBUS/RTU)

| | | |
| --- | --- | --- |
| Slave ID | : | 2 |
| Baud rate | : | 9600bps |
| Data length | : | 8bit |
| Parity | : | NONE |
| Stop bit | : | 1bit |

ANALYSIS SOFTWARE COMMUNICATION

| | | |
| --- | --- | --- |
| IP Address | : | 192.168.8.100 |
| Subnet mask | : | 255.255.255.0 |
| Port number | : | 8882 |
| Time out | : | Enable (10sec) |

SECURITY FUNCTION Modbus/TCP (Case of None)

| | | |
| --- | --- | --- |
| Filter | : | None |
| Client1 MAC Address | : | FF-FF-FF-FF-FF-FF |
| Client1 IP Address | : | 192.168.8.100 |
| Client2 MAC Address | : | FF-FF-FF-FF-FF-FF |
| Client2 IP Address | : | 192.168.8.100 |

SECURITY FUNCTION Analysis (Case of None)

| | | |
| --- | --- | --- |
| Filter | : | None |
| Client MAC Address | : | FF-FF-FF-FF-FF-FF |
| Client IP Address | : | 192.168.8.100 |

SECURITY FUNCTION Modbus/TCP (Case of Available)

| | | |
| --- | --- | --- |
| Filter | : | Off |
| Client1 MAC Address | : | FF-FF-FF-FF-FF-FF |
| Client1 IP Address | : | 192.168.8.100 |
| Client2 MAC Address | : | FF-FF-FF-FF-FF-FF |
| Client2 IP Address | : | 192.168.8.100 |

SECURITY FUNCTION Analysis (Case of Available)

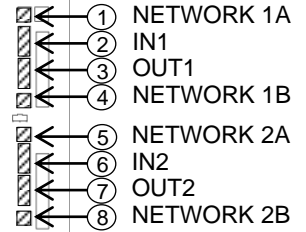| | | |
| --- | --- | --- |
| Filter | : | None |
| Client MAC Address | : | FF-FF-FF-FF-FF-FF |
| Client IP Address | : | 192.168.8.100 |

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## Module Location

Slot C1
(Upper position)

Slot C2
(Lower position)
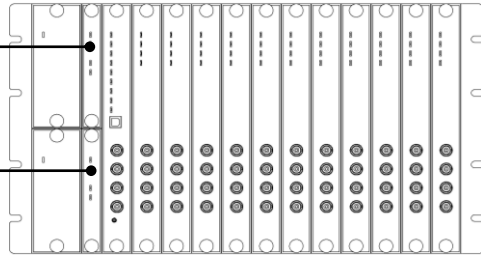
VM-761B, VM-762B Instrument Rack   (Back)

① NETWORK 1A
② IN1
③ OUT1
④ NETWORK 1B
⑤ NETWORK 2A
⑥ IN2
⑦ OUT2
⑧ NETWORK 2B

| Location | Model Code | Network Interface Connector | | |
| --- | --- | --- | --- | --- |
| | | Communication port | Communication type | Number |
| Slot C1 | VM-742B1-1 | Port A | Fieldbus (Modbus/TCP) | ① |
| | | Port B | Blank | — |
| | VM-742B1-2 | Port A | Fieldbus (Modbus/RTU) | ②, ③ |
| | | Port B | Blank | — |
| | VM-742B1-3 | Port A | Analysis software communication (TCP/IP) | ① |
| | | Port B | Blank | — |
| | VM-742B1-4 | Port A | Fieldbus (Modbus/RTU) | ②, ③ |
| | | Port B | Fieldbus (Modbus/TCP) | ④ |
| | VM-742B1-5 | Port A | Fieldbus (Modbus/TCP) | ① |
| | | Port B | Analysis software communication (TCP/IP) | ④ |
| | VM-742B1-6 | Port A | Fieldbus (Modbus/RTU) | ②, ③ |
| | | Port B | Analysis software communication (TCP/IP) | ④ |
| Slot C2 | VM-742B2-1 | Port A | Fieldbus (Modbus/TCP) | ⑤ |
| | | Port B | Blank | — |
| | VM-742B2-2 | Port A | Fieldbus (Modbus/RTU) | ⑥, ⑦ |
| | | Port B | Blank | — |
| | VM-742B2-3 | Port A | Analysis software communication (TCP/IP) | ⑤ |
| | | Port B | Blank | — |
| | VM-742B2-4 | Port A | Fieldbus (Modbus/RTU) | ⑥, ⑦ |
| | | Port B | Fieldbus (Modbus/TCP) | ⑧ |
| | VM-742B2-5 | Port A | Fieldbus (Modbus/TCP) | ⑤ |
| | | Port B | Analysis software communication (TCP/IP) | ⑧ |
| | VM-742B2-6 | Port A | Fieldbus (Modbus/RTU) | ⑥, ⑦ |
| | | Port B | Analysis software communication (TCP/IP) | ⑧ |

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