VM-742B NETWORK COMMUNICATION MODULE

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			

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VM-742B NETWORK COMMUNICATION MODULE

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) Port B : Blank	0	None
2	C2 (Lower position)	2	Port A : Fieldbus (Modbus/RTU) Port B : Blank	2	Available (Achilles Certificate Level2)
		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

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 ・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		

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VM-742B NETWORK COMMUNICATION MODULE

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,$S_{(p\text{-}p)\ max.}$)

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.

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VM-742B NETWORK COMMUNICATION MODULE

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

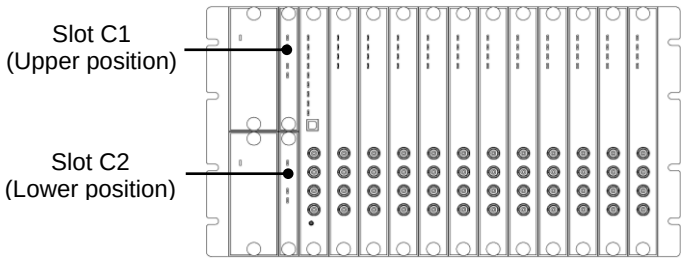
SECURITY FUNCTION Analysis (Case of Available)

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

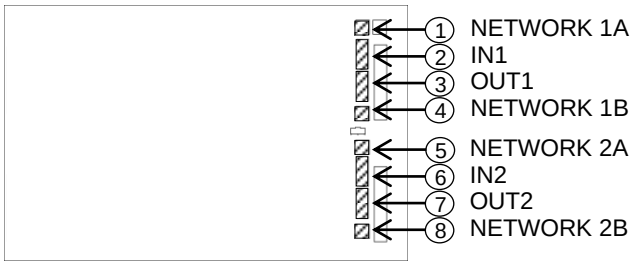
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VM-742B NETWORK COMMUNICATION MODULE

Module Location



VM-761B, VM-762B Instrument Rack (Back)



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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